

The Impact of Care Farming in the UK

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Abstract

The Impact of Care Farming in the UK

Care farms seek to support and empower people who are in some way vulnerable by enabling them to engage with agricultural places and farming activities. Their numbers have increased substantially in the UK and elsewhere over the past decade, but there is a paucity of evidence concerning that which takes place, associated outcomes and consequential change. This mixed methods study investigated care farming from multiple perspectives in order to provide an enhanced understanding of overall impact. It was informed primarily by qualitative and quantitative data provided by service users and providers but also incorporates input from representatives of other significant stakeholder groups.

The evidence of sixty seven care farmers highlighted the challenges associated with the initiation and development of sustainable enterprises, but simultaneously demonstrated this to be an activity that can benefit farming people and places. Altruistic intent was identified as a common denominator and care farming was found to have enabled both new and established farmers to engage with activities that support the land and develop community. Productive and consumptive elements interlink to provide multifaceted value. Agricultural and familial connections were presented as having been enabled, on-farm employment as having increased and farms as having regained their position as a social hub.

Multivariate statistical analysis of health and well-being measure scores provided by two hundred and sixteen care farm participants identified statistically significant positive relationships ($p < .001$) between the amount of time that people had been attending care farms and subjective happiness, satisfaction with life and more generic mental well-being. Analysis of qualitative data suggested that service users often received support initially from the animals, plants and wider natural

environment, but that people and associated social interactions were increasingly enjoyed and influential as time progressed.

An assessment of the overall impact associated with an individual care farm was provided through the application of Social Return on Investment. This took account of all elements of associated change and assigned justified financial proxies so that overall value could be conceptualised. The analysis suggested that, for every £1 that was invested, there was a return that exceeded £3.50. Value was presented as having emanated from the natural, social, learning and physical elements of the care farm space, but consequential positive outcomes were also demonstrated to impact outside this space.

This study found care farming to be a cost effective vehicle for enabling the improved health and well-being of both individuals and wider society. Associated dividends are apparent and it is hoped that this will help policy makers and service commissioners to recognise and understand the value that care farms provide.

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Chapter 1

Introducing the Study

The mean income and life expectancy of people in the developed world increased substantially during the second half of the 20th century, but this good fortune was not reflected in the improved health and well-being that might once have been anticipated (Huppert *et al.*, 2005). Instead, an 'epidemiological transition' has taken place, wherein many of the most threatening historical diseases associated with poverty have essentially been replaced by diseases that accompany greater wealth (Collishaw *et al.*, 2004; McLaren, 2007; Twenge, 2007; Wilkinson and Pickett, 2006). Medical science has taken control of most infectious diseases, but physical health problems relating to exercise, diet and immunity have become increasingly prevalent (Wilkinson and Pickett, 2010).

It is estimated that depression and similar illnesses will have become the largest source of ill-health in the UK by 2020 (Bird, 2007), and associated challenges are further compounded by the fact that coping strategies sometimes involve excessive consumption, (il)legal drug use and other ultimately harmful behaviours (Pretty *et al.*, 2005). Negative consequential outcomes can feed an increasingly destructive spiral of despair. Nearly 28 million anti-depressant prescriptions were written in the UK in 2005, with 93% of General Practitioners indicating that they sometimes prescribed these because of a perceived lack of alternatives (Peacock *et al.*, 2007).

Traditional social networks have often been weakened or broken through increased geographic mobility, and a sense of identity is no longer necessarily provided by the place where we reside or the activities with which we engage (Putnam, 2000). The resultant hole in the personal psyche has resulted in people being increasingly vulnerable to what have been described as 'social evaluative threats' (Dickerson and Kemeny, 2004). Those concerned feel unable or unwilling to engage with their neighbours or other community members, and, whether real or imagined, this can

ultimately result in increased social isolation and / or exclusion that further impacts on personal well-being (Putnam, 2000).

These challenges, aligned with greater constraints being placed on the public purse, increase the need for strategies to be adopted that address contributory factors in such a way as to effect sustainable change. Farms are most commonly associated with the provision of edible sustenance, but some are simultaneously now seeking to provide wider sustenance in the fields of human health and well-being. This practice is currently described as Care Farming in the UK, but is also known elsewhere as Social Farming, Farming for Health or Green Care Farming (Hassink and van Dijk, 2006; Hine *et al.*, 2008a; Sempik *et al.*, 2010).

Definitions of care farming can vary according to national circumstances (Haubenhofner *et al.*, 2010), but it has been conceptualised in the UK context as concerning *“the use of commercial farms and agricultural landscapes as a base for promoting mental and physical health, through normal farming activity”* (Hine *et al.*, 2008a, p. 247), or more succinctly as *“the therapeutic use of farming practices”* (Care Farming UK, 2013). A wide variety of operations and activities can potentially therefore be included under the care farming umbrella, but these are broadly united in being supportive processes that take place within an agricultural context (Dessein, 2008).

An informative scoping study concerning the extent and nature of care farming in the UK was undertaken in 2007 (Hine *et al.*, 2008a), and this has very recently been updated (Bragg [né Hine], 2013). The most commonly participating service user groups were identified by both these studies as young people and adults with learning difficulties or mental health issues, but those with widely differing personal needs also participate. These include people with autism, those dealing with various life-controlling addictions, people with physical disabilities, elders, ex-service personnel, the unemployed, people on probation and those who are homeless. The young people concerned come from a variety of backgrounds and age groups; whilst some

attend mainstream schools, others are from Pupil Referral Units / Short Stay Schools or have been temporarily / permanently excluded.

Care farms therefore engage with a wide range of vulnerable people (potential and actual), but the evidence base regarding their overall efficacy remains limited (Sempik *et al.*, 2010). Studies undertaken in the European arena have started to provide insights to the benefits that different groups of people may receive as a result of their participation, but little is currently known about related outcomes and associated change. Benefits have also been suggested to accrue for farm families, farm environments and wider society, but the form that these take, and consequential value, require further investigation (Dessein and Bock, 2010).

1.1 Research aim and objectives

This PhD was match-funded by Advantage West Midlands (a Regional Development Agency that was abolished in 2012) as an integral element of a larger grant to enable Care Farming West Midlands (CFWM) to develop and support care farms in the corresponding geographic region of the UK. A summative evaluation of care farming in terms of effectiveness and impact was sought from the outset, with the following objectives supporting this aim:

- To clarify the extent and form of care farming in the UK.
- To provide an understanding of the effect that care farming has on service providers and their farm environments.
- To identify why people (service users) attend care farms and the aspects of the experience they perceive as providing value.
- To assess the extent to which care farming impacts on the health and well-being of service users and how associated change manifests itself.
- To measure and quantify the holistic value (economic, environmental and social) provided by a care farm so that the source and relative significance of contributory elements can be conceptualised and compared.

This study enhances the existing knowledge base by incorporating consideration of multiple perspectives. The care farm service users are the primary intended beneficiaries of care farming, and are therefore central to the research, but change in relation to service providers / farmers and the farm environment is also considered, as indeed are outcomes that relate to other significant stakeholders. Combined consideration of these inter-dependent elements will provide a degree of clarity concerning the resultant impact and wider associated value that is absent from the currently available evidence base.

1.2 Outline of thesis content

The thesis is presented in nine chapters, with the first four essentially positioning the research. This introduction has laid the foundations, and the next chapter will build on these by providing greater clarity concerning relevant terms, the broader green care context and the current form and extent of care farming in the UK and elsewhere. Chapter three considers the evidence base regarding the extent and form of the relationship between humanity and the rest of the natural world on the basis that care farms potentially provide a microcosm of that wider space. A historical perspective is incorporated, relevant research is discussed and the added value that this study provides is further clarified. The fourth chapter outlines the theoretical concepts and perspectives that were identified as having particular relevance for this study and informed the development of the research framework.

The fifth chapter outlines the research methods adopted. It explains the research design (including instrument selection, sampling processes, ethical considerations and data collection) and provides the rationale for selecting a mixed methods approach. Relevant strengths and weaknesses are considered from the outset in order that the former can be mutually supportive and the latter effectively neutralised (Cresswell and Clark, 2007). This approach ultimately allows care farming to be more thoroughly explored and better conceptualised with regard to the commonalities that are found to provide value.

The sixth, seventh and eighth chapters encompass the research findings. Data provided by care farms located throughout the UK are incorporated, but these chapters are informed primarily by that which has been collected from care farms in the West Midlands region of England. This geographical area has benefitted from financial input that has supported the regional organisation (CFWM), the development of capacity and this study.

Chapter six focuses on the service provider (farmer and farm) and provides data concerning the nature, scale and practice of care farming in the UK. Relevant developments in the built and more natural farm environment are reported, and evidence is presented regarding care farming's impact for service providers in relation to social and economic outcomes. Chapter seven focuses on the primary intended beneficiary (service users) and initially provides demographic information before then considering why people choose to attend care farms and incorporated activities. The sources of value are identified and the nature of outcomes and associated change is explored. Consideration is also given to aspects of the care farm experience that are more negatively construed.

Chapter eight provides a comprehensive analysis of the impact provided by one care farm in the West Midlands through an assessment of the overall value of the change that results for all relevant stakeholders. The direct financial return (economic) provided by an activity is often reported, but no account is generally taken of associated social and environmental outcomes. A distorted picture of reality can therefore be presented. This chapter measures, accounts for and communicates such wider value through the application of 'Social Return on Investment' (SROI). The people and organisations that are involved with the care farm provide information about what really happens – the nature of change and its relative importance – and the SROI then conceptualises and articulates this from their perspectives.

The ninth and final chapter discusses the evidence provided by this study, relates it to the previously reported literature (empirical and theoretical) and interprets that

which has been presented. It considers the strengths and weaknesses associated with the overall research process and makes informed recommendations regarding future developments.

Key points from Chapter 1

(Introduction)

- Care farming is a form of green care that is also referred to as farming for health or social farming.
- Care farms can take multiple forms but incorporate the therapeutic use of agricultural landscapes.
- This study focuses principally on the impact of care farming on service users and providers in the UK but will also present data provided by other significant stakeholders.
- The form and extent of care farming is assessed, the specific elements that provide value are investigated and associated outcomes and resultant change are explored.
- This study contains a Social Return on Investment (SROI) analysis of an individual care farm. This takes account of all outcomes (economic, social and environmental) to provide an enhanced understanding of overall impact.

Chapter 2

Positioning the Research

This chapter locates care farming in relation to other green care activities and outlines the current extent and form of care farming in the UK and other nations. The discourses of health promotion, social inclusion and agricultural realignment are introduced as these have been presented as having particular relevance to care farming practices (Dessein and Bock, 2010; Sempik *et al.*, 2010). The previously incorporated definition of care farming (Hine *et al.*, 2008a) highlights the centrality of the agricultural setting, and the extent to which this might reflect multifunctional agriculture is discussed. The definition also emphasised the relevance to mental and physical health but fails to reference the social dimension. Consideration is therefore given to that which health and well-being concerns and the particular relevance of this social element to both individual and collective functioning. Health promotion and social inclusion both have relevance to human health and well-being, and the nature of incorporated relationships is assessed before subsequent chapters investigate associated impacts.

2.1 Locating care farming within green care

Care farming is one manifestation of what is more generically described as 'green care'. This term is essentially applied to all activities that utilise elements of nature to help vulnerable and / or socially excluded people to achieve specific positive outcomes (Sempik *et al.*, 2010). Encompassed interventions therefore also include horticulture practices (social and therapeutic), animal assisted activities, ecotherapy, wilderness experiences, forest school and facilitated green exercise. As the name 'green care' suggests, the provision of care is common to all incorporated activities, but the extent to which it is applied, and the form that it takes, varies considerably. Figure 2.1 demonstrates how healthcare, social rehabilitation, education and employment have all been identified as potential elements of this 'care'. It details

the mechanisms through which green care has relevance in these spheres and describes related stakeholders.



Figure 2.1: *Different elements of care within 'green care'* (Sempik *et al.*, 2010)

The level of 'care' can range from structured therapeutic interventions with clearly focused goals to broader more general interventions, and the extent and form of the 'green' element can be equally diverse. This can entail looking at nature, being active in nature, shaping nature and / or interacting with animals (Haubenhofner *et al.*, 2010). Figure 2.2 conceptualises how this applies to various green care strategies. This model outlines the relationship between the different interventions and the level at which nature contributes to the associated process. The extent and form of the engagement with nature is made apparent (experience / interaction), and the different layers suggest associated intent (health promotion, therapy, work).

Mapping the influence of nature – nature as care and therapy

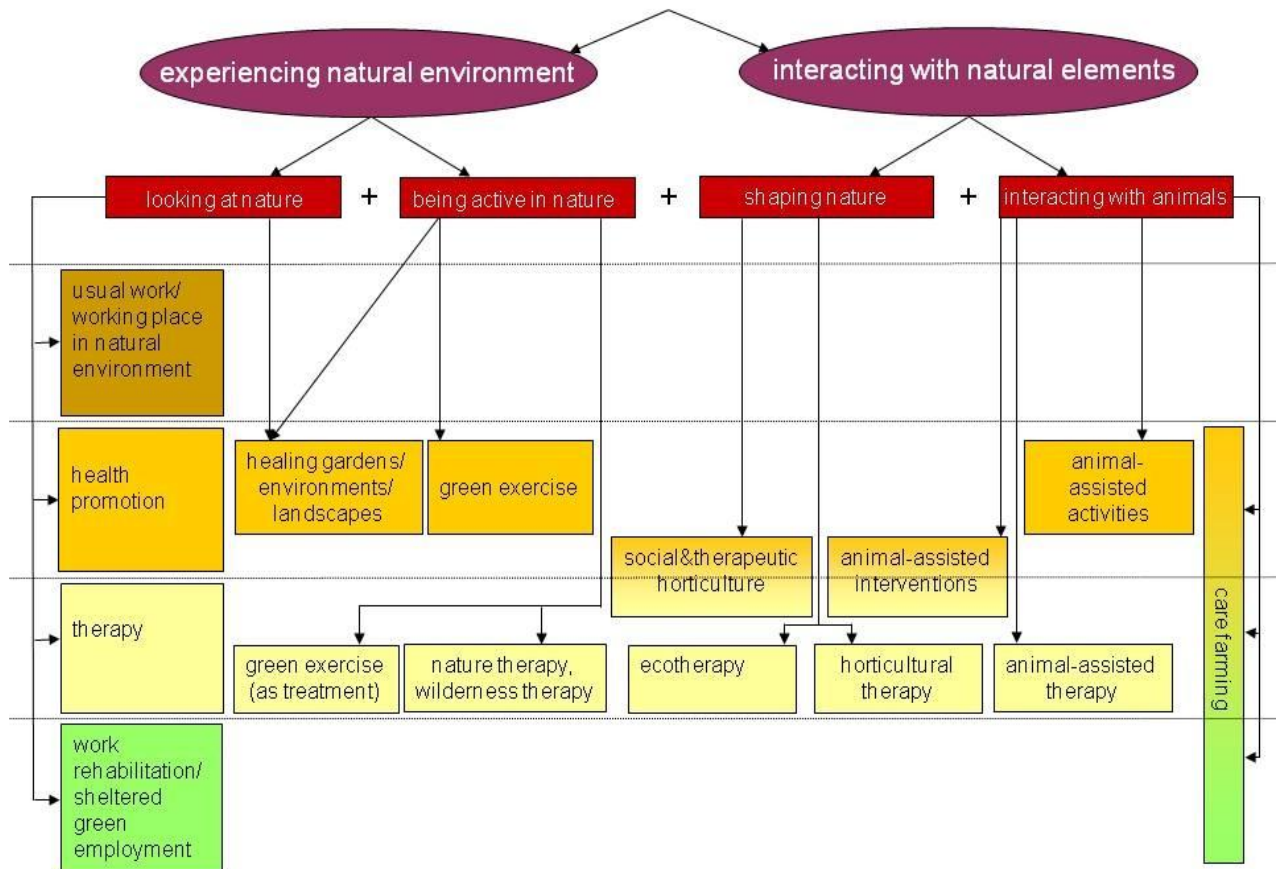


Figure 2.2: *The influence of nature in Green Care*
(Sempik *et al.*, 2010, adapted from Haubenhofer *et al.*, 2010).

Care farming is located to the right hand side of this model for presentation purposes, but the activity is acknowledged by Haubenhofer and colleagues (2010) as actually providing opportunities to experience nature in all the included categories. It is furthermore presented as being able to provide a wider range of elements of care than any other activities. Care farming is therefore shown to be uniquely positioned amongst all green care activities in that it allows the greatest possible combination of aspects – relating to the ‘green’ and the ‘care’ - to be positively incorporated and effectively encompassed. However, consideration is required of how these multiple elements interact and relate when operating in unison so that a model can be developed that more specifically and accurately reflects the care farm experience.

2.2 Multifunctional agriculture, public health and social inclusion

Multifunctional agriculture, public health and social inclusion have been presented as discourses with particular relevance to green care activities, although the extent to which each applies has been suggested to vary between countries and interventions (Dessein and Bock, 2010). The agricultural discourse is implicit in a care farm context and therefore requires specific consideration, whereas public health and social inclusion more directly concern the health and well-being of individuals and communities. These discourses will therefore subsequently be explored through consideration of the nature of their interdependence in these arenas.

2.2.1 An agricultural context

The practice of agriculture has changed immensely in recent years as a result of economic, social, political, environmental and cultural developments, and it is now increasingly common for farm assets to be utilised for purposes that are not entirely focused on production (Dessein and Bock, 2010). Debate continues concerning the extent of this shift, but many farm businesses are now providing additional services that relate more closely to consumption of the countryside (Brandth and Haugen, 2011; Burton and Wilson, 2006; Cloke *et al.*, 2006; Crouch, 2006). Related activities (production and consumption based) are often described in terms of 'multifunctional' agriculture (Wilson, 2007). Some consumption based activities are perhaps better considered as examples of diversification due to the fact that they are further removed from the productive centre (such as storage and hospitality), but care farming is a rare example of an activity that directly combines the productive and consumptive elements.

Regardless of the terminology applied, it is clear that changes in agricultural practice implemented since the end of World War II to facilitate more intensive systems of production across the European Union (EU) have had a negative overall impact for many farmers in relation to increased financial pressures and social isolation (Dessein, 2008; Vik and Farstad, 2009). Economies of scale placed particular strains

on smaller farms, and the requirement to focus on increased production levels (presented alongside the promotion of monoculture and pesticides) helped to generate cultural constructions amongst some farmers of that which constituted 'proper farming' (Burton and Paragahawewa, 2011; Evans *et al.*, 2002; Morris and Evans, 2004). It is not yet clear whether the emergence of multiple activities on agricultural holdings has in any way altered such perceptions, but care farming can be theorised as potentially being positioned to help address a number of current societal divides: between urban and rural, consumer and producer, diet and health. It is therefore likely that associated impact will apply more broadly than merely to those who might directly access such activities in relation to personal health or well-being needs.

2.2.2 The relationship between health and well-being

The identification of the extent to which care farms impact on health and well-being, and the nature of associated change, lies at the heart of this study. Clarity is therefore required regarding that which these terms are perceived as encompassing. The words 'health' and 'well-being' are commonly applied interchangeably or presented as a conjoined phrase, and that to which they individually apply is often unclear. The inherent challenge associated with making such a distinction becomes apparent when consideration is given to the definition of health that was first adopted by the WHO in 1946 and is still applied today.

"Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity" (WHO, 1946, p. 100).

The relevance of physical, mental and social elements is emphasised in this definition, but well-being is essentially presented as being contained within a broader health discourse. The inherent relationship between the two concepts is clear, but this should not result in one simply being subsumed within the other (Ewles and Simnett, 2003).

Well-being incorporates multiple aspects of the human condition, has relevance to individuals and wider communities / societies, and is conceptualised in the following terms for the purposes of this study:

“...’a positive and sustainable state that allows individuals, groups or nations to thrive and flourish’. This means that at the level of an individual, wellbeing refers to psychological, physical and social states that are distinctly positive.”
(Huppert *et al.*, 2004, p. 1331).

Psychological, physical and social dimensions are all incorporated in this definition, as indeed is the positive nature of that which is concerned. It essentially promotes the more ‘eudaemonic’ benefits that are better facilitated through social harmony in place of the more ‘hedonic’ elements that accompany economic wealth (Bruni and Porta, 2007).

A hedonic interpretation of well-being serves the purposes of free market economies / societies that trade on the claim that improved life satisfaction accompanies the accumulation of material assets, but evidence suggests that other factors (such as attitude and engagement) are actually more influential (Cantor and Sanderson, 1999; Seligman *et al.*, 2004). Indeed, a review of the evidence base has suggested that as little as 10% of the variation in subjective well-being is attributable to material circumstances (Michaelson *et al.*, 2009). Around 50% is presented as concerning factors such as personality, genes, and childhood experiences whilst the remaining 40% is provided through the activities engaged with as adults, behaviour, personal goals and general attitude to life. It is these aspects upon which participation at a care farm might potentially exert influence.

Such eudaemonic well-being is essentially that which results from personal fulfilment and supportive relationships, promotes the common good and provides sustainable outcomes for both individuals and wider communities (Bruni and Porta, 2007). It supports Aristotle’s interpretation of true happiness as resulting from engagement with wider society rather than through the satisfaction of purely hedonistic desires

and relates more closely to the 'being' rather than the 'having' mode (Fromm, 2002). It is realising personal potential (developing a sense of purpose and meaning) that is perceived as providing well-being, and supportive social relationships are presented as central to this process (Camfield *et al.*, 2009; White, 2010).

Supportive social relationships enable *"the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations"* (Cobb, 1976, p. 300). Having access to such social support networks has been demonstrated to impact positively on both mental and physical health (Turner, 1981). Positive relationships have been identified with reduced coronary heart disease and schizophrenia, recovery from surgical procedures and the ability to deal with acute stressors such as the loss of functionality and cancer diagnosis (studies cited in Berget and Braastad, 2008). People with functional social support networks have been suggested to live longer and enjoy reduced cognitive impairment (De Vries, 2006), adults with a primary support group numbering three or less people have been found to be more than twice as likely to suffer from psychiatric problems than those with more extensive support networks (Office for National Statistics, 2002), and positive social relationships have been presented as a critical factor regarding feelings of happiness (Argyle, 1987; Diener and Seligman, 2002). They act as a buffer to stress, allow skills to be shared, enable a better understanding of self to develop and thereby facilitate improved personal resilience on a number of levels (Milligan *et al.*, 2004).

Social capital is *"the 'glue' that holds our communities together"* (Hancock, 2001, p. 276) and has been similarly evidenced as supporting both physical health and subjective well-being (Helliwell and Putnam, 2004). The relevance of social capital in relation to health inequalities both within and between populations is theoretically accepted by global institutions such as the WHO and the World Bank (Henderson and Whiteford, 2003), and it is equally widely recognised as impacting on well-being (Wilkinson and Marmot, 2003). Five contributory aspects have been identified, with

these concerning 'social networks', 'civic engagement and participation', 'local civic identity' (sense of belonging, solidarity and equality), 'reciprocity and norms of cooperation' and finally 'trust in the community' (Putnam, 1993, 2000). If care farms are found to facilitate positive outcomes in relation to these factors then associated change can be anticipated to provide increased social capital and well-being.

Research has shown that the personal issues and needs that apply to many of those who attend care farm (such as learning disabilities, mental health issues and addictions) can create a range of additional challenges with regard to the development of meaningful reciprocal friendships (Becker *et al.*, 1998; Goldberg *et al.*, 2003; Thornicroft, 2006). This can, in turn, have a significant negative impact on their wider lives (Bates and Davies, 2004), and result in their being at increased risk of suffering from 'social exclusion' (Armstrong, 2006). The perceived criticality of this issue was made explicit when 2010 was designated within the European Union as the 'European year against poverty and social exclusion'. The following definition highlights the fact that it is people who are already in some way vulnerable that are particularly prone to such exclusion.

"Social exclusion occurs in part through people not gaining access to key parts of community life such as the labour market and in part through a process in which people are gradually excluded as a result of a social problem leading to several other subsequent problems.... There are many causes to why people get into exclusion. Physical and mental disabilities, ethnicity, poverty and difficult conditions during one's adolescence which in worst case can lead to substance abuse and crime are examples of factors which can have an effect on the risk of getting into exclusion" (Ministry of Health and Social Affairs [Sweden], 2006, p. 15).

This definition usefully demonstrates that the various aspects of health and well-being – physical, mental and social – are in reality interrelated, with each exerting influence upon the other. However, the precise nature of the relationship remains

the subject of debate. Whilst Putnam (2000) for instance promoted social capital as the most influential aspect, Wilkinson and Pickett (2006) acknowledged that it played a mediating role, but presented income inequality as the most fundamental cause of health inequality. Helliwell and Putnam (2004) have furthermore proposed that the presence of literature suggesting that physical health is conditioned by social factors (Berkman and Glass, 2000; Ryff and Singer, 2001) supports the assertion that health is, in effect, a pathway through which social factors influence well-being. Uncertainty therefore remains concerning the processes that are involved, but there is nevertheless agreement that social factors effect both physical and mental health and can be anticipated to impact on both personal and collective well-being.

It appears reasonable to assert that the three previously described discourses - multifunctional agriculture, public health and social inclusion – are likely to be interrelated to at least some degree. They have nevertheless individually been presented as having more direct relevance with regard to the development and practice of care farming in some countries than in others. The current extent of care farming will therefore now be considered, with particular attention being given to how these distinctions have exerted influence.

2.3 Care farming in the international arena

The use of agricultural holdings for the provision of green care is evident in many parts of Europe. A shortage of official data, and variation concerning that which is perceived as constituting care farming in individual countries, means that some figures should be treated with caution, but it does nevertheless appear to be an activity that is becoming increasingly widespread. Table 2.1 presents available numbers, with these suggesting that care farming is currently most widely practised in the Netherlands, Norway, Italy and Flanders.

Table 2.1: *Estimated number of care farms in individual countries*

Country	Estimated number of care farms	Year of estimate	Source
The Netherlands	323	2001	Ernst and Young, 2012
	1,050	2011	Ernst and Young, 2012
Norway	950	2010	Pedersen, 2011
Flanders (Belgium)	400	2009	Friedel <i>et al.</i> , 2010
	600	2011	Steunpunt Groene Zorg, 2011
Italy	300	2006	Hassink and van Dijk, 2006
	>1,000	2010	O'Connor <i>et al.</i> , 2010
Finland	200 - 300	2010	O'Connor <i>et al.</i> , 2010
Austria	250	2006	Hassink and van Dijk, 2006
The United Kingdom	76	2007	Hine <i>et al.</i> , 2008a
	189	2012	Care Farming UK, 2012
Germany	150	2006	Hassink and van Dijk, 2006
Sweden	100	2010	O'Connor <i>et al.</i> , 2010
Ireland	100	2010	O'Connor <i>et al.</i> , 2010

Similar practices are also evident elsewhere in the world, despite not necessarily being conceptualised in these terms. A care farm for young people with learning disabilities has recently opened in Taiwan (Bartholomew, 2013), and comparable, less formalised, activities take place on farms in Eastern Europe and elsewhere. In Romania, for example, there are farms that provide sheltered accommodation and work for young people leaving local orphanages / foster programmes and social enterprises run small farms that engage and support low income families and vulnerable children. Related green care activities are practised in the USA and elsewhere, but these are more commonly presented as 'horticultural therapy' and 'animal assisted therapy', despite sometimes taking place on agricultural holdings and involving crops and livestock.

Care farming varies in definition and extent between countries, but there is broad agreement that it is primarily initiated by farmers and other practitioners rather than by relevant health care providers (Di Iacovo, 2008; Di Iacovo and O'Connor, 2009;

Hassink and van Dijk, 2006; Hine *et al.*, 2008a). Research has identified quite fundamental differences in how care farms operate in different countries, with this being suggested to relate, in part at least, to how individual countries adapted to changes in social structures in the 1970s (Di Iacovo and O'Connor, 2009; Hassink and van Dijk, 2006). The situation in Italy has, for instance, been presented as being influenced by the closing of mental health care institutions, whilst associated developments in Germany accompanied the establishment of sheltered workshops (Di Iacovo, 2008). The fact that care farming is referred to in many European countries as social farming might also reflect differences in practice, as indeed might the extent to which they have developed in response to specific requirements for agricultural realignment (Di Iacovo, 2008).

The discourses of public health, social inclusion and multifunctional agriculture were specifically presented to help conceptualise distinctions regarding that which care farming might concern in alternative national arenas (Dessein and Bock, 2010). It was explicitly acknowledged that not all care farms in individual countries fit neatly into any single category, but these categorisations highlight the relevance and influence of specific national needs and structures, and provide a useful framework within which to consider that which might apply in the UK context. This is perhaps particularly pertinent given the fact that no single discourse is presented as having ascendancy in the UK, with elements of each instead being suggested to be evident (Dessein and Bock, 2010).

Multifunctional agriculture is considered to be the primary frame of reference in the Netherlands, with green care being highlighted as an important source of farm income (Hassink *et al.*, 2007). Emphasis is placed on the fact that care is provided by farmers, on private farms, and is thus distinct from institutional and other forms of health care (Elings and Hassink, 2008). Three alternative funding streams apply, with these being individual payments from the national health care reimbursement system, payments from personal budgets or private arrangements with individual

care institutions (Roest *et al.*, 2010). A broadly similar discourse is suggested to apply in Norway and Flanders, although care farmers in these countries are more likely to enter into formal agreements with local authorities (Goris *et al.*, 2008).

The discourse of public health is more widely applicable in Austria (Wiesinger *et al.*, 2006) and Germany (Neuberger *et al.*, 2006), where participation on care farms often occurs as an integral element of a broader treatment programme. The garden or farm concerned is commonly attached to an 'institution' and generally works with larger numbers of people (Haubenhofner *et al.*, 2010). Social inclusion is suggested to underpin the service provided in Italy, with many care farms having developed through the co-operative movement. The activity is commonly perceived as a form of civic duty and is focused not only on improving health but also on facilitating social cohesion (Di Iacovo *et al.*, 2006). A similar situation has been presented as applying in France and Ireland, with care farms generally operating with neither institutional support nor formal regulation (Di Iacovo, 2008; Di Iacovo and O'Connor, 2009).

Care farming in the Netherlands is promoted as that which is most developed in terms of size, organisation, recognition, finance and assurance (Dessein and Bock, 2010), and this model has informed many developments in the UK. The first UK care farmer starter pack (Care Farming West Midlands, 2009) was, for instance, informed by the Handbook for Dutch Care Farmers (National Support Centre, 2001) and the associated Dutch Quality Assurance Workbook (National Support Centre, 2002). Care farms in the Netherlands have been suggested to take two distinct forms. First there are traditional family farms that retain agriculture as their primary focus but seek diversification to generate additional income, and second there are those that have been developed specifically to provide care services that are effectively supported by the agricultural activities (Oltmer and Venema, 2008). The extent to which this situation is reflected in the UK is considered later in this study, but it is anticipated that elements of the Dutch model will have influenced, to at least some degree, the practice of care farming in the UK.

2.4 Care farming in the UK

The term 'care farming' has been applied in the UK context since 2005, and represents a direct translation of the phrase used to describe the activity in the Netherlands ('Zorgboerderij'). The National Care Farming Initiative (NCFI) was formed in the same year, with this having resulted from a conference that was arranged in response to an increasing recognition of the value that such activities might provide.

"Each organisation separately and synchronously became aware of a number of individuals and/or families offering on-farm health, education and welfare services for people with a range of specialist or particular needs, and the potential for deep, lasting and sustainable healthcare development through engaging with nature, the land and in particular the farming communities of the United Kingdom." (National Care Farm Conference, 2005, p.2)

The NCFI essentially sought to provide support and guidance for all stakeholders involved in what was perceived as a growing, yet unrepresented, form of service provision. Care Farming UK (CFUK) replaced this organisation in 2012, and in its reconstituted form acts as a hub to share information and coordinate activities, develop appropriate policies, organise publicity and lobby government / decision makers.

The NCFI commissioned a scoping study in 2007 to gauge the extent and form of care farming in the UK, and this identified a total of 76 care farms that were operational in the UK (Hine *et al.*, 2008a). However, the websites associated with both the NCFI and CFUK have contained 'online directories' incorporating basic information about all known care farms in the UK, and these suggest that the numbers have since increased substantially. In July 2010, there were 130 operational and 90 prospective care farms registered, and by February 2012, this had increased to 189 practicing and a further 206 prospective care farms (G. Tate, personal communication, February, 2012). One hundred and seventy two service providers were listed when the website

was consulted in order to contact care farms for the purposes of this study in July 2011. Figure 2.3 outlines the geographical regions of the UK in which the care farms identified by Hine and colleagues (2008) were located and compares these numbers to those that could be located on this occasion. This regional breakdown with regard to total numbers highlights the presence of significant geographical disparity in the extent to which the activity is currently established.

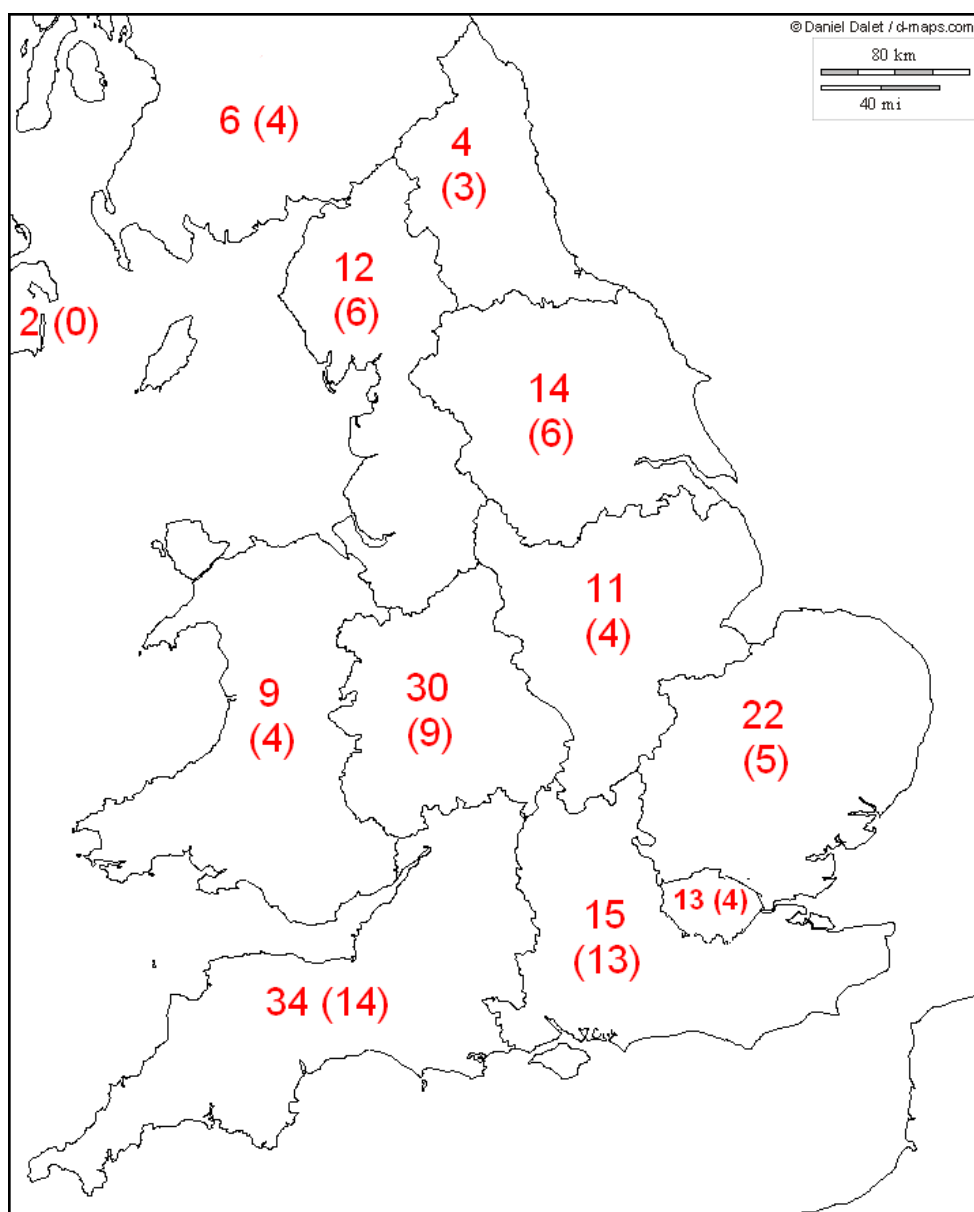


Figure 2.3: *The distribution of care farms in the UK by region, 2011 (2007)*

Care farming is therefore an activity that has become increasingly widespread in the UK in recent years, and yet scope would still appear to exist for further development when consideration is given to the extent to which it is practised in some other countries, and the fact that care farms are currently underrepresented in some areas of the UK compared to others. Care farms have previously been described as enabling people to interact with multiple elements of nature – including animals, horticulture and wilder spaces – and consideration will be given in Chapter 3 to the ways that research has suggested such interaction might impact on human health and well-being.

Key points from Chapter 2

(Positioning the Research)

- Care farming is increasingly practised in the UK and elsewhere.
- Care farming is uniquely positioned amongst green care interventions because participants can actively engage with the widest range of natural elements and health / well-being promotion strategies.
- Health promotion, social inclusion and multifunctional agriculture have been presented as discourses with particular relevance to the development and practice of care farming in individual European countries. None of these have been identified as having ascendancy in the UK context.
- Human health and well-being is associated with each of these discourses and is central to that which care farms seek to provide.
- Health and well-being are inter-related concepts that are influenced by physical, mental and social factors.
- Care farming outcomes are likely to concern a eudaemonic interpretation of well-being that presents this as developing through functioning social support networks that encourage the realisation of personal potential.

Chapter 3

The Relationship between People and Nature

Care farms seek to provide enhanced health and well-being by engaging people with the farm environment in a structured and facilitated way. Sir Michael Marmot's independent review of health inequalities in the UK (conducted on behalf of the Department of Health) recently highlighted the presence of a growing body of evidence that demonstrated the importance of the relationship between human health and engaging with the wider natural world (Marmot *et al.*, 2010). Agricultural landscapes contain many essentially natural elements that have been the subject of specific research – such as animals, horticulture, woodland and other 'green' spaces – and this chapter therefore incorporates some consideration of this evidence alongside that which more directly concerns care farming.

It is important to be clear from the outset about that which 'nature' and 'natural' environments are perceived as encompassing for the purposes of this study. This factor is often overlooked, despite being a complex and contested concept (Clayton and Opatow, 2003). The natural environment has previously been described as "*our nonhuman surroundings*" (Simmons, 1993, p. 11), with this distinction concerning whether or not the space has faced human influence / interference (Vining *et al.*, 2008). However, it is reasonable to assert that there is nowhere in the UK to which this applies, particularly given that "*by changing the weather, we make every spot on earth man-made and artificial*" (McKibben, 1989, p. 58). Nature is therefore considered in this instance as incorporating all animals (wild, livestock and pets) and green spaces (wild, managed and cultivated).

3.1 A historical perspective

Green care and care farming have only been conceptualised in such terms relatively recently, but the relationship between the natural environment and human health has been acknowledged, and sometimes intentionally harnessed, throughout

recorded human history (Bird, 2007; Frumkin, 2001; Hickman, 2009; Sempik *et al.*, 2010; Ulrich, 1993). The Industrial Revolution is generally associated with bleak, harsh urban living and working conditions for increasingly large numbers of people, and it is perhaps not therefore surprising that this period was accompanied by a growing awareness and promotion of a connection between natural elements / spaces and human health / well-being. Benjamin Rush, signatory to the American Declaration of Independence, was one of those who wrote extensively during the late 18th and early 19th century about the health benefits associated with ‘institutionalised’ people engaging in work in a natural environment (Davis, 1998).

The value provided by natural environments to human mental health was further promoted by influential commentators during the second half of the 19th century. The journalist and landscape architect F.L. Olmsted made the following claim in a report presented in 1865 (some years after he had designed Central Park in New York) concerning the land that subsequently became Yosemite National Park.

“It is a scientific fact that the occasional contemplation of natural scenes of an impressive character, particularly if the contemplation occurs in connection with relief from ordinary cares, change of air and change of habits, is favourable to the health and vigour of men” (Cited in Hartig, 2007, p. 165).

Although no evidence is provided to support this ‘scientific fact’, similar observations were also being provided by academics. William James (author of ‘The Principles of Psychology’) articulated related benefits in the following terms in his work entitled ‘On a certain blindness in human beings’ (1899).

“Living in the open air and on the ground, the lop-sided beam of the balance slowly rises to the level line; and the over-sensibilities and insensibilities even themselves out.” (Cited in James and Wilshire, 1984, p. 339).

Florence Nightingale also highlighted the positive value provided by elements of the natural world in relation to human health, with her influential ‘Notes on nursing’ (1859) containing the following advice for supporting patient recovery.

“Therefore, that they should be able, without raising themselves or turning in bed, to see out of window from their beds, to see sky and sun-light at least, if you can show them nothing else, I assert to be, if not of the very first importance for recovery, at least something very near it” (Nightingale and McDonald, 2004, p. 104).

She similarly promoted the value of opening windows and enabling patients to breathe fresh air, and perceived, and presented, benefits as also accompanying engagement with animals.

“A small pet animal is often an excellent companion for the sick...If he can feed and clean the animal himself, he ought always to be encouraged to do so” (Nightingale and McDonald, 2004, p. 119).

Despite interaction with such natural elements therefore being valued, and industrial urbanisation being recognised as having contributing to mental health problems by separating many people from nature, there was an accompanying perception amongst many Victorians that ‘wilderness’ might also encourage ‘wildness’ in people (Philo, 2004). Relatively domesticated examples of nature such as farmland and parks were therefore commonly promoted, with this being, in part at least, because the more savage elements were thereby tamed and a situation could be provided in which *“nature is mediated by morality”* (Foucault, 1967, p. 196).

Nineteenth century residential institutions often contained animals for the express purpose of reducing the need for drugs and restraints (Willis, 1997), and farms and gardens were similarly incorporated for the wider value that they provided. They helpfully produced fresh food, but additional physical and mental health benefits were perceived as being generated by the provision of productive work opportunities in a managed, but nevertheless natural, environment.

“We find that the patients derive more benefit from employment in the garden than anywhere else, and this is natural, because they have the advantage of

fresh air as well as occupation" (Nottingham Borough Asylum, 1881, p. 11, cited in Parr, 2007, p. 542).

The benefits of being active outside, growing food and engaging with animals in order to reduce the risk of illness and encourage recovery continued to be promoted during the earlier part of the 20th century, with a 1920 report on the health services provided by doctors in the UK noting how "*exhortations on growing your own food, eating well on your rations, and getting fresh air and exercise were plentiful*" (Rivett, 1998, p. 5). However, the development of more scientific medicine, combined with increasing concerns regarding the potential misuse of patients as an unpaid workforce, resulted in interaction with animals and the natural environment becoming increasingly excluded from treatment settings as the 20th century progressed (Sempik *et al.*, 2010). A more 'risk averse society' (Gill, 2007) instead placed greater emphasis on the dangers associated with zoonoses and the criticality of providing sterile environments (Allderidge, 1991).

The situation is now changing once more, with this accompanying an increased recognition that, despite the best efforts of well-funded national medical healthcare systems, some manifestations of ill-health (including depression, diabetes, obesity and cardiovascular disease) continue to grow (Pretty *et al.*, 2005; Wilkinson and Pickett, 2010). The similarly expanding body of empirical evidence that was highlighted by Marmot and colleagues (2010) is also likely to have contributed to reigniting interest in the relationship between human health and the natural environment, and this is now considered.

3.2 Evidence of nature impacting on human health and well-being

Previous literature reviews and meta-analyses have similarly concerned the available evidence about the relationship between the natural environment and human health and well-being; this is a topic that has relevance to natural, social and applied sciences and associated focus and intent therefore varies. Whilst some have been

fairly generic (Morris, 2003; Bird, 2007; Bowler *et al.*, 2010; Frumkin, 2003; Gezondheidsraad, 2004; Maller *et al.*, 2008; Newton, 2007; Townsend and Weerasuriya, 2010), others have more specifically focused on particular practices. These include green exercise (Barton, 2008; Priest, 2005; Thompson Coon *et al.*, 2011), social and therapeutic horticulture (Relf, 1992; Sempik *et al.*, 2003), animals (Brodie and Biley, 1999; Filan and Llewellyn-Jones, 2006; Fine, 2006; Pedersen, 2011; Wilson and Barker, 2003) and woodland / wilderness experiences (Hine *et al.*, 2009; O'Brien, 2005; Travlou, 2006). Research evidence regarding green care activities that relate specifically to children (Munoz, 2009; Travlou, 2006) and elders (De Bruin, 2009; Filan and Llewellyn-Jones, 2006) has also been reviewed. The conclusions drawn by these various reviews regarding the extent and efficacy of the evidence base are broadly comparable, and relevant elements will unfold as the chapter progresses.

Studies commonly concern physical, mental and social health / well-being, but no previous review has been identified that specifically considers the evidence according to these criteria. This will now be undertaken to avoid merely replicating previous literature reviews, provide a fresh perspective and gain a clearer understanding of the extent to which each aspect of health / well-being has been suggested to change through interaction with nature. It is nevertheless important to acknowledge also that these elements are, in reality, often interrelated, interdependent and multi-directional. Improved mental health has, for instance, been found to result in people being less inclined to engage in behaviour that is detrimental to their physical health (Russell and Mehrabian, 1976), but increased physical activity has similarly been evidenced as impacting positively in relation to various psychosocial factors (Peacock *et al.*, 2007; Pretty, 2004; Rimmele *et al.*, 2009; Townsend and Weerasuriya, 2010). The inherent complexity of human health and well-being is apparent in this chain of events, as indeed is the potential merit of treating individuals holistically rather than merely focusing on one element of the greater whole.

3.2.1 Nature supporting physical health and well-being

Active participation on a care farm is likely to provide physical health benefits associated with increased exercise, but there is also evidence available to suggest that just spending time passively viewing nature can also impact positively on physical health. Many of the informing studies have taken place in hospitals and prisons, with this perhaps reflecting the facts that they are sometimes located in green spaces, the setting allows extraneous variables to be better controlled and more active engagement is generally limited (Kellert and Wilson, 1993).

An early hospital based study was informed by data relating to the recovery of two matched groups of people recovering from the same surgical procedure (Ulrich, 1984). Patients with a view of a natural scene as opposed to a wall were on this occasion found to have been discharged quicker, needed fewer painkillers and were thought by staff to have generally been more cooperative. This study is commonly cited, but has been criticised on the grounds that the sample size was too small (46), data were collected over too long a period (10 years) and looking at a wall might actually have been having a detrimental effect rather than the view of nature being beneficial (Rohde and Kendle, 1994). However, a subsequent hospital based randomised control trial ($n=80$) similarly found that significantly reduced levels of pain were reported by the intervention group who were exposed to natural sights and sounds during their surgical procedure (Diette *et al.*, 2003).

The previously reported study (Diette *et al.*, 2003), suggested that positive physical outcomes can result from being exposed to 'pretend' nature, but other studies have failed to detect similar outcomes. Kahn and colleagues (2008) conducted a study that involved three groups of thirty people being exposed to the same stressors before viewing either a real natural scene, a similar natural scene on a plasma screen or a brick wall. They found that the view of actual nature resulted in the most rapid decrease in heart rate, and identified no significant difference between the groups who looked at the plasma screen and the blank wall.

Epidemiological studies have also suggested that positive physical health outcomes result from living in areas that contain more natural spaces. Takano and colleagues (2002) undertook a longitudinal study of 3144 elderly Tokyo residents and identified accessible green spaces and a positive attitude towards the local community as the factors that showed the most significant predictive value ($p < .01$) regarding their still being alive after five years had elapsed. Mitchell and Popham (2008) classified the entire English population that was under the retirement age according to area-based income deprivation and access to green spaces, and investigated the causes of death amongst 366,348 people who died between 2001 and 2005. All-cause mortality and circulatory disease mortality were found to be lower in the areas with the greenest environments. However, these studies did not take account of the extent to which such areas were accessed, and other variables might also have been exerting influence.

Physical activity is known to provide health benefits relating to reduced blood pressure and cholesterol levels (Hartig *et al.*, 2003; Maller *et al.*, 2006), and research has also considered the extent to which such outcomes might be mediated by the environment in which it takes place. Pretty and colleagues (2005) conducted a study that involved all participants exercising on treadmills, but whilst being exposed to different environmental scenes. The study population ($n=100$) was divided into five equal sized groups, and, whilst one of these just exercised, the others did so whilst looking at images that reflected 'rural pleasant', 'rural unpleasant', 'urban pleasant' or 'urban unpleasant.' Blood pressure, self-esteem and mood were measured before and after the exercise. Self-esteem scores were found to increase in all instances, significantly improved cardiovascular health accompanied both the rural and urban pleasant scenes, and mood was found to be more negatively affected by the rural unpleasant than the urban unpleasant (Pretty *et al.*, 2005). This study did not therefore identify significant differences between the impacts provided by pleasant urban and rural environments, but interestingly suggested that people might

associate urban landscapes with increased squalor or be particularly concerned about preserving the beauty of greener places.

Reductions in blood pressure have similarly been identified as resulting from animal interaction (Fine, 2006). A study of 92 cardiac outpatients reported that blood pressure dropped in the presence of friendly dogs and that pet owners were likely to live longer (Friedmann *et al.*, 1980). Associated physical activity was considered unlikely to have been solely responsible for the variation because an improved survival rate was also identified amongst owners of animals that did not require exercise. This evidence reignited interest in the relationship between animals and human health and well-being (Serpell, 2006), but it is also particularly noteworthy for the purposes of the currently reported study that the amount of time people spent outside and employment were also identified as significant variables.

Subsequent research has further supported these findings, with statistically significant increases in the levels of neurochemicals associated with decreasing blood pressure having been identified not only in people with dementia ($n=18$) but also amongst the animals ($n=18$) with which they interacted (Odendaal, 2000). A review of literature concerning the psychophysiological effects of long-term human-animal interaction reported inconsistencies in the evidence base, but nevertheless concluded that such contact did appear to moderate baseline physiological variables (Virues-Ortega and Buela-Casal, 2006).

3.2.2 Nature supporting mental health and well-being

A body of evidence concerning the extent to which having a view of nature influences mental health has emanated from studies conducted with residents of public housing developments in Chicago, USA (Faber Taylor *et al.*, 2002; Kuo, 2001; Kuo and Sullivan, 2001). Associated papers are based on the same city population, and the wider transferability of findings is not assured, but they suggest that the

presence of even minimal greenery in poor urban environments can enable a range of positive consequences.

Domestic violence was found to be less common amongst those with a view of green spaces, and these residents also perceived themselves as better able to manage major life issues more effectively than did those with a view of concrete (Kuo and Sullivan, 2001). Subsequent mediation tests were presented as suggesting that this variation resulted from reduced levels of mental fatigue and increased attentional capacity (Kuo, 2001). Another study conducted in the same housing complex ($n=169$) found that girls living in apartments with green views scored higher on tests of concentration and self-discipline, but no such change was apparent amongst boys. This was hypothesised as reflecting the fact that boys were more likely to spend time playing outside and therefore less dependent on the view for accessing related benefits (Faber Taylor *et al.*, 2002).

Three studies conducted with over 100 students compared the extent to which similar outcomes were provided by viewing 'real' and 'pretend' natural images. They found that, although exposure to nature on a video screen increased participants' abilities to resolve minor personal problems, this ability increased further when the view was of real nature (Mayer *et al.*, 2009). However, mediational analysis was in this instance presented as suggesting that this resulted from increased connectedness to nature rather than as a result of the increased attentional capacity proposed by Kuo (2001).

University of Essex researchers have undertaken various studies that concern the relationship between the natural environment and mental well-being in recent years, with self-esteem and mood being the aspects that are repeatedly measured. Significantly improved levels in relation to both of these aspects have been recorded following walks in a country park as compared to an indoor shopping centre (Peacock *et al.*, 2007), and studies concerning green exercise in other natural environments have reported similarly positive outcomes (Barton, 2008).

A meta-analysis of the scores provided by ten different studies identified noteworthy improvements in both mood and self-esteem as resulting from even relatively short green exercise activities (Barton and Pretty, 2010). Diminishing returns were found to result from more sustained activities, but improvements nevertheless continued. A wide range of green environments were evidenced as having been found to be beneficial, although the presence of water was highlighted as particularly influential. The largest increases in self-esteem scores were present amongst younger age groups and people with a mental illness, whereas the smallest changes in mood applied amongst the younger and older age groups (Barton and Pretty, 2010).

Various studies have suggested that children benefit from contact with nature, with attention often focusing on impacts relating to attention deficit hyperactivity disorder (ADHD) and the alleviation of aspects of anxiety and depression that specifically relate to this group (Munoz, 2009). Faber Taylor and colleagues (2001) collected questionnaire data from the parents of 96 children with an attention deficit disorder and this suggested that the children's functioning improved in green settings, with the degree of change being positively related to the extent of the nature concerned. A subsequent study directly engaged with the children, and involved 17 participants with ADHD (aged between 7 and 12 years) undertaking three different 20 minute walks in consecutive weeks (Faber Taylor and Kuo, 2009). Whilst one was in a park, the other two were in well-maintained urban settings ('downtown' and 'neighbourhood'). Concentration levels were found to be significantly higher (large effect size) following the walk in the green environment.

Forest School was originally developed in Scandinavia, but is now applied more widely, to enable young children to interact with nature. It essentially seeks to counteract what has been described as 'nature deficit disorder' (Louv, 2005) by encouraging positive childhood development through outdoor experiences. Case studies concerning Forest School have highlighted increased independence, confidence and self-esteem as resulting for children from being able to safely explore

and experience the natural world with only minimal adult guidance (O'Brien and Murray, 2007). Interview data collected from thirty school teachers evidenced direct contact with nature as being considered to provide a sense of empowerment, improve self-esteem and increase school engagement (Maller, 2009). A link has furthermore been presented as existing between nature based play in childhood and subsequent levels of health and wellbeing in young adults (Bingley and Milligan, 2004).

With regard to mental health outcomes associated with engaging with animals, a study of 938 Medicare patients conducted over a 1 year period found that pet owners were able to cope better with stressful events and visited the doctor less frequently, but health status and income were also identified as contributory factors (Siegel, 1990). Another study concerned changes in anxiety levels amongst 230 psychiatric in-patients following recreation therapy sessions as opposed to animal-assisted sessions (Barker and Dawson, 1998). Statistically significant reductions in scores were identified amongst patients with specific mood disorders following both sessions, but such change was only apparent amongst people with psychotic and 'other' disorders following the animal assisted activity.

3.2.3 Nature providing social value

Before considering the evidence concerning the presence of a relationship between green places and social well-being, it is important to acknowledge the presence of some research promoting the centrality of personal solitude rather than a group context. For example, Hartig and Evans (1993) proposed that it was not merely interaction with nature that restored people, but that the absence of social pressures, and not being required to meet the expectations of other people, were also contributory factors. A more recent study by Hartig further supported this claim, with students who were shown pictures simulating walks in a forest and an urban centre indicating that the company of others would increase their preference for the urban but not the natural environment (Hartig and Staats, 2004). However, an earlier

study of twelve female wilderness experience participants suggested that personal restoration and social interaction could comfortably take place in unison and be mutually supportive (Fredrickson and Anderson, 1999). Content analysis of their diaries and interviews indicated that the opportunities for inner reflection and attention restoration had been positively enhanced by the supportive group context.

Some evidence concerning the extent to which having access to nature influences social relationships has emanated from the previously described series of studies conducted with residents of public housing developments in Chicago, USA. Coley and colleagues (1997) identified a significant increase in the amount of social interaction that took place in spaces containing trees, with these being found to attract larger groups of people and facilitate increased integration between young people and adults. However, no attempt was made to identify people's motivation for using the space and it has been suggested that this might have related to the presence of shade rather than the green element more specifically (Gezondheidsraad, 2004).

Two further studies in Chicago specifically concerned female (Kuo *et al.*, 1998) and elderly residents (Kweon *et al.*, 1998). The residents who spent time in the public spaces containing trees were on these occasions found to speak to people more, communicate better, be more likely to know their neighbours by name and to feel a stronger sense of community. However, it was acknowledged by the authors that the populations concerned were generally living in poverty, did not have access to internal communal areas, were often not sufficiently mobile to be able to develop social contacts elsewhere and may already have been socially connected prior to accessing the green spaces.

Subsequent studies sought to explore this relationship further by comparing two neighbouring urban areas. These found that the one containing more green areas was once again felt by residents to have a better sense of community because they were more inclined to spend time outside and interact socially (Kim and Kaplan, 2004). Eighty three per cent more individuals were found to engage in social

activities within the outdoor areas that contained trees and grass than was the case in those areas where such elements were absent (Sullivan *et al.*, 2004). These studies were therefore united in suggesting that people are particularly inclined to interact socially in the presence of nature and that this subsequently transfers into their wider lives.

Horticultural activities that come under the broad umbrella of green care are often referred to as 'social and therapeutic horticulture'. This phrase was specifically selected because it "*acknowledges the social dimensions of those activities, that is, that the benefit is not solely reliant on the interaction between the practitioner and the client but on the interaction of all participants – clients, staff and volunteers*" (Sempik *et al.*, 2005, p. 36). Sempik and colleagues observed following their related literature review (2003) that no previous study concerning therapeutic horticulture had directly referred to social inclusion, but that horticultural activities had nevertheless been evidenced as providing social value to a wide range of potentially vulnerable groups. Relevant case studies have included those concerning young people, older people, those with mental health problems (cited in Quayle, 2008) and those with physical health problems (Unruh, 2004). The group context and related opportunities for interaction have been identified as contributing to various positive outcomes (Milligan *et al.*, 2004), with these including improved communication skills (Seller *et al.*, 1999) and social bonding (McGuinn and Relf, 2001).

The associated development of social networks has been particularly highlighted by studies of community gardens, with this having been evidenced as a significant outcome regarding lower income neighbourhoods (Armstrong, 2000), elders (Milligan *et al.*, 2004) and people dealing with mental health issues (Fieldhouse, 2003). The social network is presented as a mechanism for overcoming social exclusion that acts as a catalyst for people to address personal issues whilst also working together for the benefit of the community as a whole; it thereby facilitates empowerment at both an individual and group level (Armstrong, 2000). The study

conducted by Milligan and colleagues (2004) was ultimately only informed by 19 participants, but natural and built environments were found to be perceived very differently. Whilst the former were considered to contribute positively to mental well-being as a result of both active and passive elements, the latter were more negatively construed, with 'fear of crime' being presented as particularly relevant. The associated social network was furthermore highlighted as being valued for its reciprocity, wherein benefits accrued as a result of providing as well as receiving support (Milligan *et al.*, 2004).

Fredrickson and Anderson (1999) analysed personal field journals and interview data provided by 12 female participants of wilderness experiences and found that, although the solitude was valued for providing opportunities for personal reflection, *"the affective appeal of a particular place setting has as much to do with the social interactions that occur there, as with the overall visual appeal of the landscape itself"* (p. 36). Similar outcomes were identified by a study of four wilderness programmes in the USA (Russell and Phillips-Miller, 2002), and supported the findings of an earlier analysis of outcomes from 96 different adventure programmes that highlighted the centrality of improved social and interpersonal skills (Hattie *et al.*, 1997). A literature review concerning wilderness experiences also usefully highlighted the fact that associated social impacts will not just apply to participants.

"Social changes included an improvement in communication between participants and the wider society, resulting in improved interpersonal and family relationships, the development of trust and increased social capital" (Hine *et al.*, 2009, p. 5).

Research concerning interaction with animals has suggested they have a social function that impacts on the health and well-being of people of all ages, in both home and institutional settings (Ormerod, 2008; Verderber, 1991). Animals have been presented as particularly valuable for helping people to understand and subsequently apply appropriate social behaviour as a result of their allowing people

to feel loved, cared for and esteemed (Serpell, 2006), whilst also providing immediate, unambiguous and apparent responses to the treatment they receive (Kruger and Serpell, 2006). Katcher undertook various studies relating specifically to children's engagement with animals and reported improvements regarding self-image, social competence and cooperation and reduced levels of aggression (Katcher, 2002).

Pet animal ownership has long been recognised as increasing levels of social interaction whilst outside in the natural environment (Messent, 1983), but it is less clear whether this subsequently translates into relationships that provide social support at an individual level or increase social capital at a community level (Wood *et al.*, 2005). Despite this proviso, working with horses has been presented as promoting feelings of wider social acceptance (Ewing *et al.*, 2007), and animal-assisted therapy has also been found to increase the length of conversations between participants (Bernstein *et al.*, 2000) and overall conversational skills (Barak *et al.*, 2001). Interaction with animals has therefore been suggested to provide a range of social benefits, with these including company, social support, comfort and entertainment, encouragement to bond with other human beings and the facilitation of caring and affectionate behaviour (Enders-Slegers, 2000).

3.2.4 Nature supporting generic health and well-being

Other studies have considered more generic outcomes than those previously outlined. Whilst some have measured overall quality of life and / or health, others have collected more qualitative data with the specific intent of achieving a broader understanding of associated change and contributory elements.

Epidemiological research in the Netherlands and the UK has presented the amount of green space around the home environment as positively related with both the mental and physical health of residents (De Vries *et al.*, 2003; Maas *et al.*, 2006, 2009; Mitchell and Popham, 2008). These studies were informed by data collected for other purposes and failed to take account of the actual amount of time that

people spent in the green spaces, but a related study has intentionally incorporated these elements (Nielsen and Hansen, 2007). Analysis of questionnaire data provided by over 1000 Danish adults on this occasion suggested that having access to a garden or living near to a green space was associated with both reduced stress levels and less likelihood of obesity, regardless of the frequency with which these were utilised.

A study conducted in the UK on behalf of the mental health organisation MIND surveyed 108 people who were involved with green exercise (Peacock *et al.*, 2007). Most of those concerned (52%) belonged to gardening groups, and the most commonly presented benefits concerned 'getting out in the fresh air', 'meeting new people' and 'getting fitter'. However, widespread agreement was expressed that both physical (90%) and mental (94%) health had improved as a result, and that it was the combination of the natural context and exercise that provided the associated value (90%).

Sempik and colleagues (2005) conducted a comprehensive study that incorporated data from 24 social and therapeutic horticulture projects in the UK. This was informed by interviews with 137 service users with a range of social, physical and mental health needs, 88 project staff and carers and 11 health professionals. Reported outcomes were found to concern each of the following elements: 'social outcomes', 'work and employment', 'nature, freedom and space', 'self-confidence and self-esteem' and 'physical and mental health'. Approximately half the service users also indicated that relationships with family and friends had improved as a result of their participation.

A similarly broad range of relevant and applicable outcomes were presented following a more recent study that collected data from service providers at 21 green care projects that included community allotments, gardens, farms and stables (Quayle, 2008). Participants (clients and volunteers) at seven of these were also consulted concerning their perceptions of the experience and the value provided. A grounded theory approach on this occasion identified the following key themes:

‘social interactions and inclusion’, ‘health’, ‘natural therapy’, ‘skill development, training and education’, ‘environmental awareness and activities’ and finally ‘economic’. The social element was described in terms of friendship, inclusion, social skills, community spaces and integration (Quayle, 2008). Various green care activities were therefore in this instance presented as providing comparable outcomes, but other studies have more specifically concerned care farms and these will now be considered.

3.3 Care farms supporting health and well-being

Studies conducted in the Netherlands have consulted specific service user groups concerning the actual elements of the care farm experience that are perceived as most important, and these have suggested that a farm environment can provide multiple benefits for multiple stakeholders. Elings and Hassink (2008) presented evidence collected from focus groups involving 42 care farm participants with ‘psychological or addiction problems’ and suggested the following aspects to be critical:

- The community on the farm
- The attitude of the farmer
- The type of work
- The green environment
- The social context

These can be compared to those which were identified subsequently following interviews with farm participants with learning disabilities (Elings, 2012):

- The farmer as a role model
- Meaningful work
- Small scale
- Social network
- Clients are addressed on the basis of possibilities

There are therefore similarities in the elements that are identified, but there are also differences. The green environment is not presented as a critical factor in relation to people with learning disabilities, with the emphasis instead appearing to relate more to the fact that they are able to actively and effectively engage. However, the social dimension is highlighted as central by both studies.

“The social aspect – the feeling of belonging, and being accepted and respected – is clearly at the top of the list of aspects of care farms that the participants value” (Elings and Hassink, 2008, p. 320).

The previous studies also presented data relating to outcomes that result from participation at care farms. With specific regard to people with ‘psychological or addiction problems’, the most significant change was identified as concerning ‘general well-being’, ‘sense of freedom / space’ and ‘integration into society’ (Elings and Hassink, 2008). Participants reported benefits resulting from feeling that they were accepted and respected for who they were, being able to be themselves and belonging to an inclusive (service users and providers) and yet diverse (in terms of background and needs) social group (Elings and Hassink, 2008).

A study reported by Elings (2012) was informed by questionnaire data provided by participants when they started at a care farm, six months later and after a year. 149 participants completed the baseline version (113 from care farms and the remainder from other work based programmes), 67 completed the second (53 from care farms) and 28 completed the final element (21 from care farms). The questionnaire contained standardised items measuring quality of life and psychosocial functioning, but identified no significant changes amongst either care farm participants or those engaged elsewhere. However, care farm participants reported reductions in their use of addictive substances and their need to access relevant care services.

Hassink and colleagues (2011a) conducted a study that concerned disengaged young people (aged 16 - 20) who were participating in a farm-based ‘live and work’ intervention. The first six months of this 12 month programme are spent on the

farm, and questionnaires were completed by participants at the beginning and end of the programme and also after another 12 months had elapsed. Positive effects were reported in relation to behaviour (internalised and externalised) and self-respect. Relevant change in these spheres was still found to be in place twelve months after completion of the programme, but no change was identified in relation to their ability to deal with problems (coping behaviour).

Older people with dementia also participate at Dutch care farms, and specific consideration has been given to their experiences. De Bruin (2009) compared the dietary intake of 30 care farm participants with 23 people in 'regular' day care and found the former group to have higher intake levels with regard to energy, carbohydrates and fluids. This can be a particularly important outcome for people with dementia who are often particularly prone to suffer as a result of reduced appetite (De Bruin, 2009). Evidence has also been presented concerning the extent to which associated functional decline is affected by participation at a care farm, but no significant differences were on this occasion identified (De Bruin *et al.*, 2012).

In 2011 the Federation of Care Farmers in the Netherlands developed a 'client satisfaction system' that is currently collecting on-going comparable data from care farm participants. It has not been possible to access further information concerning that which this contains, but small-scale pilot studies are understood to have been completed in relation to older people, children/young people and people with psychiatric issues (Hassink *et al.*, 2011b, reported in Elings, 2012). These studies are suggested to present similar key elements to those that have previously been highlighted:

- The importance of learning new skills
- Doing things together
- Having social contacts
- Being outside with plants and animals

It has previously been hypothesised that evidenced behaviours and outcomes resulting from engaging with pet animals will apply equally to contact with farm animals (Bokkers, 2006), and some studies have considered how this applies in practice. Mallon (1994) undertook an early exploratory study of the experiences of 80 children (73 male) at Green Chimneys, a residential treatment centre in New York that pioneered the use of farm livestock (cows) as a treatment approach.

Questionnaires and interviews suggested that the children used the animals similarly to a more traditional therapist; they spoke openly to them knowing that what they said would not be repeated and their mood subsequently improved. Valuable and transferable nurturing skills were also presented as resulting from the activity (Mallon, 1994).

Scholl and colleagues (2008) conducted a study in Finland that involved people who had been hospitalised through mental health problems working with goats. Ten participants completed questionnaires containing scale statements and open-ended questions over the course of the four month programme, although no more than four people were ever actually present on individual occasions. No significant change in scale scores was reported, but participants described having enjoyed being outside in nature, doing meaningful work and being part of a supportive social group. They indicated that this had caused them to feel calmer and invigorated. Behaviour and well-being were presented as having improved whilst in direct contact with the goats, but this was not found to translate into change in their wider lives.

Berget and colleagues (2008a) consulted 60 psychiatric therapists in Norway and two-thirds of these indicated that therapy with farm animals had the potential to contribute better to improved mental health than other types of occupational therapy. The same research team undertook a related randomized controlled trial (RCT) that involved 90 people with psychiatric disorders; 60 participated in an intervention involving work with farm livestock and pets and the remainder received more standard therapy (Berget *et al.*, 2008b). Those in the treatment group were

presented as displaying increased intensity and exactness of work at the end of the 12 week intervention, but no significant changes were found in relation to scale scores concerning self-efficacy, coping ability and quality of life over the period in question. However, repeat measures conducted six months after completion of the programme identified significant improvements (moderate effect) amongst the treatment group with regard to self-efficacy and coping ability, and no similar change was evident amongst the control group (Berget *et al.*, 2008b). This therefore suggests that positive effect might apply over the longer-term despite not necessarily being immediately apparent.

Another RCT conducted in Norway and again utilising farm livestock reported comparable findings, with this once again concerned a twelve week intervention with psychiatric patients and a follow-up investigation after six months had elapsed. Anxiety and depression were on this occasion measured, with 41 people from the treatment group and 28 from the control group completing the programme. Depression levels were found to be significantly lower at follow-up compared to baseline amongst both groups, but, although there was no significant reduction in anxiety amongst either group at the end of the intervention, this was subsequently found to be the case amongst the treatment group (Berget *et al.*, 2011). The outcomes identified by these studies were presented as being only moderate, with this being hypothesised as perhaps relating to sample sizes, the rather unspecific nature of the interventions and / or the fact that those concerned had been dealing with relevant issues for many years and rapid change should not therefore be anticipated (Berget *et al.*, 2011). However, it is noteworthy that the treatment group in both RCTs recorded longer-term improvements than the control groups.

Another study conducted in Norway highlighted the relationship between the level of social interaction (conversation) with the care farmer and the presence of symptoms of anxiety and depression (Pedersen *et al.*, 2011). This study concerned fourteen adults with clinical depression who worked with dairy cattle twice a week

over a twelve week period. Levels of anxiety and depression were found to decrease and self-efficacy to increase over the course of the intervention, with a favourable association being reported with regard to the extent of the social contact that took place with the farmer concerned. Participants were also filmed near the beginning and end of the programme, and correlations were observed between progress in work tasks that involved interaction with the animals and improved mental health (Pedersen *et al.*, 2011).

Evidence concerning care farming outcomes in the UK is currently scarce, but the NCFI sponsored scoping study collected some valuable qualitative data about farm activities and measured short-term change in self-esteem and mood (Hine *et al.*, 2008a). Scales were completed by 72 participants immediately before and after participating at a single session on the care farm. A significant improvement in self-esteem scores was evident amongst 64% of the participants ($p < .01$), and this also applied to all six of the measured mood factors (anger, confusion, depression, fatigue, tension and vigour), with 88% of respondents recording an improvement to their overall mood. Interviews with service users identified the following as the most enjoyable elements of the experience: 'being out in the fresh air', 'being with the animals', 'gaining confidence from learning new skills' and 'having the opportunity to spend time with other people' (Hine *et al.*, 2008a).

A project called W.E.L.L.I.E.S. (Wellness, Education, Learning, Laughter, Inspiration, Environment, Skills) that took place in the UK over a six month period between 2009 and 2010 was evaluated through interviews and the completion of a scale measuring multiple elements of mental well-being (Hegarty, 2010). Eighty-nine people with mental health issues actively participated in a wide range of indoor and outdoor activities on a number of farms in Staffordshire, but these were mutually supportive in so far as they broadly concerned animals, plants and other elements of the natural world. Forty-nine participants completed the Warwick-Edinburgh mental well-being scale (WEMWBS) near the beginning and end of the project, with all but three of this

number recording higher scores on the second occasion. This study therefore suggested that relevant benefits might be sustained over a longer period of time than the previous UK study (Hine *et al.*, 2008a) had been able to assess.

3.4 The extent and efficacy of the combined evidence base

Frumkin observed in 2003 that the available evidence demonstrated that “*contact with nature seems to be good for health, at least for some people in some circumstances*” (2003, p. 1452), and that which is available to support this assertion has increased considerably in the last ten years. Research studies considered in this chapter have emanated from various academic disciplines, and have been informed through the application of a range of research methodologies, but broadly similar conclusions are generally reported. It has previously been suggested that the most compelling evidence is provided by studies that concern being able to see and having access to nature (Frumkin, 2003), but positive health outcomes relating to physical, mental and social well-being have also been presented as resulting from being active in various natural environments and engaging with animals (pets and livestock).

The spiritual value associated with nature received only minimal direct consideration in this review, but this dimension is nevertheless acknowledged. Scientific enquiry has been suggested to commonly avoid this topic because of it being hard to define, let alone measure, but natural places are internationally perceived as sacred sites, and transformational experiences often take place in nature (Huppert *et al.*, 2005). Nature has furthermore been suggested to promote spiritual wellbeing by enabling inner reflection, contributing to personal growth and providing feelings of wholeness and belonging (Burns, 2009). Spirituality is most commonly discussed in research concerning older people (Heliker *et al.*, 2001) and those suffering from serious illnesses (Unruh, 2004), with this perhaps relating to their having a heightened awareness of the transient nature of the human form.

There is widespread commonality amongst relevant studies concerning the fact that rural environments are more positively perceived than their urban counterparts (e.g.

Berman *et al.*, 2008; Berto, 2005; Hartig *et al.*, 2003; Van den Berg *et al.*, 2007). The evidence also suggests the presence of a direct link between having access to local green space and various aspects of health and well-being (e.g. De Vries *et al.*, 2003; Grahn and Stigsdotter, 2003; Kuo, 2001; Takano *et al.*, 2002), and spending time actively engaging in such environments has been widely evidenced as enhancing mood and self-esteem (Barton and Pretty, 2010). Positive outcomes have similarly been identified as relating to the physical exercise, social contact and opportunities for personal development (e.g. Milligan *et al.*, 2004; Quayle, 2008; Sempik *et al.*, 2005).

Some studies have presented green spaces as providing restorative environments that help to reduce stress, allow directed attention levels to be restored and protect against future stressors (e.g. Hartig *et al.*, 2003; Hartig and Staats, 2006a; Kaplan, 1995; Kaplan and Kaplan, 1989; Ulrich *et al.*, 1991). Associated theories are discussed further in the following chapter, but these studies have commonly adopted an experimental or quasi-experimental format and are essentially consistent in suggesting that attention restoration and stress alleviation are facilitated by natural environments. Research participants have been found to perform better at a range of tasks after having been exposed to natural elements (e.g. Faber Taylor *et al.*, 2002; Kuo, 2001; Tennessen and Cimprich, 1995), and positive outcomes are commonly presented regardless of whether emotional, attentional or physiological measures have been applied (Hartig and Staats, 2006b).

Hartig and Staats (2006b) highlighted the fact that comparable results concerning restorative benefits had been informed by different study populations and had been obtained from both laboratory and field settings. However, it should equally be noted that many of these studies related to residents of public housing in a single US city or students who often receive course credits or financial recompense in exchange for their participation. This should not therefore be considered a representative sample of the global population. Some studies were furthermore

informed by data provided by people imagining mood states, and, even in cases where attempts were made to induce mood change (such as Ulrich *et al.*, 1991), there is no guarantee that results will be comparable to those applying in reality.

Some of the studies reviewed were informed by data provided by very small samples (e.g. McGuin and Relf, 2001; Peacock *et al.*, 2008; Scholl *et al.*, 2008), and the significance and wider applicability of the results is therefore particularly uncertain. At the other end of the scale, epidemiological studies have presented relationships between green spaces and human health and well-being, but claiming causality is particularly challenging when datasets have originally been collected for other purposes, and other variables have also been presented as exerting influence (e.g. De Vries *et al.*, 2003; Maas *et al.*, 2006; Mitchell and Popham, 2008). However, comparable results were presented by studies that directly collected data specifically for their own purposes (e.g. Grahn and Stigsdotter, 2003; Nielsen and Hansen, 2007).

Relevant literature reviews generally agree that there is a compelling body of evidence to suggest that green spaces can facilitate a range of positive outcomes, but concerns have nevertheless been expressed regarding the validity of some studies and the conclusions that can reasonably be drawn. One review that specifically considered physical exercise reported that additional mental well-being benefits appeared to result from this taking place in natural places, but highlighted the fact that a lack of methodological clarity, combined with the application of a wide range of outcome measures, prevented direct comparisons being made (Thompson Coon *et al.*, 2011). Sempik and colleagues (2003) also observed following their comprehensive review of the evidence relating to horticultural activities that many of the studies concerned were broadly discursive and that sufficient detail concerning process and results was often absent.

Bowler and colleagues (2010) raised a number of concerns regarding the extent to which the available evidence adequately demonstrated the presence of a relationship between health and nature. They concluded that, whilst there was a

fairly substantial body of evidence suggesting that mental well-being might have improved, that which demonstrated physiological change was smaller, and therefore less compelling. They also highlighted the fact that data were commonly generated through short-term tests that might similarly reflect only short-term change. They accepted that methodological challenges would always be present when seeking to evidence the relationship between nature and health/well-being, but suggested that greater clarity could be provided concerning relevant processes and procedures (Bowler *et al.*, 2010).

Various studies have demonstrated that human and animal interaction can impact positively on human health and well-being (e.g. Antonioli and Reveley, 2005; Barak *et al.*, 2001; Richeson, 2003), with associated outcomes providing physical, mental and social benefits (Brodie and Biley, 1999; Enders-Slegers, 2000; Katcher and Friedmann, 1980). It has nevertheless also been highlighted that studies are often insufficiently powered, of poor design or insufficiently randomised (Filan and Llewellyn-Jones, 2006), and that some have failed to detect significant relationships between animals and human health (Beck and Katcher, 2003). Filan and Llewellyn-Jones (2006) also drew attention to the shortage of evidence concerning the longevity of associated change or the relative benefits of resident as opposed to transient animals, and this aspect might have particular relevance in a care farm context.

It has previously been observed that it is the physical and mental health impacts that are most commonly highlighted (De Vries, 2006; Milligan *et al.*, 2004; Patterson and Chang, 1999). Sempik and colleagues (2003) noted following their literature review that, although associated relevance was sometimes inferred, they had found no instances in which social inclusion was directly referenced as a positive related outcome. This literature review has identified the social aspect as often being acknowledged as relevant, but this factor sometimes seems to be overlooked or understated during subsequent discussions. The University of Essex has conducted

multiple studies in the UK that have related to various green care interventions (e.g. Barton, 2008; Hine *et al.*, 2008a; Peacock *et al.*, 2008; Pretty *et al.*, 2005). The combined data, provided by more than three thousand people, has been suggested to present the following three primary outcomes (Peacock *et al.*, 2007):

- The improvement of psychological well-being.
- The generation of physical health benefits.
- The facilitation of social networking and connectivity through enhanced social capital.

However, despite acknowledging the relevance of each of these three spheres, consideration of the psychological element often focuses on mood and self-esteem, and only short-term change is sometimes considered. The relevance of social connectivity and networking outcomes can also sometimes appear to receive less detailed consideration than those that relate to mental and physical health. Evidence is certainly available to suggest that the natural context can contribute to improved physical and mental health and well-being, but there is also a great deal that highlights the social context as being at least equally critical (e.g. Parr, 2007; Patterson and Chang, 1999).

“Horticulture is rarely specifically referred to....The project’s great value, and what has helped literally save lives, is that it provides a community” (Cherry Tree Nursery, 2010, p. 85-6).

It has previously been hypothesised that the widespread tendency to focus on the role of the natural environment for improving health has served to encourage the effective ‘medicalisation’ of nature and resulted in the subjugation of alternative discourses (Brown and Bell, 2007). Even in those instances where the relationship between green spaces and well-being is claimed to be the subject under investigation, well-being is easily conflated with health and this has perhaps contributed to the social dimension often being effectively side-lined (Newton, 2007). A misplaced perception that evidence must meet objective scientific / medical

criteria to be considered suitably robust might also have contributed to this situation (Newton, 2007), but, regardless of cause, it is important that due consideration is given to all potentially contributory factors if associated value is to be better understood.

3.5 The value of this study

Care farming is an activity that is increasingly practised in the UK, but the associated evidence base concerning the nature and efficacy of incorporated interventions and processes remains minimal (Sempik *et al.*, 2010). Consideration has been given to the extent, form and potential of care farming in individual countries within the UK, with studies having focused specifically on the Welsh (Williams and Randall-Smith, 2011) and Scottish (Homer, 2011; Skerratt and Williams, 2008) contexts and some consideration of the situation in Northern Ireland having been incorporated in a report concerning Ireland as a whole (McGloin and O'Connor, 2007), but these are not yet supported by empirical evidence concerning cause, effect and outcomes. Previous studies in England have measured change following a single session at a care farm (Hine *et al.*, 2008a) and amongst a group of people with mental health issues who had participated in a fixed term intervention that utilised various venues (Hegarty, 2010), but no evidence is currently available concerning the extent to which change is sustained, how this manifests itself in participants' wider lives and the associated impact on farms, farmers and related stakeholders.

It is evident that multiple elements contribute to human health and well-being, with the natural environment being only one of those that might be found to exert influence on a care farm. This study will provide an enhanced understanding of how the various aspects interlink in a care farm context. The relationship between physical, mental and social factors has been shown to be equally complex, with personal health and well-being being mediated by a combination of factors. A holistic examination of how these interrelate in the care farming context will provide greater clarity concerning the extent and form of the value that is provided. The particular

need for research that specifically considers the cause and effect relationships that green care interventions provide has been highlighted (Sempik *et al.*, 2010), and this study will present those that are found to apply on care farms in the UK.

This research provides new knowledge and insights concerning not only the elements that are perceived by care farm stakeholders as providing value but also the nature of associated change. It does not focus purely on specific pre-defined elements of health and well-being, but instead explores subjective outcomes more broadly in order to achieve a better understanding of that which the participants themselves feel is really happening for them. In instances where change is identified, this study will provide an analysis of both form and wider impact.

“The full economic benefits of promoting care farms as a health, social or educational care resource are not yet fully understood.” (Hine *et al.*, 2008a, p.44).

The Public Services (Social Value) Act came into force in the UK on 31 January 2013 and requires public authorities to take account of all economic, social and environmental elements when procuring or commissioning services. The final Act is not legally binding with regard to small contracts such as those that generally apply to care farms, but it further demonstrates the timely nature of a study that incorporates consideration of all these elements and conceptualises the combined economic impact. The following chapter presents the theoretical approaches that informed this study and suggested the pathways that were subsequently explored.

Key points from Chapter 3

(The Relationship between People and Nature)

- The relationship between human health and the natural world has been acknowledged throughout recorded human history, but was increasingly over-looked during the 20th century.
- A fairly comprehensive evidence base is available to suggest that engaging with the natural environment can provide physical, mental and social benefits.
- Positive outcomes have been presented as resulting from engaging with animals, viewing nature, being passively present in it and actively engaging with it.
- Social elements are more commonly incorporated in relation to process rather than outcomes.
- Most care farm studies have emanated from the Netherlands and Norway. Positive outcomes are presented, but significant measurable change is not always identified.
- This study provides a fresh perspective by focusing on sustained longitudinal outcomes, exploring the nature of associated change and articulating this in economic terms to clarify wherein the value might lie.

Chapter 4

Towards a Theoretical Framework

Western psychology has traditionally focused primarily on the individual inner psyche, and less consideration has been given to interactive relationships with other people and the rest of nature (Huppert *et al.*, 2005). Sigmund Freud was perhaps partially responsible for this, as he firmly located the psyche 'within' and the rest of the world 'outside' (Roszak, 1992), but the evidence presented in Chapters two and three has suggested that these relationships can actually exert profound influence on personal functioning and are likely to be central to care farming outcomes. This chapter outlines the theories and models that informed this study and explains how they accommodate external environmental influences (social and natural).

The Biophilia Hypothesis, Attention Restoration Theory and Psycho-Evolutionary Stress Reduction Theory will be described and considered, as these underpin much of the literature concerning the relationship between human well-being and the natural environment that was reviewed in Chapter three. A preliminary model that incorporates the various sources of impact suggested by the literature review to potentially apply in a care farming context is then provided; this informed the areas that were specifically explored for the purposes of this study.

4.1 The relationship between human functioning and social context

The relationship between social circumstances, health and well-being was outlined in Chapter two, and the evidence presented in Chapter three demonstrated that social interaction and inclusion have relevance to green care activities and associated outcomes. The Social Cognitive Theory and the Mandala of Health are now presented as frameworks from within which to conceptualise the processes through which care farms might exert influence and facilitate change.

4.1.1 Social Cognitive Theory

Social Cognitive Theory specifically seeks to accommodate the impact of the wider social context in relation to individual human functioning (Bandura, 1986). It presents such functioning as the product of personal, behavioural and environmental factors, and conceptualises the associated relationship as one of 'reciprocal determinism', wherein each influence, and are influenced by, the others (Bandura, 1986). Positive change can thereby be facilitated by improving cognitive, emotional or motivational aspects, increasing behavioural competencies or changing social factors (Bandura, 1989). The theory rejects assertions that social behaviour can be explained purely through consideration of environmental factors, and proposes instead that these affect it more indirectly by influencing aspects such as aspirations, expectations and self-beliefs (Bandura, 1997).

Social Cognitive Theory is underpinned by an understanding of human agency wherein every individual is proactively engaged in their own development and thereby able to initiate personal change. The human capacity for self-reflection allows people to make sense of, and learn from, experiences, so that thinking and /or behaviour can consequentially be adjusted accordingly (Bandura, 1986). People are presented as both products and producers of their environment and social systems. Individual lives are intertwined and learning is perceived as taking place not only through personal experience but also through observing the behaviour of others (Bandura, 1997).

The development of a positive attitude towards personal abilities can be facilitated by appropriate social support, and such self-efficacy is presented as central to human functioning and a major determinant of behaviour (Bandura, 1986). Self-efficacy beliefs influence the personal choices that are made, the effort that is expended and the resilience that is demonstrated in the face of challenges (Schwarzer, 1992). Those with high self-efficacy are considered more likely to perceive things as positive challenges rather than as threats and are therefore less likely to give up in the face of

difficulties (Pajares and Schunk, 2001). Those with low self-efficacy are suggested to avoid situations and tasks that they perceive as potentially challenging, lower their goals accordingly, feel less confident and act accordingly (Bandura, 1997).

Social Cognitive Theory suggests that self-efficacy beliefs develop from the following four principal sources (Bandura, 1997):

- Mastery experience (interpreting results from previous performance).
- Vicarious experience (seeing others - particularly perceived peers rather than theoretical experts - perform similar tasks).
- Social persuasion (positive and genuine encouragement to recognise that it is worth 'having a go').
- Somatic / emotional states (negative reactions decrease self-efficacy beliefs from the outset).

Since Bandura first introduced the Social Cognitive Theory and the construct of self-efficacy, empirical research has identified associated beliefs as having a profound impact on subsequent levels of attainment (Stajkovic and Luthans, 1998), and self-efficacy has even been suggested to be the most consistent predictor available regarding behavioural outcomes (Graham and Weiner, 1996). If care farms are found to provide opportunities and experiences for participants to develop improved self-efficacy then Social Cognitive Theory theorises that this will also impact on their wider lives.

4.1.2 The Mandala of Health

The Mandala of Health similarly incorporates social and environmental elements in relation to individual human functioning, but locates these in a wider communal context (Hancock, 1985). The individual is firmly located at the centre of the model, but the role of the family (or similar) regarding health values, attitudes, and habits is also recognised. As Figure 4.1 demonstrates, this model accommodates elements that concern personal health and well-being (mind, body and spirit) whilst simultaneously acknowledging the role of external influences.

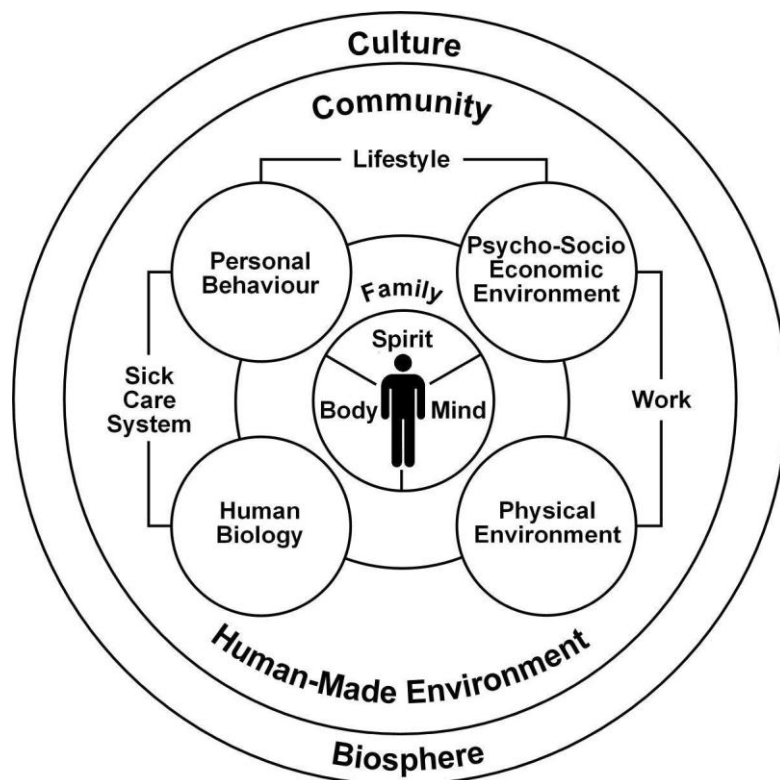


Figure 4.1: *A model of the Mandala of Health* (Hancock, 1985)

The Mandala of Health presents four principal factors as influencing personal health and well-being, with these concerning human biology, personal behaviour, psychosocial environment, and physical environment. The medical dimension of health ('sick care system') is presented as primarily relating to behavioural and biological elements, whilst 'work' promotes health through the psychosocial elements of the experience and the nature of the physical space where it takes place. 'Lifestyle' relates to personal behaviour but lifelong socialisation processes and the psychosocial environment that is inhabited are also incorporated as exerting influence in this sphere (Hancock, 1985). This model therefore presents health as incorporating biomedical (objective), functional (social) and perceived (subjective) elements; it is the social and subjective dimensions that perhaps most directly relate to well-being, and it is these elements upon which participation at a care farm is hypothesised as potentially facilitating positive change.

4.2 The relationship between human functioning and natural context

Despite acknowledging that the presence of his dog during therapy sessions could facilitate associated processes, Freud did not perceive the natural world as promoting well-being (Fine, 2006). *"Nature is eternally remote. She destroys us – coldly, cruelly and relentlessly."* (Freud, cited in Roszak, 1996, p.22). However, some psychologists now refute this assertion and ecopsychology specifically seeks to take fuller account of humans' ecological embeddedness (Metzner, 1999). This approach proposes that the current disconnection between human and nonhuman nature is harming both people and planet (Bernstein, 2005), and seeks to heal this separation through therapeutic techniques that encourage natural experiences and the development of a sense of place (Roszak, 1992; Scull, 2008).

Ecopsychology more closely reflects the perspective adopted by Carl Jung who noted in a seminar given in 1928 that *"People got dirty through too much civilization. Whenever we touch nature, we get clean"* (cited in Sabini, 2002, p.1). Unlike Freud, Jung promoted the importance of reconnecting with nature and suggested that everyone should work a four-hour day and have a small plot of land on which to spend the rest of their time (Sabini, 2002). The Biophilia Hypothesis, the Attention Restoration Theory (ART) and the Psycho-Evolutionary Stress Reduction Theory (PET) are the theoretical pathways most commonly applied to conceptualise the relationship between the natural environment and human health and well-being (Bowler *et al.*, 2010), and these will now be individually considered. The concept of biophilia essentially presents an instinctive human need as having developed in response to our evolutionary connection with the natural environment (Wilson, 1984), and ART and PET seek to conceptualise the mechanisms through which this connection impacts on personal well-being (Sempik *et al.*, 2010). Both concern the restorative effects that natural environments provide, but they differ with regard to the processes considered to underpin the relationship and outcomes (Hartig, 2007).

An understanding of these differences and similarities is therefore required in order to conceptualise the elements that might be expected to contribute towards the care farm experience.

4.2.1 The Biophilia Hypothesis

The Biophilia Hypothesis was developed by Edward Wilson and asserts that people have a genetic, instinctive, predisposition to connect with natural landscapes and organisms (Wilson, 1984).

“In short, the brain evolved in a biocentric world, not a machine-regulated world. It would be therefore quite extraordinary to find that all learning rules related to that world have been erased in a few thousand years, even in the tiny minority of peoples who have existed for more than one or two generations in wholly urban environments” (Wilson, 1993, p. 32).

A detailed knowledge of, and understanding about, the natural world is presented as having supported personal survival since the beginning of human history, and the Biophilia Hypothesis proposes that this developed over time into a genetically based connection with natural environments that broadly resemble the African savannah in which we evolved (Wilson, 1984).

The Biophilia Hypothesis theorises that nature causes a range of emotions that can be negatively or positively construed (Wilson, 1993). A genetic predisposition to certain landscapes is suggested to have resulted in people generally responding positively to elements such as scattered trees, grassland, water and animals (non-threatening) that are contained within open natural environments (Kellert and Wilson, 1993). Artificial man-made elements (such as power lines and industrial landscapes) are presented as manifestly separate from the environment in which humans evolved and more likely to promote negative responses (Kellert, 1997; Ulrich, 1993), particularly given the relative rapidity of associated changes (Glendinning, 1995). Modern environments theoretically provide for our physical

needs, but the associated mental costs of becoming increasingly separated from the rest of the living world are presented as immense (Gullone, 2000).

Biophobic tendencies are considered to further support this theory, with people continuing to display fears of animals that no longer present a real physical threat (Kellert and Wilson, 1993). An early epidemiological investigation in the UK for instance identified people as being more scared of snakes than the dentist, despite being more likely to suffer pain through contact with the latter (Agras *et al.*, 1969). Genetic mechanisms are similarly suggested to underpin the sense of well-being that is provided by animals with a relaxed demeanour that have historically shown themselves to be non-threatening (Melson, 2001).

The Biophilia Hypothesis is therefore a construct that relates not only to why people might feel the need to spend time in more natural environments but also why they might benefit from having the opportunity to re-engage their “*innate tendency to focus on life and lifelike processes*” (Wilson, 1984, p.1). It remains unproven (no specific associated genetic mechanisms have been identified), but is an influential conceptual framework concerning the relationship between human behaviour and the world in which it is located, and care farms will certainly provide participants with opportunities to actively engage with the elements of the more natural world that are presented as being positively construed.

4.2.2 Attention Restoration Theory (ART)

ART concerns cognitive changes that accompany improved mental functioning, and suggests that restoration occurs more rapidly in some environments than others (Kaplan and Kaplan, 1989). It was proposed and subsequently developed by the Kaplans, but was informed by the work of William James (1892) concerning distinctions between voluntary (or directed) and involuntary attention. Whilst voluntary attention is suggested to require levels of effort and concentration that cause fatigue, involuntary attention demands negligible cognitive effort and enables personal restoration (Kaplan and Kaplan, 1989).

Voluntary attention is presented as being required to negotiate modern urban lifestyles that contain multiple distractions (such as traffic and associated infrastructure) which impact negatively on mental functioning (Kuo and Sullivan, 2001). Associated fatigue has been suggested to provoke a range of negative outcomes including irritability, indecisiveness, irrational behaviour and increased stress (Van den Berg *et al.*, 2007). Involuntary attention, on the other hand, accommodates more relaxing sights and sounds such as those that are more generally found in natural environments (Van den Berg *et al.*, 2007). The inherent restorative element is considered to enable recovery from mental fatigue and to result in people generally preferring nature dominated landscapes to those which have been constructed by humans (Kaplan and Kaplan, 1989).

The following four components have been identified as particularly applying to natural environments and are theorised as being the elements that provide restorative benefits (Kaplan and Kaplan, 1989):

- People have the sense of being removed from the more normally perceived daily trials of life (being away).
- The feeling of extent and space associated with nature helps provide perspective (extent).
- Engaging with the natural world (process and/or content) stimulates senses (fascination).
- Nature is generally viewed as a supportive and harmonious environment (compatibility).

ART has been suggested to have been most widely applied in relation to therapeutic horticulture (Sempik *et al.*, 2010), but associated research has more commonly and broadly concerned the extent to which the provision of attention restoration varies between urban and rural environments. Whilst some studies have been informed by people looking at pictures of urban or rural environments (Berto, 2005; Herzog *et al.*, 1997), others have required them to spend time in one or other of these places

(Berman *et al.*, 2008; Hartig and Staats, 2006a). Various attention tests and scales were applied before and after these activities, and significantly improved scores were in all instances presented as applying to those who had received the rural experience. These studies, and others reporting comparable attention restoration outcomes (Staats *et al.*, 2003; Tennessen and Cimprich, 1995), were all informed by student samples (who are often rewarded for their participation), and the wider applicability of findings is therefore questionable, but broadly comparable results have also been presented by smaller numbers of studies involving other sample populations (Regan and Horn, 2005; Stark, 2003).

4.2.3 Psycho-Evolutionary Stress Reduction Theory (PET)

PET similarly concerns the restorative qualities that natural environments provide, but presents these as resulting from reduced stress levels rather than the replenishment of attentional capacities (Ulrich, 1981). It proposes that affect precedes cognition, and emphasises the significance and immediacy of emotions and feelings. Stress is presented as the body's reaction to changes that require physical, mental or emotional responses, with problems emerging when it is felt (real or imagined) that these cannot be adequately accommodated (Ulrich, 1979). Non-threatening natural environments are not considered to demand the processing of excessive amounts of information and stress levels are suggested to decrease accordingly (Ulrich *et al.*, 1991).

PET therefore proposes that the physiological and emotional changes associated with non-threatening natural environments are affective reactions that take place through direct stress reduction mechanisms (Hartig and Staats, 2006b; Kahn *et al.*, 2008; Ulrich, 1981). The biological affinity to nature promoted by the Biophilia Hypothesis is perceived as causing an immediate reaction that takes place before the environment has been analysed more cognitively (Ulrich, 1983). This theory contends that related changes can be measured via physiological indicators that reflect

autonomic arousal (Ulrich *et al.*, 1991), and that positive changes quickly result from exposure to natural scenes that are perceived as calm and pleasant (Ulrich, 1993).

Ulrich presented his research as undermining ART by virtue of the fact that, when participants watched a stressful film prior to being exposed to videos containing the sights and sounds provided by one of six different natural or urban setting, both the stressor film and the natural environments resulted in high levels of involuntary / automatic attention (Ulrich *et al.*, 1991). However, subsequent recovery in relation to blood pressure and muscle tension was found to be fastest and most profound following exposure to the natural scenes. Despite not always being directly presented in relation to the applicability or otherwise of PET, other studies have similarly found statistically significant relationships between the proximity of green space, the amount of time that is spent in such places and self-reported stress levels (Grahn and Stigsdotter, 2003). Care farms are enabling people to spend extended periods of time in non-threatening natural environments, and stress levels might therefore diminish accordingly.

4.2.4 Combining ART and PET

Both ART and PET concern the restorative effect of nature, but whilst the former is presented as affecting thought processes that need to be measured via psychological parameters, the latter is concerned with a more immediate reaction that is better measured physiologically (Bird, 2007). An integrative framework has sought to accommodate both stress and attention in the context of human-environment relationships by hypothesising that attention fatigue may provoke the stress response, and that experience in natural environments can mitigate stress whilst also aiding in the recovery of directed attention (Kaplan, 1995). However, this framework simultaneously contended that attention fatigue could exist regardless of stress, and that the absence of such fatigue could in itself prevent stress (Kaplan, 1995). Kaplan therefore continued effectively to contend that attention fatigue was central to the relationship between the natural environment and human health and well-being.

An alternative and perhaps more conciliatory proposition suggested that the differences between the two theories might relate primarily to the time scales concerned, with attentional fatigue apparently taking longer to develop than stress, and recovery from stress being more rapid (Hartig *et al.*, 2003). There are clear differences in the mechanisms that ART and PET present as lying at the heart of the relationship, but there is nevertheless agreement concerning the underlying tenet that passive engagement with nature is beneficial for humans. Care farms and other green care activities can potentially therefore intentionally harness associated affective and cognitive processes for therapeutic purposes whilst simultaneously accessing benefits that result from more active participation. Figure 4.2 conceptualises associated pathways and suggests some of the outcomes that might subsequently impact more broadly in relation to personal well-being.

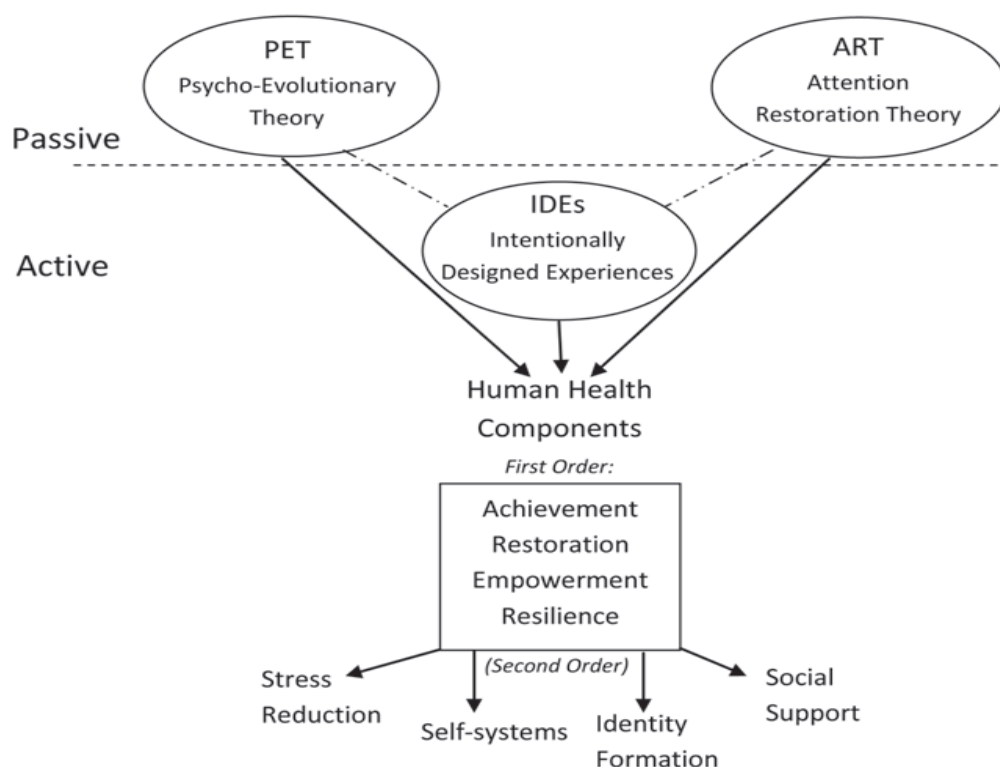


Figure 4.2: *Natural Environment and Human Health Outcome Model*
(Ewert and Voight, 2012)

This model refers to ‘intentionally designed experiences’ (IDEs), but green care activities are examples of these, and it helpfully starts to conceptualise how the benefits provided through such activities might develop as chains of events. IDEs such as care farms are presented as ‘vectors’ for the psychological and physical health benefits proposed by ART, PET and the Biophilia Hypothesis. ‘First order’ outcomes directly result from participation in the activity, and associated change facilitates the ‘second order’ outcomes that have wider impact (Ewert and Voight, 2012).

4.3 Theoretical pathways from care farm to health and well-being

The evidence presented thus far has demonstrated that care farms are increasingly prevalent and engage with people with a wide range of personal needs. Only limited specific consideration has yet been given to their operation, but the natural farm environment has been shown to be one within which multiple positive connections might be encouraged and enabled. Physical, mental and social factors have all been evidenced as contributing to overall health and well-being, and Figure 4.3 conceptualises the pathways through which the various aspects contained within a care farm environment can be hypothesised as potentially facilitating positive outcomes that will have relevance in each of these spheres.

This figure was developed for the purposes of this study to conceptualise the various elements that the literature review suggested might contribute in a care farm context. It demonstrates the wide range of opportunities that a care farm might provide and the manner in which these might combine to provide positive outcomes for participants. It is reasonable to hypothesise that this mix might be unique to a care farm environment. All engagement with the natural world has been evidenced as impacting on human health and well-being to some degree, and all green care activities intentionally utilise this relationship, but only care farms can provide all forms of interaction: looking at nature, being active in nature, shaping nature and interacting with animals (Haubenhofner *et al.*, 2010). A care farm environment can

similarly potentially incorporate the broadest combination of ‘care’ opportunities, with these including health promotion, therapy and work opportunities (Haubehofer *et al.*, 2010). Education and training are also integral elements, as indeed is the development of functioning social networks and support systems.

The figure and incorporated pathways illustrate the combined relevance of the physical, mental and social aspects and suggest how these might interlink to facilitate shared outcomes. Whilst the left hand side concerns the social, the right relates more to the mental sphere and exercise provides direct physical benefits. The various elements are not in reality this distinct - the environmental context has for instance already been shown to encourage social engagement – but relevant strands are incorporated alongside one another to provide improved clarity regarding that which is theorised as potentially taking place.

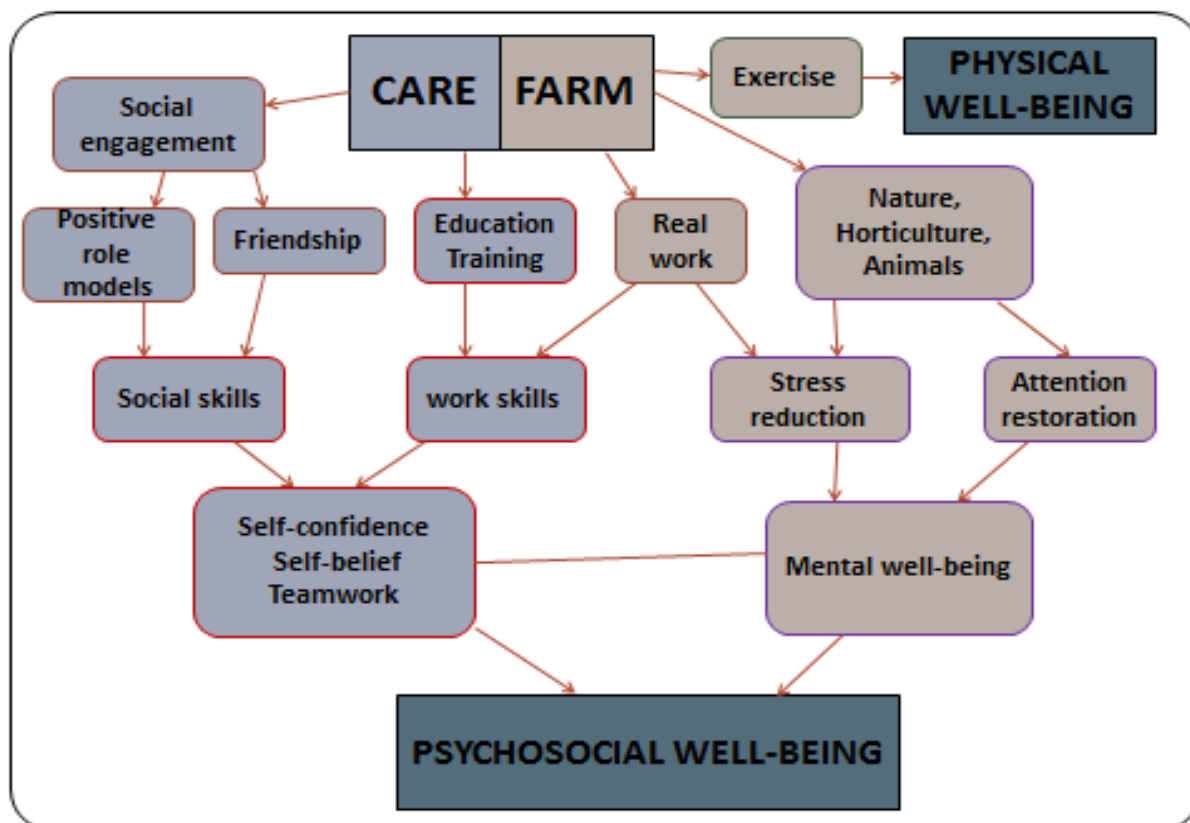


Figure 4.3: Potential pathways from care farm to well-being

This study will assess the extent to which these pathways are found to apply and ascertain how the various elements might combine on a care farm to provide connections that facilitate change for service users and other significant stakeholders. The following chapter will outline the methodology that was adopted to meet the research aim and facilitate a sufficiently broad study to accommodate the multiple strands that require consideration whilst simultaneously being robust and valid.

Key points from Chapter 4

(Towards a Theoretical Framework)

- Both environmental and social factors have been evidenced as influencing human health and well-being.
- Social Cognitive Theory highlights the interdependence between environmental / social factors and personal functioning and behaviour.
- The Mandala of Health locates these aspects in a wider context and more explicitly differentiates between physical and psychosocial factors.
- The Biophilia Hypothesis proposes that humans have an innate biological attraction to natural environments such as those contained within care farms.
- PET suggests that associated value is provided through a stress reduction mechanism whereas ART presents it as concerning attention restoration.
- A model of potentially contributory pathways was devised to conceptualise how care farms might be positioned to facilitate physical, mental and social outcomes.

Chapter 5

Methodology

This chapter describes the research methods applied to meet the aim of the study. They provided the underlying structure and informed the data collection and analysis process. A pragmatic approach was adopted, whereby the guiding principle concerned the selection of methods that were judged most likely to provide the greatest possible insight. These were monitored throughout the research process to ensure that they remained effective and fit for purpose. Intentional flexibility allowed methods to be adapted or altered if it emerged that particular aspects were unsuitable or that relevant factors were being overlooked or required further investigation. This chapter will explain why a mixed methods design was considered most appropriate and describe how this was applied in practice.

The ontological perspective that underpinned the identification of suitable methods has previously been described as 'subtle realism', wherein the social world is perceived as existing independently of an individual's subjective perspective, but the interpretations they apply provide access to this world (Hammersley, 1992). It was epistemologically considered essential to remain objective and neutral in relation to the collection, interpretation and presentation of data to allow participants' accounts to be accurately and fairly reflected, but it was simultaneously judged that a deeper understanding would result from interweaving individual perspectives. Practicality and the desire to gain an understanding of what was really happening for people guided the process rather than adopting a particular approach because it suited a preordained belief system (Morgan, 2007).

5.1 Mixed methods research

Qualitative and quantitative methods of data collection have traditionally been portrayed as reflecting alternative research paradigms, with the former being linked to a constructivist approach and the latter with a more positivist view (Risjord *et al.*,

2001). However, the perceived dichotomy between these two approaches has been effectively challenged in recent years, and mixed methods research is now widely accepted as a third research paradigm (Johnson and Onwuegbuzie, 2004; Onwuegbuzie and Leech, 2005b). When effectively applied, it allows the two alternative approaches to be integrated in such a way as to benefit from their combined strengths and to protect against their associated weaknesses (Bryman, 2007; Johnson *et al.*, 2007). Neither approach is perceived or presented as superior to the other, with the focus instead being placed on identifying and applying the methods that best meet the requirements of the study (Tashakkori and Teddlie, 2003), and provide *“breadth and depth of understanding and corroboration”* (Johnson *et al.*, 2007, p. 123).

Data collection tools were essentially perceived as *“the pieces of a jigsaw puzzle that provide a full image of a certain object if put together in the correct way”* (Erzberger and Kelle, 2003, p. 461). The numeric data provided by surveys was recognised as invaluable for generating demographic information and longitudinal data concerning potentially measurable change, but a real understanding of where someone is coming from, how their needs are being met and the impact this is having on their wider lives cannot be gained from a questionnaire alone. The following observations effectively articulate that which the methodological design sought to encapsulate:

“A holistic approach that looks at whole systems and conditions with multiple causes and multiple effects in the context of real life....People’s subjective experience is just as important as the objective measurement of their condition” (Dean and Hancock, 1992, p. 8).

5.2 The type of mixed methods study adopted

Greene and colleagues (1989) suggested five alternative justifications for combining qualitative and quantitative techniques in relation to evaluation research: triangulation, complementarity, development, initiation and expansion. For the purposes of this study, triangulation was perceived as the primary intention and

expansion as secondary, but it was simultaneously acknowledged that outcomes are not predictable and initial perceptions cannot be assured (Bryman, 2006). A triangulation design was applied “*to obtain different but complementary data on the same topic*” (Morse, 1991, p. 122). ‘Convergence’ or ‘confirmation’ was essentially sought in recognition of the fact that if two alternative approaches support the same conclusions then these cannot be said to have been reached purely because of the adopted method (Fielding and Schreier, 2001; Olsen, 2004).

The inherent diversity of the population(s) being studied (a range of stakeholders with differing perspectives, needs and capabilities) further supported the inclusion of a range of methods to increase the likelihood that the entire sample would feel able and willing to provide the relevant data. People with learning difficulties can be particularly prone to acquiescence or the provision of responses that they perceive the questioner as wanting to hear (Gilbert, 2004), and related concerns have been raised concerning young people (Hill, 2005). Methodological variety was considered essential to allow the study to incorporate and reflect the genuine experiences and opinions of the greatest possible number of participants.

Questionnaire surveys were incorporated in the study to generate numerically comparable data concerning care farming stakeholders and to identify the presence or otherwise of longitudinal measurable change. Semi-structured interviews, less formalised conversations and participant observation provided deeper, more multifaceted insights. This combination of research approaches allowed measurements to be incorporated alongside the development of an understanding of that which was actually taking place (Cresswell and Clark, 2007). A concurrent design was applied (data were collected, analysed and interpreted over broadly the same time period) as this is particularly appropriate when the primary requirement is to provide increased depth and breadth of understanding (Onwuegbuzie and Collins, 2007). The design was also convergent, with equal weighting being applied to each

method and data being merged during the subsequent interpretation and discussion (Creswell and Clark, 2007).

5.3 Methodological rigour

Issues concerning representation, integration, politics and legitimation were all addressed to ensure that sufficient methodological rigour was applied (Collins *et al.*, 2007). Representation relates to the requirement for the associated text (words and numbers) genuinely to represent the lived experience to which it relates (Denzin and Lincoln, 2005; Onwuegbuzie and Collins, 2007). Power analysis ensured that a sufficiently large sample size was incorporated to support quantitative analyses and interviews continued until it reasonably appeared that data saturation had effectively been achieved.

Integration refers to the methods being combined in such a way as to address the requirements of the study (Onwuegbuzie and Collins, 2007). Triangulation in this instance allowed the quantitative data from larger samples and qualitative data from the nested samples to be combined in such a way as to provide a more complete understanding of care farming outcomes. *“In genuinely integrated studies, the quantitative and the qualitative findings will be mutually informative”* (Bryman, 2007, p. 21).

The political element concerns the need to address potential conflicts that can emerge when qualitative and quantitative methods are combined (Onwuegbuzie and Collins, 2007). These can relate to different people sometimes taking responsibility for separate strands of a study, but did not emerge in this instance due to the fact that data were collected and analysed by a single researcher who had previous experience of applying both quantitative and qualitative methods. Working according to ethical guidelines and requirements helped to ensure that all aspects of the study were appropriate and acceptable.

Legitimation concerns issues of validity, and mixed methods research studies can effectively address this aspect through design quality and interpretive rigour (Onwuegbuzie and Johnson, 2006). Design quality was provided through consideration of the following four components (Tashakkori and Teddlie, 2003):

- *Design suitability*: the research design uses the most appropriate procedures for addressing the research question(s).
- *Design adequacy*: quality is demonstrated in relation to sampling, data collection procedures and data analysis procedures.
- *Within design consistency*: the individual components are shown to be compatible with the sampling process.
- *Analytic adequacy*: the data analysis strategies are appropriate to adequately answer the research question(s).

The following five criteria similarly helped to ensure that sufficient interpretive rigour was applied (Onwuegbuzie and Johnson, 2006; Tashakkori and Teddlie, 2003):

- *Interpretive consistency*: an identifiable audit trail links original data, analysis, interpretation and final conclusions.
- *Theoretical consistency*: the results are shown to be consistent with current theories and the framework developed for this study.
- *Interpretive agreement*: the consideration and opinion of academic and practitioner peers was sought throughout the process.
- *Interpretive distinctiveness*: plausible conclusions are provided that are informed by the evidence provided by the study.
- *Integrative efficacy*: inferences are supported by both the quantitative and the qualitative aspects of the study.

Sufficient detail has been incorporated concerning study participants and their circumstances to allow third parties to make an informed judgment concerning the extent to which relevant findings might be applicable elsewhere; similar clarity has

been provided in relation to data collection and analytic processes. Validity was further ensured by actively involving care farm stakeholders throughout the research process. This particularly applied with regard to the SROI analysis, with all concerned being encouraged to discuss the extent to which reported findings accurately represented their personal experiences.

“All criteria developed for use in qualitative studies rely heavily on presenting the results to those who were studied and asking them to verify whether or not they agree with them.” (Nolan and Behi, 1995, p. 589)

5.4 Target populations

The primary target population of the study was the care farm service users themselves, the principal intended beneficiaries of the activity. However, there are various other stakeholder populations of relevance to a holistic study such as this, and it was therefore necessary to ensure that they were also able to contribute meaningful data regarding relevant outcomes. The care farmers (service providers) were considered particularly significant for the purposes of this study, but it was recognised that change might also be taking place for members of the service users' personal support networks (including placement commissioners, carers and family members) and related organisations. Each of these stakeholder groups therefore contributed input, and the specific form that this took is described later in the chapter.

5.5 Sample designs

Random probability sampling has traditionally been presented as relating specifically to quantitative methods, and non-random methods as applying more appropriately to qualitative research, but this strict dichotomy has been effectively challenged in recent years (Onwuegbuzie and Leech, 2005a). For the purposes of this study, the process was essentially guided by the belief that random sampling improves generalisability, but that pertinent insights are more likely to be provided through purposeful sampling (Onwuegbuzie and Collins, 2007).

5.5.1 Service user sample

A stratified sampling scheme was applied to service users, whereby the sampling frame was divided to enable the following relevant and relatively homogeneous sub-populations to be incorporated:

- Young people who were struggling in mainstream education
- Adults with learning disabilities
- Adults with mental health issues
- Adults dealing with addictions

Distinctions in terminology are complex when such a broad range of individual circumstances apply, and specific needs did, in reality, vary greatly. Amongst those who are broadly defined for the purposes of this study as having a learning disability for instance, some of the associated issues would more precisely be described as learning difficulties or cognitive impairments. However, such prescribed selection criteria allowed consideration to subsequently be given to the salience of these factors (Cresswell and Clark, 2007).

Interviews were conducted with nested samples of the groups that completed questionnaires to investigate further the specific aspects that contributed to the overall care farm experience and associated impact. A stratified purposeful sample was initially sought to allow a sufficiently broad range of experiences and opinions to be accessed, but previously identified participants were not always able to participate in interviews when the researcher attended the farm (with some having left, being absent from the farm or otherwise engaged) and it was ultimately necessary to incorporate some aspects of convenience sampling (Onwuegbuzie and Collins, 2007). Generalisability cannot therefore be guaranteed, but valuable insights were obtained in relation to what was happening for those concerned; relevant outcomes were often found to be shared and might therefore be applicable more widely.

Interviews and questionnaires were appropriate tools for collecting data from many care farm participants, but there was an associated requirement that those concerned were willing and able to express themselves adequately via the written and / or spoken form. It was apparent from the outset that this would not always be the case, and a sufficiently flexible approach was required to avoid *“the implications of excluding cases because they are less articulate or less well documented, of uncertain reliability or difficult to access”* (Curtis *et al.*, 2000, p. 1012). An active participatory approach allowed the researcher to work alongside those who might otherwise have been excluded (primarily adults with more severe learning disabilities / cognitive impairments and some of the young people), engage in informal conversation and simultaneously observe that which was taking place. This particularly applied with regard to the incorporated SROI. The care farm to which this relates was visited regularly during the year under consideration, and a full week was also spent actively participating on the farm. It was thereby possible to engage directly with all current service users and gain a clearer understanding of the range of activities, the associated interaction and resultant outcomes.

5.5.2 Service provider sample

The online database maintained by CFUK contained information about 172 care farms in July 2011. The extent of associated data concerning individual organisations varied greatly, but an analysis of that which was available provided an enhanced understanding of the national picture. Given the numbers involved, and the exploratory nature of the study itself, the entire population were invited to participate in this research. A purposive sample of respondents located within the West Midlands area of England was also interviewed. The size of farm, the economic centrality of the care farming activity and the relationship to multifunctional agriculture / diversification have previously been highlighted as relevant factors regarding distinctions between care farms (Hine *et al.*, 2008a). Interviewees were initially identified on the basis of farm size, but variation was also ultimately found to apply regarding these other two differentiating aspects.

5.5.3 SROI sample

It is essential for the purposes of an SROI that representatives of all significant stakeholder groups contribute data to the analysis. The following stakeholder populations were identified as having particular relevance on the care farm concerned: service users, the care farmer and their family, the families and carers of the care farm service users, service commissioners and the care farm volunteers and employees. Representatives of all these stakeholder groups were interviewed, a stratified purposive sample of service users completed the questionnaires incorporated in the wider research and a random sample of home carers (familial and otherwise) provided written responses to three open-ended questions concerning outcomes and associated change. Eight service users, who had attended the farm for over 12 months and had a diverse and broadly representative range of personal needs, were consulted in an exploratory phase to gain initial insights. The information they provided informed the specific elements that were subsequently explored with the wider population of farm participants.

5.6 Sample sizes

Mixed methods studies can face particular challenges regarding the selection of appropriate sample sizes due to the fact that quantitative and qualitative researchers generally have very different approaches (Tashakkori and Teddlie, 1998). Attention was therefore paid to ensuring that suitable and justifiable numbers were identified from the outset (a priori) rather than being considered subsequently (post hoc).

5.6.1 Questionnaire sample sizes

Power analysis was applied to estimate the size of service user sample required to generate statistically significant results (Lewis, 2006). GPower (version 3) was the computer programme utilised, with this having been specifically designed for statistical tests commonly used in social and behavioural research (Faul *et al.*, 2007). Two tailed tests that examine relationships in both directions (i.e. increase or decrease) were judged to be appropriate because, although they require a larger

sample size, one tailed tests can potentially result in relevant information being overlooked (Bowling, 2004).

It was initially envisaged that analyses would primarily concern correlations with a conventional 0.8 power, a medium effect size and $p < .05$. Analysis informed by these criteria determined a minimum sample size of 82, but this figure increased to 134 when statistical power of 0.95 was applied. The lower number is supported in the literature as sufficient for providing descriptive and correlational data (Onwuegbuzie *et al.*, 2004), but it was acknowledged from the outset that longitudinal comparative data would not always be obtainable due to attrition (Sempik, 2007). Two hundred and sixteen service users ultimately completed the initial questionnaire; 137 of this number provided longitudinal comparative data and 95% statistical power was therefore enabled.

It was originally intended that the sample population would comprise of new service users who would then provide comparable data after a period of 12 months had elapsed. However, this was not ultimately possible because fewer participants initially attended the newly developed care farms in the West Midlands area of the United Kingdom than had been anticipated by the regional development organisation (CFWM). The study population was therefore also recruited from better established and more geographically diverse care farms, but this resulted in many of those concerned already having been participating for varied periods of time. Alternative (but directly comparable) versions of questionnaires were provided for use by those who had attended for more or less than three months, with the earlier versions focusing to a greater extent on sought rather than actual outcomes. Table 5.1 outlines the amount of time that participants had already been attending the care farm upon completion of the first questionnaire.

Table 5.1: *Amount of time attended care farm (first completion)*

Time attended (total = 216)	<i>n</i>	%
Less than 1 month	89	41
1 – 3 months	45	21
4 – 6 months	20	9
7 – 9 months	9	4
10 – 12 months	8	4
1 – 3 years	37	17
More than 3 years	8	4

Of the 137 study participants who subsequently provided comparable data, 43 (31%) did so after less than 6 months had elapsed, 46 (34%) after between 6 and 11 months had passed and the remaining 48 (35%) after 12 months or more.

All 172 farms that were contained on the NCFI database (July 2011) were invited to contribute to this study through an online questionnaire that was publicised via their website and newsletter. The use of the internet was considered appropriate because the intended recipients were all known to be available online through their database listing. This questionnaire (contained in Appendix 1) was designed to generate quantitative information that would be comparable with that provided by earlier scoping research (Hine *et al.*, 2008a), and additionally contained open-ended questions concerning aspects including motivation, challenges and sources of satisfaction. This was completed by representatives of 67 care farms, or 39% of the total population. It is not possible to claim with any degree of certainty that they are representative of the total population, but the numbers in the sample are nevertheless considered sufficient to constitute a reliable evidence base. Only 18 (27%) of these had contributed to the previous UK-wide study (Hine *et al.*, 2008a) and at least 30 (45%) had started care farming subsequently (within the last three years).

A second questionnaire contained predominantly open-ended questions that invited farmers to articulate change in both individual circumstances and the wider farm environment that had come about as a result of their care farming operation

(Appendix 2). This was distributed to all those who had responded to the initial quantitative survey, and was completed by a subset of 33 care farms (19% of the national total recorded by CFUK).

Ten short questionnaires containing open-ended questions were completed by a random sample of family members / carers who reside with care farm service users for the purposes of the incorporated SROI analysis.

5.6.2 Interview sample sizes

The fundamental requirements regarding the collection of qualitative interview data concern ensuring that the sample is of a sufficient size to provide data saturation, theoretical saturation and informational redundancy (Sandelowski, 1995). Cresswell (2007) suggested that a minimum of ten interviews were required, whilst Morse (1994) proposed that a minimum number of six was sufficient. The sampling frame concerning service users had been stratified into four separate groups and a minimum number closer to 25 was therefore considered likely to be more appropriate. However, a pragmatic approach envisaged that interviewing would ultimately cease when saturation was felt to have been achieved rather than because a specific pre-determined number had been reached.

Despite initially intending solely to conduct one to one interviews, circumstances resulted in two participants being interviewed simultaneously on two occasions, and on another occasion five people ultimately contributed to the same interview. This shared situation was intentionally sought by those concerned and allowed them to discuss care farm experiences and associated change. A total of 33 service users ultimately participated in interviews and many more engaged in less structured conversations at the farm. With regard to the SROI, 67 individual service users provided verbal input, with this accounting for over 80% of all those who attended this care farm during the period under analysis.

Twelve service providers / care farmers from the West Midlands region were interviewed to obtain a richer and deeper understanding of the range and relative importance of associated impacts than could be provided through questionnaires alone. This region of the UK is particularly suitable for investigation due to the fact that it has witnessed the greatest expansion in the number of care farms in recent years (Figure 2.3, p. 20). Four of the interviewees were selected to encompass farms that were medium-sized (over 50ha) and practised care farming alongside more traditional productive farming activities. Another four had previously been considered too small to be viable as a purely agricultural operation (between 5 and 25ha) and care farming had essentially been perceived as an opportunity to allow the skills and interests of family members to generate an economic return from the land. The remaining four were smallholdings of less than 5ha that had been developed specifically to operate as care farms (one associated with a therapeutic community and another with a church).

5.7 Data collection tools

The various tools that contributed to the data collection process are now described; the rationale for their inclusion is explained, the specific elements that were incorporated are discussed and associated processes are further clarified.

5.7.1 Service user questionnaires

The service user questionnaires were designed to collect demographic / descriptive data and also contained psychometric scales to test the theory that spending time on a care farm (the independent variable) influenced the health and wellbeing of participants (the dependent variable). Although the first questionnaire (Appendix 4) was generally completed prior to an interview taking place, the process was nevertheless envisaged as essentially concurrent rather than sequential. The questionnaire contained a combination of multiple choice questions, Likert-format responses and open-ended questions and was designed to provide information relating to the background, interests, circumstances and well-being of individual

service users. It enabled comparable data to be collected from a relatively large sample in a standardised way so that longitudinal change could be measured and monitored (Oppenheim, 2000).

Various aspects were considered during the design stage of questionnaires to ensure that they were fit for purpose. These included identifying questions that would provide the information to meet the aims of the study, ensuring that questions were worded in such a way as to allow the greatest possible number of participants to contribute meaningful data and adopting a layout and sequence that minimised the risk of influencing responses or promoting bias (Oppenheim, 2000). Questionnaires included both open and closed questions. It was acknowledged that closed questions can potentially result in respondents expressing inaccurate opinions in terms that they would not usually choose (Gomm, 2004), but they can equally generate valuable additional insights (Bryman, 2001).

The service user questionnaire was initially piloted on three care farm service users and appropriate adjustments were subsequently incorporated. Indeed, it was as a result of this process that open questions were included to reduce the likelihood of personally relevant factors being overlooked. It emerged during the data collection process that some care farm users were either unable to conceptualise elements of that which was included (primarily young people and those with learning disabilities) or were unwilling to complete what they perceived as an overly long questionnaire. A shortened version that contained a reduced number of questions and scale items was therefore also made available, but the core content of all versions remained constant to allow comparable data to be generated.

The survey was intentionally designed to allow self-completion, but participants were sometimes unable or unwilling to complete this task unsupported. The researcher or a relevant third party at the farm concerned was therefore always available to record responses on behalf of the service user if required. Although it was recognised that additional issues concerning validity can arise as a result of a

third-party being involved in this way, it enabled the entire selected sample to provide meaningful input. Support was provided in the first instance by the researcher (who stressed independence and highlighted the fact that there were no 'correct' responses) or alternatively by an independent third party (such as a care farm volunteer). It was not considered appropriate to ask service users to personally disclose the reason for their referral to the care farm from the outset (although some did choose to do so), and relevant information was provided by the service provider.

5.7.2 Service user quantitative scale items

In order to support the identification of relevant change, it was deemed necessary to incorporate measures that would provide directly comparable data concerning personal well-being.

"A prima facie case can be made that the ultimate 'dependent variable' in social science should be human well-being, and in particular, well-being as defined by the individual herself, or 'subjective well-being'." (Helliwell and Putnam, 2004, p. 1435)

Various validated well-being measures were considered, but it became apparent whilst testing these during the pilot phase of the study that some of those who attended care farms were likely to be unwilling or unable to assimilate some of the concepts and vocabulary concerned. The Rosenberg Self-esteem scale and the Profile of Mood States (POMS) have previously been applied to a care farm sample (Hine *et al.*, 2008a), but these were avoided to provide a fresh perspective. High self-esteem can furthermore sometimes present itself as a negative trait (Wilkinson and Pickett, 2010), and reduced rather than increased scores might therefore reflect a more positive outcome in some instances.

It was important to keep the questionnaire short and accessible, but health and well-being concern multiple elements of the human condition. In order to consider as many elements as possible, it was important that incorporated measures were brief and yet had been demonstrated to be robust. The Office for National Statistics

identified three broad types of subjective well-being measures and suggested that all should ideally be measured (Office for National Statistics, 2011). Their categories concerned 'evaluation' (global assessments), 'experience' (feelings over short periods of time) and 'eudaemonic' (reports of purpose and meaning, and worthwhile things in life), and the measures incorporated in this study addressed each of these elements.

General Self-Efficacy Scale (GSE)

The perceived relevance of the Social Cognitive Theory (Bandura, 1986) and the construct of self-efficacy have previously been discussed (p. 53), and it was considered desirable to incorporate a measure of the extent to which this was evident amongst service users. Self-efficacy had previously been presented as having relevance to green care interventions (Sempik, 2007; Sempik *et al.*, 2010) and this scale has been applied in relation to farm based interventions in Norway (Berget *et al.*, 2008b; Pedersen *et al.*, 2011). It is presented as suitable for use with anyone over the age of eleven and contains ten items (Appendix 4, p. 324) that essentially relate to coping behaviour (Schwarzer, 1992; Schwarzer and Jerusalem, 1995).

Concerns have been expressed regarding the psychometric properties associated with all measures of general self-efficacy (Scherbaum *et al.*, 2006), but the GSE scale has been presented as "*reliable, homogeneous, and unidimensional across 25 nations*" (Scholz *et al.*, 2002, p. 249). Scholz and colleagues (2002) reported that it had good internal consistency, with Cronbach alpha coefficients across a variety of samples and countries having ranged from .75 to .91. A figure of .911 was found to apply to this study.

Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

This is a more recently developed scale that incorporates both hedonic and eudaemonic perspectives to provide a measure of overall mental well-being (Tennant *et al.*, 2007). It contains fourteen positively worded items (Appendix 4, p. 322) that are intentionally expressed in clear and accessible language (Parkinson,

2007). The scale's sensitivity to change was still being established when this study commenced, but it was presented as psychometrically robust, displaying good content validity and correlating highly with other health and well-being scales (Tennant *et al.*, 2007). Tennant and colleagues (2007) reported Cronbach alpha coefficients of .89 (student sample) and .91 (population sample), whilst in the current study the Cronbach alpha coefficient was .926.

However, a shortened 7 item version of WEMWBS (SWEMWBS) has since been suggested to have more robust measurement properties than the longer version (Stewart-Brown *et al.*, 2009). This version is more focused on psychological and eudaemonic well-being, but does not display the gender bias suggested to apply to its predecessor (Stewart-Brown *et al.*, 2009). Spearman's Rank Correlation Coefficient between the 14 item and 7 item versions was 0.954. The internal consistency of the scale was assessed according to the Person Separation Index; this is presented as equivalent to Cronbach's alpha and provided values ranging from 0.837 to 0.910 (Stewart-Brown *et al.*, 2009). In the current study, the Cronbach alpha coefficient was 0.856. Analyses for the purpose of this study were ultimately undertaken in relation to both versions of the scale; Appendix 4 contains the full version, and the items incorporated in SWEMWBS are followed by an asterisk (p. 322).

Sense of Coherence

Antonovsky developed the concept of 'sense of coherence' (SOC) in pursuit of an improved understanding of the psychological and social resources that influence personal health and well-being (Antonovsky, 1979). His salutogenic theory focused on health rather than illness, and the related scale seeks to identify why some people cope better in the face of adversity than others (Lundberg and Peck, 1995). A systematic review of over 100 studies found it to be a valid and reliable instrument for measuring the extent to which people are able to manage stressful situations (Eriksson and Lindström, 2006).

The original scale contains 29 items and was considered too long for inclusion in this research, but three questions have previously been constructed that individually encapsulate the relevant dimensions: manageability (*'I can usually see a solution to problems and difficulties that other people find hopeless'*), meaningfulness (*'my daily life is usually a source of personal satisfaction'*) and comprehensibility (*'I usually feel that things that happen to me in my daily life are hard to understand'*). This abridged version has been shown to be valid and reliable, and is promoted as an acceptable substitute for the full scale in multipurpose surveys (Lundberg and Peck, 1995). Given the fact that there are only three items incorporated in this scale it has not surprisingly been reported as having a lower Cronbach alpha value (0.35) than any of the longer versions of the scale (Eriksson and Lindström, 2006); this was similarly found to be the case in this study (0.327).

The Connor-Davidson Resilience Scale

The Connor-Davidson resilience scale concerns the extent to which people are able to deal effectively with adversity. Such resilience is suggested to vary according to personal life circumstances (Connor and Davidson, 2003), and has been reported to develop through active engagement with nature (Ewert and Yoshino, 2011). The full scale contains 25 items (Connor and Davidson, 2003), but the two included items (*'I am able to adapt to change'* and *'I tend to bounce back after illness or hardship'*) were presented by the scale's designers as encapsulating the essence of resilience and displaying good test-retest reliability and validity (Vaishnavi *et al.*, 2007).

Associated scores have been found to correlate significantly with both the full original scale and individual items (Vaishnavi *et al.*, 2007). A Cronbach alpha coefficient of 0.654 applied to the current study.

The Environmental Identity Scale

Connectedness with nature is a concept that has relevance for both environmental and human health; it has previously been presented as positively correlated with psychological well-being, vitality and meaningfulness (Cervinka *et al.*, 2012). The 24-

item Environmental Identity Scale (EID) was designed to measure "*the extent to which the natural environment plays an important part in a person's self-definition*" (Clayton, 2003, p. 52), and has been demonstrated to be reliable and to have consistent construct validity (Olivos and Aragones, 2011). The two items that were included in the current study were suggested by Clayton to reflect environmental behaviour (*'I spend a lot of time in natural settings'*) and connectedness (*'I think of myself as part of nature, not separate from it'*). No previous data are available concerning the internal consistency of these two items, but a Cronbach alpha coefficient of 0.698 was found to apply in this instance.

Satisfaction / Happiness

Single item evaluative life satisfaction and happiness questions have been used in studies concerning mental well-being for many years (Campbell *et al.*, 1976; Diener, 1984), and are commonly incorporated in international surveys (Waldron, 2010). Their inclusion is now recommended in all instances where aspects of subjective wellbeing are being measured (Dolan *et al.*, 2011). The following two items were included in the questionnaire as indicators of overall life attitudes:

- *All things considered, how satisfied are you with life at the moment?*
- *Taking all things together, how happy would you say you are?*

Additional single item measures

The two previously discussed items concerning happiness and life satisfaction were elements of a well-being module that was included in the 2006/7 European Social Survey and underpinned the development of a working model for National Accounts of Well-being (Michaelson *et al.*, 2009). Consideration was given to including the entire survey, but this was not ultimately judged to be appropriate because it had not been tested for validity or reliability. However, the following five items were included because they were considered to address potentially relevant constructs that were not incorporated elsewhere:

- Purpose in life: *'I generally feel that what I do in my life is valuable and worthwhile'*.
- Physical health: *'My life involves a lot of physical activity'*.
- Social support: *'There are people in my life who really care about me'*.
- Autonomy: *'I feel I am free to decide how to live my life'*.
- Self-esteem: *'In general I feel very positive about myself'*.

5.7.3 Service user interviews

Semi-structured one-to-one interviews were incorporated to allow relevant experiences and aspects to be sought out, expanded on and ultimately verified (Gubrium and Holstein, 2002). The associated personal interaction provided the opportunity to build rapport (Thompson, 2000), allowed issues relating to motivation or literacy level to be counteracted (Burns, 2000), and enabled a productive conversation to take place (Burgess, 1984; Ritchie and Lewis, 2003). A non-hierarchical relationship was intentionally sought, with the interviewer combining interpersonal and research skills to effectively act as a facilitator. The interview was sufficiently guided to allow relevant topics to be covered, but related process was not allowed to exert undue influence and thereby diminish associated authenticity (Ritchie and Lewis, 2003).

Interviewees were encouraged to feel as comfortable and relaxed as possible to increase the likelihood of their providing genuine insights. A generic chat always took place prior to the interview to establish rapport, and this also allowed an appropriate approach to be adopted that would encourage the sharing of relevant personal information. The researcher had previously located a relatively quiet (minimal distractions) and relaxed place for interviews to take place, with this tending to be outside (weather permitting). The suitability of the selected location was then checked with the interviewee and, although a secluded spot was generally preferred, this was always in a sufficiently open environment to remain within view of third parties.

It was made clear from the outset that there were no right or wrong answers to encourage participants to express freely their genuine views. Interviews started with questions concerning the activities engaged with on the farm to encourage the participant to relax, subsequently moved on to aspects that might potentially be of a more sensitive nature (concerning thoughts, feelings and views) and ended by encouraging a reflective summary of the experience to be provided (Ritchie and Lewis, 2003). The interview schedule (Appendix 6) was piloted on three service users, with amendments that resulted from this process principally relating to sequencing rather than actual content. The predetermined schedule always guided the interview format and better ensured consistency, but the language used and the associated depth of discussion varied according to individual circumstances (Burgess, 1984).

Service user interviews generally lasted between 20 and 60 minutes. This degree of disparity reflected the fact that some care farm service users find communication challenging and were only able / willing to provide brief responses. Despite this reality, attentive and active engagement on the part of the researcher encouraged the service users' personal experiences and perceptions to emerge in as natural a way as possible (Ritchie and Lewis, 2003). Interviews were digitally recorded whenever possible in recognition of the multiple benefits associated with an entire conversation being recorded ad verbatim rather than scribing those aspects that initially appear to have the greatest relevance. This also prevented interviewees being distracted and conversation threads being broken whilst responses were written down. However, field notes and direct quotations were manually recorded if individual preferences or circumstances prevented digital recording from taking place.

5.7.4 Service provider data collection tools

An equally broad range of methods were applied for the collection of data from service providers, with two on-line questionnaires being combined with in-depth interviews. The internet was used to deliver questionnaires because targeted

recipients were all known to be online as a result of their listing on the CFUK database. The initial scoping questionnaire (Appendix 1) was designed to generate primarily quantitative information concerning demographics, the nature of the farm and the service provided, whilst the subsequent qualitative survey (Appendix 2) invited farmers to articulate the impact of operating as a care farm in relation to both personal circumstances and the wider farm environment.

Twelve care farmers from the West Midlands region were interviewed to provide a richer and deeper understanding of the range and relative importance of associated impacts. Interviews were conducted at the farm site, were digitally recorded and generally lasted between one and two hours. They were semi-structured and sufficiently flexible in style to allow lines of particular interest to be identified and pursued (Appendix 3).

5.7.5 SROI data collection tools

Interviews and conversations with representatives of the stakeholder groups identified as material for the purposes of the SROI (p. 189) focused on their perceptions of the care farm and the nature of associated change. The following specific aspects were given particular consideration:

- What has changed
- Has this all been positive
- How long might this change last
- How can this change be seen
- How important is the change
- What is the order of importance of changes identified
- How else might this have been achieved
- Did anything / anyone else contribute to the change (and how much)
- What might otherwise have happened

All stakeholders were encouraged and enabled to provide input throughout the SROI process. This included developing indicators, quantifying outcomes, valuing outcomes and estimating deadweight and attribution. This level of engagement helped to ensure that the resultant analysis is supported by stakeholders as being a fair and accurate portrayal of what really takes place. Discussions with stakeholders continued throughout the SROI process and they also provided incorporated feedback following the completion of the report.

5.8 The data collection process

The steps that were taken to enable and facilitate the collection of data are now described.

5.8.1 Gaining access

It was important for the purposes of this study to develop positive and productive relationships with care farmers from the outset; they effectively operate as gate-keepers with regard to obtaining access to the farm and associated stakeholders. This process was facilitated by CFWM as they provided relevant information and directly promoted the research study to care farmers. All new care farms associated with CFWM were visited early in the study to explain the research that was being proposed and to encourage their involvement from the outset. Previous personal experience of working on farms, and with a wide range of vulnerable groups (as researcher and practitioner), also provided the researcher with useful insights and a level of understanding that further supported the development of productive relationships.

5.8.2 Recruiting participants

Quantitative and qualitative data were provided by service users from thirteen different farms. Ten were located in the West Midlands region of England, one in Northern Ireland, one in Derbyshire and one in Hertfordshire. The presence of a trusting relationship between researcher and participant is known to encourage the sharing of personal and honest information (Polit and Beck, 2004), and the

researcher and / or care farmer would initially explain the nature of the research and their specific role within it, before then inviting them to discuss relevant issues / concerns further. Everyone who was approached was ultimately willing to participate in the research, and the previously described flexibility enabled all concerned to contribute useful and meaningful data. Whilst some could fill out questionnaires and / or participate in interviews, others required additional support or were unable / unwilling sufficiently to conceptualise or articulate their feelings and opinions in what they perceived as an overly formalised situation. However, such participants were always prepared to engage in conversations whilst undertaking activities around the farm.

5.9 Data analysis

Following the collection of the data, these were then organised, interpreted and synthesised in such a way as to address the original research aim. An orderly and structured strategy was adopted throughout the process to ensure that the analysis was valid and reliable.

5.9.1 Quantitative analysis

Quantitative data were analysed using the Statistical Programme for Social Scientists (SPSS), a software package that is particularly suitable for all aspects of data storage, manipulation and analysis (Dancey and Reidy, 2002). Statistical tests were applied to identify the extent and nature of relationships between variables, with these including correlations and tests of difference. Demographic variables concerning age, gender and personal needs were controlled in analyses in order to provide an enhanced understanding of associated effects. Two-tailed tests were incorporated throughout in recognition of the fact that directional certainty regarding change was not assured. Likert scales were analysed as interval data, but single item responses were treated as ordinal data (Baggaley and Hull, 1983; Carifio and Perla, 2007; Maurer and Pierce, 1998; Vickers, 1999).

Normality of distribution was assessed through the use of histograms, normal and cumulative probability plots, the calculation of skew and kurtosis values and the application of Kolmogorov-Smirnov and Shapiro-Wilk tests. Happiness and satisfaction with life scores were found to be somewhat negatively skewed, but this is commonly the case with regard to such variables (Pallant, 2007). Normality of distribution was in all instances apparent regarding the full scales (WEMWBS, SWEMWBS and GSE), but the Kolmogorov-Smirnov and Shapiro-Wilk tests identified significant deviation from normality for the abridged scales and single items ($p < .05$). Associated samples were fairly large, and this might not therefore have exerted influence (Field, 2009; Pallant, 2007), but non-parametric tests were nevertheless always applied in these instances.

Box plots provided further clarity regarding the nature of data distributions and allowed outliers that would impact disproportionately on subsequent analyses to be located (Field, 2009). In instances where extreme outliers were identified, the data set was initially checked to ensure that this was not the result of a coding error, and the relevant score was then changed to one unit above the next highest score to minimise associated bias (Field, 2009). Box plots and scatterplots (simple and grouped) were also generated to help conceptualise the strength and type of relationship between initial and subsequent scores on the various incorporated well-being measures (Burns, 2000).

5.9.2 Qualitative analysis

Interviews were transcribed with the support of Dragon voice recognition software. The associated requirement to replay the discourse, repeat it verbally and subsequently listen to it once again to incorporate corrections helped ensure that the researcher became thoroughly familiar with the content from the outset. Discourse analysis was supported by thematic analysis techniques that facilitated the identification, analysis and reporting of patterns in the data. *“Thematic analysis can*

be a method that works both to reflect reality and to unpick or unravel the surface of reality” (Braun and Clarke, 2006, p. 81).

An essentially inductive approach was adopted, with identified themes being closely linked to the actual data provided. The coding process did not seek to fit the data to a pre-defined frame, but that is not to suggest that it took place in some *“epistemological vacuum”* (Braun and Clarke, 2006, p. 84); it was informed by the conceptual framework and relevant literature was considered both before and during the thematic analysis process. This supported the identification and recognition of relevant strands, but the risk of potentially crucial aspects being overlooked as a result of only focusing on predetermined elements was simultaneously acknowledged and monitored (Tuckett, 2005).

The process of organising and understanding the data was supported by NVivo computer software, but more traditional analysis techniques were also applied. Conceptual ordering and theorising of the qualitative data was initially undertaken through a process of microanalysis.

“Detailed line-by-line analysis necessary at the beginning of a study to generate initial categories (with their properties and dimensions) and to suggest relationships among categories.” (Strauss and Corbin, 1998, p. 57)

Such microanalysis is more commonly associated with a grounded theory approach (Strauss and Corbin, 1998), but was applied in this instance because it is particularly useful for providing a better understanding of social phenomena such as care farming (Strauss, 1999).

Data analysis incorporated open and axial coding, and this effectively took place throughout the process. The data itself essentially generated the codes from which the key themes were identified.

“A theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set.” (Braun and Clarke, 2006, p. 82)

No predetermined proportion of the data was required to evidence a particular theme for it to be included. The critical element was rather that it captured something of relevance to the original research aim (Braun and Clarke, 2006). The themes that were identified, coded and analysed were specifically intended to provide an accurate reflection of that which was actually taking place and were based directly on the spoken and written words provided.

5.10 Ethical considerations

The criticality of adhering to an appropriate ethical code that will avoid causing physical or emotional harm to research participants has been well documented (LoBiondo-Wood and Haber, 2006; Polit and Beck, 2004). The collection of data from vulnerable adults and young people does furthermore raise additional issues in relation to ethics and the skills required to engage with them effectively (Hill, 2005). The researcher had previously worked extensively with vulnerable adolescents and adults, and was therefore experienced at dealing with relevant issues in an appropriate manner. Ethical approval for the study was sought and obtained from the Institute of Health and Society Ethics Committee at the University of Worcester (Appendix 9). The following procedures were incorporated throughout the study to minimise the risk of negative impact resulting for participants.

5.10.1 Consent

Participation in the study was entirely voluntary and informed, written consent was provided by all concerned. In the case of adolescent participants (aged 14 – 16), this was also obtained from appropriate guardians. The nature of the research was outlined on the introductory page of questionnaires, and this was also read aloud to service users to further ensure that they were aware of that which was written. This was a necessary safeguard given the fact that literacy levels were known to vary greatly, despite relevant issues not always being explicitly acknowledged from the outset. All participants were actively encouraged to raise and discuss any issues of

concern and were made aware of their right to stop participating, without explanation being required, at any time in the process.

5.10.2 Distress

The questions and statements contained in the service user questionnaire were intentionally selected as a result of their generally being worded in a positive manner. The need to avoid causing distress to people who might already be particularly vulnerable was considered of paramount importance throughout the data collection process and the researcher was constantly vigilant for potential signs of discomfort. Given the fact that sensitive issues might arise, it was necessary not only to recognise relevant signals but also to have a realistic strategy in place to deal with such eventualities. The researcher sought always to guide the conversation to more positive aspects when required and, although a few participants indicated during subsequent informal discussions that specific questionnaire statements / interview questions had provoked some personal discomfort, nobody chose to withdraw as a result of such issues.

5.10.3 Confidentiality and data storage

All data were anonymised to allow confidentiality to be assured (Polit *et al.*, 2006). Study participants were assigned a unique code number for identification purposes from the outset and were explicitly informed that personal information would never be shared with a third party without their consent first being provided. Electronic data were stored securely on a University of Worcester computer protected by a personal identification number known only to the author of this study. Paper questionnaires were kept in a locked cabinet and associated consent forms were stored in a separate secure location.

5.11 Applying the methodology

This chapter has described the range of methods and strategies that were applied to allow the aim of the study to be successfully met. Service users, commissioners and

providers have indicated that they consider that which is presented to be an accurate and appropriate reflection of their reality. This is perhaps the ultimate test of the efficacy of such evaluative research and meets the requirement that *“the practitioners themselves and the readers of the theory view the study findings and regard them as meaningful and applicable in terms of their own experience”* (Cutcliffe and McKenna, 1999, p. 379).

Regular meetings with the supervisory team helped to ensure the suitability of research design, data collection and data analysis processes, and the initial research proposal and subsequent preliminary analyses were presented to academic peers at research seminars and conferences. Associated suggestions and critiques allowed the research process to be continually re-assessed and refined in order that a suitably robust and genuinely informative study could result.

The adoption and implementation of these various methods ultimately facilitated a study that is able to consider the overall impact of care farming and explore the nature of associated change from multiple perspectives. The data collected are now presented, with this phase of the study being structured to move from the generic to the specific. A comprehensive picture of the sources, nature and scale of associated value is developed and integral elements are then drawn together in a way that conceptualises their individual contribution to the greater whole. The way in which care farming impacts in relation to the farmers and their environments (natural, built and familial) is presented initially, with this being informed by data supplied by care farmers from throughout the UK. The next chapter provides a comprehensive examination and comparison of the experiences and outcomes of service users with a wide range of personal needs from a smaller number of farms, before the final analysis chapter presents an SROI that conceptualises how the outcomes experienced by these and other material stakeholders apply and connect on one particular care farm.

Key points from Chapter 5

(Methodology)

- The central aim of this study is to evaluate the practice of care farming through consideration of associated impacts and outcomes.
- A pragmatic approach allowed research methods to be selected for their suitability with regard to addressing the aim of the study rather than to reflect a particular epistemological or ontological stance.
- Qualitative and quantitative methods are triangulated in order to provide enhanced breadth and depth.
- The study is principally informed by data collected from care farm service users and providers (questionnaires and interviews), but the SROI also contains input from other significant stakeholders (including service commissioners, relatives, carers, employees and volunteers).
- A flexible design ensured the whole sample were able to contribute meaningful data.
- Sufficient transparency is incorporated throughout the study to demonstrate that rigour has been applied and to enable replication / development of that which is presented.

Chapter 6

Care Farmers and their Farm Environments

This chapter concerns the impact of care farming in relation to farmers, their families / employees and the farm holding. It initially provides information concerning the characteristics of care farms in the UK, the business structures adopted and the contribution that is made to farm income. The relationship between care farming and the practice of farming itself is assessed, with influences being shown to extend beyond the human into the domains of the inhuman (such as landscape features) and non-human (including for example, crops and livestock). The chapter then focuses upon the ways in which care farming can change the experience of agriculture for those who are engaged in the activity. The benefits that care farming can provide for service providers are thereby analysed and presented, but this is balanced through consideration of the associated challenges.

The 2008 scoping study by Hine and colleagues provided a valuable introduction to the form and extent of care farming in the UK, and this has recently been up-dated (Bragg, 2013). It was not known that this would be taking place when data were being collected for the purposes of this study and some comparable information was therefore obtained. However, important new areas are also explored that particularly concern the change that takes place for care farmers, their families and the farm environment. These elements have not previously been assessed and an enhanced understanding of the impact of care farming from their perspective is thereby provided.

6.1 Characteristics of UK care farms

Consideration is first given to the information provided by the care farmers about their own situation, their service users and their employees. The extent and form of the care farming operations are described, and an understanding is provided of the primary factors that had motivated them initially to engage with this activity.

6.1.1 The care farmer

The care farmer is directly responsible for providing care farm services, and their input is therefore fundamental to the very existence of such opportunities. Eighty seven per cent of the 67 care farmers who completed the initial questionnaire indicated that they were the principal decision-maker on the care farm, and 82% of the entire sample also held this role on the farm as a whole. Almost half (48%) of the 67 respondents indicated that they were less than 49 years of age and only 3% were over 65 years old. This compares with figures suggested as applying to the farming context more widely, which have presented 52% of all UK farmers as being over 55 years of age (Charlier, 2003) and 57 as the average age of UK farm holders (NFU, 2003). Care farmers therefore appear to be somewhat younger than the wider farmer population, with potential contributory factors being identified from interviews and questionnaires as the ability of care farming to attract new entrants to farming and the opportunity it can provide for farm family members who had developed off-farm careers (such as teaching or health care) to now transfer related and relevant skills back to the farm holding.

Just over half (56%) of the respondents indicated that they lived at the care farm site, with this figure appearing to be lower than that which might more typically apply to UK farm family businesses, where 'living on the farm' is often presented as a desirable criterion of definition (Gasson and Errington, 1993). This perhaps reflects the fact that some care farms are operating from land that has been specifically accessed for this purpose and residential accommodation is not necessarily therefore available. 31% of respondents had been farming for over 20 years and 53% (on this site at least) for less than 11 years. Comparable data are not easily available, but county farm surveys in the Welsh Marches found that approximately 60% of principal decision-makers had been on their farms for over 15 years (Evans, 2009). Only 27% of the care farmers indicated that their parents had also been farmers, which is significantly lower than the inheritance figures of over 50% that are more usually applied to the farming context (Gasson and Errington, 1993).

These figures demonstrate that care farming is practised by both new and established farming families, with this perhaps reflecting the diversity in the backgrounds and motivational influences of those concerned. Care farmers are nevertheless found predominantly to be owner-occupiers (50%), with the remainder being divided between tenants (16%), leaseholders (16%), those with a mixture of land rights (12%) and managers (6%). This compares to the 2011 Farm Business Survey of England that suggested a national figure of 38% owner-occupier, 16% tenants and 46% mixed tenure (Wilson *et al.*, 2011). Owner-occupier status therefore appears to be more prevalent amongst care farmers than the wider farming population, despite the fact that associated residential accommodation is less common.

When asked to describe what motivated them to become involved with care farming, no survey respondents initially mentioned financial factors. The most cited reason concerned seeking to meet a perceived need, whether amongst known associates (14%) or the wider population (27%). Responses essentially related to wanting to help people (social) rather than purely to generate profit (economic). Indeed, some care farmers indicated a range of more personal needs, issues and experiences that had also played a part in their deciding to start care farming.

“Having a brother with learning disabilities and autism who was keen on farming, accessed a vocational course as [a] mature student at agricultural college and [had] nowhere to progress.” (CF 24)

“The fact that my kids [from the school where she was employed] needed something to do and there wasn't anything out there. We were setting them up to fail, and I'd had animals for the last 6 years.” (CF 07)

Such comments support the claim made by Hine and colleagues (2008a) that *“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”* (Hine *et al.*, 2008a, p. 9).

When specific consideration is given to the three different farm 'types' that have previously been described as applying with regard to interviewees (p. 78), altruism and a social conscience most commonly emerge as the primary motivational factor amongst those who were already engaged with commercially viable farming.

"Wanted to encourage people to go down the right path." (CF 13)

"Interested in using our animals and site for useful purposes." (CF 48)

The care farmers who owned agricultural land that had not previously been considered sufficiently large to be economically viable often had relevant care farming skills in place as a result of having previously been employed in professions where 'care' was an integral aspect. Care farming is perceived and presented as an ideal opportunity to combine personal interests, skills and resources in a meaningful way.

"I am a social worker and could see how farming could help disaffected, angry young people." (CF 44)

"I have a teaching background and have watched children struggle in a classroom setting." (CF 09)

"Using our skills to the best advantage in an environment that we find stimulating and immensely satisfying." (CF 45)

Those who had acquired suitable land specifically to provide care farming as a service that they had identified as likely to provide value (for themselves and / or members of the wider community) would often more directly refer to this as having been a logical step in a wider personal journey.

“For ten years I owned a business that provided adults with a learning difficulty supported accommodation, I was responsible to find these adults day time activities, and always struggled to find anything that wasn’t a traditional day service, college or a charity shop. My hobbies are small animals and horses, so after five years of looking and doing our research we found a suitable smallholding.” (CF 36)

“A new challenge although had some previous farming experience from an early age.” (CF 56)

“I was a rural science teacher, so I taught in the state system and then I ran a school farm....really it was a continuation of what I done in schools and colleges.” (CF 04)

6.1.2 Care farm service users and usage

The extensive range of specific needs regarding the personal abilities and needs that can apply to care farm service users has previously been described, and the evidence provided by the farmers for this study further demonstrates this diversity. Table 6.1 outlines the percentage of care farmers ($n=64$) that identified the following circumstances as applying amongst their participants.

Table 6.1: *Prevalence of different service user groups*

Service user needs	% of farms ($n=64$)
Learning disabilities	70
Autism / challenging behaviour	63
Mental health	58
Disaffected young people	56
Unemployed	31
Drug / alcohol dependency	28
Physical disability	25
Ex-offenders	22
Rehabilitation after illness / accident	19
Homeless	17
Elders	16
Ex-service personnel	14

Although participants are being referred to as service users for the purposes of this study, this is actually the fourth most popular descriptor that is applied on the farm, with alternatives (in order of stated preference) being students, clients, volunteers, helpers, participants, co-farmers, visitors and learners. This wide variety of terms of reference reflects not only the diversity of the participating groups but also suggests the range of functions that their presence on the farm can fulfil.

Half (50%) of the participating care farms stated that they currently have service users on the farm for five or more days a week and six (9%) of the remaining farms did not yet have any service users on the farm. The number of people accommodated and the duration of the actual sessions within the broad measure of 'days attended' varies greatly between farms, with day sessions (excluding those with residential facilities) ranging from 1.5 to 10 hours in length; the majority (58%) last between four and six hours. There is a similarly wide variation in fees charged, with 10% of respondents with service users stating that there was no cost associated with the service that they provided. Between £35 and £50 was found by this study to be the most common daily range, but actual charges varied considerably depending on the specific needs of the individual concerned and the funding arrangements that applied.

The more recently completed comparable study (Bragg, 2013) presented an average charge of £51 per day as applying, with this reflecting a fairly considerable increase from what had previously been presented as being in the region of £30 per day (Hine *et al.*, 2008). However, these studies similarly stressed the extent of the variation that exists with regard to the individual charges that apply. Such disparity is evident concerning many aspects of care farm provision, and highlights the complexity of that which is entailed and the challenges associated with seeking to provide generalisations. People with a wide range of personal care needs attend (and the required degree and nature of support varies accordingly), and, whilst the care

farming activities might be just one of several farm-based activities, they can equally be the sole raison d'être.

6.1.3 Care farm employees

The farm based labour force in the UK declined substantially during the second half of the 20th century as a result of increased mechanisation and changes in agricultural practice. This situation appears to be continuing, with a further 10% reduction having taken place during the first decade of the 21st century (Defra, 2011). In contrast to this trend, care farming is found by this survey to generally be accompanied by increased levels of on-farm employment. Amongst the 63 care farms that provided relevant information, the average number of employees (including family members) was four full-time and four part-time. These figures are lower than those provided by Hine and colleagues in 2008 (five full-time and five part-time), but exceed those presented by Bragg in 2013 (three full-time and four part-time). Some uncertainty is therefore present regarding precise employment levels, but care farming can clearly be seen to be a valuable provider of farm based employment. Interestingly, one farmer highlighted the fact that the same number of people was now employed on the farm as had been the case 70 years previously (CF 08).

Changes in the agricultural labour force have resulted in increasing numbers of farmers often working alone, and it is perhaps no coincidence that they are consistently represented in the UK amongst the occupations with the highest suicide levels (Kelly and Bunting, 1998; Meltzer *et al.*, 2008; Price and Evans, 2009). Increased employment levels associated with care farming might also therefore deliver associated benefits to service providers with regard to social inclusion, and this aspect is considered in greater detail later in this chapter (p. 115).

Care farm employees often have a wider range of formal qualifications than is traditionally the case amongst farm workers. Fifty three per cent of care farms were found to have at least one employee with a farming qualification, but a broadly similar number (47%) include those trained in the field of health, and significantly

more individuals (69%) with teaching experience are employed. These figures are broadly comparable to those more recently obtained by Bragg (2013), and reflect a slight rise in the numbers relating to health and teaching and a slight fall in those with farming qualifications when compared to the figures that were previously provided (Hine *et al.*, 2008a).

6.1.4 The care farming operation

Analysis of information concerning the 172 care farms listed on CFUK's online directory (2011) immediately suggests a wide degree of variation in the nature of the service provided. Twenty six (15%) of these presented themselves as city / urban farms and, although related activities might be similar, the wider rural context is therefore absent. A small number (11 or 6%) explicitly stated that there was no financial charge associated with attending the farm. These were notably drawn from the city farms or were otherwise generally managed directly by educational establishments and local councils. Young people were described as the sole client group of 13 care farms (8%), with six of these being an integral element of a particular school or college. Equine related provision is the specific focus for five farms and six operate from what is mainly a woodland environment. Many care farms are not therefore operating from a holding where commercial agriculture is the priority, but 120 (70%) appear to be based in some form of working land-based environment.

This situation is reflected in the data generated specifically for the purposes of this study. One half of the 67 questionnaire respondents describe their site as a farm and most (31%) of the remainder consider it to be a smallholding. This is comparable to the evidence recently reported by Bragg that identified 78% of operations as farms or smallholdings but did not differentiate further between these two forms (Bragg, 2013). With regard to the evidence collected for the purposes of the currently reported research, the distinction between these two descriptors often appeared to reflect variations in holding size, with over half (54%) being less than 20 hectares (ha)

and 36% being over 40ha. This situation is broadly comparable with national figures which indicate that 48% of UK agricultural holdings are less than 20ha and 32% over 50ha (Defra, 2011).

Although some care farmers stated that they had possessed land prior to initiating care farming, they had not always previously used it commercially because they had not considered it to be of a sufficient size to be viable.

“Originally [it was] simply [a] personal home with horses, chickens etc.... started care farming to see if it would help pay for the place when all other forms of income ceased i.e. loss of jobs etc. Thus, farming was never an option on something as small as this.” (CF 25)

Care farming is presented as having provided the opportunity for farms that had found themselves no longer able to compete effectively in traditional markets due to their holding size to once again become productive.

“We wouldn't be a successful farm. If we were just running as a farm, we would be bankrupt. You can't make a living off 21 acres, you have to diversify. We are playing at farming. We've got 35 cows over the road and we've got sheep here there and everywhere so we are farming but... Obviously we've got some animals, we try and make a profit, but it is a small profit. It certainly wouldn't sustain the farm. It would only work if you'd already paid the mortgage. You might just make it work then on a small farm. But, I mean this is the problem - why a lot of small farms are in such trouble - they don't work unless you've got some sort of niche of some description.” (CF 05)

Other care farmers indicated that they had previously rented their land out to neighbouring farmers, and 25% of respondents had undertaken land acquisition with the specific intention of developing a care farming operation as their primary activity.

Despite the fact that care farming is sometimes perceived and portrayed as a relatively new form of farm-based activity, there is evidence that this is not necessarily the case. It emerged from the survey that 40% of respondents had been

providing such services for a period exceeding five years, and this would suggest that they will now be well-established in their local communities. However, this figure is significantly less than the average of 14 years previously reported by Hine and colleagues (2008a) and therefore supports the assertion that care farming is an activity that continues to expand, rather than the increase in numbers merely reflecting the fact that more service providers have become aware of the generic descriptor or the presence of the umbrella organisation.

6.2 Economic outcomes for care farmers

The relative importance of the income generated from care farming is found to vary considerably amongst the study participants. Whilst 36% of respondents indicated that they were mainly or totally dependent on this income stream, almost as many were either partly reliant upon it (33%) or not at all so (31%). 44% of the participating care farms stated that they operated as social enterprises and a similar number as companies limited by guarantee (44%). This supports the following observation made by Hine and colleagues (2008a, p. 76).

“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.”

Questionnaire data furthermore suggest that care farms continue to favour this business model, irrespective of the length of time that they have been operational.

A social enterprise is, as the name suggests, a business that operates in the marketplace (and therefore achieves sustainability through trading), but that is driven primarily by social objectives. Social enterprises have no financial commitment to their owners (generally the care farmer), but are instead required to reinvest all profit in the actual operation (Nyssens *et al.*, 2006). This crucially facilitates access to capital funding in the form of grants and various government incentives, with these often being identified by care farmers as providing an important income source, particularly in relation to the development of associated

infrastructure and the provision of educational activities. Social enterprises have previously been presented as a modern manifestation of the community support systems that operated in the UK during the 19th century (Leadbeater, 2002). These enabled services to be delivered from within local communities rather than by external institutions, and care farms would therefore appear to particularly suit this operational form. Private companies limited by guarantee are intended specifically to allow non-profit making organisations to acquire legal status, and this is also therefore an operational form that will directly support social enterprise.

Care farming is not presented by practitioners as something that should be pursued for purely economic reasons, but this aspect is sometimes suggested to have been promoted at the outset.

"I think some people have perhaps been encouraged in, or seen care farming and have thought, 'ooh, that would be lucrative'... I mean we were out there as Care Farming West Midlands encouraging new businesses to start-up weren't we, and I mean there's been lots in the press, stuff in the Guardian and all over the place that probably paints a fairly rural rosy scene." (CF 04)

Although the overall financial impact of operating as a care farm is felt by 69% to have been of a broadly positive nature – *"from being unviable to viable"* (CF 62) – 12% of respondents did not yet receive any income and the remaining 19% indicated that they were struggling to generate sufficient funds.

"The farm has made a loss for three years now as a direct result of all the infrastructure and extra expense which has been incurred due to setting up the care farming." (CF 14)

It is generally the newer and less well-established operators that indicate they are currently failing to realise sufficient income to safeguard their existence over the short to medium term. It was observed over twenty years ago (Ilbery, 1991) that those who most need to diversify their farm business to enable their survival often

have the greatest difficulty accessing the necessary financial resources, and this appears to apply equally to the care farming context.

"...there was no farm income as such before and so far we have barely secured enough funding to cover some of our basic costs." (CF 25)

However, better established care farms generally suggest themselves to be generating sufficient income to at least cover associated costs, and there was furthermore a feeling expressed that this was still perceived as a relatively new and untested form of service provision that will take time to become established.

"We make enough to pay everyone and provide some resources, but would like more naturally." (CF 17)

"... and, of course, once you get to a certain level, you get a sort of momentum going and so people start to hear about us. Now, if you went back two years, [name] care farm wouldn't have existed and nobody would have known. Now people do." (CF 05)

Despite not yet being by any means universally applicable, care farming is considered in some instances to have provided the 'diversification panacea' that was envisaged by politicians in the 1980s as a way for farms to achieve commercial viability whilst simultaneously cutting surpluses, reducing subsidies and providing wider environmental benefits (Ilbery, 1988).

"It's a good business. It generates a good income. You wouldn't generate that sort of income on a farm of this size without some special type of business on the farm." (CF 07)

The related income is often not substantial, but it is nevertheless sometimes portrayed as having been critical with regard to enabling the continuation of farming operations that might not otherwise have been sustainable.

"[Name] was beginning to look for work away from the farm because it wasn't paying. We knew right from the beginning this wasn't going to be huge money but it just seemed to fit in with how we both felt sort of thing....It was to do with perhaps keeping our farm afloat but not about making a huge business out of it. It's not a huge farm and it had stopped paying us enough to bring up a family on several years before." (CF 09)

6.3 Environmental outcomes on care farms

This section considers the change that is presented as having taken place with regard to the farm environment. Outcomes are differentiated between those that concern the natural, the horticultural and the livestock.

6.3.1 The natural environment

Care farmers recognise the benefits that they receive as a result of having access to elements of the natural environment, and there was a shared desire to provide others with similar opportunities and further promote / preserve the farming 'way of life' (Price and Evans, 2009).

"Wanting to make the countryside more accessible." (CF 55)

"I wanted to share the experiences I had as a child." (CF 60)

Those who provide care farming services are aware of the increasing predominance of urban lifestyles and the negative impacts that these might be having on the health and well-being of some of those concerned. They similarly perceive value as emanating from enabling people to spend time in the countryside.

"A lot of them, from the town, they've never seen the countryside before so it's a lovely opportunity for them. They get to see the whole life-cycle don't they? From lambs being born, right through to the adult animal. They seem to benefit from that, and just the fresh air and exercise." (CF 05)

The fact that economic viability had not previously been provided by agricultural activities alone had resulted in some service providers having become separated from their land. Engaging with care farming has sometimes resulted in a renewed interest not only in husbandry but also in the wider farm environment. In instances where landowners had rented their land out to a third party rather than farming it themselves, those who became responsible for working the land had been particularly focused on the economic return that it provided. This had sometimes resulted in a lack of appreciation of the landscape and reduced management of the more natural elements of the farm environment.

“From 1992 until 2009 we rented out all our land to dairy farmers. Our farm became run down and the woodland became overgrown. We did not engage with our land apart from occasionally getting a contractor to do hedging or drainage....we are now 100% engaged in the farming we do.” (CF 14)

Care farming has allowed some farmers to become more directly involved with managing / protecting the natural environment that is in their care to a greater degree than had previously been possible. Such environmental stewardship can be facilitated by the presence of service users who are often willing and able to engage in the more labour intensive activities associated with traditional farming systems. Industrialised agriculture has tended to eliminate features providing distinctive landscapes and valuable habitats (Westmacott and Worthington, 2006), but care farming has enabled relevant tasks to once again receive the attention that is required and deserved.

“We have been able to restore orchards and meadows, erect fences, put in water supplies and new gates to bring abandoned land back into production. Our land is mostly SSSI [Site of Special Scientific Interest] which is now seen to be in 'favourable' condition by Natural England.” (CF 02)

Thirty-three care farmers (50% of respondents) indicated that they were in receipt of direct government funding to support them in undertaking appropriate stewardship tasks. The associated income can be a valuable additional resource, particularly for

those who become eligible for the Higher Level Stewardship (HLS) payments that require more labour intensive, proactive input.

6.3.2 Horticulture

Grassland is presented as the most common field enterprise on the care farms that contributed to this study (contained within 85%), but woodland, vegetable and fruit crops were also present on over half of those concerned. A comparable picture is presented by the evidence recently collected on behalf of Natural England (Bragg, 2013). It is arable crops (evident on only 23% of farms) that both studies have found to be underrepresented compared to UK farming more broadly. According to national statistics, cereals or general cropping apply to 22.1% of farms by main type, rather than their merely being present to some degree (Defra, 2011). This perhaps reflects the fact that modern crop growing practices are not always easily adapted to allow increased numbers of people to participate in the production process usefully and safely.

Sixty-six per cent of the care farms engage in horticultural activity, but the manner in which these crops are grown often neither seeks nor provides maximum yields. The focus is instead more widely placed on allowing everyone to participate, regardless of their (suit)ability, with fairly minimal surplus produce often being generated to trade in the market place.

“We would struggle to make a living out of the produce. Certainly the stuff we grow from a horticultural point of view we would probably eat ourselves. They cut it and eat it. It rarely gets beyond the kitchen.” (CF 14)

Despite the fact that the majority of care farms engage in horticulture, care farmers indicate that not everyone is keen to participate in growing crops, with differences being perceived in how people with differing needs approach this activity.

“It's very difficult horticulture because I have noticed that it's only certain client groups that like it....A lot of drug addicts are sort of male orientated, so the women almost entirely will do horticulture but with others, you don't get that divide with other client groups. I mean adults with learning difficulties love horticulture. They love the regularity of what they are doing. They like the fact that they're potting up that plant, that plant, that plant. They feel safe with that, and the sense of achievement when they see what they've done is important to that group, and for that reason I find adults with learning difficulties very keen on the horticulture. The children, as long as it's only for five minutes, you know? So the horticulture has mixed uses.” (CF 09)

The real value of horticulture for many service users is instead presented as being broader than merely nurturing the crops. It is engaging with, and having an increased awareness of, the activity and that which it concerns that is perceived as providing valuable wider benefits in relation to personal health and well-being. These result not only from the associated physical activity but also through the development of an improved understanding of the form and importance of a balanced and nutritious diet that incorporates local, seasonal produce.

“I think it's absolutely crucial that we teach about healthy eating as well because that's one thing that a lot of clients have in common. They very rarely eat healthy food. So I think teaching about healthy eating is very important, but it doesn't have to be the client's involvement in actually growing it. It might be the client involvement with picking it or cooking it.” (CF 09)

6.3.3 Livestock

Unlike in modern, industrialised farm businesses where economies of scale have often required specialisation (Bowler, 1986), a wide variety of animal species are generally present on care farms. Chickens are the most commonly kept animals, with these being found on 89% of the surveyed care farms. They are particularly useful in a care farm environment because they require little land and capital to initiate and sustain, and service users can support their labour-intensive needs. Pigs, which have

also been industrialised and removed from holdings in some part due to the demands they make on members of an agricultural workforce, are the second most common livestock found on care farms (77%). They are followed by sheep (68%), horses (59%), other poultry (54%) and beef cattle (46%). Rare breeds of some description were recorded as being present on 33% of farms, and 20% of respondents also indicated that they kept goats, despite these not having been included as a named category in the questionnaire. These figures differ somewhat from those collected in 2007 (Hine *et al.*, 2008a) that identified sheep as most common (80%), but are more closely comparable to those presented following the more recent study (Bragg, 2013) which similarly identified chickens as being most popular (82%).

The main anomaly identified when comparisons are made to farming practice more generally in the UK is the under-representation of dairy cows (9%) amongst care farms, as compared to the 46% that contained beef cattle. This situation perhaps relates to the fact that milking ever-larger herds twice a day does not easily accommodate the simultaneous management of other enterprises and has resulted in dairy farms in the UK being the farming operations that are least commonly diversified (Exeter University, 2003). However, this is in direct contrast to the situation in the Netherlands, where dairy farmers have been suggested to be the principal providers of care farming (Di Iacovo and O'Connor, 2009). A significant minority of care farmers also independently indicated that they kept a range of small pet animals specifically for the benefit of their service users, despite the fact that this category had not been specifically included in the questionnaire. This was also found to be the case on the overwhelming majority of the care farms that were visited.

Very few care farms indicated that they had sufficient numbers of specific livestock types to be competitive in the marketplace and independently sustain a viable farm business. As has previously been described with regard to horticultural activities, the actual profit that is generated from the livestock is often minimal.

"We've got some animals, but they're not really particularly profitable. The animals are more to do with creating interest for the clients." (CF 55)

This associated opportunity for participants to engage with the animals is considered by many care farmers to be a particularly critical ingredient in the mix that allows them to provide service users with positive experiences.

"They love grooming them, up close and personal. They like feeding them. The interaction with the animals is brilliant. Their minds don't stretch to the 'oh, this isn't very efficient is it? Feeding a few lambs isn't very efficient.' They don't think like that. They think 'oh, this is great'." (CF 07)

This 'efficiency' factor is mentioned by various care farmers, but it is never perceived or presented as an aspect of concern because the agricultural activity is specifically intended to provide participants with a range of experiences that allow them to develop, apply and appreciate personal skills rather than purely to maximise direct economic return from the production of food.

"The farming is not as efficient as it could be as we make animals accessible and hold back from doing things efficiently so that everyone can have a go at farming activities." (CF 05)

Many care farms therefore keep animals for the benefit of their participants as much as for the direct financial value that they generate. The different breeds of animals have equally distinct characteristics and variations in the type and level of care that they require and this generates a suitably diverse range of activities that can be usefully harnessed on a care farm (Hassink, 2003). Nevertheless, care farmers present the behaviour and needs of certain types of livestock as being better suited for some activities and service users than others.

"I think for just looking at, you can't beat the pigs, because they're interesting, they're intelligent animals, so they are always moving about, they're always doing stuff. And piglets are enchanting to watch. Actually hands-on stuff, I think Pygmy goats are very, very useful. Again, it depends on the client group." (CF 04)

The fact that the animals require regular attention to maintain their health and well-being provides nurturing opportunities that allow participants to fulfil a useful supportive function that can have clearly apparent positive consequences.

“The care farm has specific roles that they carry out on the farm such as collecting eggs, feeding the orphaned lambs, boxing up eggs for the shop and for selling at other enterprises....In some cases as well, the co farmers [service users] are able to give over their time to the animals when they are in need. There was a specific example this spring, where there was a poorly orphaned lamb, and [they] were able to sit with her for over an hour and feed her throughout, which in fact in this case saved her life.” (CF 30)

Individual animals are therefore acknowledged by care farmers as often receiving a great deal more personal attention on a care farm than would be the case on a more mainstream livestock farm. This is presented as enabling individual participants to develop supportive relationships with individual farm animals that can provide symbiotic benefits for both parties.

“A lot of times they've got more affinity with an animal than they have with a human being because human beings have let them down and abused them.” (CF 03)

The previously presented evidence has reflected the data provided by the majority of care farmers, but it is important to also acknowledge that, due to the complex nature of care farming (encompassing a wide range of operations and practices), there are exceptions to all identified commonalities. A principal, and thus more commercial, livestock type is found on some farms, with this predictably tending to apply at the larger sized holdings. For example, one farm has 600 hens, and another has 300 dairy cattle. However, on the farms that engage in larger scale activities, this will commonly occur alongside the care farming activities. Care farm service users can often engage with related activities, and benefit from the additional opportunities that this can provide, but are not solely responsible for undertaking all elements of the more directly commercial operation.

6.4 Social outcomes for care farmers

All the care farmers who responded to the first questionnaire were asked to specify the aspect(s) of care farming that provided them with the most satisfaction. A total of 90 factors were identified by 59 respondents. The most popular (63%) essentially concerned the philanthropic value received as a result of the perception of having helped facilitate, and being able to witness, improvements in the personal health and well-being of their service users. The centrality of this element is further reflected in the fact that 41% of respondents chose to start their written response with the words 'seeing' or 'watching', thus emphasising further the value that they personally receive in addition to the extent of their belief in the efficacy of the approach.

"Seeing the smiles on people's faces when they achieve something they didn't know they could do." (CF 40)

"Seeing how people develop and being told by them how much they get from coming to the farm." (CF 18)

'Develop' is another commonly applied word (used by 32% of the care farmers) in relation to the positive outcomes that care farmers indicate having witnessed taking place amongst service users. This further suggests that participating farmers are able to both recognise and appreciate positive related change. With regard to the specific outcomes that are described, perceived changes in happiness (13%) and confidence (11%) are most frequently cited alongside the wider value that is felt to be provided through the associated social integration (11%). Being in a position to facilitate the development of relevant skills, both social (soft) and more practical (hard), was also mentioned in the responses of 19% of the 59 care farmers. However, some were unable to identify specific sources of satisfaction and instead presented the value they received as having emanated from the entire package.

"I love it all, even dealing with people when they are behaving outrageously. It's very holistic." (CF 08)

With regard to more personal social outcomes, care farmers who are operating from a family farm indicate that the wide range of skills required for the successful delivery of the activity has impacted positively on familial ties.

"[The] Next generation have become inspired and motivated where before they were feeling despondent about the future potential to earn a living from farming. We have grown closer as a family unit and enjoy more honest, open, adult conversations with an increased respect for each other's ideas and needs around the farm. It has drawn in family members who have previously been detached from the farm business because there is now a clear role for their skills." (CF 29)

Care farming is furthermore valued for having provided opportunities to become more socially active, with this being presented as benefiting both the individual and the local community through facilitating *"a greater sense of fulfilment and playing a useful role in society"* (CF 02). Farm families are more commonly becoming increasingly socially isolated, and this outcome is considered by care farmers to have inherent, intrinsic value, regardless of the level of associated economic return.

"Although care farming has not (as yet) brought any financial rewards, it has created new energy on our farm, given each of us in the family a sense of purpose and a means to feel connected and valued. So we are exhausted a lot of the time but our lives are more full and rewarding than before we began." (CF 14)

The evidence presented by care farmers frequently suggests that social capital accumulates on a successful care farm, with this being considered to benefit everyone who is directly involved with the activity.

"The family are more eager to be involved than ever they were when we milked cows." (CF19)

"The value, the social value, is for everyone. I've met nicer people through doing this than I've ever met in my life." (CF 09)

"They are part of the family, very much so. We have got our own little community here. It's wonderful." (CF12)

With regard to the reception that the provision of care farming activities received from neighbouring farmers, this was initially suggested to have been mixed.

“A huge range of comments from derision to genuine support. It all comes down to individuals.” (CF 19)

However, respondents indicate that direct criticism and negativity were not generally faced, with scepticism appearing to be derived from misconceptions and ignorance rather than underlying issues with care farming.

“I think they view the whole thing with a slightly bemused and possibly slightly cynical view, but they have always been supportive.” (CF 25)

Indeed, care farming is evidenced as sometimes having resulted in increased interaction with neighbouring farmers, with those concerned being presented and perceived as genuinely interested in associated developments and sometimes being prepared to provide practical support.

“[There is] a lot of encouragement and some [are] willing to give us access to aspects that we don’t cover here, for example sheep farming.” (CF 17)

Some care farmers (17%) did indicate that they had no real contact with the wider farming community, but this was more commonly the case when activities were taking place in an urban or school environment rather than a more conventional agricultural setting.

6.5 Challenges and support needs

Care farmers can therefore be seen to have articulated a range of benefits that result from the activity for service users, themselves, their families and their working environment. However, they also provided information about associated challenges, with these demonstrating that care farming should not be perceived as an easy option for farmers. When asked to identify the greatest challenge associated with operating a care farm, 62% of respondents raised issues that concerned difficulties in accessing adequate funding.

“It seriously needs proper state support.” (CF39)

The common perception was that individuals were often personally keen to attend the care farm, but that statutory sector service providers and commissioners were sometimes unwilling or unable to provide access to the necessary funding. The main barriers in the UK that care farmers believed to be causing this situation essentially related to the fact that the activity was considered by many such funders to be untried, unconventional, lacking an evidence base and not fitting easily into current referral arrangements.

UK Government policy has been focused in recent years on encouraging increasing numbers of vulnerable people to take greater and more direct control of their personal budgets to better ensure that they access service provision that truly meets their personal needs (Bartlett, 2009; Dickinson and Glasby, 2010). However, this is not currently a straightforward process, is being implemented more slowly than initially intended and is not always found actually to provide the positive outcomes intended (Slasberg *et al.*, 2012). Care farmers report associated difficulties with *“getting through the minefield of self-assessment for direct payments and personal budgets for our service users”* (CF 57), and this is also suggested to provide similar, if not greater, challenges for the person with responsibility for administering the overall budget (commonly a carer rather than the individual concerned). Even in those cases where the required funding is available, this often takes the form of short-term arrangements or contracts that provide uncertainty and associated difficulties.

“[There is a] lack of steady income security. Planning and development for more than three to four months is very difficult which in turn makes it difficult to attract skilled part-time staff.” (CF 24)

Bureaucracy and associated administration are mentioned directly by 21% of respondents as providing a challenge. Given the fact that many care farms are relatively small organisations and cannot afford to employ an administrator for this sole purpose, paperwork is often the responsibility of the care farmer alone.

“The time pressure, the capital expenditure, getting the client numbers and having no help available. The paperwork is a nuisance, but there’s no way round it. But if you’re so small and you have to juggle it all yourself then it’s difficult.” (CF 11)

The fact that there are two related yet separate aspects to the actual business can also create tensions, as the care farmer has overall responsibility for ensuring that these two elements remain mutually supportive rather than acting to undermine one another.

“Managing limited resources to ensure that viable outcomes are available to both the care and farming sector of the service”. (CF 56)

6.6 External support mechanisms

It has previously been mentioned that, in addition to benefiting from the presence of the national representative body (CFUK), West Midlands care farmers have also been supported over the last three years by a regional body (CFWM). This was initially principally funded through the Regional Development Agency and was more recently resourced through the Rural Development Programme for England (RDPE). The presence and input of this organisation is widely considered by newly developed care farmers to have greatly facilitated their inception and development.

“CFWM was excellent regarding start-up support. They gave me lots of help with policies, procedures and training.” (CF09)

“I am sure that the good relationship we are now developing with [NHS trust] would not have happened without the large amount of work that was done by CFWM.” (CF10)

“There is still an issue around demonstrating that you are a properly registered care farm and the CFWM connection helps to provide this.” (CF12)

However, there was a feeling expressed by other care farmers that such input was neither required nor necessarily appreciated.

“It needs to be more organic and receive less direction from outside. I don't want people working on my behalf from outside.” (CF08)

It is worthy of note that, in the countries that have witnessed the greatest expansion in care farm activity (such as the Netherlands, Norway and Flanders), central support and regional representation have been provided, and these elements have been presented as having critically influenced the activity becoming better established, recognised and valued (Di Iacovo and O'Connor, 2009).

6.7 The impact on care farmers and their environments

Despite the fact that 73% of the care farms consulted on this occasion had not participated in the previous national survey (Hine *et al.*, 2008a), similarities have been found in terms of farm sizes, service user groups, structures and issues of concern. However, greater disparity emerged in relation to the providers concerned, with independent farms appearing to have become increasingly prevalent. Over 70% of the 67 care farms that contributed data have developed from within the agricultural sector, with this including all those known to have started trading within the last two years. The agricultural foundation is perceived as vital; associated merits are enhanced by a countryside setting, but suitable and comparable places can also be created in more urban environments. The farming elements were presented as central to the activities that were provided and the outcomes that resulted, but 65% of respondents nevertheless indicated that they considered the care element of the service they provided to outweigh the farming.

Care farming has been shown to impact with regard to environmental, social and economic factors; it has enabled both new and established farmers to engage with activities that support both land and community. Productive and consumptive elements interlink to provide multifaceted value. Care farming has enabled family members who had previously been required to engage in off-farm activities to

support their farming lifestyle to transfer relevant skills back onto the farm and link them directly to the practise of agriculture. They gain multiple benefits from being able to work in their home environment and reconnect with both people and place, and similarly value being able to share their space, knowledge and values with people who are seen to benefit as a result.

However, it was recognised that not all farming families would necessarily have all the skills required to work in this arena, with one farmer (born and bred) whose son looked after the care farm highlighting the differences in that which was entailed as compared to more mainstream farming activities.

“I mean some ordinary farmer – sorry, I shouldn't use the word ordinary - but an ordinary farmer starting it up wouldn't have sometimes the nouse or the knowledge. I shouldn't say knowledge, but because he's university trained he'd think differently wouldn't he. Sorry, I know that sounds a bit snobby, but it's true in some ways. Because it isn't an easy job looking after people with learning disabilities.” (CF08)

It is important to acknowledge this fact, particularly with regard to those for whom care farming concerns ‘multifunctional’ rather than ‘new’ agriculture, but it is equally apparent that some care farms have been initiated by people who might not possess relevant farming skills from the outset. Service providers can in both instances employ people with the skills that are not already present, and having the ability to identify and attract suitable team members will help to ensure that the best possible outcomes can result.

The data revealed broad similarities regarding overall ethos and intent, with care farmers generally being primarily guided by altruistic desires to help people to achieve and enjoy their full potential. Care farmers have been found to relish their role and to believe that associated activities provide value for a range of stakeholders on a multitude of levels. *“It's beyond measurement for all involved”* (CF33). Data collected from Norwegian care farmers has previously suggested that financial gain was the most common motivational factor for becoming involved with

the practice (Fjeldavli, 2006), but this was not found to be the case amongst those who contributed to this study. This is, nevertheless, clearly an important element, with care farming having been evidenced as increasing on-farm employment and being considered by the majority of respondents to have provided a viable enterprise. Care farming generally does not, and indeed perhaps should not, generate greater income than that which can be reinvested usefully in the space and place, but it can provide an invaluable and regular cash flow that supports the promotion and provision of sustainable agricultural practices.

Care farming is not, in many cases, simply an extension of previous agricultural activities and instead sometimes reflects the adoption of a whole new strategy for engaging with the land productively. It enables functional agriculture. For some farms that had become marginalised within the industrialised agrarian regime, often because modest holding size restrict economies of scale, care farming has enabled those concerned to actively engage in the 'core' agricultural activities that constitute farming identity and receive associated personal benefits. It has allowed some established agricultural enterprises to operate on a more sustainable footing and has enabled others to be developed so that they *"become a viable full-time unit rather than one that would support farming as a part-time activity"* (CF 18). However, such sustainability ultimately requires participants wanting to attend and evidence being available to demonstrate that they also benefit as a result of the activity. Chapter 7 will present such evidence and assess the extent to which identifiable outcomes result.

Key points from Chapter 6

(Care Farmers and their Farm Environments)

- Care farms vary greatly in relation to size of holding and extent of agricultural activity, but they are generally social enterprises or private companies limited by guarantee that operate as non-profit making organisations.
- Many care farms in the UK do not operate from a traditional farm holding but the overwhelming majority have developed from within the agricultural sector.
- Care farming allows production in, and consumption of, the countryside to occur simultaneously and in a manner that is mutually supportive.
- Care farming has provided increased on-farm employment, has facilitated the continued operation of some agricultural enterprises and has enabled new ones to develop.
- Most care farms are presented as economically viable, but some are currently struggling to access sufficient funded service users. This is considered to be the result of funding constraints rather than people not wanting to participate.
- Care farmers are most commonly motivated and sustained by altruistic rather than economic returns.
- Care farming is not perceived or presented as an easy option, but service providers benefit from being able to re-engage with environmentally sustainable activities, family members and / or the wider community.

Chapter 7

Care Farm Service Users

This chapter presents the data provided by the care farm service users, the primary intended beneficiaries from the activity. Five overarching themes were identified from the data and these are shown to have relevance and applicability throughout the analysis: from the initial rationale behind attending the care farm, through the aspects that are considered to provide value, on to the benefits that participation was judged to provide and, finally, in relation to associated outcomes and consequential change.

1. *Environmental engagement* (farm, animals, horticulture, nature)
2. *Social interaction* (people, communication, teamwork, friendship)
3. *Positive experience* (enjoyment, engagement)
4. *Personal development* (work, learning, skills, behaviour)
5. *Health / well-being improvement* (physical, mental, generic)

The following analysis presents the data that identified these themes as having particular significance, considers their relationship and outlines associated impact. The relative extent of their individual influence is found to vary at different stages of the wider journey. The number that precedes the theme descriptor in the previous list is included in all subsequent tables detailing sub-themes to clarify that to which they apply. Themes are presented independently to provide clarity concerning the nature and extent of associated value, but supporting data do not always fit so neatly into such distinct silos; individual quotations sometimes refer to multiple themes despite being presented in relation to one particular theme / sub-theme.

7.1 Demographics of the service user sample

The fact that care farms engage with a diverse range of people has previously been highlighted; Table 7.1 outlines the primary needs, gender and age group of the

service user sample. The acronyms incorporated in the table are applied throughout this chapter to provide background information concerning the sources of direct quotations.

Table 7.1: *Primary needs, gender and age group*

Service user group (sample size = 216)	<i>n</i>	%
Substance misuse (SM)	33	15
Young people (YP)	30	14
Learning disabilities (LD)	53	25
Mental health (MH)	55	26
Multiple needs (MN)	34	16
Other (O)	11	5
Gender (sample size = 216)		
Male (M)	154	71
Female (F)	62	29
Age group (sample size = 210)		
Under 16	26	12
16 - 20	11	5
21 - 30	54	26
31 - 40	52	25
41 - 50	44	21
51 - 60	16	8
Over 60	7	3

As Table 7.2 indicates, approximately half of the sample live with family members (53.8%), 17.6% live alone and the remainder (28.6%) live in some form of shared / supported accommodation.

Table 7.2: *Home living arrangements*

Who live with (sample size = 165)	<i>n</i>	%
Parents	43	26
Partner and / or children	35	21
Alone	29	18
Shared accommodation	17	10
At farm	15	9
Other relatives	11	7
Residential home	8	5
Carer (not related)	7	4

With regard to the source of the idea that they attend a care farm ($n=200$), almost a third (31%) suggested that they personally had initiated the process, whilst a further 10% indicated that it had been a shared process, despite this not having been included in the questionnaire as a predefined option. A relatively small proportion (7%) had received the idea from an NHS health care professional, whilst almost a quarter (23%) cited an alternative key worker of some description (including social and probation workers). Schools (11%) and relatives / friends (12%) were also frequently identified as having first made participants aware of care farm opportunities. Table 7.3 outlines the distance participants live from the farm, the number of days they attend and associated travel arrangements.

Table 7.3: *Frequency of attendance / travel arrangements*

Number of days attending (sample size = 214)	<i>n</i>	%
1	120	56
2	48	22
3	11	5
4	13	6
5	5	2
7	17	8
Distance live from farm (sample size = 194)		
Live at the farm	16	8
Less than 2 miles	20	10
2 to 5 miles	49	25
6 to 10 miles	48	25
11 to 20 miles	48	25
More than 20 miles	13	7
Travel to farm (sample size=161)		
Minibus	51	32
Own vehicle	33	21
Given a lift	23	14
Taxi	22	14
Live at farm	16	10
Walk	5	3
Various	5	3
Public transport	4	3
Bike	2	1

7.2 Reasons for attending the care farm

New care farm participants (attending for less than three months) were invited to make selections from a list of relevant skills to indicate those that they would like to develop whilst attending the care farm (Table 7.4). 'Growing food' (63%) and 'woodwork' (62%) were most frequently selected, although skills concerning 'animal care' (56%) and 'chainsaw' (53%) were also selected by the majority of respondents. Only six respondents indicated that they did not want to develop skills in any of the suggested areas.

Table 7.4: *Would like to develop skills in the following (new starters)*

Areas of interest	Yes (%)	No (%)	Unsure (%)
Growing food (n=115)	63	37	1
Woodwork (n=100)	62	37	1
Animal care (n=115)	56	44	1
Chainsaw (n=100)	53	46	1
Conservation (n=102)	47	52	1
Mechanics (n=100)	34	65	1
Land management (n=98)	34	65	1

The questionnaire for participants who had attended the farm for less than three months also included an open-ended question concerning their motivation for attending the care farm: 'What are you hoping to get out of coming to this farm?' 94 participants provided responses, with these identifying a total of 232 individual aspects. 16 people described a single factor (17%), 36 (38%) identified two factors, 25 presented three factors (27%) and the remaining 17 (18%) suggested more than 3 motivational factors. Most participants are therefore seeking to address multiple aspects of their current circumstances from the outset. Table 7.5 relates responses to the five previously identified principal themes.

Table 7.5: *Motivation for attending (principal themes)*

Motivational themes (total = 232)	code	n	%
Personal development	4	77	33
Health / well-being improvement	5	43	19
Environmental engagement	1	39	17
Social interaction	2	38	16
Positive experience	3	33	14
Other	n/a	2	1

Personal development was most frequently cited, with at least one relevant element (relating to learning, skills, work or experience) having been included by 72% of the sample. Indeed, 34% of respondents included the word 'learn' and 23% spoke directly of 'skills'. Table 7.6 presents the sub-themes that were identified from the data, and an explanation of the contribution that each principal theme makes at this initial stage is then provided.

Table 7.6: *Motivation for attending the care farm (sub-themes)*

Motivational sub-themes (total = 232)	code	n	%
Improve mental health / well-being	5	22	9
Learn new skills	4	21	9
Be outside with nature	1	19	8
Something to do	3	19	8
Doing something different	4	18	8
Meet people / develop social skills	2	17	7
Increase knowledge	4	17	7
Enjoyment	3	14	6
Work	4	13	6
Social activity	2	12	5
Improve physical health	5	10	4
Horticulture	1	10	4
Develop social relationships	2	9	4
Animals	1	8	3
Experience	4	8	3
Change addictive behaviour	5	7	3
Improve overall health	5	4	2
Farming	1	2	1
Other (a home / don't know)	n/a	2	1

Personal development

The desire to learn new skills / engage in work is expressed by many service users from the outset. This is sometimes linked to wanting to become more employable for the wider marketplace (transferable skills), but in other cases attending the care farm is perceived as work in its own right. Amongst participants with substance misuse issues, the desire to change associated behaviour is also a particularly common motivational factor.

“Getting back into a working routine and some self-respect.” (SU185, M, 31-40, SM)

“I was looking for an outside job. I didn't want to be like stacking shelves in a factory or anything being stuck indoors. I just wanted to be out in the environment with some room around sort of thing.” (SU8, M, 41-50, MH)

“To learn building and cutting trees. The hard and fiddly jobs.” (SU56, M, under 16, YP)

Health / well-being improvement

Some service users describe their motivation purely in terms of wanting to address elements of their current health / well-being. This particularly applies to those dealing with substance misuse / addiction issues; none of the young people or those with learning disabilities incorporated this aspect in relation to initial motivation.

“I hope to build up more confidence and have a better lookout on life.” (SU158, M, 21-30, MH)

“I thought something's got to change, so you might as well change it now before it's too late. You're either going to end up in a coffin or someone's going to put you in the coffin or you're just going to die a lonely old man on the street or something, do you know what I mean?” (SU47, M, 31-40, SM)

Environmental engagement

Only six of the sample (6%) actually included the word ‘farm’ in their response, but 19 (20%) describe wanting to spend time outside in nature, 10 (11%) wanting to engage with horticulture and eight (9%) with animals.

“To experience life on a farm. To experience planting seed and working with animals.” (SU120, F, 41-50, MH)

“To learn all about the different animals.” (SU51, F, under 16, YP)

Although some service users present these aspects as their sole motivational factor, others already perceive a connection between ‘natural’ elements of the farm environment and improved personal well-being.

“Destressing by being in countryside.” (SU30, M, 21-30, SM)

Social interaction

A social expectation was incorporated in 38 responses (40%), with this essentially concerning opportunities (17), participation (12) or relationships (9). A desire to engage with other people exists amongst some participants from the outset, but this is often expressed in terms of wanting to meet and be with them rather than an expectation of anything more permanent. It is social interaction rather than support that is initially presented by service users as having particular relevance.

“Getting to know people really and how to care for the animals really and all that.” (SU144, M, 21-30, LD)

“To get out of the house, work in the open air, meet new people and socialise.” (SU165, F, 41-50, MH)

“To learn to work with others and mainly to sort my life out, open my eyes to something possible”. (SU194, M, 21-30, SM)

Positive experience

For others, the decision to attend the care farm is presented in terms of seeking to participate in something that is expected to be enjoyable or at least preferable to that with which they engage more usually.

“Enjoy myself and just to do something different really.” (SU50, F, under 16, YP)

“Just to do something and be outside relaxing.” (SU199, F, 41-50, LD)

“Relaxation, peace of mind, being myself for the three hours I am here.” (SU75, F, over 60, MH)

This theme was not presented by anyone with substance misuse issues regarding their initial motivation, with these participants often appearing to be seeking more specific behavioural and circumstantial change from the outset.

7.3 The care farm activities

The evidence presented by service users demonstrates the wide range of activities that can be engaged with on a care farm; these are diverse and reflect the nature of farming. It is not only the animals and crops that require attention, but also the wider farm infrastructure.

“Working with livestock, ponies, things like that. TB and castrating, lambing. We’ve done tractor and maintenance work and clearing stuff up and we did brickwork for a bit.” (SU48, F, under 16, YP)

Indeed, there are some participants who appear to derive particular pleasure from the associated building and maintenance tasks and choose not to even mention agricultural factors when describing what they do on the farm.

“I do enjoy doing the jobs of like mopping the floor. I quite enjoy doing that. And hoovering the carpet. And I sometimes quite enjoy going shopping. I do like doing that.” (SU12, M, 41-50, LD)

Personal preferences might not therefore always directly relate to the farming context, but participants are nevertheless actively encouraged to also join in with more farm-based activities.

“When bailing season’s come, we all help out with that. The same with the veg. We all help out with that. Rotavating or planting or taking up, everybody seems to do that.” (SU98, M, 31-40, SM)

Care farms produce food that can be eaten at the farm and taken home, but they also provide opportunities for new skills to be gained whilst simultaneously adding value to the produce (edible and otherwise).

"I've made damson jam, plum jam, loads of green tomato chutney. Yeh, I've been making loads of things.... We've been down the woods, we went foraging and made dream-catchers and made a wigwam out of willow and painting pots for these flowers at Christmas." (SU6, F, 41-50, SM)

The opportunity to develop and apply such creative skills is an important element of that which many care farms provide, with woodwork (often using materials sourced on the farm) being an activity that was found to be particularly common and popular on the farms that participated in this study.

"The woodwork gets you out of yourself a bit. Gets you to achieve things which you thought you could never achieve." (SU198, M, 41-50, MH)

The range of activities that can be engaged with on a care farm is therefore broad, and this diversity of opportunity is appreciated by those concerned.

"I help out with different little jobs and lots of things you know. It's great. It's a nice variety of things to do." (SU195, M, 31-40, LD)

Care farms are working farm environments, and associated skills can be developed that are outside people's previous experience and expand their horizons.

"I've delivered lambs, helped with calving, the lot. It's just like, when I first come here I didn't expect to be doing that in a year's time. It's mad really what we do. How many people can say they've delivered lambs?! You basically learn like, you learn what like normal farmers do like." (SU49, F, under 16, YP)

When asked to record what they liked most about attending the care farm, 32 service users (19% of respondents) referred to specific activities. A selection of these is now provided to demonstrate further the diversity not only of the activities themselves but also of those which are favoured by individual participants.

"Mucking out the goats and stables. Keeping things clean for animals." (SU199, F, 41-50, LD)

"Sorting and grading the eggs." (SU218, F, 31-40, LD)

"Making the animal feed. Use the petrol strimmer." (SU99, M, 41-50, MN)

"Working in the farm cafe and with the pigs." (SU109, M, 21-30, LD)

"Being outside fishing." (SU63, M, under 16, YP)

"Driving around the farm." (SU23, M, under 16, YP)

"Potting and watering the plants." (SU126, F, 21-30, LD)

"Working in workshop, bricklaying, strimming." (SU55, M, under 16, YP)

"Working on the roundhouse and in the garden." (SU188, F, 31-40, MN)

"Planting and building in general." (SU170, M, 41-50, MN)

"Putting my skills as a painter into the painting of barns, gates etc." (SU159, M, 51-60, MN)

"I like woodwork the best and mending things." (SU130, M, 31-40, LD)

"Working with the chainsaws." (SU41, M, 31-40, SM)

"Making clay models." (SU90, F, 41-50, MH)

"Reflexology, learning about herbs." (SU76, F, 41-50, MH)

"I like doing craft and being in IT." (SU219, M, 31-40, SM)

This list demonstrates clearly that farm environments can be utilised to provide an eclectic range of activities that meet multiple personal interests and preferences. The relative importance of these various factors to the wider sample is now investigated.

7.4 Important aspects of the care farm experience

Follow-up questionnaires invited respondents to select a maximum of three of the following items regarding the aspects of the care farm experience that they personally considered to be most important:

- Learning new skills
- Contact with nature
- Looking after the animals
- Helping plants / food grow
- Working in woodland
- Getting to know other farm clients / helpers
- Getting to know farmer and their family / workers
- Developing mental strength
- Developing physical strength
- Other

It was recognised that providing participants with such prompts might potentially result in their failing to identify additional aspects of personal significance, but it better ensured useful input from those who were less inclined / able to conceptualise / articulate opinions. Table 7.7 details the relative popularity of these pre-defined categories amongst the 123 service users concerned.

Table 7.7: *Most important aspects*

Most important (total = 379)	<i>n</i>	%
Learning new skills	73	19
Looking after the animals	62	16
Getting to know other farm clients / helpers	46	12
Getting to know farmer and their family / workers	33	9
Contact with nature	29	8
Developing mental strength	29	8
Helping plants / food grow	26	7
Developing physical strength	26	7
Working in woodland	20	5
Getting to know everyone	14	4
Working / keeping busy	10	3
All equally important	8	2
Other (out of town / part of something /enjoyment)	3	1

Despite being requested to select a maximum of three responses, eight respondents instead indicated that all were equally important. Fourteen other participants were unable or unwilling to differentiate between service users and providers; they chose instead to present them as a single cohesive unit. Having the opportunity to learn new skills remains important, but the number of people recording the importance of the animals has increased dramatically (50% of the sample) compared to the frequency with which this was cited as contributing to the decision to attend the care farm (9% of sample). Working / keeping busy was not incorporated as a category in its own right, but ten respondents (8% of the sample) considered it of sufficient importance to add independently. It can reasonably be hypothesised that many more would have included this aspect had it been included as a pre-defined option.

7. 5 Changed perceptions of people and incorporated elements

All service users who completed questionnaires were asked to rate how much they liked a range of easily conceptualised elements that might relate to the care farm experience. Table 7.8 details the responses provided on the first occasion that questionnaires were completed.

Table 7.8: Amount that different care farm elements are liked

Relevant element	Not at all (%)	A little (%)	Quite a lot (%)	A lot (%)
Animals (n=206)	1	9	25	65
People (n=158)	1	13	43	42
Plants (n=166)	7	22	34	37
Trees (n=154)	3	21	30	46
Nature (n=193)	2	17	29	53
Being outside (n=206)	1	7	29	64
Being with other people (n=139)	1	19	42	37
Getting dirty (n=139)	12	30	30	28
Learning new skills (n=203)	1	10	24	65
Making things (n=203)	5	12	29	54
Meeting new people (n=204)	3	18	35	44
Physical exercise (n=207)	4	19	31	46
Helping things grow (n=189)	7	21	30	42
Trying to fix things (n=189)	9	20	25	46

Aspects concerning 'people' and 'plants' were therefore initially favoured less by participants than 'animals', 'being outside' and 'learning new skills'. In order to identify the presence or otherwise of change in the responses of those who completed follow-up questionnaires, a Wilcoxon Signed Rank test was applied to the data; this is particularly suitable for using with non-parametric repeated measures that generate ordinal data (Dancey and Reidy, 2002). Table 7.9 details the extent of the change in relation to variables where significance was initially detected.

Table 7.9: *Change in the amount that elements are liked*

Variable	<i>n</i>	<i>z</i>	<i>r</i>	<i>p</i>
People	69	2.35	.20	.019*
Plants	87	2.57	.20	.010*
Being with other people	55	2.34	.22	.020*
Meeting new people	131	2.05	.13	.041*

*A significance level of $p < .05$

A statistically significant increase was therefore revealed concerning 'plants', 'people' 'being with other people' and 'meeting new people', although the actual effect sizes (*r*) were in all instances only small (.10) to medium (.30) according to the Cohen (1988) criteria. When the same test was applied solely to data provided by those who had been attending the care farm for less than three months when the first questionnaire was completed, no statistically significant change was identified in relation to any of the variables concerning people, but was evident instead in relation to animals ($n=84$, $z=2.02$, $r=.16$, $p=.04$) and plants ($n=69$, $z=2.5$, $r=.21$, $p=.01$).

Amongst those respondents who had already been attending for over a year prior to completing the initial questionnaire there was no statistically significant change in relation to how much they liked any of the items under consideration. However, when the Wilcoxon Signed Rank test was applied only to data provided by those who had been attending the care farm for between 1 month and 1 year prior to participating in this study, statistically significant change was apparent concerning animals ($n=40$, $z=2.23$, $r=.25$, $p=.026$), people ($n=23$, $z=3.46$, $r=.51$, $p=.001$), being with other people ($n=23$, $z=2.50$, $r=.37$, $p=.013$) and meeting new people ($n=40$,

$z=2.30$, $r=.26$, $p=.022$). Although sample sizes are of course lower in these instances, effect sizes (r) can be seen to have increased quite substantially.

Significant change was always positive and was only ever apparent (regardless of the level of analysis) in relation to animals, plants and people. The differences that were evident regarding the extent and form of this change in relation to the amount of time attending suggest that support might initially be provided by the animals and plants, but that people and associated social interactions can be increasingly enjoyed and influential after someone has attended the care farm for a longer period of time.

7.6 Liked aspects of the care farm experience

One hundred and seventy respondents who had attended the care farm for more than three months or had completed an intentionally short intervention described the aspect(s) of the experience that they particularly enjoyed. Data analysis identified 396 elements in the written responses and their relationship to the principal themes is outlined in Table 7.10.

Table 7.10: *Most liked aspects (principal themes)*

Most liked aspects (total = 396)	Theme	<i>n</i>	%
Environmental engagement	1	128	32
Social interaction	2	86	22
Personal development	4	72	18
Positive experience	3	67	17
Health and well-being improvement	5	21	5
Everything	n/a	21	5
Other	n/a	1	<1

Given that the focus of this question concerned what was 'liked' about attending the care farm, it is perhaps not surprising that health and well-being were mentioned least frequently; these aspects are likely to relate more directly to outcomes rather than the experience itself. However, responses clearly demonstrate the extent to which the wider farm / rural environment is appreciated, with this accounting for almost a third (32%) of all responses and being directly mentioned by 108

participants (64%). Table 7.11 outlines the frequency with which relevant sub-themes were incorporated in responses.

Table 7.11: *Most liked aspects (sub-themes)*

Most liked aspects (total = 396)	theme	n	%
The people	2	74	19
The animals	1	57	14
The work	4	50	13
Natural outdoors	1	41	10
A specific activity	3	32	8
Everything	n/a	21	5
Horticulture	1	19	5
Learning new skills	4	18	5
Something different	3	12	3
On a farm	1	11	3
Something to do	3	9	2
Health	5	8	2
Teamwork	2	7	2
Having fun	3	6	2
Doing what enjoy	3	5	1
Sense of achievement	5	5	1
Helping others	2	5	1
Freedom	5	4	1
Lack of pressure	5	4	1
New opportunities	4	4	1
The variety	3	3	1
Other	n/a	1	<1

Engagement with other sentient beings (human and otherwise) is most commonly highlighted, with each of these elements (people, livestock and pets) potentially being both sources and beneficiaries of social support. Thematic consideration is now given to the various aspects of the experience that were presented as being liked, and thereby likely to contribute to outcomes, to provide a clearer understanding of the sources of associated value.

7.6.1 Environmental engagement

The specific desire to access a green space is not always directly mentioned, but appreciation can nevertheless be expressed of the fact that attending the care farm enables people to leave their more negatively construed living spaces.

"The more time I spend at home the lower I feel and the more angry. I quite like coming here coz [sic] coming here I normally just forget about stuff."

(SU24, M, 16-20, YP)

"It's nice to come here instead of being in stuck at home doing nothing."

(SU17, M, 21-30, LD)

For those who live in an urban setting, this desire to 'get away' can equally be presented as relating to escaping from the wider town / city space and spending time outside.

"It's like therapeutic in my eyes. You're in the country, you're not in a big massive city. Nothing's going fast, like I'm so used to the bum, bum, bum, bum, bum. Out here it's like everything is taken that much slower innit [sic]?"

(SU38, M, 21-30, SM)

"Being outside is the best bit when the sun shines. It does me good. At the end of the day it does me good."

(SU144, M, 21-30, LD)

As the previous quotations have intimated, the care farm environment can be perceived as a 'rural idyll' that is far removed from that which is more usually experienced. It is particularly valued by some participants for providing both literal and figurative space for personal reflection and restoration.

"You can do a lot of introspection at a place like this. Allows time to think about what doing and where going when working outside in such a beautiful environment."

(SU27, M, 41-50, MN)

"I suffer with the chronic depression and the fresh air, getting out and about and touching base with the soil, it does ground you out and calm you down."

(SU200, M, 31-40, MH)

Animals are the individual 'environmental' element that are most frequently described as being liked, and they are clearly perceived as providing value. A wide range of pets and livestock were individually highlighted, with a particular

attachment to a specific species being most commonly presented by young people and adults with learning disabilities.

“Like he [the horse] basically has been like my best friend throughout it all.”
(SU49, F, under 16, YP)

“I like playing with and looking after the dogs. I like to walk the dogs.”
(SU134, F, 16-20, LD)

Horticulture and associated activities have previously been evidenced as less frequently mentioned than animals with regard to that which is liked best about the care farm experience. Nevertheless, certain individuals highlight this as their favoured activity on the care farm, with these tending to be adults with mental health issues or learning disabilities.

“I couldn’t stick being indoors and doing gardening was outdoor, practical stuff. I found it more, you know, much more satisfying.” (SU19, M, 41-50, MH)

“I like doing plants. I like seeing them grow from seeds.” (SU21, F, 31-40, LD)

Amongst those who directly referenced the farm environment as a holistic entity, an appreciation of the value of place, incorporated elements and associated output were all apparent.

“I love farm places. Quiet, you know what I mean?” (SU145, M, 41-50, LD)

“Say if it were a factory then that’s not work that you could get satisfaction out of is it? Working on a farm, growing things, you know, seeing the fruits of what you’re doing.” (SU98, M, 31-40, SM)

7.6.2 Social Interaction

The care farm service providers are a central element of the overall care farm experience, and members of all service user groups frequently highlight the

importance of their contribution. They are appreciated and valued for treating everyone equally, regardless of personal background and circumstances.

“They talk to us like young adults here, they don't talk to us like we're just kids. We're trusted to do stuff. We haven't constantly got somebody with us.” (SU23, M, under 16, YP)

“The people here are bloody beautiful. Lovely people. They treat you with respect. They just treat you right. Yeah, I've really liked it.” (SU190, F, 31-40, SM)

They are furthermore appreciated for being approachable, willing to listen and a source of valuable support.

“Last time I told him stuff about my problems and what had gone in the past like, which I probably couldn't have told anyone....He actually spoke to me and basically made me think there weren't no need to end my life.” (SU24, M, 16-20, YP)

The support that is provided encourages people to open up, helps them to feel less isolated and better enables them to identify / face relevant issues. This most commonly takes place informally, but can have therapeutic intent as well as results; some care farm workers are qualified therapists and others apply related, but more intuitively based, skills. One of the care farms that contributed to this study incorporate regular therapy sessions as an integral element of their programme, and these were highlighted by participants as providing value, despite this fact not always being made apparent.

“They all say they hate it and everything [therapy sessions] but you're just dying to get in there and offload everything on her, do you know what I mean?” (SU47, M, 31-40, SM)

Not everyone who first attends a care farm is in a position where they want to engage with people and, as has previously been evidenced, they can initially seek and obtain support from other natural elements of the care farm environment.

However, even amongst participants who do not appear to be seeking human support from the outset, associated interaction can be more positively perceived than was originally envisaged or is more generally the case.

"Funny, meeting some of the people here, at time, has been not too bad (mood dependent)." (SU172, M, 41-50, MN)

"I'm not really a people person. I'm very quiet. I find it very difficult to make friends, you know. I mean here for instance, I've got a couple of, you know, close friends and then you know, everybody else I sort of say hello to and have a little chat perhaps." (SU20, M, 41-50, MH)

The fact that human contact takes place on a care farm is not always described in terms that suggest this has yet translated into supportive relationships, but it is nevertheless valued for having provided an opportunity to engage with other people and thereby develop / rediscover social skills.

"Certainly having people around really helps me. I'm not particularly good on my own, I'm not very self-motivated." (SU6, F, 41-50, SM)

"The farm helps me to learn new skills and help me open up to people." (SU175, M, 41-50, MN)

For other service users it is the additional value that results from actively participating with other people (teamwork) that is particularly appreciated.

"I love it so much here at the farm working with people all helping each other. We have such fun, and making new friends. Everyone is so kind to each other." (SU69, F, 51-60, MN)

"Working with all my friends and having a good time." (SU137, M, 41-50, LD)

7.6.3 Positive experience

Some participants indicated that they liked coming to the farm essentially because they needed something to fill their day and found this to be an activity that met their needs. This opinion was most commonly expressed by people with learning disabilities.

"I like coming here because it's something to do and I enjoy it as well." (SU10, M, 31-40, LD)

"I find it quite boring at home, at my new house, at home and I like to come out to work each day." (SU12, M, 41-50, LD)

People dealing with mental health issues perceived similar benefits, but were more inclined to value the sense of purpose and structure that attending the care farm provided.

"It has given some structure to my week and a reason to get up and get going in the morning." (SU174, M, 51-60, MH)

"It gives you more motivation to get up in the morning because you know you've got something to go and do and you feel the sense of achievement." (SU35, M, 41-50, MH)

Young people more commonly presented the time at the care farm in terms of it being preferable to that which was spent at school.

"I thought it was going to be like school a lot, but it's like a decent place." (SU55, M, under 16, YP)

"When I weren't here I had nothing to look forward to. I'd be sat at home and it would just be like another day if you get what I mean. Another day at school. But since I come here it was like I had something to look forward to in my week." (SU49, F, under 16, YP)

Having the opportunity to engage with activities that are found to be genuinely enjoyable enables people to appreciate the time they spend on the farm, engage in laughter and become more contented, happier individuals.

"It's like when I'm here I'm just happy. You know, I just get on with what I've gotta do. I'm well away basically." (SU40, M, 21-30, MH)

"Having a laugh with people who understand you." (SU37, M, 31-40, SM)

"We have a good laugh, whereas before I wasn't into having a good laugh with people." (SU198, M, 41-50, MH)

However, appreciation is equally expressed for the fact that the activities concerned are clearly useful and genuinely productive.

"I am doing something useful that makes me feel useful." (SU102, M, 41-50, MN)

"I feel like I am doing a meaningful activity. Like this hopefully will last for hundreds of years, who knows, something for the future isn't it and that's a really nice feeling." (SU6, F, 41-50, SM)

Such comments demonstrate that participating at a care farm is perceived as a positive experience, in part at least, due to the connections made with people and place, and these are similarly valued for supporting personal development.

7.6.4. Personal development

Most people who first attend a care farm do not appear to have previously engaged with farm related activities, despite 34% ($n=159$) having indicated that they had previously spent time in farm environments. Participation at the care farm is appreciated for having provided opportunities to gain new knowledge and skills.

"I ain't got a clue about animals, not before. What animals ate, what they did or anything. I'd never worked on a farm I've never been on a farm before. I've never done fencing or anything like that before. I've picked up so many different little bits." (SU8, M, 41-50, MH)

Agricultural aspects are not always specifically mentioned, and that which takes place on care farms does not always directly relate to food production, but the opportunity to engage in learning is nevertheless described and appreciated.

"It's good how they like learn you how to do all different stuff and that."

(SU55, M, under 16, YP)

"Learning and doing new things. The work keeps me busy and I enjoy doing it." (SU138, M, 16-20, MH)

As the previous quotations intimate, care farms are valued for not only enabling the development of new skills but also for allowing these, and others that might have been lying dormant, to be practically applied.

"It's good to help. Coz at first like when I come I was like, I didn't know what to do sort of thing, like oh, am I doing this right, you know, but now I've got the hang of it. I just come here and I stick me boots on and I'm just well at it like." (SU40, M, 21-30, MH)

Having the opportunity to work was incorporated in open-ended question responses as a 'liked' element of the care farm experience by 50 participants (29% of the sample). Many others also chose to describe a specific work related activity. Indeed, the word 'work' was directly included in 27% of responses. People who attend care farms have often been absent from the world of work for an extended period and are generally appreciative of having the opportunity to (re)engage.

"I'm doing five or six hours a day here at the moment and that's virtually full-time work isn't it? But I'm enjoying it so much I don't know I'm doing these hours because time goes so quick it's unbelievable." (SU8, M, 41-50, MH)

"It's like seeing the other side of life isn't it? Do you know like, how normal people, not normal, people live and work. What they do every day. You think phwoar [sic], you've got to have some minerals to do that, do you know what I mean? And then you're getting stuck in with them and you feel better with yourself." (SU47, M, 31-40, SM)

The wide variety of incorporated tasks is sometimes highlighted directly by participants as a positive feature that helps them to become, and remain, engaged.

“There’s always something different to do which is interesting. The variety. The variety of work.” (SU20, M, 41-50, MH)

“Everyone here is warm and welcoming and there are a variety of activities to do.” (SU95, MH)

There are multiple reasons for care farm service users being unemployed, and many are currently in a situation where they might be considered, or consider themselves, to be effectively unemployable. The care farm is valued for providing opportunities to participate in a productive workplace and (re)discover associated benefits.

“It’s good just to do a day’s graft and come back at the end of the day feeling tired.” (SU1, M, 31-40, SM)

“I ain’t a slacker or nothing so when I come here I like to do my days work and basically prove myself and that.” (SU24, M, 16-20, YP)

“It’s brilliant, perfect working.” (SU107, F, 21-30, LD)

Having the opportunity to engage with enjoyable, meaningful and productive work is presented as an element of the care farm experience that is particularly liked by individuals assigned to all the broad service user groups, but some of the adults dealing with mental health or substance misuse issues made it clear that they did not yet feel ready for the wider workplace. Associated pressures had sometimes contributed to their current situation, and appreciation was therefore expressed for the fact that there were no preconceived expectations regarding the amount, or indeed the standard, of their work at the care farm.

“It does make you get up in the morning to come here and enjoy yourself, but you aren’t pressured to do the work. It’s not the same job every day, you’re doing something different.” (SU8, M, 41-50, MH)

The work is therefore presented as a central element of that which is provided, but wider appreciation results from it not being accompanied by negative workplace features. It is instead perceived as an enjoyable and productive social experience.

“Doing all the work, being outside and knowing that I am with friends. Doing jobs I like. It is a regular activity, involving people I know. It is outdoor work.”
(SU102, M, 41-50, MN)

“I like the work and everything. Having my friends to do things with. Seeing everything grow and new things being made.” (SU22, M, 31-40, LD)

The connections that are made with work, people and place combine to allow people to gain pleasure and satisfaction from the productive and worthwhile activities that are engaged with on the care farm. Evidence will now be presented concerning the extent to which this can be seen to translate into identifiable and positive change in health and well-being. Consideration will first be given to the quantitative data generated through service user questionnaires.

7.7 Measured change in health and well-being

The presence or otherwise of relationships between the amount of time that people had been attending the farm and their scores on the various mental well-being measures (single items, abridged and complete scales) that were included in the service user questionnaire were investigated using non-parametric tests due to the presence of an ordinal variable (time). Spearman’s Rank Order Correlation was applied to the full scales that provided better distributed response scores, but Kendall’s tau was used for single items and abridged scales due to the increased frequency of tied ranks (Field, 2009). Table 7.12 outlines the significance of associated relationships with regard to all the first questionnaires that were completed.

Table 7.12: *Mental well-being scores and time at care farm (all sample)*

Measures (first questionnaires)	<i>n</i>	ρ / τ	<i>p</i>
SWEMWBS ¹	215	.353	<.001**
WEMWBS ¹	215	.331	<.001**
General Self-efficacy ¹	128	.155	.080
Satisfaction with life ²	214	.155	.004**
Happiness ²	214	.238	<.001**
Sense of Coherence ²	185	.021	.718
CD Resilience ²	185	.001	.981
There are people who really care about me ²	207	.102	.098
Free to decide how live life ²	209	.070	.237
Generally feel positive about self ²	207	.209	<.001**
What do in life is valuable and worthwhile ²	209	.219	<.001**

**Correlation is significant at the .01 level (2 tailed)

¹ Spearman's Rank Order Correlation

² Kendall's tau

Significant correlations were therefore present in relation to the WEMWBS scale and responses to the following single questions / items:

- *All things considered, how satisfied are you with life at the moment?*
- *Taking all things together, how happy would you say you are?*
- *I generally feel that what I do in my life is valuable and worthwhile*
- *In general I feel very positive about myself*

Relationships were in these instances statistically significant, but associated effect sizes were fairly small. The strongest correlations were identified in relation to the broader measures of overall mental well-being provided by WEMWBS (both versions); .353 / .331 reflect 12.5 / 11% of the shared variance (the coefficient of determination) and indicate a medium strength relationship (Cohen, 1988). In order to gain a further understanding of the extent to which change continues whilst someone is attending the care farm, these analyses were also undertaken solely utilising data provided by those who completed the questionnaire on two occasions. Associated results are presented in Table 7.13.

Table 7.13: *Mental well-being scores and time at care farm (repeat measures)*

Measure	n	First questionnaire		Second questionnaire	
		ρ / τ	p	ρ / τ	p
SWEMWBS ¹	136	.428	<.001**	.378	<.001**
WEMWBS ¹	136	.392	<.001**	.350	<.001**
General Self-efficacy ¹	56	.063	.599	.180	.172
Satisfaction with life ²	137	.191	.006**	.225	.001**
Happiness ²	137	.273	<.001**	.258	<.001**
Sense of Coherence ²	110	.046	.547	.111	.121
CD Resilience ²	112	-.040	.614	.117	.111
People who really care about me ²	130	.114	.148	.217	.004**
Free to decide how live life ²	130	.069	.366	.208	.005**
Generally feel positive about self ²	128	.200	.008**	.334	<.001**
Valuable and worthwhile life ²	131	.232	.002**	.361	<.001**

**Correlation is significant at the .01 level (2 tailed)

¹ Spearman's Rank Order Correlation

² Kendall's tau

Positive and significant correlations remain in relation to the scales / items that were previously highlighted, but, amongst the participants who provided comparable data, the scores that were included in follow-up questionnaires (the additional time that had passed was incorporated in the calculation) also identified positive correlation with responses to items concerning 'social support' (*'There are people in my life who really care about me'*) and 'autonomy' (*'I feel I am free to decide how to live my life'*). In order to further clarify the extent of the change that was apparent between the responses provided on the first and second occasions, Wilcoxon signed rank tests (non-parametric) were applied to single items and abridged scales, whilst paired samples t-tests (parametric) were applied to complete scales. Table 7.14 presents the associated results, with *t*, *p* and Eta squared (η^2) values applying to the t-tests and *z*, *p* and *r* values to Wilcoxon results.

Table 7.14: *Change in scale scores (between first and second completion)*

Measure	n	Mean	SD	t / z	r / η^2	p
1 st SWEMWBS ¹	136	24.73	4.98	6.06	0.21	<.001**
2 nd SWEMWBS ¹		26.33	4.53			
1 st WEMWBS ¹	136	49.75	10.12	6.89	0.26	<.001**
2 nd WEMWBS ¹		53.01	9.30			
1 st General self-efficacy ¹	56	28.82	6.27	3.58	0.19	.001**
2 nd General self-efficacy ¹		30.55	5.47			
1 st satisfaction with life ²	137	7.12	2.13	4.71	0.28	<.001**
2 nd satisfaction with life ²		7.78	1.89			
1 st happiness ²	137	7.26	2.21	4.82	0.29	<.001**
2 nd happiness ²		7.91	1.77			
1 st Sense of coherence ²	110	8.25	1.73	4.29	0.28	<.001**
2 nd Sense of coherence ²		8.80	1.40			
1 st Connor Davidson (resilience) ²	112	6.20	1.05	1.44	n/a	.149
2 nd Connor Davidson (resilience) ²		6.30	1.02			
1 st People who really care about me ²	130	3.58	0.65	0.59	n/a	.552
2 nd People who really care about me ²		3.58	0.62			
1 st Free to decide how live life ²	130	3.20	0.74	0.48	n/a	.635
2 nd Free to decide how live life ²		3.17	0.70			
1 st Generally feel positive about self ²	128	3.08	0.88	4.07	0.25	<.001**
2 nd Generally feel positive about self ²		3.34	0.78			
1 st Valuable and worthwhile life ²	131	3.08	0.78	3.41	0.21	.001**
2 nd Valuable and worthwhile life ²		3.30	0.66			

**Significant at the .01 level

¹Paired samples t-test

²Wilcoxon Signed Rank Test

Significant improvements in relation to personal well-being are therefore apparent. When consideration is given to the effect sizes proposed by Cohen (1988) in relation to Eta squared values (η^2), a large effect ($> .14$) is present with regard to the positive change found to apply to scores on both versions of WEMWBS and also that of General Self-Efficacy. Cohen's comparable criteria concerning Wilcoxon results (non-parametric) would suggest slightly below medium ($> .3$) effect sizes in relation to the Sense of Coherence scale and the following single questions / items:

- *All things considered, how satisfied are you with life at the moment?*
- *Taking all things together, how happy would you say you are?*
- *In general I feel very positive about myself.*
- *I generally feel that what I do in my life is valuable and worthwhile.*

Table 7.15 demonstrates that some people who completed two questionnaires scored lower on the second occasion, but it is nevertheless apparent that positive change is taking place for many care farm participants.

Table 7.15: *Direction of change in well-being scores*

Well-being measure	<i>n</i>	Negative change (%)	No change (%)	Positive change (%)
SWEMWBS	136	22	16	62
WEMWBS	136	23	7	71
General Self-efficacy	56	20	16	64
Satisfaction with life	137	17	34	50
Happiness	137	15	41	45
Sense of Coherence	110	16	36	48
CD Resilience	112	18	51	31
People who really care about me	130	13	72	15
Free to decide how live life	130	22	60	19
Generally feel positive about self	128	7	63	31
Valuable and worthwhile life	131	11	60	29

7.7.1 Wellbeing scores and service user groups

Consideration is now given to the impact of the broad needs / circumstances of the service user sample on well-being scores. Table 7.16 indicates the number of people in each service user group who completed initial and follow-up questionnaires.

Table 7.16: *Service user group sample sizes*

Sample groupings	First questionnaire		Second questionnaire	
	<i>n</i>	%	<i>n</i>	%
Learning disabilities	53	25	42	31
Mental health	55	26	34	25
Substance misuse	33	15	16	12
Multiple needs	34	16	25	18
Young people	30	14	16	12
Other	11	5	4	3

Service users were divided into these groups according to their primary needs, but it is important once again to stress that the extent and specific nature of the specific issues that people were dealing with varied considerably. These groupings reflect the primary reason for their first having been referred to the care farm rather than a

professional diagnosis, but they serve broadly to suggest the sort of issues that might be entailed. Dissimilar numbers of participants were represented in each service user group and the Kruskal-Wallis test (a non-parametric alternative to analysis of variance) was therefore applied to identify the relevance of this factor (Dancy and Reidy, 2002). Table 7.17 details the strength of associated relationships.

Table 7.17: *Mental well-being scores and service user groups*

Well-being measure	<i>n</i>	χ^2	<i>df</i>	<i>p</i>
1 st SWEMWBS	215	43.51	5	<.001**
1 st SWEMWBS (repeat measures [rm])	136	32.42	5	<.001**
2 nd SWEMWBS	136	38.82	5	<.001**
1 st WEMWBS	215	43.57	5	<.001**
1 st WEMWBS (rm)	136	32.36	5	<.001**
2 nd WEMWBS	136	43.49	5	<.001**
1 st self-efficacy	128	2.77	5	.735
1 st self-efficacy (rm)	56	2.90	5	.716
2 nd self-efficacy	56	6.72	5	.242
1 st satisfaction	214	30.42	5	<.001**
1 st satisfaction (rm)	137	18.89	5	.002**
2 nd satisfaction	137	19.29	5	.002**
1 st happiness	214	29.19	5	<.001**
1 st happiness (rm)	137	18.67	5	.002**
2 nd happiness	137	18.04	5	.003**
1 st sense of coherence	185	13.00	5	.023
1 st sense of coherence (rm)	110	4.21	5	.519
2 nd sense of coherence	110	9.53	5	.090
1 st CD resilience	185	3.79	5	.580
1 st CD resilience (rm)	112	2.42	5	.789
2 nd CD resilience	112	8.48	5	.132
1 st People who really care about me	207	7.29	5	.200
1 st People who really care about me (rm)	130	8.72	5	.121
2 nd People who really care about me	130	20.70	5	.001**
1 st Free to decide how live life	209	7.46	5	.189
1 st Free to decide how live life (rm)	130	4.37	5	.497
2 nd Free to decide how live life	130	13.78	5	.017
1 st Generally feel positive about self	207	21.33	5	.001**
1 st Generally feel positive about self (rm)	128	14.58	5	.012
2 nd Generally feel positive about self	128	28.73	5	<.001**
1 st Valuable and worthwhile life	209	13.67	5	.018
1 st Valuable and worthwhile life (rm)	131	6.71	5	.243
2 nd Valuable and worthwhile life	131	23.07	5	<.001**

**Significant at the .01 level

Statistically significant differences were therefore once again apparent at all levels at which the questionnaire data were analysed with regard to WEMWBS, SWEMWBS, satisfaction with life and happiness. Significant differences were also apparent with regard to the scores provided in follow-up questionnaires with regard to the following individual items:

- *'I generally feel that what I do in my life is valuable and worthwhile'.*
- *'There are people in my life who really care about me'.*
- *'In general I feel very positive about myself'.*

Mean scores and standard deviations relating to the well-being measures where statistically significant differences were apparent on all occasions were calculated to further explore associated relationships. Table 7.18 reports those that apply to each service user group in relation to happiness and satisfaction with life.

Table 7.18: Mean scores of service user groups (satisfaction and happiness)

Group	<i>n</i>	M	SD	<i>n</i>	M	SD	<i>n</i>	M	SD
	1st satisfaction			1st satisfaction (RM)			2nd satisfaction (RM)		
SM	33	6.27	1.97	16	5.88	2.13	16	7.06	1.69
YP	30	7.40	2.22	16	7.50	1.97	16	7.88	2.13
LD	52	8.33	1.77	42	8.10	1.83	42	8.74	1.40
MH	54	6.87	2.01	34	7.03	1.95	34	7.47	1.91
MN	34	5.91	2.79	24	6.50	1.98	24	7.17	1.83
Other	11	7.73	1.68	4	6.75	1.89	4	8.00	1.41
TOTAL	214	7.10	2.26	136	7.18	2.05	136	7.82	1.83
	1st happiness			1st happiness (RM)			2nd happiness (RM)		
SM	33	6.55	2.08	16	6.13	2.39	16	7.56	1.50
YP	30	7.73	2.07	16	7.63	2.03	16	7.88	1.96
LD	52	8.40	1.85	42	8.36	1.69	42	8.81	1.35
MH	54	6.57	2.21	34	6.71	2.22	34	7.53	1.78
MN	34	6.26	2.85	24	6.96	1.99	24	7.25	1.92
Other	11	7.91	1.38	4	7.00	1.41	4	8.00	1.41
TOTAL	214	7.20	2.31	136	7.31	2.13	136	7.93	1.75

People with some form of learning needs scored highest concerning happiness and satisfaction with life on all occasions, and those with substance misuse, multiple needs and mental health issues scored consistently lower. Figure 7.1 presents changes in mean scores between the two occasions on which data were provided,

and identifies the largest improvements as applying to those with substance misuse issues and 'others' (a smaller and more diverse group), and shows that little change is evident with regard to the young people.

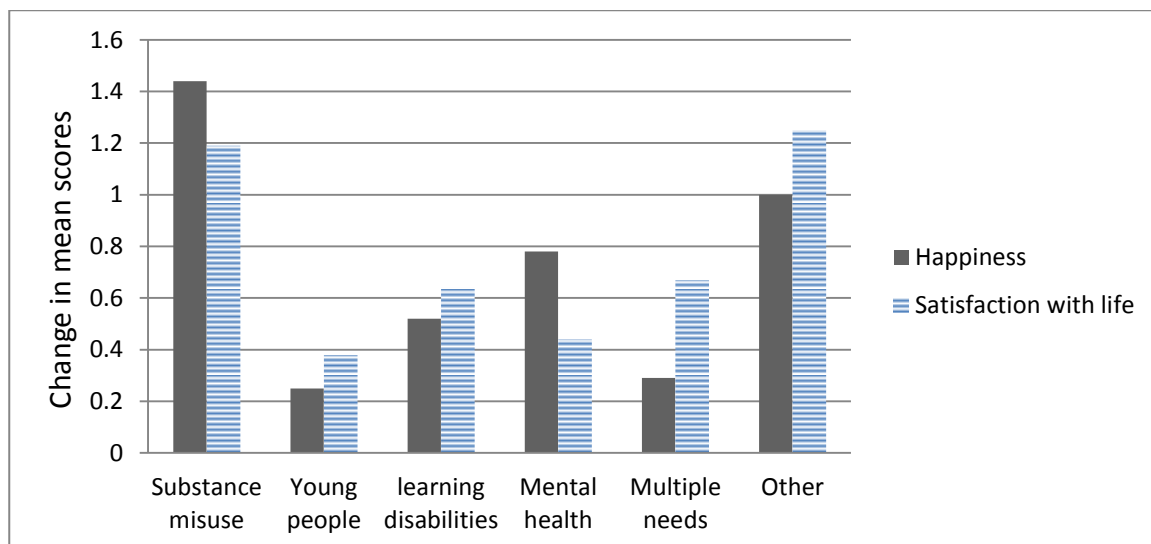


Figure 7.1: *Change in mean scores between questionnaires (Happiness and Satisfaction with life)*

Table 7.19 similarly presents the mean scores obtained from the SWEMWBS and WEMWBS scales.

Table 7.19: *Mean scores of service user groups (SWEMWBS and WEMWBS)*

Group	<i>n</i>	M	SD	<i>n</i>	M	SD	<i>n</i>	M	SD
	1st SWEMWBS			1st SWEMWBS (RM)			2nd SWEMWBS (RM)		
SM	33	23.52	4.90	16	22.25	5.83	16	24.38	4.92
YP	30	25.27	4.26	16	24.81	3.90	16	26.25	4.71
LD	52	28.13	3.94	42	27.76	3.93	42	29.33	2.83
MH	55	23.80	4.78	33	23.94	4.68	33	25.64	4.37
MN	34	21.74	5.46	25	21.84	4.42	25	23.28	3.96
Other	11	26.82	4.36	4	27.00	5.10	4	27.75	4.50
TOTAL	215	24.84	5.09	136	24.73	4.98	136	26.33	4.53
	1st WEMWBS			1st WEMWBS (RM)			2nd WEMWBS (RM)		
SM	33	46.83	10.33	16	43.88	11.89	16	47.63	9.61
YP	30	50.93	9.13	16	50.38	8.32	16	53.50	8.62
LD	52	56.75	7.40	42	56.12	7.73	42	59.60	5.83
MH	55	47.76	9.63	33	47.97	9.60	33	51.64	8.81
MN	34	43.66	11.05	25	44.28	8.95	25	46.64	8.51
Other	11	53.00	7.20	4	52.75	7.89	4	54.75	7.76
TOTAL	215	49.86	10.29	136	49.75	10.12	136	53.01	9.30

People with learning disabilities have once again commonly scored highest, but the lowest scores are on this occasion more commonly recorded by people with multiple needs and those with substance misuse issues. Figure 7.2 demonstrates that it is once again this latter group who record the greatest change in associated scores.

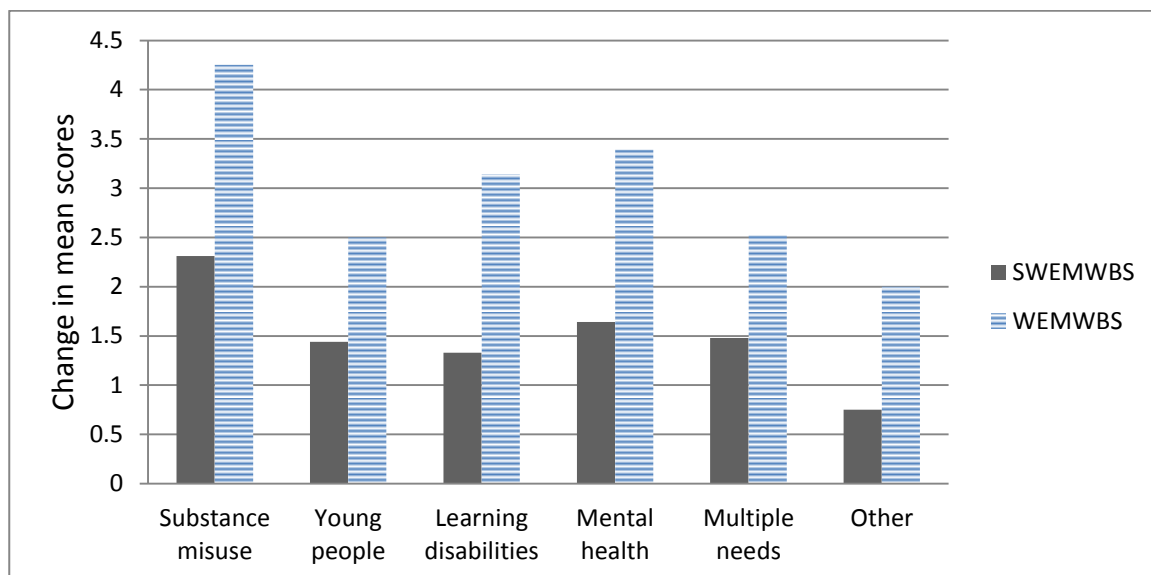


Figure 7.2: Change in mean scores between questionnaires (SWEMWBS and WEMWBS)

The longitudinal quantitative data therefore suggests that spending time on a care farm is associated with improved mental well-being. Happiness, satisfaction with life and overall mental well-being levels (WEMWBS) are consistently found to be in a positive and significant relationship with the length of time that participants have been attending a care farm. The actual scores that are recorded have been found to vary between service user groups, but mean scores in relation to each of these variables improve amongst all groups after additional time has been spent at the care farm.

7.8 Self-reported change influencing health and well-being

Care farm service users who had been attending the farm for more than three months were also asked to indicate the extent to which they considered that aspects of their physical, mental and social health / well-being had changed since attending

the farm. This evidence is now presented in conjunction with responses to the remaining, related, individual scale items that were included in questionnaires.

7.8.1 Physical health and well-being change

The following statements concerned elements that will impact on physical health and well-being:

- *I sleep better since coming to the farm (n=153)*
- *I have started eating more healthy food since coming to the farm (n=155)*
- *My physical health has improved since coming to the farm (n=155)*

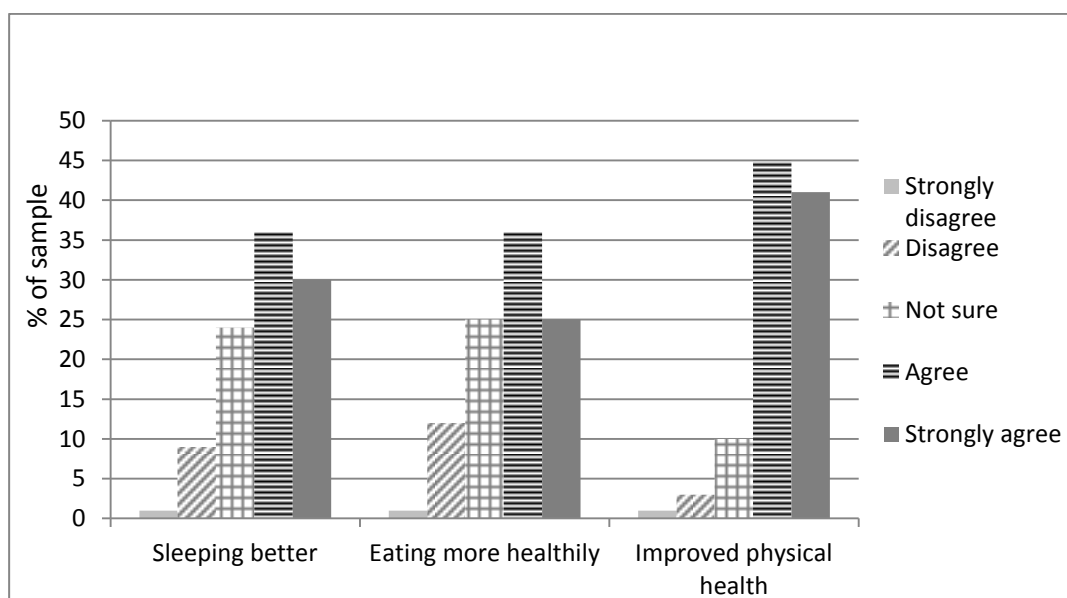


Figure 7.3: *Self-reported change in aspects relating to physical health*

As Figure 7.3 demonstrates, the majority of participants feel that each of these outcomes applies, with 61% indicating their diet has improved, 66% that they are sleeping better and 87% that their overall physical health has improved.

Many participants did not directly mention improved physical health as an outcome of participating at the care farm, but the extent of their overall physical activity was further evidenced in questionnaires by responses to the following Likert-style item:

- *My life involves a lot of physical activity.*

The relationship between this variable and the amount of time that people had already attended the farm was investigated by applying Kendall's tau. Two hundred and nine respondents provided responses on at least one occasion, and a significant positive correlation was present between the two variables when all first questionnaire responses were incorporated ($n=209$, $\tau = .23$, $p < .001$). This was similarly found to be the case when only the first questionnaire responses provided by those who also provided subsequent comparable data were included in the analysis ($n=131$, $\tau = .24$, $p = .001$), and remained evident when increased attendance time was incorporated in relation to their follow-up questionnaire data ($n=131$, $\tau = .22$, $p = .003$).

When a Wilcoxon Signed Rank test was applied to compare the data provided by the 131 participants who completed repeat measures, there was evidence of significant positive change ($z=2.60$, $p < .01$) in relation to levels of perceived physical activity, although the associated effect size ($r = .16$) was fairly small (Cohen, 1988). It is also reasonable to assume that physical health will benefit as a result of sustained activity in a farm environment. Care farm participants often seem not to consider that they are physically exerting themselves as a result of their being able to proceed at their own pace in a place that they enjoy and whilst engaged in activities that provide satisfaction. However, it is clearly apparent when spending extended periods of time on care farms that the overwhelming majority of people are engaging in behaviour that will support their physical health.

7.8.2 Mental health and well-being change

The following questionnaire statements concerned aspects of service users' mental health and well-being:

- *I feel less stressed because of coming to the farm (n=122)*
- *I feel more positive about myself than when I started at the farm (n=155)*
- *I have started to enjoy my life more since coming to the farm (n=156)*
- *My mental health has improved since coming to the farm (n=154)*

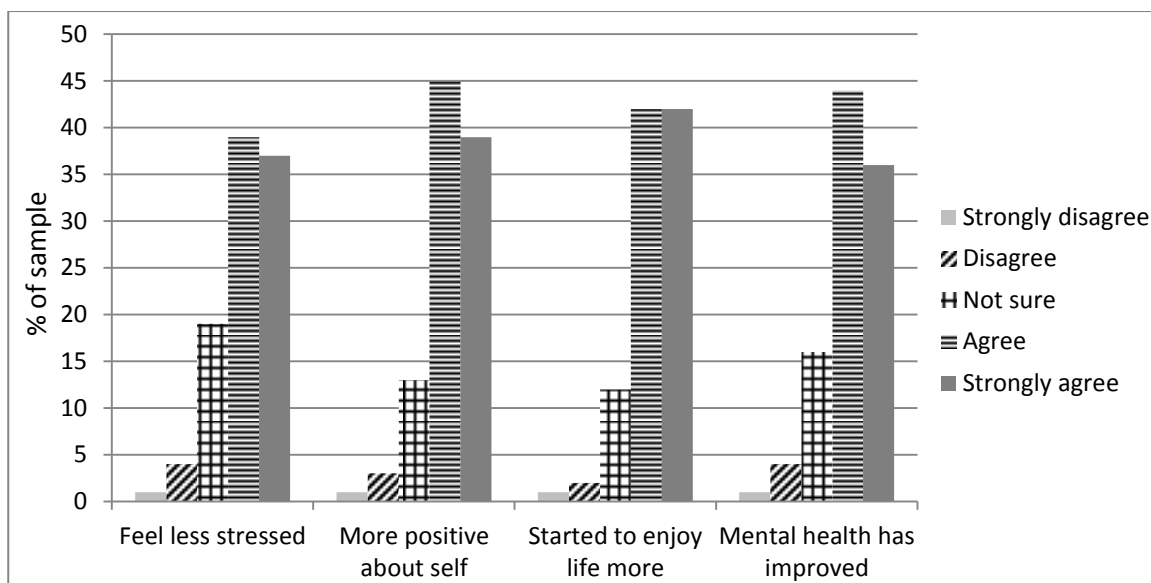


Figure 7.4: *Self-reported change in mental health /well-being*

Figure 7.4 demonstrates that most service users considered their attendance at the care farm to have facilitated change in relation to all of these variables. Seventy six per cent indicated they now felt less stressed, 80% that their mental health had improved, 84% that they were now feeling more positive about themselves and 85% that they were enjoying life more.

7.8.3 Social interaction change

Study participants also recorded responses to the following items that concerned social outcomes:

- *I have become more confident about meeting new people since coming to the farm (n=155)*
- *I have made new friends at the farm (n=153)*

Figure 7.5 outlines the responses that were provided and demonstrates that the overwhelming majority considered their attendance at the farm to have had a positive impact in this sphere. Whilst 82% indicated that they had become more confident about meeting new people, 95% reported having made new friends.

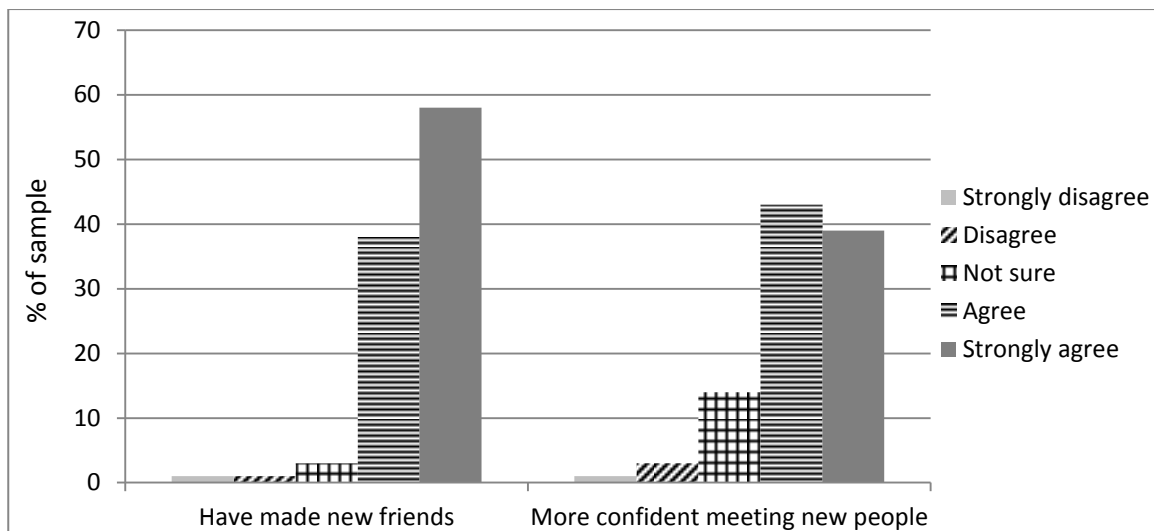


Figure 7.5: *Self-reported social outcomes from attending care farm*

7.8.4 Environmental engagement change

The 'green' elements of the farm environment have previously been identified as a widely appreciated aspect of the care farm experience, with their having been most frequently described in relation to the aspects that were particularly liked. Engaging with the natural environment has furthermore been suggested to provide increased personal health and well-being. The environmental theme was not incorporated in any statements that directly relate to care farm outcomes, but the questionnaire contained two items from the Environmental Identity Scale (Clayton, 2003) that specifically concern associated attitudes and levels of engagement:

- *I think of myself as part of nature, not separate from it.*
- *I spend a lot of time in natural settings.*

The relationship between the responses provided and the amount of time that people had already attended the farm was investigated by applying Kendall's tau. A significant positive correlation was present when all first questionnaire responses were incorporated ($n=184$, $\tau=.18$, $p=.002$), when only the responses of those who provided repeat measures were included ($n=114$, $\tau=.19$, $p=.013$) and also when increased attendance time was incorporated in relation to their follow-up questionnaire data ($n=114$, $\tau=.25$, $p=.001$). Effect sizes can be seen to have increased

accordingly. This would suggest that service users benefit from the time that they spend engaging with the more natural elements on a care farm and also develop an improved appreciation of the natural environment that might also enhance their personal resilience.

“I tell you what right, this is going to sound pathetic and quite stupid, but I sat here one night and I was knackered tired, and I’m looking up at the stars and I thought, there’s stars! And you know, being locked up for years and pissed, I hadn’t really looked up at the sky and I felt so much better in myself though coz [sic] I thought, I’ve noticed the stars!” (SU37, M, 31-40, SM)

7.8.5 Personal development change

The aspects most commonly presented in relation to personal development have concerned learning and applying new skills in a ‘real’ workplace. The following questionnaire items sought to assess the extent of associated change:

- *I have developed new interests through coming to the farm (n=156)*
- *I have learnt new work skills at the farm (n=155)*
- *I am now more keen to try new things than when I started at the farm (n=155)*

Figure 7.6 outlines the extent to which service users agreed or disagreed concerning the extent to which these outcomes had taken place.

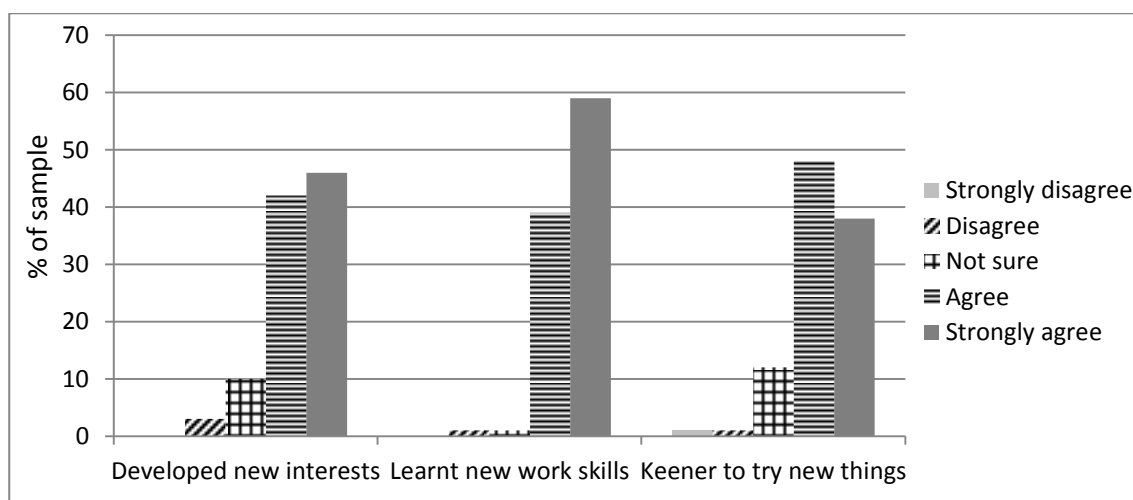


Figure 7.6: Self-reported change in interests and work skills

The frequency of affirmative responses concerning having learnt new work skills is the largest provided in relation to any pre-defined outcome statements, with 98% of respondents indicating that this had been the case. 87% reported that they had developed new interests, and 86% said that they were now keener to try new things than had previously been the case. Positive responses are therefore provided by a clear majority of respondents in all instances, but it is those concerning personal development and social integration that are most commonly felt to apply.

7.9 The impact of the change

An open-ended question concerning the nature of associated change was also included in questionnaires, and analysis of the 120 responses identified 208 specific outcomes. Table 7.20 outlines associated themes, with more than half directly concerning personal health and well-being and the remainder also having relevance in this regard.

Table 7.20: *Change from attending the care farm*

What has changed (total=208)	n	%
Improved health / well-being	109	52
More capable (skills)	37	18
Improved behaviour	29	14
Improved relationships (social)	26	13
Everything	3	1
Nothing	4	2

Further consideration will now be given to the ways in which such change is suggested to manifest itself, with this once again being reported in relation to that which concerns the physical, the mental and the social. It is the social and mental elements that are most commonly highlighted; their interdependence has previously been evidenced and this is found to continue to apply. More specific attention is then given to outcomes that appear to have particular relevance to members of individual service user groups.

7.9.1 Impact on physical health and well-being

It has previously been observed that service users are physically active whilst participating on a care farm but that this is sometimes not acknowledged by those concerned. However, there are some who directly promote the relevance of this element.

“It keeps me fit and healthy. I enjoy myself and can relax.” (SU146, M, 51-60, LD)

“In a way this is like me going to the gym sort of thing.” (SU19, M, over 60, MH)

“I’m always tired when I go home.” (SU21, F, 31-40, LD)

The fact that service users are tired at the end of the day helps some to sleep better and supports others in their attempts to break personal addictions. The exercise that causes such tiredness will also further support physical health. This increased level of physical activity can then transfer into people’s wider lives and thereby facilitate further change.

“I am more active on my rest days as I have realised that coming to the farm is much better than a duvet day.” (SU164, F, 21-30, MN)

7.9.2 Impact on mental health and well-being

Seventy three questionnaire responses (35%) directly concerned mental well-being, and Table 7.21 demonstrates the presence of widespread agreement regarding the principal areas in which change was felt to have occurred.

Table 7.21: *Aspects of change in mental well-being*

Mental well-being change	<i>n</i>	%
Confidence	22	30
Happiness	22	30
Emotional stability	13	18
Other	16	22

Each of the commonly described outcomes - confidence, happiness and emotional stability - will now be considered independently, but these will be seen to also influence wider behavioural outcomes.

Impact on confidence

Some participants related their increased confidence to the fact that they were now involved with something that provided a sense of purpose. Those concerned had often been excluded from the workplace for many years and this can result in people becoming increasingly separated from themselves and their personal abilities.

"I felt like I was never doing nothing. It was doing my head in. So that knocked my confidence and everything. Since I come here my confidence has picked up a lot like." (SU193, M, 31-40, SM)

Learning and applying new skills is similarly presented as having had a positive impact on confidence levels, and this is also considered to have improved their longer-term, future prospects.

"Probably feel more self confident again and aware of my abilities and a sense of purpose." (SU161, F, 51-60, MN)

"I've got a lot more confidence from here as well, as a person. I'm more than confident that I will walk into a good job." (SU59, M, 31-40, SM)

Reported changes in self-confidence are therefore perceived as impacting on future life opportunities, but they are also presented in some instances as having already resulted in positive changes in people's wider lives away from the care farm.

"I am more confident that I can do things around the gardens and also when I'm in town." (SU148, M, 21-30, LD)

"I definitely take this home. I feel more confident going into town and that with my wife and child." (SU35, M, 41-50, MH)

The associated social context is sometimes highlighted as having contributed to this process, and levels of social interaction similarly improve as a result of the increased level of personal confidence (mutually supportive).

*"Helped with confidence and talking to people that I have not known."
(SU188, F, 31-40, MN)*

Impact on happiness

The fact that attending the care farm had made people happier was also frequently highlighted.

*"I feel more happy. I enjoy myself more and am happy."
(SU219, M, 31-40, SM)*

*"I am more happier to see new people."
(SU117, M, 21-30, LD)*

Change in feelings of happiness was commonly highlighted by people with learning disabilities, and was often presented as being something that transferred to their wider lives.

*"I am happy at the farms and all the time now."
(SU122, M, 31-40, LD)*

*"I feel happier inside and am enjoying my life a lot more."
(SU134, F, 16-20, LD)*

Some service users directly mentioned both happiness and confidence in unison, and the two aspects can be hypothesised as related and mutually supportive. They reflect a more positive outlook on life that has been facilitated by the overall care farm experience. This change is once again highlighted as also being carried over into people's lives away from the care farm.

*"Since coming to [name of farm], I feel more confident, happy and more positive in myself. I enjoy the space, the people and having something to do that you can see is useful. Things grow and are shared."
(SU145, M, 41-50, LD)*

Impact on emotional stability / control

Distinctions between internalised and externalised emotions have previously been highlighted (p. 40), with change in relation to both having been found to apply amongst care farm participants in the Netherlands (Hassink *et al.*, 2011a). This study has similarly found this to apply in the UK context. Service users indicate that associated change has enabled them to start managing their emotions more effectively than had previously been the case, with the various elements of well-being once again being presented as interlinked and effectively operating as chains of events.

"I've got my feet now, I've found where everything is, I'm happy. Before I first come here I was a bit anxious, 'oh what's going on', but now I'm so relaxed here." (SU8, M, 41-50, MH)

Anxiety, stress and anger were all described by care farm participants as being things with which they had previously struggled but were now able to better manage.

"Feeling less stressed and wanting to converse and be with others more. Had become a loner. Spend less time thinking have no control over what happening." (SU27, M, 41-50, MN)

"I used to get angry a lot at things. If I couldn't do it I'd get angry. Now it's just, well, I can't do it, I'll get someone to show me how to do it right and I'll do it. You know instead of 'oh, fuck this'." (SU47, M, 31-40, SM)

Other care farm participants chose to describe associated change in terms of increased calmness rather than reduced anger, although such emotions are related and associated behavioural change and outcomes are often therefore comparable.

"I know it sounds stupid, but working with horses has calmed me down loads. Coz around them you have to be calm anyway." (SU49, F, under 16, YP)

"I do find it very therapeutic. It makes me feel calmer and it gets me a bit out of my head. Because I tend to be a bit of a head case you know." (SU6, F, 41-50, SM)

7.9.3 Impact on social well-being

Change in social circumstances is presented by service users as applying both on the farm and elsewhere. Many people who attend care farms were previously in a situation where they were suffering from social exclusion. This had often related, in part at least, to their specific needs, but the care farm provides them with the opportunity to become part of something that is intentionally inclusive and supportive.

"It's brilliant, how we've bonded together." (SU22, M, 31-40, LD)

"We all want good for each other do you know what I mean, it's not about one single person. We're all trying to make each other better." (SU37, M, 31-40, SM)

"They give you support and you can give them support. You're helping each other out sort of thing." (SU8, M, 41-50, MH)

As the previous comments have demonstrated, people are appreciative of the help and support they receive, but they also value the opportunity that this provides them to help others and fulfil a useful function.

"I think it has helped me grow, helping other people. I like helping other people. Making sure they're all right. Telling them what I've done." (SU98, M, 41-50, SM)

"I've suffered it and I know how people feel so I feel that if I can give something back, it makes me feel good." (SU35, M, 41-50, MH)

This mutually supportive environment is suggested to encourage the development of a functional, supportive community that can ultimately provide benefits for all concerned.

"It reminds me a little bit of a kibbutz or something – it's a working community....It's a community living together and you feel part of a family as well." (SU1, M, 31-40, SM)

The social skills and confidence that develop on a care farm have resulted in some service users now engaging in activities that would not previously have been possible.

"I'm going out more. Before I just used to stay in." (SU201, M, 21-30, LD)

"When I started coming here I used to do nothing else, but now I have started a computer course and am going out walking. I wouldn't be doing that if I hadn't come here." (SU6, F, 41-50, SM)

The importance perceived as resulting from the fact that a care farm is a real working environment has previously been described, and for some participants becoming part of such a supported and enjoyed workplace is a critical outcome in its own right. However, for others (principally those dealing with addictions and some of those recovering from mental health problems) the experience has provided them with useful transferable skills and increased impetus to find paid employment.

"I've only ever had one job, I only know one skill, but now I'm picking up different things and I can look at different jobs when I do want to go into full-time work." (SU8, M, 41-50, MH)

"The farm has made a start on regaining my work habit (I have not done paid work for 23 years). It has given some structure to my week and a reason to get up and get going in the morning." (SU174, M, 51-60, MH)

Some of those who had left the care farm before follow-up questionnaires were completed had done so as a result of becoming employed, and, although this outcome is not always directly described, it would appear that others have achieved the sort of change that might ultimately result in this taking place.

"I'm feeling better just for being normal. Do you know what I mean? In me sen [sic]. And I want more things. I want holidays, I want a car, money and I want to work hard." (SU11, M, 21-30, SM)

7.9.4 Impact on group specific needs

Evidence has previously been presented to suggest that reasons for attending a care farm and the aspects that provide particular value can vary according to the principal needs of those concerned. Areas of commonality have been found to exist throughout, but specific outcomes can be sought and their presence or otherwise is now considered further.

Substance misuse

For some of the people who have attended care farms as a result of illegal drug dependency issues, the care farm experience is critically suggested to have positively supported them in successfully addressing the habit.

"I've beat the heroine and that's like 14 months now I've been clean off that. I've just come off 4 ml of methadone. Even though that's only a small amount I still struggle a little bit on that but I'm opiate free and that's been for the first time in 12 years so I'm proper buzzing with that." (SU190, F, 31-40, SM)

"Just walking about and thinking to yourself, you know, I'm not in danger, I'm in control. You know, head held high. It's an amazing feeling you know, rather than what I was walking about with." (SU3, M, 31-40, SM)

Similar outcomes are described by those who are dealing with an alcohol addiction. Not everyone claims to completely abstain from alcohol, but they are not drinking whilst at the farm, and, if they do drink elsewhere, this is suggested to now take a less extreme form.

"Often I don't drink so much because I'm so knackered I have to go to bed, so that's really good actually." (SU6, F, 41-50, SM)

"I still have a drink of an evening but you know it's more like a controlled thing now rather than just like ok, right, fire it all down like.....I'm doing a lot better on the other days as well now like." (SU31, M, 31-40, SM)

"I go to see some people that are still drinking like crazy but I still go around and see them and I'll just have a cup of tea and that." (SU193, M, 31-40, SM)

Illegal drug and excessive alcohol use often go hand in hand, and some participants indicated that they had successfully dealt with all addictions since attending the care farm. For people who live at the farm, return visits to the home environment associated with the addictive behaviour can present a particular challenge, but for those who find themselves now able to abstain in the face of such temptation this can be an important step in their personal journey of recovery.

"It was a good feeling to think well I haven't got to run-off and buy this to make me feel better, I haven't got to drink that to make me feel better. I was automatically feeling better and I thought, I likes this." (SU37, M, 31-40, SM)

Mental health

A wealth of evidence has been presented suggesting that positive mental well-being outcomes result for many care farm participants, but these can be particularly critical for those who are dealing with specific and often profound mental health issues that can have threatened their very existence.

"I've got something to look forward to now. It's worth living for now sort of thing." (SU8, M, 41-50, MH)

"Coming to the farm, it makes me forget all about the suicidal thoughts." (SU198, M, 41-50, MH)

It's a blessing, it really is. I mean for me, if I didn't come here, I'd be depressed and suicidal." (SU200, M, 31-40, MH)

Some people are dealing with issues that are unlikely ever to be fully resolved by such interventions, but they nevertheless indicate that they are now in a more positive place.

"In theory like I've got manic depression which is incurable apparently, but er, they've still got this thing that they're trying to get people to recover and er, I have been a lot better the last couple of years actually." (SU20, M, 41-50, MH)

The people who contributed to this study continue to attend the care farm, and are therefore likely to feel that they still require the associated range of supportive benefits, but they do nevertheless indicate that positive outcomes have resulted and that they consider these likely to continue into the future.

"I am much more accepting of myself and I take more responsibility for my mental health and feel less like a victim. I do public speaking and I meet new people and organise things I would not have done before as I was very worried." (SU77, F, 51-60, MH)

"Every day gets a bit better and that's the way I just hope it carries on until I can reach the stage where I can get back into full-time employment." (SU35, M, 41-50, MH)

Learning disabilities

Learning disabilities are primarily genetically determined and it is therefore to be anticipated that there will be less evidence of the sort of recovery / rehabilitation that can apply to the other broad service user categories. However, people with learning disabilities have already been shown to derive immense enjoyment from working communally on a farm and similar outcomes to those described above sometimes result.

"Feeling stronger in my head now." (SU21, F, 31-40, LD)

"Everything would probably go wrong again and I might need the hospital again." (SU144, M, 21-30, LD)

Many service users with learning disabilities justifiably consider their time at the care farm as useful work in an environment in which they feel comfortable. No further outcomes are sometimes sought or perhaps even required.

"Obviously you need to retire one day. I expect probably when the time is right for me to retire but I haven't got anything to fill in time for when I do retire. I haven't got anything to fill in time when I do retire. So I'd like to carry on coming here as much as I can." (SU12, M, 41-50, LD)

Young people

The fact that young people who attend care farms perceive themselves as developing new skills has previously been evidenced and, for those who have shown themselves unable to function effectively in a traditional classroom setting, this is a valuable outcome. Young people in particular will sometimes receive certification as formal evidence of output, but this appears to be something that is, for now at least, often valued to a greater extent by those who commission the placements rather than by those to whom it applies.

"I think I've done qualifications here like, but I don't know which ones. You'd have to ask [name of teacher] that because he's got all the qualifications and that." (SU55, M, under 16, YP)

Nevertheless, the skills that are developed at the farm can have a positive impact on the future plans and prospects of those concerned.

"I'm going to [name] College to do animal care, so everything that I've learnt here basically is going to help me out." (SU49, F, under 16, YP)

The young people concerned can be dealing with a range of issues that present profound personal challenges, but the care farm has allowed them to support other people rather than purely being perceived or presented as requiring support.

"I like being with the young kids as well. I prefer them to my own age." (SU23, M, under 16, YP)

"The special needs I've got time for them." (SU24, M, 16-20, YP)

"I speaks to them like, helps them out and that like if they need some help." (SU55, M, under 16, YP)

The fact that they are engaging with a learning experience that they enjoy and perceive as beneficial is furthermore presented as having resulting in changed behaviour in the home and school environments.

“When I was like still at school like, my behaviour used to be like really bad. When they started to bring me here I've been doing well and when I've been going back to school my behaviours changed.” (SU55, M, under 16, YP)

“I don't really like going back to the past. I don't really like to hang around. I don't like going out on the streets and looking like a gangster who's going to go killing everyone and really I'm not like that.” (SU24, M, 16-20, YP)

It is therefore clear that positive outcomes can result from participating at a care farm and that service users recognise and value this reality. However, the activity should not be presented or perceived as providing some sort of universal panacea, and consideration will now be given to aspects, outcomes, change and impact that might be more negatively construed.

7.10 Negative aspects of the care farm experience

One hundred and forty four care farm participants provided written responses to the question ‘*What do you enjoy least about coming to this farm*’. A total of 166 aspects were described in responses, and relevant themes and frequencies are outlined in table 7.22.

Table 7.22: *Least enjoyed aspects of the care farm experience*

Theme (total=166)	n	%
Nothing	55	33
Weather	42	25
Specific activity	25	15
Travel	13	8
Personal issue	11	7
Service delivery issue	9	5
Other service user(s)	6	4
Timing of sessions	5	3

Over a third of those who responded (38% of 144) thus indicated that there was nothing they disliked in relation to attending the farm.

“I think it's all great.” (SU22, M, 31-40, LD)

“I enjoy everything about coming here.” (SU75, F, over 60, MH)

A quarter of response items (25%) concerned the weather, but there was recognition that many care farm activities require time being spent outside and that this aspect was therefore unavoidable.

"I don't like working out when it's raining and that. Snow, when it snows, I don't like coming here when it snows." (SU49, F, under 16, YP)

"The only downside is the turn in the weather which unfortunately cannot be changed - man cannot control forces of nature." (SU79, M, 21-30, MH)

A dislike concerning specific tasks was expressed by 25 respondents (15%), with these relating both to elements of farm work and other more diverse activities.

"I do not enjoy digging as much as other activities." (SU206, M, 31-40, LD)

"Paperwork, cleaning out goat shed." (SU141, M, under 16, YP)

"Therapy sessions, sitting in classroom." (SU42, M, 31-40, SM)

Eight per cent of responses concerned travel to the care farm, with these referring to both the length of time involved and the nature of the journey itself.

"Journey made me feel anxious." (SU91, M, 51-60, MN)

"Long drive in the minibus." (SU36, M, 21-30, SM)

As the above quotation suggests, this issue was generally raised by those who were taken to and from the farm by minibus and often had to endure an extended drive due to the number of individual drop-offs that were required.

The remaining aspects that were raised were diverse, but principally related to specific issues concerning personal health or individual circumstances that were essentially outside the control of the care farm(er) concerned.

"When I'm having a really crap day. On these days it's really not easy to enjoy anything, even if it's something that I'd normally enjoy." (SU172, M, 41-50, MN)

One interviewee also mentioned initially having had concerns regarding the fact that she was the only female participant, but stated that this did not ultimately prove problematic.

“The only off-putting thing was, to start with, was coz it was all lads and I was the only girl here. That was the only thing. But I get on well with all of them anyway.” (SU190, F, 31-40, SM)

However, there was also a feeling expressed that it was important for the service delivery team to include women so that the overall dynamics were not overly informed by a masculine agenda.

7.10.1 Funding challenges

Two thirds (67%) of those who did not already attend the farm on every day that it was open indicated in questionnaires that they would like to attend more frequently. It became clear during interviews and conversations that it was commonly the absence of funding that prevented this from taking place.

“This placement is brilliant, I just wish it was like more than one day.”
(SU193, M, 31-40, SM)

“I have to stop coming on Mondays because I can't get no more funding for myself. I've tried. I'm a bit gutted, I am, about it and erm, I rang up my adult placement officer on Friday and he said I can't get no more funding for you.”
(SU22, M, 31-40, LD)

Being able to access appropriate funding streams is therefore a significant issue with regard to the current and future sustainability of care farming (as previously evidenced in relation to service providers). However, the fact that participants would like to attend more frequently serves to underline the extent to which care farms are perceived as providing value.

7.10.2 Paying to work

Having the opportunity to engage in work has previously been highlighted as providing multiple positive impacts, but concerns were also occasionally raised on specific farms regarding the repetitive nature of activities. Despite it being recognised that this was an unavoidable feature of some elements of farm work (livestock and horticulture), it was not always felt that sufficient choice / variety had been provided.

“Sometimes doing same thing for too long - more variety needed.” (SU32, M, 21-30, MN)

“You knew like, for a good few weeks, it was a case like, this is what we are doing like. You know, there's no two ways about it - that was it like. But then that's the way of farms innit? It's all seasonal. You know, certain things get done at certain times of the year.” (SU31, M, 31-40, SM)

However, service users indicated that the new care farmers concerned had been made aware of, and had since sought to address, this issue. It is nevertheless important to highlight the fact that, despite engaging with work providing immense value, participants are not getting paid and the therapeutic connections should always therefore take ascendancy over the physical output.

“It used to feel like that a bit here. We've got to get all this done today, so there's this kind of pressure. Which there shouldn't, I think they've learnt and they've changed that a bit now. But at [name of farm] it's very much mentally therapeutic. It's definitely there that this is a healing thing. I'm not saying that [name of farmer] doesn't have that here, but it's a combination of the staff really rather than just one person. It's just the whole atmosphere.” (SU6, F, 41-50, SM)

It did not prove possible to interview any care farm participants who left without explanation, but the requirement to work and the nature of the farm environment are both suggested by other service users to have perhaps been influential.

“They’ve got their ideal of what it’s going to be and when they get here and realise, oh, hold on a minute, I’m working here like. And I dunno, maybe it’s a case of like, hold on a minute, I’m doing free work for people.” (SU31, M, 31-40, SM)

“He just didn’t want to do it at all, he just tried to walk home. We finally made him do a day and he just sat in the buggy all day and never done anything. Some people don’t like getting covered, like knee deep in cow poo and stuff like that.” (SU49, F, under 16, YP)

The reality of farming cannot be changed, but it is presented as essential that care farm service providers always approach the incorporated work in a way that encourages and enables participants to enjoy and benefit from the activity rather than merely reinforcing negative experiences or preconceptions.

7.10.3 Dependency

This final potentially negative aspect relates in many ways to the previously outlined strengths; people become part of, and are able to depend upon, a supportive working community located in idyllic surroundings. It is not therefore surprising that some participants present concerns regarding the fact that their participation at the care farm is intended as one stage in their journey rather than a final destination. The associated support system is not therefore something that can necessarily be depended upon indefinitely.

“I feel proper close to [name of care farm employee] here. He’s a real good mate. It’s like, the bond I have with him. I have a proper bond with him. I don’t want nothing to change.” (SU24, M, 16-20, YP)

“I’m dreading the day I leave here. Absolutely dreading it, because I feel like there’s no safety net beyond this.” (SU200, M, 31-40, MH)

“It’s going to be hard work when I leave so it’s a little bit daunting. I don’t know why I’m worried about it but I suppose there’s a lot to think about, like what I’m gonna do.” (SU1, M, 31-40, SM)

Such concerns are understandable, and further highlight the profound impact that attending the care farm can have on people's lives, but it is nevertheless important that they are acknowledged, understood and addressed. Some farms currently have support systems in place that continue after someone leaves the farm; such practices help to ensure that a successful transition takes place and are appreciated by those to whom they apply.

7.11 The impact of care farming on service users

This chapter has presented the care farm experience from the perspective of the service users. It has considered various elements of their associated journeys; from the aspects that originally caused them to access this form of provision, through to those that were principally perceived as providing value and on to the associated change that was felt to have taken place. Five key themes were presented, with these concerning environmental engagement, social interaction, positive experience, personal development and health / well-being improvement. These were individually found to exert varying degrees of influence according to the different stages at which they applied.

Initial motivation for having attended the farm was most commonly described in terms of personal development, the opportunities for environmental engagement (particularly with animals) were highlighted as providing pleasure at the farm and social interaction was found to become increasingly influential as time progressed. Environmental engagement enabled people to leave their home / urban space and spend time in a natural / rural space actively engaging with animals and the land, whilst social interaction was facilitated by the service providers delivering a socially inclusive experience that encouraged the development of social connections. A positive experience resulted from it being perceived as something that was worthwhile and enjoyable, and personal development occurred as a result of learning and applying new skills and engaging in meaningful and productive work.

Positive change in relation to health and well-being was most commonly described as having been facilitated through the care farm, with improved physical health being provided through increased levels of exercise and, to a lesser extent, a more nutritious diet. Reported levels of physical activity were found to be in a statistically significant positive relationship with the length of time that someone had been attending the farm. Various elements of mental well-being were similarly found to be in positive relationships with the amount of time that people had been at the care farm, with this being particularly evident with regard to satisfaction with life, overall happiness and generic mental well-being ([S]WEMWBS). Significant positive change in relation to these and other well-being aspects was also identified amongst service users who provided longitudinal, comparable data.

WEMWBS and the single items with a wider range of response options identified significant outcomes at all levels of analysis, but the other validated measures that were incorporated did not do so with such consistency. This might reflect the fact that less change took place, but it might also be due to the fact that they were not sufficiently sensitive (due to their abridged state) or were expressed in terms that many people could not adequately conceptualise. It is neither fair nor realistic to imagine that care farm participants will want to complete a barrage of written scales when they first attend, and further studies are required that more directly consider specific elements in greater depth. It is essential that scales use plain, everyday language, and considerable scope remains for the further development of relevant well-being measures that can be easily understood. The value associated with the collection of longitudinal data concerning subjective well-being is increasingly recognised and promoted, and it is therefore imperative that appropriate measurement tools are available; these will benefit from being inclusive as well as robust.

The service users themselves most commonly chose to describe change in mental health and well-being in terms of confidence, happiness and emotional stability. Such

improvements were essentially presented as having resulted from being able to develop and apply new skills in a social and natural working space. Having the opportunity to both receive and provide (reciprocal) social support was a particularly valued element of the experience. Social outcomes were principally described in relation to the social network that was provided, friendships that developed and improvements in relationships away from the farm.

Differences were found to exist between service user groups with regard to their reasons for participating, the aspects that they reported as providing value and the change that was considered to have taken place as a result. Many of the people with learning disabilities required care and attention but were keen to engage with useful activities. They widely appreciate the farm elements (most commonly the animals) and value being able to actively participate in an inclusive and productive workplace. People with mental health issues were more inclined to highlight the fact that they needed to 'get away' from their home space and enjoy 'fresh air'. Although they were not always expressly seeking social interaction when they first started to attend, and the more natural elements of the farm could usefully fill this role, this element was increasingly appreciated as time progressed and improvements in levels of mental well-being were commonly reported.

Participation was presented by some of those dealing with substance misuse issues as having enabled them to once more engage with the wider public and the world of work. There is, of course, no guarantee that people will stay drug free, and members of this group in particular sometimes fail to attend care farms for a sufficient period of time to suggest that the activity might facilitate long-term change, but it is clear that, for some, the care farm experience has been, quite literally, life changing. For those who are ready and committed to trying to address relevant behaviour, care farms have been evidenced as providing a supportive and engaging environment that facilitates real change. This was found particularly to apply when service users live on

the farm and are thereby completely removed from the environment that they associate with, and that associates them with, their addictive behaviour.

Although measurable changes in well-being were found to be smallest amongst the young people, members of this group engage actively with the learning experience, develop useful skills and particularly benefit from being able to help people with different needs to their own. Associated change amongst all groups of participants was found also to have facilitated quite profound change in their wider lives and those of the people with whom they engage.

The fact that real work is undertaken on care farms has previously been theorised as an important element of that which care farms can provide (Bock and Oosting, 2010), and being able to contribute to wider society has been evidenced as particularly valuable for people who are unable or not ready to engage in more formal employment (Boardman, 2003; Grove, 1999). This study has found that the perception of being involved with real work provides equally real value for all service user groups. Regardless of whether the new skills that are developed can effectively be transferred to an unsupported workplace, having the opportunity to participate in an unpressurised workplace allows people to feel that they are fulfilling a useful purpose whilst simultaneously receiving associated benefits regarding social engagement and personal well-being.

Green care activities have previously been evidenced as acting like therapeutic communities wherein benefits derive (partially at least) from being part of a group of people who are jointly engaged in what is perceived as a worthwhile activity (Sempik *et al.*, 2003, 2010). Evidence from the Netherlands identified the presence of a “*striking difference*” (Elings and Hassink, 2008, p. 318) between the amount that sense of community was valued by care farm participants with mental health issues and those who were dealing with addictions, but this was not evident amongst the UK care farm participants whose opinions have illustrated this chapter. Community membership can enable members to feel part of a bigger whole, provide social

relationships and facilitate social inclusion (Calhoun, 1980), whilst simultaneously exerting influence in relation to social identity and behaviour (Crow and Allan, 1994). Care farms have been shown to be perceived by many service users as providing such communities within which they can grow stronger as individuals and more collectively.

It is clear that many people with a wide range of personal needs receive immense benefits as a result of attending a care farm. Such places provide a unique combination of opportunities that enable individual strengths to be applied, shared and developed. Specific consideration will be given in the subsequent chapter to that which takes place at an individual care farm in order to develop a clearer understanding of the form and value of associated impact.

Key points from Chapter 7

(Care Farm Service Users)

- A wide range of care farm activities were highlighted as being enjoyed. These concerned those that are farm specific and the more generic.
- The most important aspects of the care farm were presented as learning new skills, working with the animals and getting to know other people (service users and providers).
- Elements relating to the natural farm environment were most frequently mentioned with regard to that which was particularly liked and opportunities for social interaction were also highlighted by most respondents.
- Statistically significant correlations were identified between the amount of time that people had been attending the farm and levels of happiness, satisfaction with life and overall mental well-being (WEMWBS). Repeat measures suggested that positive change might also be taking place in relation to other well-being related variables.
- Change in mental well-being was most commonly described in terms of happiness, confidence and emotional stability. The positive impact associated with the development of reciprocal social support systems was also frequently highlighted.
- Service users often initially attend care farms in pursuit of personal development, subsequent environmental engagement facilitates social interaction and these aspects combine to provide positive experiences that enable improved health and well-being.

Chapter 8

A Holistic Analysis of Care Farm Impact

The impact of care farming has been shown to apply in multiple spheres and via various mechanisms. Much of the wider value associated with the sort of change that has been identified and presented in this study is not easily quantifiable in strict financial terms and this can result in relevant aspects being overlooked, despite their perhaps having an immense impact in relation to people's lives and their wider communities. SROI is a framework that measures, accounts for and communicates a broader and more complete concept of value by incorporating all social, environmental and economic aspects (the triple bottom line). This technique is now applied to an individual care farm to conceptualise the overall impact of their activities and the relative value provided by the contributory elements.

SROI measures change in ways that are identified and recognised as suitable by the stakeholders concerned (the people/organisations that experience the change) and then articulates this from their perspectives. Relevant associated outcomes are initially identified and subsequently represented in appropriate monetary terms. The resultant ratio of benefits to costs helps the total associated value to be more easily conceptualised, but this number must not be considered in isolation. It tells only one part of the overall story. SROI clarifies and demonstrates true value in a meaningful and robust manner by collecting a range of information from all stakeholder groups that might experience change. The most important outcomes are incorporated in the analysis and justifiable financial proxies are selected to help conceptualise resultant value. Relevant stakeholders are involved throughout the process to ensure that the included outcomes and associated financial proxies accurately reflect their perceptions of relative importance.

SROI has previously been presented in relation to green care as a potentially valuable technique for providing a holistic understanding of associated value (Dessein and

Bock, 2010), but this study is thought to be the first instance in which this has been fully applied. Standard SROI terms and definitions are incorporated throughout, and these are contained in Appendix 7. Further information about SROI can be found in the Guide to SROI (The SROI Network, 2012), but the following principles and procedures informed and underpinned the overall process.

SROI Principles

1. Involve material stakeholders
2. Understand what changes
3. Value what matters
4. Include only what is material
5. Avoid over-claiming
6. Be transparent
7. Verify the result

SROI Procedures

1. Establish scope and key stakeholders
2. Map outcomes
3. Evidence and value outcomes
4. Establish impact
5. Calculate the SROI
6. Report, use and embed

8.1 The care farm

The care farm under consideration was established in October 2003 and is based on an 80 hectare working farm in North Herefordshire that is owned and farmed by the project leader's father. It caters for a range of potentially vulnerable people, with these being primarily (but not exclusively) adults with learning disabilities or mental health problems and young people struggling in mainstream education. The fact that it is an established enterprise that engages with the three groups of people who most commonly attend care farms makes it a particularly suitable case study example. Only eight hectares of the farm are solely used by project service users, but participants are also able to access and engage with the wider agricultural and woodland environment. In addition to the opportunities provided by the farm (relating to animals, horticulture, maintenance and construction), service users also have access to a well-equipped and popular wood / craft workshop, a kitchen and a comfortable social space. A flexible structure is intentionally incorporated in order

that associated training and hands-on experiences can be specifically designed to meet the particular needs of the individual concerned.

A wide range of livestock is kept at the care farm, with this including pigs, goats, sheep, chickens, turkeys, peacocks, ducks, guinea pigs, rabbits, a horse and a donkey. Looking after these animals provides multiple related activities as all require care and attention on a daily basis. Associated opportunities can relate to feeding, cleaning, health care, collecting produce (eggs and milk) and even riding. A vegetable garden, polytunnels and a greenhouse are present on the site and everyone is encouraged and able to participate in associated horticultural activities. These include composting, propagating, planting, picking and consuming. The materials used in the wood workshop are primarily sourced from the previously mentioned farm woodlands, and all related produce (edible and otherwise) is used on the farm, sold externally or taken home. The farm buildings, fields and associated infrastructures require continuous maintenance and development which enables interested and able parties to engage in a range of construction / landscaping activities.

The ethos underpinning the project promotes the importance of the social and occupational aspects of daily living and encourages participants to lead full and satisfying lives. Although there is recognition of the fact that paid employment might not always be a realistic option, structured activities develop skills that can be transferred to the workplace by those who are able or alternatively applied at the project to access associated benefits that might relate for instance to job satisfaction and improved personal well-being. The explicit intent is to provide everyone with the opportunity to contribute according to their personal capacity. It is people's possibilities, rather than their limitations, that are the primary focus.

The aims of this care farm can be summarised as follows:

- To provide an individualised and flexible service that promotes social inclusion and personal independence through education and training.

- To enable service users to develop their personal capacity to form friendships and relationships with a wide and diverse range of people.
- To offer occupational activities that enable social participation and facilitate enhanced personal self-esteem and self-efficacy.
- To encourage service users' involvement in the process of identifying and planning activities that suit their personal learning style and needs.
- To facilitate improved well-being by providing opportunities for service users to recognise and value their personal strengths, abilities and achievements.

The care farm seeks to achieve these aims by working not only with the individual concerned, but also with the other people and agencies that contribute in their wider lives. Participants receive opportunities to develop and appreciate their own personal strengths, with this being intended to facilitate a level of personal fulfilment and satisfaction that will encourage improved health and well-being. The focus is on allowing people to learn and apply useful skills in a supportive environment, and the farm setting provides a sufficiently wide range of activities to enable this process.

“The thing about a farm environment, it provides you with space and it provides you with certain opportunities you can do that people won't necessarily get elsewhere.” (Project employee)

8.2 SROI type and purpose of analysis

This is an evaluative SROI analysis that relates to the period from 1st October 2010 to 30th September 2011. It encompasses all the activities that take place at the care farm in relation to the provision of day placements for vulnerable adults and young people. The SROI is intended to identify relevant outcomes, inform future developments and provide current and future stakeholders – including participants, commissioners and related organisations – with a clearer understanding of the change that can result.

8.3 Investment

As Table 8.1 indicates, this care farm is primarily funded through payments received from participants, either directly or through their commissioning organisation.

Associated charges vary according to individual circumstances (level of care required, length of session, nature of agreement etc.), but are generally between £30 and £40 per day (including transport to and from the farm).

Table 8.1: *Income received (October 2010 – September 2011)*

Stakeholder	Purpose of investment	Type of investment	Nature of investment	Annual income received
Adult service users	To personally attend project	Payments from personal budgets / funds	57 individuals attending for a total of 77 daily sessions per week	£114,986
Care Providers	To enable residents to attend project	Block contract for a maximum of 8 client placements	£171 fixed weekly payment (50 weeks a year)	£8,550
Schools	To enable children to attend project	Contract with three individual schools	£325 fixed weekly payment (38 weeks a year)	£12,350
European Agricultural Fund	To refurbish barn	Grant funding	Single payment as 50% of total cost	£7,000
Customers	To receive produce	Cash sales	Money received in return for surplus produce	£1,500
TOTAL INCOME (October 2010 – September 2011)				£144,386

The total income received in relation to adult service users during the period in question amounted to approximately £120,000. Groups of children from three secondary schools also participated at the project on a weekly basis, with associated income totalling approximately £12,000. A further £7,000 in grant funding was obtained through the 'LEADER' funding stream, which is administered by the Rural Development Programme for England (RDPE) to facilitate rural service delivery. This covered 50% of the cost of refurbishing a barn as a carpentry workshop.

8.4 Stakeholders

All potential stakeholders were identified for the purpose of this analysis, and materiality was assessed through consultation with the service providers. In order to provide an accurate and manageable analysis that enabled impact to be assessed and understood, it was essential to focus on the stakeholders (and outcomes) that were most relevant to the analysis and its predetermined scope. Relevance was principally judged according to the following criteria:

- Where change can be seen to have taken place.
- Where there is a direct financial impact of the change.

As a result of this process, seven primary stakeholder groups were identified, with these being the service users, their families / carers, the project volunteers, the project workers, the farm owner(s), placement commissioners (schools and residential care homes) and the NHS. However, it was recognised that significant stakeholders can be overlooked or undervalued during the initial stages of the SROI process, and primary stakeholders were consulted about this possibility throughout the process. It is only upon completion of the analysis that any degree of certainty concerning those that should be included can be claimed, and stakeholder relevance was thus continually reassessed as the story of change unfolded.

Various other stakeholders were also identified but were not subsequently judged to provide or receive a sufficient level of change to justify full inclusion. Given the wide range of ways in which such change can occur, and the fact that every participant is a unique individual with an equally unique range of circumstances and needs, a potentially unmanageable amount of data might otherwise have been generated.

8.4.1 Significant stakeholders



Service Users

The care farm principally exists to meet their needs, and they are intended and perceived as the primary beneficiary. Participants have a wide range of backgrounds and individual needs, but they are generally adults with learning difficulties and / or mental health issues and young people facing a range of personal issues. However, a variety of challenges can be presented, with these including autism, acquired brain injury (ABI), drug / alcohol misuse and physical disabilities.

During the year under analysis (October 2010 to September 2011) a total of 83 individuals attended the project, with 18 of this number being young people coming with their schools. Service users were aged between 14 and 65. Twelve adult participants moved on from the project for a variety of reasons during the relevant period (associated outcomes are outlined on p. 207) and eleven new service users started. The project is open for 5 days a week, with between 16 and 28 individuals attending the project on individual days during September 2011. A total number of

approximately 4,500 individual placement sessions were provided over the course of the year under consideration.

Table 8.2 provides a breakdown of the primary needs of the adult service users concerned and the length of time that all current participants had been attending the care farm (September 2011).

Table 8.2: *Length of time attended (71 current participants)*

	< 1 year	1-2 years	3-4 years	>4 years	Total
Mental Health	7	4	4	1	16
Learning Disabilities	4	13	13	4	34
ABI	0	2	1	0	3
Young people	17	1	0	0	18

Adults attend the project for between one and three days a week, depending on personal circumstances / needs, and a total of 103 weekly placements were being delivered in September 2011. Eight of the aforementioned participants (six with learning disabilities and two with an ABI) come as a result of direct arrangements with an external organisation, and do not attend for the full day. The remainder are funded individually through their personal care / treatment / support budgets.

Table 8.3: *Number of days attending*

	1 day	2 days	3 days	Total
Mental Health	9	7	0	16
Learning Disabilities	15	14	5	34
ABI	2	1	0	3
Young people	18	0	0	18

As Tables 8.2 and 8.3 indicate, participants with learning disabilities generally attend more frequently and for a longer period of time than many of those who are present for reasons primarily relating to their mental health. This is perceived as being caused by a combination of factors, with these including funding arrangements, individual needs and the associated potential for recovery / rehabilitation. Table 8.4

demonstrates furthermore how participants with learning disabilities are also far more likely to be living in residential care rather than the wider community.

Table 8.4: *Home living arrangements*

	Indep.	Residential	Supported	Family	Total
Mental Health	7	3	2	4	16
Learning Disabilities	0	23	4	7	34
ABI	1	2	0	0	3
Young people	18 (unknown)				18

People with some form / degree of learning disabilities are the largest participating group at the care farm, with 34 (48%) of those currently attending being included in this broad category for the purpose of this analysis. Personal needs vary greatly – including those with developmental disorders and what might more accurately be considered as learning difficulties rather than disabilities – but the data gathered during this analysis shows that the most significant outcomes are nevertheless generally shared. These people are therefore in this instance presented as a single group to provide clarity and manageability. Recovery / rehabilitation is often not a realistic or relevant outcome, given that a learning disability is by definition a reduced intellectual ability that affects someone for their entire life (Mencap, 2012), but participation at the care farm will nevertheless be shown to provide a range of positive and valuable outcomes.

Two individuals with an ABI currently attend with a support worker on one day a week, and another participates independently for two days a week. People with an ABI and those with learning disabilities can, on the surface, appear to exhibit similar cognitive impairments, but whilst the latter have generally lived with the disability all their lives, the former have experienced a trauma that has required them to reorient their lives accordingly. Individual experiences and needs can therefore differ, but data collected for the purpose of this analysis suggests that those with an ABI are experiencing broadly similar outcomes from participating at the care farm as those with learning disabilities. Given that there are currently only three individuals who fit

into this category, these two groups have been combined for the purposes of this SROI.

Those whose primary needs relate to their mental health are also a principal service user group at this care farm, with 16 (23%) of those currently attending being included in this broad group. The severity of the illness and associated consequences vary considerably, but all those concerned have previously required in-patient hospital care on at least one occasion as a result of their condition.

Three schools have arrangements in place for groups of students to attend the project on a weekly basis, with individual establishments participating on alternative days of the week. The 18 young people concerned (aged 14 -16 and accounting for 25% of all current participants) have a range of individual behavioural, emotional and /or learning needs that have resulted in their often struggling in a traditional school-based learning context. Although specific arrangements vary, the training that takes place at the care farm is sometimes designed to support relevant vocational / practical qualifications that the school concerned has identified in conjunction with the project team as serving the needs of their students.

Volunteers

Five people volunteer, for one day a week each, on a regular basis. Two of the current service users also attend on a voluntary basis on additional days to those for which they have funding. This is perceived by all concerned as being an integral part of their overall personal journey of recovery and integration into the wider community network. The volunteers engage in a wide variety of activities – including the compilation of a project newsletter – intended to support and enhance the service delivered by employees.

Employees

The project leader works at the farm full-time, and seven other people are employed on a part-time basis. £84,327 of the income received from service user fees between

October 2010 and September 2011 (58%) was used to pay project workers. They are the stakeholder that is ultimately responsible for the successful delivery of the project, invest time and effort and in return receive income and job satisfaction. Although they are salaried and are already receiving a financially quantifiable return for their input, their wages are paid directly from associated service user fees. Their employment and associated outcomes are therefore dependent upon, and inextricably linked with, the continued existence of the care farm.

Host Farmer

The care farm operates from a farm that is owned by, and home to, the parents of the project leader. Although they do not receive direct payment for allowing their land to be used for this purpose, and have only minimal daily involvement, they are nevertheless a significant stakeholder. The project could not exist in its current form without their support, and the presence of the participants and the activities that they undertake is anticipated to impact on their home and work environment.

Families / Carers of Service Users

The circumstances or behaviour that can result in someone choosing to participate at a care farm will often have impacted on their wider family / support network. Associated changes experienced by participants are also therefore likely to create significant outcomes for this group, with these applying away from the farm where the actual activities take place.

Schools / Care homes

Three schools, two care homes and a voluntary group have arrangements in place to attend the project weekly. They invest financially in return for the provision of a service that they perceive as meeting their specific needs. There are also a range of health care professionals who refer people to the care farm and access appropriate funding streams when required. Although the specific nature of the benefits that they receive as a result of this relationship may not always be directly felt by themselves, they are nevertheless a critical stakeholder.

National Health Service (NHS)

This stakeholder does not directly invest in the project, but the NHS will ultimately benefit if service users subsequently require reduced support and treatment as a result of their participation at the care farm.

8.4.2 Other stakeholders

The rationale behind focusing less directly on other stakeholders who were initially identified and considered for inclusion is now explained. This is particularly worthwhile because, despite not being judged to be relevant for the purposes of this SROI, this will not be the case in all instances. Another care farm SROI has also been completed by the author of this study, and many of those included below were on that occasion found to be material.

Care Farming West Midlands (CFWM)

CFWM is the social enterprise that provides support, advice and guidance to new and existing care farms in this geographical area and promotes the concept and practice of care farming amongst relevant commissioners and organisations. Their activities have undoubtedly played a crucial role in raising awareness of care farming in the region, they have successfully facilitated the development of a number of new service providers and they have furthermore supported this research. However, CFWM was not judged to be a relevant stakeholder in relation to this SROI given the fact that this care farm was already well established prior to the formation of the regional organisation.

Department of Work and Pensions (DWP) / HM Revenue and Customs (HMRC)

The DWP and HMRC benefit not only as a result of people being employed at the project but also as a result of service users and volunteers developing skills that might ultimately be transferred to the workplace. Benefit payments are reduced and tax is paid. However, these stakeholders were ultimately excluded as it was judged likely that project employees would otherwise be working elsewhere (displacement)

and the number of service users moving into employment was not considered to be sufficiently large to merit inclusion.

Customers

Some farm produce is occasionally sold directly to community members or through local traders. This stakeholder is therefore included in relation to the input section of the SROI to accommodate the relatively small amount (approximately £1,500) of associated income. Although it is possible that members of this stakeholder group might receive additional benefits as a result of this transaction to those relating purely to ownership of the relevant produce (such as having the opportunity to support a local enterprise and gaining access to fresh, organic local produce), the associated outcomes were found to be currently minimal and therefore considered immaterial for the purpose of this analysis. Nevertheless, there is considerable scope for the size and significance of this stakeholder group to increase in the future.

Natural Environment

Although care farming can often result in positive change in relation to the natural environment, this was not in this instance judged by stakeholders to have been the case during the time period in question. The woodland on the wider farm is accessed by care farm participants and is more actively managed as a result of their making use of the timber it contains, but the extent of this change was not yet considered sufficient to merit inclusion in the analysis. The area of land that is cultivated / managed by the care farm benefits from organic practices, but it had previously been primarily pastureland and the farmer and son did not feel that significant environmental change had resulted.

However, it is worthy of note that many care farms are now benefiting from funded government stewardship schemes, access to which has been facilitated as a result of the required environmentally supportive activities being undertaken by their participants. This may therefore be a useful funding opportunity that is worthy of further consideration. There are also plans currently underfoot at this care farm to

develop an orchard that will contain traditional, local, fruit trees; such developments will facilitate positive environmental outcomes in the future and should therefore be monitored.

Department of Education

Despite the schools that utilise the care farm having been included as a stakeholder in relation to their financial input, no outcomes are directly applied to them. This decision was taken because it was not possible to access sufficiently reliable and robust information concerning the impact that attending the project would have on either current or longer-term educational requirements. It was furthermore suggested that actual staffing costs are not significantly reduced for the schools concerned as a result of the care farm. It is nevertheless clear that they are being supported in achieving their remit relating to the young people in their care being enabled to engage positively with learning. More substantial savings will be achieved if participation can ultimately be demonstrated to have enabled any of those concerned to return to more mainstream education / training.

Government / Society

The behaviour of marginalised and vulnerable individuals can impact widely in relation to society as a whole. The associated costs can be significant and may continue to accrue for many years into the future. Although savings for the NHS have been included as an outcome, there are many other such services (relating for instance to law enforcement and welfare) that can also ultimately benefit as a result of changes in individual behaviour. The inclusion of costs incurred by society as a whole was therefore initially considered, but it was once again judged that insufficient evidence was available to demonstrate that related outcomes were sufficiently widespread and had resulted from attending the care farm.

8.5 Inputs and outputs

All relevant inputs and outputs relating to included stakeholders during the year of analysis are incorporated in Table 8.5.

Table 8.5: *Stakeholder inputs / outputs*

Stakeholders	Inputs		Outputs
Who did we have an effect on? Who had an effect on us?	What did they invest?	Value £	Summary of activity in numbers
Adult service users	Time, effort, and money	£114,986.00	65 adults were transported to the farm, spent time outside in a natural environment and had the opportunity to engage in a range of productive activities.
Young people	Time and effort	£0.00	18 young people spent time on the farm and had the opportunity to learn a range of related skills.
Project volunteers	Time, effort and commitment (valued at minimum wage)	£10,000.00 (8.25.50)	5 people shared their skills and provided general support.
Project employees	Time, commitment, effort and expertise	£0.00	8 people were employed.
Host farmer	Infrastructure	£0.00	n/a
Families/friends of clients	Care and concern	£0.00	n/a
Care providers	Funding to provide placements	£8,550.00	n/a
Schools	Funding to provide placements	£12,350.00	n/a
European Agricultural Fund	LEADER grant funding	£7,000.00	A barn was refurbished.
Customers	Money	£1,500.00	Food and other items were purchased.
TOTAL		£154,386.00	

The time of project volunteers has been included as an input and has been assigned a financial value at the level of the minimum national wage, in line with the standard approach to SROI (The SROI Network, 2012). Project employees receive an income in return for their input, but this is not included to avoid double counting; relevant associated investments are already included in relation to adult service users.

8.6 The theory of change

This analysis sought to identify all aspects of the care farm operation, and the related change that was experienced, before subsequently considering and reflecting the associated value. The initial exploratory phase suggested elements that were then investigated further and more broadly. The following 'theory of change' was developed to help conceptualise what appeared to be taking place, but was not initially shared with stakeholders to ensure that bias was not introduced.

This care farm provides opportunities for people with a range of personal needs to develop useful transferable skills and engage in productive work-based activities in a mutually supportive natural environment. Relevant outcomes for participants can include improved physical health, personal well-being and community engagement. Subsequent and related changes in behaviour can have consequences that impact on interpersonal relationships and levels of wider societal participation.

This theory of change helped to identify the following factors as likely to be particularly relevant:

- Farm activities enable the acquisition, development and application of a range of work skills in a supportive environment.
- Caring for animals allows people to engage with non-judgmental living beings and to take responsibility for the well-being of others.
- Vulnerable people are able to leave their usual environment, interact with others and enhance their social skills.
- Participants undertake a range of activities that involve physical exertion.
- Participants are encouraged and enabled to eat fresh, healthy, seasonal produce.
- Edible produce and wooden items are made than can be kept, shared with others or sold in the marketplace.

8.7 Understanding the change

The evidence that was provided by stakeholders in relation to the relevance of the previously described factors, the nature of associated outcomes and the form of resultant change will now be presented.

8.7.1 Change for current adult service users

The responses of fourteen service users (who had attended the farm for over six months) to questionnaire items concerning change that had occurred because of their participation at the care farm are presented in Figure 8.1.

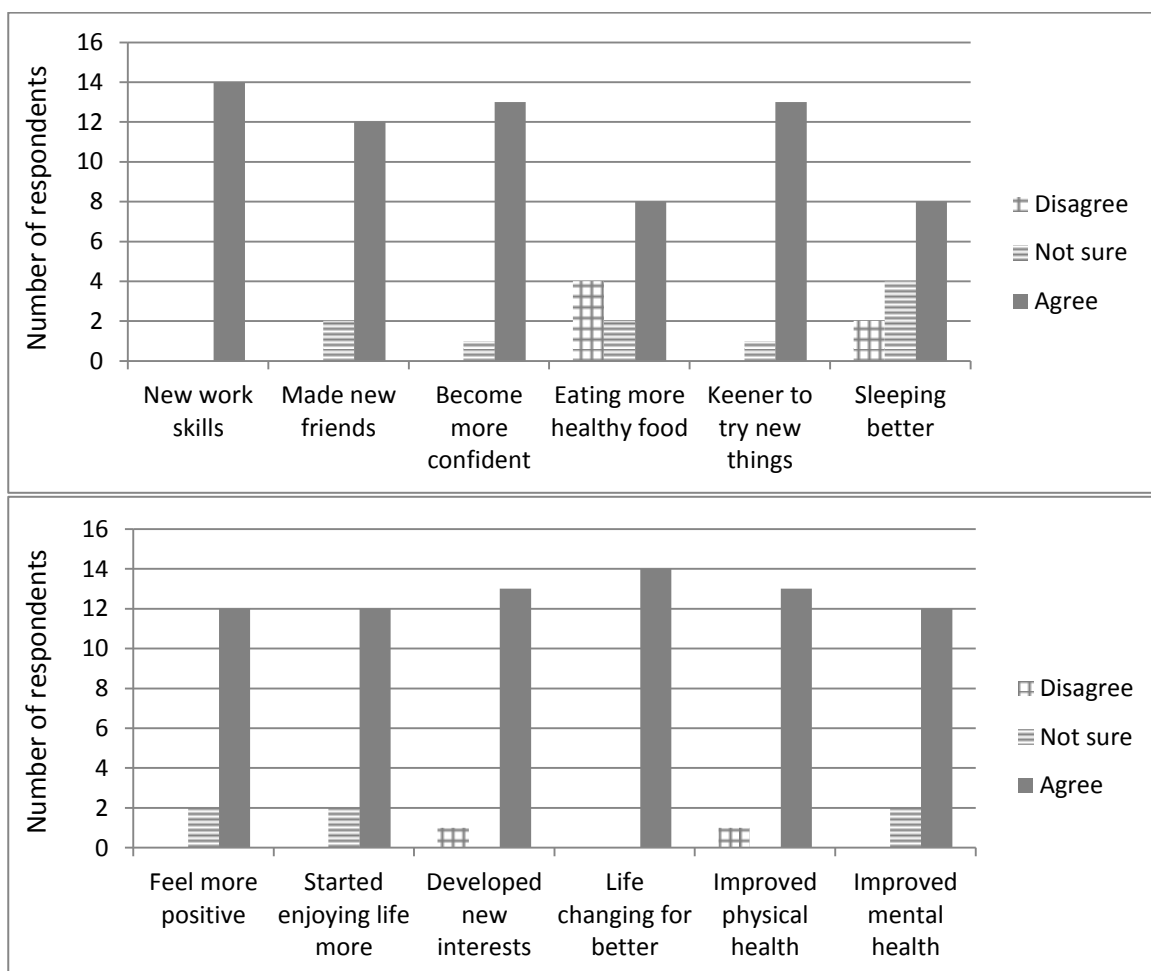


Figure 8.1: Change resulting from attending this care farm

Responses indicate that everyone concerned (100% of respondents) considered that their life was changing for the better as a direct result of their participation at this

care farm. This breadth and significance of impact was supported further in interviews and conversations. With regard to statements relating to sleep patterns and diet, respondents who felt that change had not occurred indicated that this was due to the fact that they already slept well and / or enjoyed a healthy diet. Thirteen of the respondents (93%) nevertheless indicated that their overall physical health had improved because of participating at this project.

All those who completed questionnaires and had been attending the farm for more than three months ($n=16$) were also asked to choose up to three statements from a list of ten to indicate the relative importance of various aspects of the care farm experience. The following four responses accounted for 74% of all those selected (with the next most popular accounting for only 7%):

- Getting to know other farm clients / helpers (22%)
- Looking after animals (18%)
- Learning new skills (18%)
- Getting to know farmer and workers (16%)

It is noteworthy that service users repeatedly commented that they did not perceive a difference between service users and providers (farmer / volunteers / workers). This degree of integration was suggested to facilitate one of the most appreciated aspects of participation; the feeling of belonging to an inclusive community. Indeed, the benefits associated with operating as a team member, in a non-hierarchical structure that values everyone's input equally, were aspects of the care farm experience that were highlighted by all identified stakeholder groups. This was furthermore felt by participants to contribute directly to the outcomes that result.

Sixteen project participants also completed a range of questions / scales designed to measure aspects of personal well-being during the period under analysis,. Eleven of this number provided comparable data after a period of between nine and twelve months had elapsed. Further information about the specific statements is contained

in Chapter 5 (pp. 81-85), but Figure 8.2 indicates the extent to which measurable change was recorded.

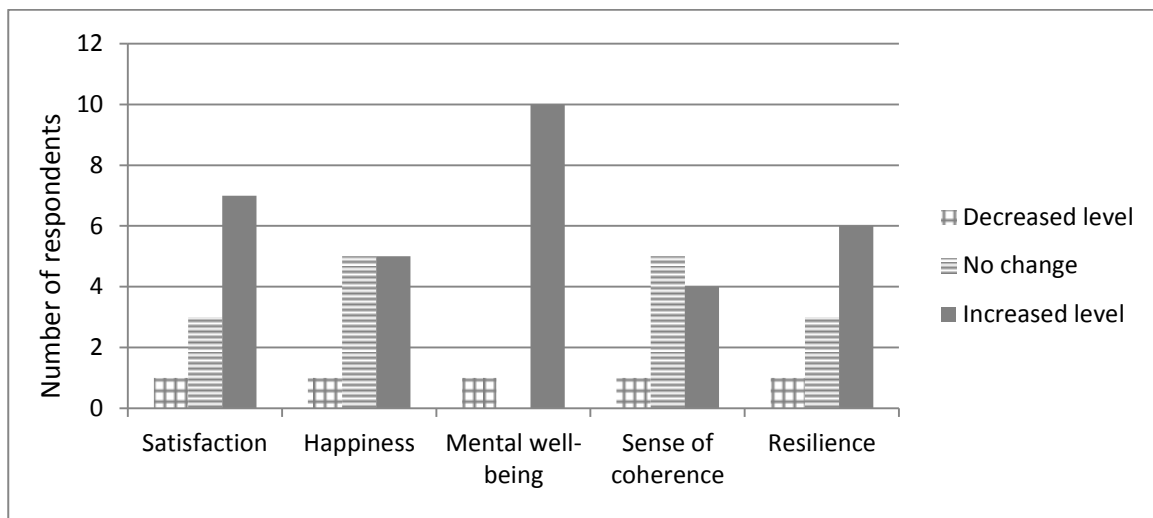


Figure 8.2: *Change in well-being scores*

The lowest levels of change were identified amongst those who had already been attending the project for a significant period prior to the data being collected, and a large part of any associated change might therefore already have been in place. Whilst the 'happiness' and 'satisfaction' levels are based on the response to a single question, and 'sense of coherence' (Lundberg and Peck, 1995) and 'resilience' (Vaishnavi *et al.*, 2007) relate to scores for three and two statements respectively, the 'mental well-being' score is compiled from fourteen statements (Tennant *et al.*, 2007). This scale is therefore anticipated to reflect more subtle degrees and aspects of change than the others, and it is particularly significant that ten of the eleven respondents (91%) scored higher on the second occasion on which it was completed, regardless of the amount of time that they had previously been attending.

The quantitative data collected through questionnaires provided evidence that helped to identify the numbers of service users who were likely to be experiencing applicable change as a result of participating at the care farm. Relevant change was explored further through interviews and conversations, with the outcomes that are now presented being further identified through this process as having particular

relevance. This evidence supports the applicability of the sort of outcomes that have been highlighted throughout this study and impact on the physical, mental and social being.

Enjoyment

A project of this nature will ultimately fail if it is unable to provide participants with an experience that they enjoy. The relevance and criticality of this aspect was explicitly acknowledged by representatives of all stakeholder groups. Questionnaires and interviews clearly showed that all the participants at this care farm genuinely enjoy the days that they spend on the farm.

"I like coming here because it's something to do and I enjoy it as well. I like all of it. I don't mind what I do....This is the place I want to be." (SU 49)

"They love coming here. They will only do what they want, so you know they are enjoying it because they want to keep coming." (Care home employee)

Equilibrium

Change relating broadly to levels of personal equilibrium (conceptualised as encompassing feelings including anger, anxiety and stress) is a positive outcome that was mentioned repeatedly by service users.

"I've got anger issues but it'd never come out here because this place puts me on a level." (SU 22)

"It does me good. It makes me more calm and relaxed. I find I can sleep better." (SU 26)

Both the more natural elements of the farm environment and the socially inclusive atmosphere that is created / provided are presented as contributing to this change. Whilst the peace, beauty and tranquillity of the landscape can initially provide the required space, working with the animals is often felt to enable non-judgmental mutual support relationships to develop before personal issues are further resolved with the support of the human community. Although not everyone felt that they had

yet gained full control over aspects such as anger or anxiety, nobody felt that related negative behaviour could ever emerge at the farm and interviewees indicated that relevant improvements also impacted positively on their wider lives.

Confidence

Associated change in levels of confidence is another outcome that was highlighted and valued by stakeholders in relation to participation at the care farm. Project participants frequently indicated that they believed their lack of personal confidence had contributed to, and been augmented by, previously faced problems and their ability to deal with these effectively. Increased confidence was presented as a profoundly valuable personal resource that often then enabled further positive change. When people first attend the project, they are not necessarily in a place where they want, or feel able, to engage with either the people or some of the more structured activities.

“Socially I’m not very confident at the moment. Sometimes I like mixing with people sometimes not. I like just looking at the view sometimes.” (SU 22)

“I like coming for the fresh air, and the peace and quiet.” (SU 18)

Once again, the ‘natural’ farm environment and the features that it includes are recognised by more recent service users as helping to start their personal journey in relation to achieving positive change. After people have been attending the care farm for a sufficient period of time to become attuned and integrated with the people and place, confidence is described as increasing, and this in turn facilitates further positive outcomes.

“Well I’m a lot more confident, a lot more self-confident. I get a sense of achievement out of it, you know? It makes me happy.” (SU 31)

“As he feels safe and secure, both with the people and with the environment, he is happier and has gained in self-confidence and self-worth.” (Parent)

Happiness

As the previous quotations demonstrate, this is a related positive outcome that was frequently described during interviews and less formal conversations. Although previously reported longitudinal questionnaire data did not always identify positive change in happiness levels, the lowest scores were provided by those who had been attending for the shortest period of time when the initial level was recorded, and overall levels amongst participants were high. On a scale numbered from 0 to 10, the mean selected point was 8.5 and the median was 9.

"We have a good laugh, whereas before I wasn't into having a good laugh with people." (SU 19)

"You can't have happy people without happy homes. This place is like a 2nd home really." (SU 22)

Social Inclusion

Friendship and levels of happiness have been evidenced as being closely related to one another (Argyle, 1987), and 86% of questionnaire respondents have already indicated that they have made new friends as a result of attending the project. The opportunity to develop social relationships at the project was also identified through questionnaires as a critical aspect of participation, and the relevance and associated value of this were further highlighted by the people who were interviewed.

"The people really make the place. It's like family without the arguments!" (SU 14)

"I feel safe and secure, like I'm amongst friends and it's great you know?" (SU 31)

Previous research has shown that people with learning disabilities face a range of additional challenges with regard to the development of meaningful reciprocal friendships (Goldberg *et al.*, 2003), and that this can have a significant negative impact on their wider lives (Bates and Davies, 2004). Related issues are also

frequently encountered by those with mental health needs (Thornicroft, 2006). The fact that the care farm is felt by participants to provide social inclusion and facilitate the development of meaningful and genuine friendships is therefore rightly perceived as an important and valuable outcome. Sharing work and experiences as a team player encourages and enables participants to support and heal one another, regardless of the specific nature of their individual needs.

Work

Although service users do not receive financial income in return for participating at the care farm, it is nevertheless critically presented, perceived and valued as a work based activity that produces outputs that are tangible and real (looking after animals, growing food and making things out of natural materials). Although these might currently have only limited direct financial exchange value in the market-place, all service users indicated that they had developed new work skills and gained an immense sense of pride from being involved with something that has genuine purpose rather than seeming to have been created merely to fill their time.

“At [another project] you are just there because of mental health problems and they don’t sort of go beyond that. Here it is a lot more work focused, although not on the actual amount that you do, and there is loads of choice.”

(SU 19)

“[Name] looks upon his attendance as a job. He values this work and is always keen to go to the farm. He is proud of what he achieves / makes during his time at the farm.” (Parent)

The opportunity, and indeed expectation, to participate in meaningful work is something that is valued by those with learning disabilities and mental health issues alike. Whilst the former are engaged with something they rightly perceive as important and necessary, the latter appreciate the fact that it is not accompanied by the sort of pressures and associated difficulties that they have previously encountered in the workplace and can have contributed to their current situation.

Although the care farm is not operating in a strictly commercial environment, there is nevertheless a genuine shared perception amongst participants that they are doing a proper job that they truly enjoy. They are contributing to, and actively participating in, wider society.

Physical Health

Much of the work that is undertaken involves some degree of physical exercise and this ultimately improves the overall fitness and health of all participants. Thirteen of the fourteen individuals who provided questionnaire data concerning change that had occurred as a result of attending the care farm indicated that their physical health had improved, and the remaining respondent already went to a gym on a regular basis.

“Some people can have a negative association with doing exercise, but they like coming here to feed the animals and do things like that and so they are also getting the exercise.” (Project employee)

“Coming here gets me out of the house at the end of the day. It’s a purpose and reason to get up. Otherwise I’d just stay in bed all day.” (SU 24)

There is evidence available to suggest that individuals with mental health issues and learning disabilities often engage in less exercise than the wider population and that this can have a resultant negative impact in relation to wider personal well-being (Callaghan, 2004; Emerson, 2005). This is therefore a significant and valuable outcome for adult project participants.

8.7.2 Change for former adult service users

For many of the people who attend the project, mainstream employment in a competitive marketplace may never be a realistic option, but, as the above has shown, comparable benefits are gained from active participation on the farm. However, there are some service users who become able to operate effectively and independently in the wider world after a period of recovery / rehabilitation at the

project, and others also decide to stop attending for alternative reasons. Table 8.6 details outcomes in relation to the twelve adult service users who left the project during the 12 month period under consideration.

Table 8.6: *Outcomes for adult project leavers (October 2010 – September 2011)*

Outcome	<i>n</i>
Found employment	1
Started a college course	5
No longer wanted to attend	3
No longer able to attend (ill health)	1
Moved away from the area	2

The college courses and position of employment were all directly related to, and were presented as having occurred as a result of, participation at this care farm and are therefore incorporated in Table 8.7 and the impact map (Appendix 8).

8.7.3 Change for young people

Eighteen young people from three different schools attended the project weekly (in term time) during the period under analysis. Although they potentially have less personal choice concerning their participation at the farm than adult service users (the school may exert influence), they are unlikely to engage with activities unless they value and / or enjoy the opportunities provided. It was clear whilst working directly with the three school groups that the time spent on the farm was greatly appreciated by all concerned. Teachers did indicate that they had previously occasionally brought young people to the farm that were not able / willing to benefit from the experience, but they suggested that this had happened only rarely.

“The teachers asked me if I wanted to do something different, but I said I don’t need to. I get to do different things every week and I’m learning stuff that I enjoy and that interests me.” (SU 67)

You find that they enjoy it and so they become engaged with it.” (School teacher)

The previous quotations demonstrate that the young people enjoy their time at the care farm and simultaneously learn and develop a range of useful and transferable skills. In many ways, these relate to the same aspects of the project that have ultimately been shown to facilitate the most widely applicable and valuable outcomes for adults: the farm environment, the range of associated tasks (training and work) and the social context. As the following observations make clear, this is felt by the school teachers who accompany them to have important positive consequences.

"I can see them, you know, they haven't got any peer pressure here. They can regress to the ages that they've missed. So psychologically it's excellent for them." (Head teacher)

"It stretches them and they do things neither they nor I would have thought they could do, and it just gives them that confidence." (School teacher)

However, the care farm provides young people with more than just an environment to enjoy and in which they are able to develop as individuals. The interests and skills developed on the farm have directly resulted in some participants pursuing related training at college that has then led on to employment. Young people, teachers and care farm employees all provided evidence demonstrating that this took place.

"What we do here's great. I want to go to college to learn more about animals and stuff." (SU 68)

"Some go into more land based work after this, and so it leads into that." (Head teacher)

8.7.4 Service user issues / concerns

It is worthy of note that, when asked to identify anything they disliked about attending the project, the only issue raised concerned the sometimes inclement weather, and this is of course outside the control of all concerned. However, it was also acknowledged by the farmer and others that some participants had previously

decided not to come because of a discovered dislike of animal by-products / dirt and the risk of these getting on their clothes.

Even the time spent travelling to the farm was said by participants to be enjoyable. This is not an opinion that is always expressed by those who attend other care farms. Given that this generally takes the form of a shared minibus ride or a lift from care farm employees, it once again highlights the widespread recognition and appreciation of the level of associated friendship and community membership.

8.7.5 Change for volunteers

The people that volunteer at the care farm have all found themselves in a position where they have spare time available and have taken the decision to use this in a productive manner. For those who have other responsibilities, the activity fits into their personal schedules in a way that paid employment cannot. The focus of one volunteer's output concerns the compilation of a project newsletter that is an eclectic mix of the relevant and the more generally informative. Whilst some of the content relates specifically to the care farm, other parts are more broad and diverse. Indeed, the paper's motto can be suitably applied to both the publication and one of the fundamental underlying strengths of the wider project:

'Welcome to the [name of care farm] – where there's never a dull moment.'

The other four volunteers spend their time working directly on the farm with individual service users. There are sufficient employees available at all times to meet the needs of service users, but this extra support facilitates the provision of an enhanced level of personal attention.

The benefits that volunteers receive as a result of helping at the care farm are presented in similar terms by those who are unable to find paid employment and those who do not require employment.

"I can go to sleep at night, despite not getting any official work, because I know that I'm doing something useful." (V 01)

This outcome concerning 'doing something useful' was presented as being of fundamental importance by the volunteers; they felt it provided them with a role in the community that was also recognised and valued by their family, friends and associates.

"When you can say, 'well, actually I do a voluntary job', they kind of look at you in a slightly different light, don't they? Prepared to get involved a bit and help out." (V 02)

Two current service users also attend on a voluntary basis on additional days to those for which they have funding, and this is recognised by all concerned as being an integral part of their overall personal journey of recovery and integration into the wider community network.

"I mean a place like this doesn't exist without money. He's got to pay one day, however obviously he likes it. They won't pay any more days for him, but I can see that he's benefiting from it and I'm very happy to have him become a volunteer the rest of the time." (Project leader)

Despite the fact that the two service users concerned undoubtedly receive benefits as a result of participating as volunteers, these have not been quantified on the accompanying impact map (Appendix 8) to avoid the possibility of double counting (outcomes are incorporated in relation to their involvement as service users).

8.7.6 Change for employees

In addition to receiving financial payment in return for the time and effort that they invest at the care farm, all project employees indicated that they enjoy their work and that it provides them with immense personal satisfaction. The individual strengths and qualities of the team that are in place are recognised and valued by all other stakeholders and they are presented as making a critical contribution in

relation to many aspects of the wider value that has previously been discussed. It is essential for a project such as this that the necessary mix of practical and personal skills is available on the farm at all times. This was found to be the case at this care farm, with the individuals concerned being repeatedly mentioned and valued in relation to the quality and success of the service that is provided.

"They've given him ever such a lot of support. Really above and beyond what they needed to." (Occupational therapist)

"It's the atmosphere that's created by the staff." (Care home worker)

"[Name of project leader]'s got really good staff working for him." (School teacher)

However, all employees are receiving financial payment for the time and effort they invest, and are otherwise likely to be employed elsewhere. The wage that they receive is funded directly from the financial contributions made by service users, but the jobs exist to allow the activity to take place and have not therefore been assigned a value as an outcome. It is nevertheless important to acknowledge both the significance of the contributions that they make to the positive change that takes place for other stakeholders and also the benefits that they personally receive as a result of engaging in employment that they enjoy and value.

8.7.7 Change for host farmer

The landowner allows part of the farm to be used by the care farm free of charge, but he recognises and values the benefits received as a direct result of this relationship. The farmer and his wife eat food produced by the care farm enterprise, have access to a range of tools and equipment and benefit from the on-going development and improvement of the farm yard, buildings and wider environment. Care farm participants undertake daily maintenance tasks and the larger capital works help preserve the architectural agricultural heritage and add to the overall market value of the farm.

“He's added value, of course, to the farm....If he hadn't done something to that barn, it could've finished collapsed.... And you know that sort of barn, what is it? 1700, if not earlier.” (Host farmer)

The farmer also articulated the wider value that he perceived as resulting from participants having the opportunity to engage with the countryside and agricultural production.

“There are less and less people involved with agriculture and the result of that is of course we've got, you know, people don't understand what we've been doing. It's got distance....and I think that's a bit sad.” (Host farmer)

The farmer described one negative impact for himself and his wife which related to fairly large numbers of people regularly sharing their home space. The farm buildings and yard that are used by the care farming operation are in close proximity to the farmhouse in which they reside and the success of the project in terms of the number of people who have chosen to attend has therefore impacted on their personal privacy. However, he went on to indicate that he did not consider this a significant problem due to the fact that the project is only operational for five days a week.

8.7.8 Change for families / carers of service users

The parent / carer of ten project participants responded to the following open-ended questions to provide an understanding of the extent to which any change in relation to participant behaviour also impacted on their home lives:

- *What change have you seen since s(he) has been going to the [name of care farm]*
- *How has this changed your relationship with him/her or affected your own life*
- *Do you have anything else to say about what [name of care farm] does or the value it provides*

Only one of the respondents included a negative comment, with the carer concerned suggesting that the service user can sometimes be 'difficult' when she returns home as a result of being upset by the fact that an animal has died. However, this issue was not mentioned by the participant concerned, and indeed she commented whilst being interviewed that she was often sorry to go home at the end of the day because there was so much more that she would rather be doing at the care farm.

All respondents (including the one mentioned previously) indicated that the participants receive a range of benefits as a result of their time at the project, and that these impact not only on relationships at home but also with the wider community. The sort of change commented on in relation to service users related to increased knowledge and interest in animals, horticulture, the natural environment and farming in general, enhanced mood and confidence levels and associated improvements in behaviour and attitude.

"Has become more positive, confident and self-motivated at home." (Carer)

"Since attending [name of care farm] there have been no incidence when he has come home distressed, unhappy or confused." (Parent)

Such outcomes were presented by questionnaire respondents as having caused positive changes in their own relationships with the individuals concerned. Associated improvements relate to how they communicate with one another and the ways in which they are able to interact.

"Without the opportunity to attend I'm sure the situation here would soon become fraught." (Carer)

"He comes home satisfied with what he has achieved and happy to communicate." (Parent)

Appreciation was also expressed of the personal value that is gained as a result of having the opportunity to spend time apart from the person that they are more

generally focused on supporting, without having to worry about them in their absence. This allows people to engage with their own interests and helps facilitate personal recuperation.

"It provides a valuable service for the clients who attend, as well as an important break for carers!" (Carer)

"It has meant my wife and myself having more time to ourselves. We can 'forget' him whilst he is there." (Parent)

8.7.9 Change for schools

This care farm is felt by representatives of all participating schools to provide a valuable opportunity for their young people to actively engage in a learning experience that they enjoy. They are responsible for helping their young people develop positively and to reach their full potential; it is therefore essential to access services that enable them to learn in as stimulating a way as possible. The project is recognised by those concerned as providing a service that meets this requirement to the satisfaction of the education authority, the school and the young people themselves.

"So many things we took our youngsters to and there was a mismatch. The staff didn't understand the needs of ours and it was just a disaster. This has proved time and time again that this is perfect." (Head teacher)

The range of learning opportunities provided by a farm enable core educational subjects to be taught, but teachers equally value the positive outcomes in relation to behaviour and attitude that can emerge as a result of sharing space with a range of other vulnerable people in a social, natural environment.

"That sort of caring side can come out. Caring for others, caring for animals." (School teacher)

"While they're here they are seeing that there are other people that are needy in a different way, that have got different needs. That they are not the only special people in the world." (Head teacher)

The care farm is perceived by school teachers as providing their young people with invaluable opportunities that they might not otherwise receive. The natural environment provides space and freedom, whilst contact with animals and other project participants encourages personal development as sentient beings. The care farm provides value for the schools concerned as the stimulating inclusive environment helps them to deliver a learning experience that the young people want to engage with and can be seen to enjoy. The young people are helped to recognise and value their personal abilities, to look beyond themselves, see the bigger picture and better understand their own place within it. Associated personal changes can result in increased participation and decreased disruptive behaviour which will in turn impact positively at school and in their wider lives.

However, it was decided upon review that, although the care farm clearly provides a useful service for the schools concerned, associated outcomes that specifically relate to this stakeholder could potentially be overstated / claimed. The actual level of teacher support that is provided whilst the young people are attending remains broadly similar to that required during the rest of the week, and relevant change is potentially already included elsewhere in relation to other stakeholders (the young people themselves and their families / carers). No outcome is therefore measured / included for the schools concerned in recognition of these facts; the same principle has also been applied to the three care homes that attend with groups of residents.

8.7.10 Change for the NHS

This evaluation has highlighted the impact that the care farm has on the health and well-being of those who participate. All those with mental health issues who are currently attending, and many of those with learning disabilities, have previously required in-patient and out-patient hospital treatment as a result of their condition. Only one service user has been readmitted since attending the farm. Twelve of the 14 questionnaire respondents (86%) indicated that their mental health had improved, and a significantly reduced need for NHS support was recognised by both

participants and health care professionals alike as directly resulting from attendance at the project.

"It definitely helps to keep them out of hospital, keep them well. Most definitely I think." (Occupational therapist)

"If I didn't come here everything would probably go wrong again and I might need the hospital again." (SU 17)

Another valuable outcome concerning NHS costs relates to the fact that participation at the care farm facilitates physical exercise and is involved with growing fresh vegetables and the food production process. This not only encourages people to eat better food but also increases their awareness and appreciation of the benefits associated with having a healthy diet and lifestyle.

"I lost about two stone in about two months." (SU 45)

"I get lots of exercise, physical exercise. It's just great you know?" (SU 31)

"We made our own [apple] juice last week and it tasted sour but we still liked it." (SU 67)

Eight of the fourteen service users who completed questionnaires (and had been attending for more than six months) stated that their diet had improved as a result of attending the care farm; this aspect of change received further support in interviews.

Research has suggested that ill health relating to weight is more prevalent amongst individuals with learning disabilities (Elliott *et al.*, 2003) and mental health problems (Brown *et al.*, 1999) than amongst the wider population. Given that Body Mass Index (BMI) related illnesses are currently estimated to be costing the NHS £17.4 billion per annum (McPherson *et al.*, 2011), significant savings will result from people engaging in increased exercise and enjoying a healthier diet. Thirteen out of fourteen questionnaire respondents indicated that their physical health had improved because of attending the care farm. The total societal costs associated with obesity

and overweight have actually been estimated as much greater than those previously presented, but the inclusion of some of the additional factors could potentially have resulted in the double counting of some outcomes (discussed further below) and was therefore avoided.

8.8 Outcomes from identified change

An impact map is central to an SROI; it contains the data and associated calculations that inform the suggested return on investment. The impact map accompanying this analysis is included in its entirety in Appendix 8, but key elements are also incorporated and discussed in this chapter to provide further clarity regarding process. Table 8.7 (pp. 220-222) contains information concerning the outcomes (and associated chains of events) that were found to apply, the indicators that were applied to measure the change, the basis on which their applicability was assessed and the financial proxies that assigned a value to the change.

8.8.1 Avoiding double counting

Two factors relating to the change that was found to take place for care farm participants were considered to potentially result in the same outcome being counted on more than one occasion and an inaccurate picture thereby being presented:

- Various manifestations of the identified change broadly relate to aspects of personal well-being and might therefore contribute to shared outcomes.
- These and other changes (for instance with regard to learning and subsequently applying new skills) might ultimately be elements of the same chains of events.

The following steps were taken to prevent this from taking place.

Well-being

Happiness, satisfaction, stress, confidence and more generic quality of life are all aspects that influence, and are influenced by, well-being. Indeed, the relationship between 'well-being' and 'quality of life' remains the subject of debate, with no clear

consensus having yet been reached as to whether they concern the same or alternative constructs (Bowling, 2010). There are multiple aspects of the operation of this care farm that service users perceive as promoting well-being, with these relating to the farm environment and the social dimension in addition to the opportunity to learn, apply and develop new skills in a place that is focused on doing real work, but in an essentially therapeutic manner.

However, it is not practical when undertaking an analysis of this nature to quantify all such aspects separately. Confidence has previously been evidenced as having increased as a result of being able to participate in productive, enjoyable activities in a socially inclusive, harmonious environment. This concept can encompass both self-esteem and self-efficacy, and both these aspects have been found to develop as a result of participating at this care farm despite the fact that participants often choose to articulate associated change more generically as increased confidence. In order to avoid potential problems concerning the valuation of specific aspects of well-being, relevant changes have been incorporated as aspects of chains of events rather than as individual outcomes, but this should not be perceived as in any way undermining the importance of their contribution to the overall process.

Chains of Events

It was recognised as imperative that this analysis did not seek or appear to present an excessive valuation of the outcomes associated with attending the care farm. Due attention has therefore been taken to only include (quantify) the most advanced stage of change when a chain of events has been identified. As a result of this process, only three outcomes have been included in the impact map regarding service users, despite the fact that seven widely applicable outcomes were previously evidenced as having being found to apply. With regard for instance to that which related to improved confidence, this was considered by those concerned to have facilitated their being able to enjoy genuine job satisfaction:

Service users got structure to their day → learnt new skills → did something productive in the workplace (meaningful activity) → became more confident → received job satisfaction.

The outcomes that concern other elements of personal well-being have similarly been included in the chain of events that have provided service users with the immense benefits associated with being part of a supportive social network:

Service users enjoyed coming to the farm → became more relaxed → felt happier → interacted with others → made friends → became part of a supportive social network.

Each of these elements is an important outcome in its own right, and needs to be acknowledged, but it would be presenting an overinflated and inaccurate picture if every stage of each personal journey were to be counted and valued independently.

8.8.2 Negative and unintended change

It is important to remain open to the possibility that, for every positive intended outcome, there may also be a negative unintended consequence. The only one found to apply in this instance related to the reduced privacy enjoyed by the host farmer; this is highlighted in bold italics in Table 8.7 and on the impact map.

8.8.3 Indicators

Following the identification of relevant outcomes, suitable indicators were selected to measure the extent to which these apply. Ninety four per cent of current service users were directly consulted during this measuring change phase, and the quantities that are included in Table 8.7 and the impact map (Appendix 8) were directly informed by the stakeholders themselves. Four adult service users were absent during the final week that data were being collected for the purposes of this analysis, and relevant incorporated quantities have been increased by two in recognition of this fact. It was considered inappropriate for associated figures to be based solely on participant observation and information provided by the individuals concerned, and

more objective supporting indicators were therefore provided by the service user questionnaire and input from representatives of other stakeholder groups.

Table 8.7: *Outcomes, indicators, quantities and proxies*

Stakeholders	The outcomes (what changes)			
	Description	Indicator	Quantity	Financial proxy
	Describing the change	Measuring the change	Calculating the extent of the change	Valuing the change
53 adult service users (current)	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, became more confident and received job satisfaction.	Number of service users who had developed new skills and said they had become more confident as a result of engaging in useful and enjoyable work (supported by other stakeholders).	Observation, service provider input AND questionnaire responses indicating new work skills <u>and</u> increased confidence (13) or verbal evidence (30) portraying work opportunities positively (e.g. <i>"The work keeps me busy and I enjoy doing it"</i>).	25% of a 1 point rise (on 10 point scale) in job satisfaction at the lowest assigned value.
	Service users became less tense / angry / anxious, interacted with others, made friends and became part of a supportive community.	Number of service users who participated enthusiastically, said they had made new friends and were more relaxed than when they started at the project (supported by other stakeholders).	Observation, service provider input AND questionnaire responses indicating made new friends <u>and</u> improved mental health <u>and</u> positive change in WEMWBS scores (10) OR verbal evidence (28) suggesting importance of new friendships (e.g. <i>"I've made some brilliant friends"</i>).	25% of the value assigned to social relationships.
	Service users were active in a restorative natural environment, benefited from a healthier lifestyle and physical health improved.	Number of service users who remained active whilst at the project and said they had become fitter as a result (supported by other stakeholders).	Observation, service provider input AND questionnaire response indicating improved physical health (13) OR verbal evidence (35) of being more physically active at the farm (e.g. <i>"Otherwise I'd just stay in bed all day."</i>)	Cost of annual fitness club membership.
12 adult service users (left during year)	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, became more confident and started a college course.	Number of service users who left the project to study a subject related to skills developed on the farm.	Project records and conversation with project leader (5).	Future earnings differential City and Guilds ordinary level qualification compared to no qualification.

12 adult service users (left during year)	Service user got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, became more confident and gained employment.	Number of service users who left the project to go into paid employment utilising skills developed on the farm.	Project records and conversation with project leader (1).	Minimum full-time wage (over 21).
18 young people	Young people had fun outside, enjoyed the learning opportunities provided by the farm environment, knowledge increased and self-confidence developed.	Number of young people who talked positively about what they did and learnt at the farm and teaching staff confirmed that they enjoyed and benefited from the experience.	Conversations with the young people and teachers indicated this applied to all (18) those currently attending (e.g. <i>"I'm learning stuff that I enjoy and that interests me"</i>).	Cost of a two week activity holiday in a natural environment.
	Young people interacted with animals and vulnerable adults, reassessed their own situation / behaviour and developed improved social skills / dealt with issues better.	Number of young people who said they were relating to other people better as a direct result of attending the farm and related behavioural change is supported by teachers.	Conversations with the young people provided evidence of relevant change (12) (e.g. <i>"This place just helps me be more calm"</i>), and teachers further supported this.	Cost of Cognitive Behavioural Therapy (30 one hour sessions).
5 project volunteers	Volunteers helped other people (giving something back), contributed to society and felt valued in the workplace.	Number of volunteers who fulfilled a useful function on the farm and said that they felt other people treated them differently as a result.	Observation, conversation with project leader and verbal evidence (3) of improved well-being (e.g. <i>"I can go to sleep at night ...because I know that I'm doing something useful"</i>).	Cost to volunteer abroad for 12 months.
1 host farmer(s)	The built environment was improved / expanded and the marketplace value of the farm was increased.	Estimated value added to farm as a result of project activities during the year in question.	Observation and verbal evidence from farmer and project leader.	Cost of replacement barn.
	<i>More people on the home farm resulted in reduced privacy / personal space.</i>	<i>Farmer saying it caused friction within the family.</i>	<i>Verbal evidence from farmer.</i>	<i>Average cost of a family holiday.</i>
45 families / carers of service users	Changes in service user behaviour had a positive impact on home life and relationships improved.	Number of carers / relatives who reported positive changes in behaviour / relationships at home and this was supported by service users.	Number of carer questionnaires initially mentioning positive related change away from the project (5) (<i>"He comes homehappy to communicate"</i>) OR described in conversations (4).	Average cost of a family holiday.

45 families / carers of service users	Service user was known to be in a safe environment that they enjoy and carer was able to benefit from personal time, relax and recuperate.	Number of carers / relatives who gained free time for themselves and considered this to be positive and valuable.	Number of questionnaires completed by carers who share family home with service user (4) that identified the time apart as important for both parties (e.g. <i>"We can 'forget' him whilst he is there."</i>).	Value of time not spent 'caring' or worrying.
NHS	Service users no longer required residential hospital treatment, NHS costs reduced / able to redirect resources.	Number of service users who had previously required related in-patient hospital treatment, had not required this since attending the project and indicated that the two facts were linked.	Questionnaire responses (service users with mental health issues) indicating positive change in mental well-being (WEMWBS) scores (4) OR verbal evidence (12) of improved mental health (e.g. <i>"Coming to the farm, it makes me forget all about the suicidal thoughts"</i>), AND project leader indicating no further in-patient care had taken place since attending (15).	Cost of in-patient NHS hospital services for people with mental health problems (2 week stay).
	Service users were physically active, ate more healthily, overall health improved and associated NHS costs were reduced.	Number of service users who were active on the farm, ate the produce grown and said that their physical health had improved as a direct result of attending the project.	Observation, service provider input AND service user questionnaire responses indicating improved physical health (13) OR verbal evidence (35) of being more physically active at the farm (e.g. <i>"I get lots of exercise, physical exercise"</i>).	Estimated cost to NHS of overweight / obesity per individual.

8.8.4 Financial proxies

Potentially appropriate financial proxies were identified from a range of sources that included academic research, the SROI network database, other assured SROI studies and internet sites. Such variation helped ensure that those that were ultimately incorporated suitably value the change from the perspective of the stakeholder concerned. All sources are referenced on the impact map (Appendix 8). It is neither possible nor intended to claim that those which were ultimately selected are precisely applicable in all instances – the extent of associated change and the degree to which it is valued will always vary between individuals – but such challenges

should not be used as an excuse for merely ignoring impact that is not easily quantifiable. Sufficient transparency is included throughout to provide clarity and encourage wider consideration of how best to value outcomes that are by their nature subjective and fluid.

8.8.5 Outcome materiality

The suitability of all outcomes, indicators and proxies, as indeed stakeholders, was constantly reassessed during the course of this analysis. As this evaluation has shown, a possibly unique feature of a care farm relates to the fact that there are a wide range of aspects that can contribute individually or more holistically towards positive change and associated value. These may relate to the natural environment, the animals, the horticulture, the social engagement, learning new practical skills or being active and engaged.

Some outcomes that were identified by service users as having relevance to them as individuals have not been included in the associated impact map as a result of the need to keep the analysis manageable. These have significance for the individuals concerned, but were not sufficiently widespread to justify inclusion. Such outcomes included the following:

- Drinking less alcohol
- Taking less legal / illegal drugs
- Reduced criminal activity
- Started new hobbies / joined new clubs
- Started volunteering

Only those outcomes that were found to account for more than two per cent of the total present value were included and quantified on the impact map (this did not apply to any of those mentioned above). Those stakeholders who experienced such excluded outcomes nevertheless agreed they had also enjoyed the sort of change that is included in the impact map and that this reasonably reflected the value

provided. The final SROI ratio might, as a result, be lower than would otherwise have been the case, and the significance of such change for the individuals concerned should not be overlooked, but it is not practical to incorporate outcomes on a case by case basis. Although the only negative / unintended outcome included in the analysis has been assigned a value of significantly less than 2%, its presence allowed the associated issue to be drawn to the attention of, and considered by, appropriate stakeholders.

8.9 Duration of change

Although some of the changes identified in this chapter will potentially have a positive impact for a sustained period, many are dependent on the continued provision of the activity for the person concerned. For most of the adults who participate at the care farm, it is the associated support and range of tasks that are available (facilitated by the appreciated, essentially natural, environment) that directly and indirectly enables identified outcomes for themselves and other stakeholder groups. It is therefore unlikely - as was described by many participants - to be sustained if the service is withdrawn.

In recognition of this fact, and to avoid over-claiming, this analysis does not consider the duration of any identified change in relation to adults currently attending to last for longer than the year under consideration. The change experienced by service users is, in turn, closely related to that which has been identified in relation to family / carers and the NHS. Duration of one year (the period under consideration) was therefore once again considered most appropriate. Changes may of course ultimately continue to exert some influence after the end of this period, but it was not felt possible to claim this with any degree of certainty.

With regard to the adults who moved into full-time education or employment as a result of spending time at the care farm, the new skills and training that they received (in conjunction with associated personal development) have facilitated this outcome, and will generally result in more sustained and profound change in

lifestyle. There is also evidence available to show that positive behavioural change amongst young people during their formative years exerts longer-term influence (Little and Estovald, 2012), and this was described by relevant stakeholders as having been seen to apply amongst previous participants. However, it was considered inappropriate in this instance to incorporate more than two years duration due to the fact that relevant longitudinal data were not available.

It is also likely that additional factors will exert increasing influence in relation to associated outcomes as time progresses; 'drop off' is utilised in SROI to account for this reality. Following discussions with relevant stakeholders, and taking consideration of the relatively modest duration that was being included, a figure of 20% was thought reasonable to apply to the behavioural outcome relating to young people, whilst 30% was suggested to be more appropriate regarding college / employment outcomes amongst former adult service users who would now be operating in a completely new environment. Incorporated figures were therefore partially informed by anecdotes and estimates, but this is often necessary as a result of required empirical data relating to previous participants being unavailable (Pank, 2011). A conservative approach was adopted in recognition of this fact.

8.10 The care farm's contribution to the change

A valuable strength of SROI is that it incorporates procedures specifically intended to allow the impact of an individual organisation with regard to identified outcomes to be considered in isolation. This is in recognition of the fact that additional external factors might exert influence in relation to identified outcomes; all associated impact could not then be claimed to have occurred as a direct result of this activity.

Deadweight, displacement and attribution are the three elements that are taken into account during the SROI process in order to calculate the actual impact that is caused by the specific intervention under consideration. The individual rates that were considered to be appropriate for application in relation to specific outcomes are included in the accompanying impact map, but the associated rationale requires

further explanation. The figures provided can only ever be estimates, but are informed by the data provided by the stakeholders themselves. Their suitability was also subsequently discussed with those to whom they apply and changes incorporated when considered appropriate. This procedure was applied in recognition of the criticality of relevant stakeholders being personally involved throughout this process rather than decisions being made on their behalf (New Economics Foundation, 2011).

8.10.1 Deadweight (would the change have happened anyway)

Given the personal circumstances of current service users and their descriptions of lifestyle / behaviour prior to starting at the care farm, it was judged by all concerned to be extremely unlikely that the identified changes would have occurred if they had not come to the farm. Many participants had previously been attending other more formalised statutory day care schemes that they did not feel had met their needs and had not resulted in their achieving the sort of outcomes that this project has enabled. Others had been effectively suffering from what they perceived as social exclusion, and a shared conviction was expressed that the identified change would not otherwise have taken place. However, this cannot be guaranteed and a deadweight level of 5% has been applied throughout in recognition of this lack of certainty.

8.10.2 Displacement (how much of the outcome has displaced other outcomes)

Displacement was not considered by the overwhelming majority of stakeholders to be an issue with regard to the outcomes identified. The concept of displacement is more commonly applicable to outcomes relating for instance to anti-social behaviour (which may just relocate to another geographical areas rather than actually stopping) and such aspects are not relevant to this analysis. However, it was suggested by one volunteer that they might have chosen to help out elsewhere if they had not decided to spend their time at this care farm and an associated displacement figure of 20% has therefore been assigned. An outcome that was initially identified concerning

National Insurance and taxation payments was also subsequently removed given the likelihood that someone else would have taken the job and made the relevant payments if the care farm client / employee had not been successful with their application.

8.10.3 Attribution (is any of the change down to others)

This is an assessment of how much of the outcome might have been created / facilitated as a result of contributions from other individuals and organisations. Attribution will always vary between individuals and can once again only be an estimate based on the evidence available. However, it was recognised from the outset as potentially being of particular significance given the fact that some service users also receive regular input from other organisations. It is therefore to be anticipated that, for those individuals, this will also impact on identified outcomes.

“One organisation can credibly be attributable for fixing a car, but overcoming social problems is more complex” (New Economics Foundation, 2011, p. 26).

The stakeholders concerned were once again involved during the process of selecting appropriate attribution levels. Those that were initially included were based on the number of days they attended the project, the extent to which they participated in other regular, structured activities and the likelihood of these supporting similar outcomes to those evidenced as resulting from this care farm. Relevant stakeholders subsequently provided feedback with regard to what was being proposed and associated figures were adjusted as required. Although differences naturally applied in relation to the specific circumstances of individual participants, it is important to stress from the outset that the vast majority perceived this as by far the most significant (if not the only) such activity that they engaged with, and as having been effectively responsible for the identified outcomes. The figures incorporated in the impact map in relation to all significant stakeholders will now be explained on a case by case basis to provide enhanced clarity.

Service users

As previously indicated, some adult service users also engage in other regular activities during the week and it was therefore anticipated from the outset as unlikely that participation on the farm would be solely responsible for all the change that was found to occur. However, it became clear from interviews and questionnaires that those who attend the care farm for a sustained period of time have chosen to do so because they have developed a special affinity with the associated people and place. The data that were provided clearly demonstrated that the vast majority considered this specific activity to be critical with regard to the outcomes that applied.

“I would say this is the best thing of the week, coming here every week.” (SU 49)

“The two days here is the only structured time that I have. The rest of the week is just appointments and things that don’t really do anything.” (SU 24)

It is nevertheless essential to acknowledge the additional input that occurs for some participants. Interestingly, it was often amongst those who attended more frequently during the week that attribution appeared most relevant, as many of these participants had a structured and full weekly timetable that also included various other potentially contributory activities. With regard to the outcome concerning job satisfaction, some participants were also engaged in other work-based activities (such as charity shops), but these did not involve producing such identifiable and tangible outputs and were not generally considered by the service users concerned to be as enjoyable or personally satisfying.

Similarly amongst those who valued having become part of a supportive social network, some participants indicated that they had also made friends through other regular activities such as music, drama and pottery. Attribution in relation to current adult service user outcomes was initially included at 25% in recognition of this fact (essentially reflecting 50% attribution amongst half of those to whom change

applied), but this figure was subsequently reduced to 20% after some stakeholders indicated that they felt the original figure to be excessive and unrealistic. No attribution was incorporated in relation to those who left to attend college or as a result of gaining employment during the year under consideration because the relevant outcome was in all cases dependent upon, and directly related to, the skills that had been developed at the care farm.

The young people who attend the farm are generally receiving additional input from relevant professionals during the remainder of the week that will potentially also facilitate positive behavioural change. Although many young people indicated that this was the only place where they received the opportunity to help other sentient beings (human and otherwise), and that the relevant outcome resulted directly from attending the farm, teachers suggested that it was more likely to be the result of a combination of factors (despite also agreeing that the care farm's contribution was often critical). A more substantial figure of 40% attribution has therefore been included in recognition of this fact. However, there was more universal agreement expressed regarding the fact that the outcome concerning increased confidence as a result of successfully learning and applying appropriate skills related entirely to the time spent at the project. No attribution was therefore included in this instance.

Parents / carers

Parents / carers of service users indicated that positive associated change in behaviour / attitude was particularly noticeable at the end of the day(s) when the person concerned had actually attended the care farm, and was therefore clearly and directly related to the time spent there. A rate of only 10% attribution has been allocated to this outcome due to the fact that participation at the project was generally presented as the sole catalyst for it taking place. The other quantified outcome concerned the personal carer (generally a relative) being able to enjoy quality time for themselves that allowed them to 'recharge their batteries'. No

attribution is included in this instance as the change directly resulted from knowing that the other person was happy and safe at the care farm.

NHS

Attribution regarding the reduced need for hospital treatment in relation to mental health issues has been principally included in recognition of its previously described relevance concerning personal change amongst service users. Some service users continued to receive input from community based health care workers and other related professionals, but this support was generally reduced significantly once they were known to be settled at the care farm. A figure of 20% was therefore once again felt to be appropriate by consulted stakeholders. A lower figure of 10% was applied to the outcome relating to physical health as only low numbers of participants also engage in other activities that require physical activity, and these do not also promote the healthy diet and associated lifestyle that is encouraged and enabled by this care farm.

Volunteers / host farmer

No attribution has been included in relation to these groups as those concerned do not volunteer elsewhere and no one else provides relevant input to the farm land and infrastructure.

8.11 Social return calculation

The following section outlines how the social return on this care farm's activities has been calculated, but a more detailed explanation of the relevant procedures can be found in Stage 5 of the Guide to SROI (The SROI Network, 2012).

8.11.1 Calculation of impact

Impact refers to the total quantified value of each identified change and is calculated by applying the following equation:

The financial proxy X the quantity of the outcome X the fraction of the change remaining after deadweight, attribution and / or displacement have been removed.

This calculation is applied to each row of the impact map and the total impact is the sum of these individual calculations. The total impact of the activities that have been identified by this analysis at the end of the forecast period has been valued at **£578,801** and is shown on the impact map (Appendix 8).

8.11.2 The future value of change

Some of the change that has been identified is anticipated to last into the year following that in which the activity has taken place. However, it is necessary to accommodate inflationary change and the present value has therefore been calculated using a discount rate of 3.5%, as recommended for the public sector in HM Treasury's Green Book (2003). The overall present value of the activities under consideration is **£582,649** after this discount rate is taken into account.

8.11.3 Social return

The social return is expressed as a ratio of the present value divided by the value of inputs. The forecast social return ratio for the Houghton Project is
 $582,649 / 154,386 = 3.77 : 1$

**For every £1 invested in this care farm,
 £3.77 of social value is created.**

8.12 Sensitivity analysis

An evaluation of this sort – encompassing many outcomes that are not easily quantifiable - must by its very nature be founded to a degree on justified estimations and assumptions. It is therefore important to consider in greater detail those that might have a significant effect on the final SROI figure. It then becomes possible to present alternative scenarios, to outline the associated level of change to the overall SROI and identify the incorporated assumptions that have the greatest effect.

Scenario 1: *Altering duration of outcomes*

Some outcomes have been assigned a duration of two years for this analysis. Changing the duration of all outcomes to one year provides an SROI of £3.60.

Scenario 2: *Altering specific financial proxies*

As the impact map indicates, over half of the total value concerns outcomes that directly apply to the service users themselves. This is neither surprising nor problematic (given that they are the intended principal beneficiaries), but should nevertheless be considered further. The two financial proxies selected to account for most of the associated value have been derived from the analysis of data relating to job satisfaction (Helliwell and Huang, 2005) and social involvement (Powdthavee, 2008). With regard to the latter figure, it was judged by relevant stakeholders as inappropriate to include the full suggested proxy and 25% of the total was applied in this instance.

Increasing the level to 50% would provide an SROI of £4.51, whilst removing it completely would reduce the SROI figure to £3.04.

Completely removing the proxy concerning the value of being engaged in productive and enjoyable work would reduce the SROI figure to £2.91.

Scenario 3: *Altering deadweight*

Although there is no evidence to suggest that associated change would have taken place without the involvement of this care farm, a 5% figure was incorporated throughout in recognition of the fact that this remained a possibility.

Removing all deadweight would increase the SROI ratio to £3.97, whilst incorporating a level of 10% to all outcomes would provide a final figure of £3.58.

Scenario 4: *Altering attribution*

This is the assumption that has been applied with the greatest degree of variation between individual outcomes for the purpose of this analysis, and is essentially based on informed estimations. However, the levels that were incorporated already accommodate the possibility of other individuals / organisations having contributed to these outcomes to a greater degree than was generally judged to be the case by the concerned stakeholders.

Standardising attribution to 25% across all outcomes reduces the SROI to £3.34, whilst a rate of 40% across all outcomes provides an associated ratio of £2.67.

Scenario 5: *Altering quantities*

The service users have already been identified as the main beneficiaries and sensitivity analysis can therefore usefully be applied to this stakeholder. The actual number of those who experience relevant outcomes is now halved, despite the fact that the service users themselves in no way recognise the applicability of this scenario.

Reducing the number of current service users (adults and young people) who experience outcomes by 50% changes the SROI ratio to £2.81.

An SROI ratio of £3.77 has been shown to be justifiable. However, this figure remains in excess of £2.50 when a range of alternative, less realistic, scenarios are tested.

8.13 The care farm's impact: a story of change

In order to ensure that this report remained manageable, comprehensible and accessible, it was necessary to focus on the outcomes that were identified by stakeholders as being of primary importance / significance. There are a wide range of individuals, with an equally wide range of needs, who attend this care farm and multiple factors can contribute to the different outcomes found to result. Despite this acknowledged breadth, the various stakeholders concerned indicated that the outcomes selected and assigned a financial value suitably encapsulated what was actually happening for them.

This SROI has shown that this care farm provides value on a number of levels and that an identifiable and positive return on investment is received by included stakeholders. It provides a service that is both effective and inclusive.

"The [name of care farm] is a very good project. I wish there were more places in the county like [name of care farm]. It is a good place for people with learning disabilities and mental health to experience working with other people." (Carer)

The input of all participants is equally valued and the resultant sense of shared ownership allows the care farm to successfully operate as a genuinely supportive and productive community space.

However, it is important that other stakeholders and concerned third parties are aware of what is happening on the ground. It appeared that the initial assessment and subsequent monitoring of individual participants can sometimes currently take place in a rather informal fashion.

"It would be quite nice sometimes just to get maybe a written feedback of how they're doing. Because that would help me fill in the paperwork to make that argument for why it's been beneficial." (Occupational therapist)

It is acknowledged that formalised procedures / paperwork can become a burden for all concerned if there are no associated benefits, but the evidence provided is invaluable for those who are responsible for accessing the funding that enables people to participate.

This analysis identified the team of workers at the project as playing a crucial part in providing a service that delivers true value. It is to the credit of the project leader that he has the ability to recognise and attract suitable personnel, and it is important that the contributions made by all employees are acknowledged. The natural farm environment has been shown to be an ideal and idyllic space from which to deliver a project of this nature, but participants would not use the physical space, engage with the learning space or become part of the social space without the support and encouragement that the care farm workforce provide.

The care farm is primarily seeking to enable participants to enjoy improved health and well-being and it has been shown to be meeting this aim. Figure 8.3 conceptualises the various pathways that have been identified in this analysis as contributing towards positive outcomes amongst service users.

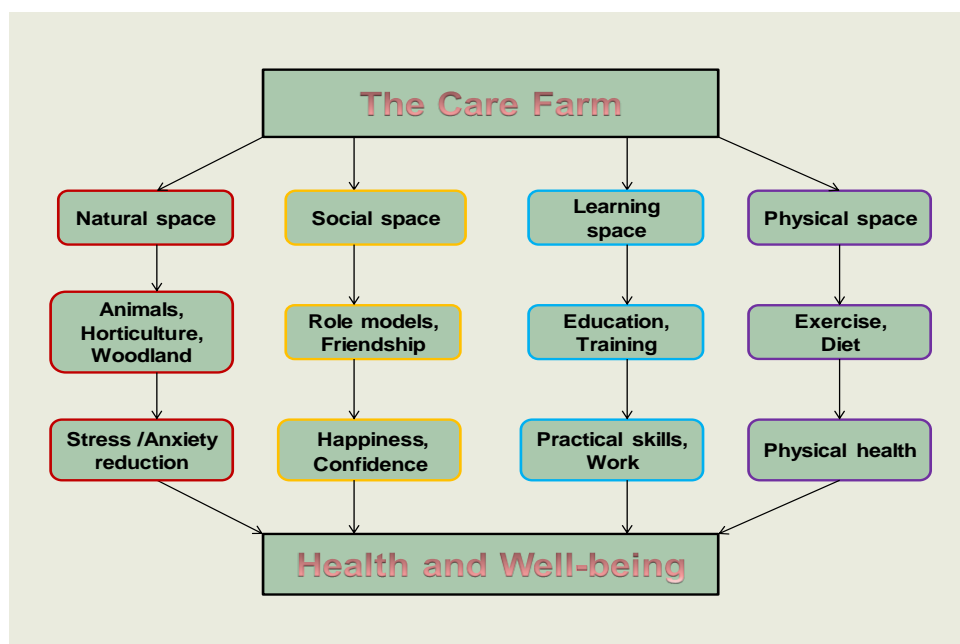


Figure 8.3: Pathways from the care farm to health and well-being.

Natural space: The idyllic rural farm environment has been found to help facilitate personal recuperation. Service users develop a rhythm that is in tune with the land and the livestock that they nurture; seasonal change and associated life cycles (animals and crops) provide perspective and context.

Social space: Social inclusion lies at the heart of that which the care farm provides and has been shown to be a critical ingredient for personal development. The associated friendships and support networks help service users to recognise and appreciate their personal strengths and enable them to enjoy more active and purposeful roles in the wider community.

Learning space: Although paid employment in a competitive marketplace is not a realistic option for many of the service users, the activities that take place are focused around providing training and enabling people to learn useful work skills. This training is provided in a context that encourages engagement with the learning process, helps people to recognise and appreciate their strengths and allows skills to be applied in a real, productive workplace.

Physical space: Many activities at the care farm require a degree of physical exertion given the geographical size of the space and the nature of the work that is involved. Although people do not necessarily consider what they are doing to be exercise (as this is not the primary focus), and everything is done at a pace that suits individual circumstances, overall physical health improves.

The care farm's activities have also been shown to result in additional positive outcomes for people and organisations who do not directly participate. Not only are the lives of those who interact with service users away from the project (families and carers) improved as a result of associated change, but support needs that require wider societal input are also diminished. This SROI focused specifically on societal scale outcomes that relate to the NHS, but there are also various less widely

applicable aspects that will similarly impact positively in relation to costs that are essentially borne and shared by us all.

Such outcomes were found to relate to aspects including benefit payments, drug / alcohol use, social service / education support and public disorder / crime. Although the data gathered for the purpose of this analysis did not suggest that these were sufficiently widespread to justify their individual inclusion in this instance (as a result of issues relating to scale, manageability and clarity), their combined value will be more significant and is therefore noteworthy. One of the greatest strengths of this care farm has been shown to relate to its ability to accommodate the varied needs of a diverse range of individuals, but this has resulted in some less widespread aspects of associated change not being directly incorporated in the analysis.

Despite the previous caveat, the care farm has been presented by all included stakeholders as providing a valuable and appreciated service that facilitates a range of positive outcomes. Associated change has been demonstrated to have a profound impact on the lives of those concerned. Participants are enabled to become more confident, happy individuals through engaging in meaningful work that they enjoy within a farm environment that they value. Integration within an inclusive and supportive community allows friendships to develop, concerns to be shared and stronger, more resilient individuals to emerge.

Key points from Chapter 8

(A Holistic Analysis of Care Farm Impact)

- Organisations are increasingly required to account for economic, social and environmental value so that true impact can be better demonstrated. SROI has been found to be an innovative technique that is fit for this purpose.
- This SROI encompassed all the activities that take place at an individual care farm in relation to the provision of day placements for a range of vulnerable adults and young people.
- The analysis suggested that, for every £1 invested in the care farm, in excess of £3 of social value is created in return.
- Relevant stakeholders contributed at all stages of the analysis to ensure that it reflected that which they felt was really taking place.
- The analysis identified four key factors as contributing positively to improved well-being amongst service users: the natural space, the social space, the learning space and the physical space.
- Learning and applying new skills with other people in this supportive natural environment was found to enable participants to become happier, healthier, more relaxed and self-confident individuals with improved social networks.
- The SROI demonstrated how care farms also provide associated positive and valuable outcomes for the people that service users engage with and wider society.

Chapter 9

Conclusion

This chapter draws together the evidence and analyses that have been presented in previous chapters and discusses the findings with regard to the original research aim. This discussion is not intended merely to replicate that which has gone before, but consideration of the combined evidence base enables an assessment to be made of the extent to which the study has achieved that which was intended. The methodological strengths and limitations of the study are discussed before consideration is given to broader implications and the contribution that this study makes in the form of new knowledge and understanding concerning that which care farms provide and the associated impact.

9.1 Meeting the aim of the study

More people globally are now living in urban rather than rural environments for the first time in history (United Nations, 2011), and in the UK more than 80% of the population reside in an urban setting (Defra, 2012). This has resulted in many people having reduced opportunities to engage with the natural world and ‘nature-deficit disorder’ can result (Louv, 2005). This concept was originally proposed in relation to children, but the evidence presented in the opening chapters suggested that adults are suffering accordingly. Current levels of disconnection have been demonstrated to relate to the increased prevalence of some of the modern ailments that are impacting negatively on the health and well-being of many people, and re-connection has equally been evidenced as accompanying positive outcomes.

A review of the literature in Chapter three suggested that engaging with nature in a range of forms and ways provides multiple benefits regarding human health and well-being. Just looking at nature has been evidenced as providing positive outcomes, as indeed has passive and active engagement with flora and fauna (non-threatening) of all shapes and sizes. Evidence was presented in Chapter two that

suggested similarly positive outcomes could be enabled through functional social support networks and being able to engage in meaningful activities. Weaknesses were highlighted with regard to the methodological rigour that underpinned some research studies, and variability in design often prevents direct comparisons being made, but the body of evidence is fairly substantial and is broadly united in promoting the presence of positive relationships between human health and well-being and levels of social and natural connectivity.

Studies that more specifically concern green care have similarly suggested that the natural environment can be positively incorporated in interventions that facilitate improved human health and well-being, and farms were highlighted as potentially being ideally positioned for this purpose. Research was presented that has started to assess the validity of this claim, but this had principally emanated from outside the UK and little consideration was found to have been given to the situation in this country, despite it having been shown to be an activity that is increasingly practised. No studies have previously sought to identify the holistic value that is provided or to conceptualise this in economic terms. The processes through which the various elements that appeared likely to apply in a care farm setting might influence personal functioning were considered in Chapter four, and a theoretical framework was developed that sought to incorporate those that might potentially exert influence.

The research methods that were applied and associated methodological issues were presented in Chapter five. These were central to allowing the aim of the study to be met as they influence fundamentally that which is discovered and the inferences that can reasonably be drawn. Deciding which tools to incorporate in a study in order to best access and understand that which is required is always a difficult decision, and there will always be strengths and limitations associated with those that are selected. Those that applied in this instance are considered in greater detail later in the chapter, but the methods applied were essentially found to be fit for purpose.

The interviews helpfully incorporated sufficient flexibility to allow relevant lines of enquiry to be pursued, but questionnaires increased the sizes of the samples that informed the study and helped to ensure that it reflected that which was taking place.

The evidence presented in Chapter six demonstrated that care farming can enable the financial viability and wider sustainability of individual farms. Established farmers were found to have been able to maintain their traditional productive focus whilst also generating additional income by using the farm to provide vulnerable people with therapeutic opportunities. Others have been able to develop new agricultural enterprises on land that was already owned or had been specifically accessed for these purposes. Benefits were shown to accrue for the individuals concerned, other family members, the farm environment and the incorporated community. Enhanced connections between agriculture and wider society were evidenced, with these simultaneously supporting rural development objectives.

Care farming was demonstrated to be an unusual 21st century agricultural activity by virtue of it often having resulting in an increased workforce being employed on (and by) the holding. Although other farm diversification strategies can also generate additional income and employment for farm family members, these more commonly involve engaging with activities that do not relate to farming and / or fail to facilitate social outcomes due to the anonymity and transience of associated social interactions. Care farming has been shown to be distinct from such activities as it enables a genuine working community to be built that can, in turn, allow the farm to regain its historic position as a social hub.

Chapters six and seven provided evidence that successful care farms often intentionally blur distinctions between service users and providers to create an atmosphere that encourages everybody to be equally responsible for each other's welfare. It is not always possible upon first arriving at a care farm to immediately discern the specific roles of those who are present; the focus is placed on 'doing

with' rather than 'doing for' and everyone contributes usefully to the best of their abilities. However, the employees play a crucial, if understated, role in ensuring that sufficient support is available to sustain the activity and facilitate a transition from exclusion to inclusion. Their personal contributions were recognised by all other stakeholders as often being critical with regard to encouraging people to engage with activities that they would not have been sufficiently comfortable or confident to attempt alone.

Chapter seven identified several reasons for people accessing care farms, with these being found to vary according to their own perceived and actual needs. Five principal themes were presented as effectively encapsulating that which prompted people to become engaged, provided value on the farm and facilitated the positive outcomes that were identified. These concerned environmental engagement, social interaction, positive experiences, personal development and improved health and well-being. It is noteworthy that service providers, service users and other related stakeholders all referenced change as having taken place in relation to happiness, self-confidence and emotional stability. Care farm service users suggested that positive outcomes had also resulted in relation to many aspects of their wider lives, with these incorporating improved physical health, psychological well-being and social integration. Participants were found to be benefiting as a result of the connections that care farming facilitated with self, other people and multiple elements of the wider, more natural, environment.

Evidence was presented concerning the various aspects of a care farm that contribute to improved health and well-being and demonstrated that change takes place in the physical, mental and social domains. The interplay that exists between the various spheres of the operation and the outcomes that result will always provide immense challenges with regard to reasonably claiming causality, but improved clarity was provided concerning the extent to which care farming impacts on the health and well-being of service users and the nature of associated change.

Care farming is not presented or perceived as a universal panacea (different individuals respond differently to different therapeutic interventions), but it was demonstrated to provide immense benefits for many of those who chose, or were enabled, to participate. The fact that care farms are focused on doing real work is a crucial element for many participants and facilitates a range of positive outcomes. It has previously been suggested that working in the natural environment might provide “... *a sustainable vehicle for new versions of social citizenship for people traditionally marginalised in mainstream society*” (Parr, 2007, p. 537), and the evidence collected by this study supports this assertion.

Concerns have previously been raised with regard to the sustainability of schemes that involve engaging the socially excluded in non-profitable working activities (Amin *et al.*, 2002), but this is failing to take account of the wider associated value that has been demonstrated to indirectly accrue. Actively engaging in such supported environments should not be perceived as exploitation purely on the basis that they are not receiving direct financial returns in exchange for their labour. People commonly require intensive support and their personal needs and behaviour can ultimately result in the profitability of the actual farming activities being reduced rather than increased. Greater importance is placed on the value that results from participating in a structured and inclusive workplace that provides the often inane, but widely sustaining, banter and overall camaraderie that can accompany an enjoyable and worthwhile job.

Research and indeed professional practice concerning that which takes place within, or involves interaction with, elements of the wider natural world, often focuses on the associated ‘green’ qualities and the ways in which they can be harnessed to facilitate improvements in health and well-being. This study has similarly identified this aspect as providing immense value, but it has equally demonstrated the significance of associated social relationships. While most of the people who took part in this study described more natural aspects of the farm

environment as having contributed to the overall experience, this was commonly expressed as having been appreciated within the wider social context. The green space was effectively found successfully to enable social relations to develop and it was these that were often presented as having had the greatest impact on personal well-being. The fact that many care farms frequently have people with a wide range of personal needs participating simultaneously was found to further encourage people to discover, apply and appreciate skills and abilities of which they had not previously been aware.

“Society has prejudices and so it’s important to break down those barriers and in an environment like this we’re able to do that. There’s no bridge between abilities. Everyone does what they can. Society should be about integrating all people” (CF 06).

Chapter eight contained a case study that took the form of an SROI analysis and sought to identify and value the full range of outcomes that resulted from one care farm’s activities. This was informed by evidence that had been provided by all relevant stakeholders. Such a holistic examination allowed multiple perspectives to be incorporated and overall associated change to be explored more thoroughly. Conceptualising this in monetary terms helped the integral value to be more clearly understood and enabled an assessment of the relative contribution of individual elements.

SROI analyses must often incorporate estimations, but these were informed by robust data and the application of the technique provided a degree of clarity that would not otherwise have been achieved. SROI was found to be an invaluable tool for the intended purpose. The analysis was informed by those to whom it applies and transparency ensured that the sources of numbers and appropriate proxies were made apparent. The value of the change that the care farm enables might ultimately exceed the figure generated due to caution being applied throughout, but the breadth and depth of the associated impact is clear.

9.2 Strengths of the study

A particular strength of this study concerns it being the first that has sought to encompass and evaluate all elements of that which UK care farms provide. It was unusual in having been informed by research drawn from a range of disciplines, but benefited as a result of the combination of geographic, economic, social and psychological perspectives. This suited the multi-faceted and multi-disciplinary nature of that which care farming entails and helped a more comprehensive understanding of associated value to be provided. Increasing numbers of studies in the UK and elsewhere are now taking account of interventions that intentionally incorporate elements of the natural world for therapeutic purposes, but this is understood to be the first longitudinal study that has sought to identify all associated outcomes to assess combined impact.

An appropriate methodology underpinned the study, and the mixed methods design allowed a wide and informative body of evidence to be collected. The application of the incorporated tools in isolation would have provided less conclusive results. The triangulation of research methods allowed the reality of that which was taking place for all concerned to be better identified and explored. It ultimately proved to be the more qualitative elements of this study that were most informative with regard to identifying the sort of change that care farming enabled, but the quantitative elements supported the presence of associated outcomes and contributed towards an enhanced understanding of the extent and form of that which was taking place. The SROI provided fresh insights by assigning quantitative figures to associated impact and this will support policy makers in conceptualising the value that care farms provide.

Service user questionnaires contained various well-being measures (that had previously been presented in the literature as robust and reliable) to identify the extent to which measurable changes in health and well-being might be found to take place whilst someone was attending a care farm. However, these were supported by

simpler items concerning the extent to which people liked specific elements that have relevance in the care farm setting and more widely. This was felt to be particularly important for the purposes of this study, given the desire to collect comparable data from people with a wide range of individual needs and abilities. The study was enhanced as a result of data being collected and presented in a format that was more widely accessible and informative.

Despite objective measures of health sometimes being presented as essential in order to demonstrate that change has taken place, these cannot adequately identify how people are really feeling or behaving, and this study was further enhanced through consideration of subjective evidence. *“People’s subjective experience is just as important as the objective measurement of their condition”* (Dean and Hancock, 1992, p. 8). It can be hypothesised that the distinction between health and well-being might reflect, in part at least, a division between that which is objective and that which concerns the subjective, with both being critical elements for understanding the associated whole. Subjective input allowed relevant issues and symptoms to be shared that might otherwise have been overlooked.

The absence of studies considering the full economic benefits of care farming (and indeed green care more generically) has previously been highlighted (Dessein and Bock, 2010; Hine *et al.*, 2008a), and this study has started to fill the current void. The study was enhanced through the inclusion of SROI, an innovative and informative technique for ascribing and conceptualising wherein value lies. This tool allowed relevant stakeholders to be identified, outcomes to be attributed and overall impact to be presented. Such analyses will always incorporate assumptions and estimates, but these are informed by evidence and are an integral element of the overall process.

“Rejecting absolute versions of truth, and the feasibility of absolute objectivity, is not the same as rejecting the standard of truth or the attempt to be

objective. In things social and behavioural, our knowledge is always partial and intrinsically incomplete.” (Needham, 1983, p. 32)

A medical health model promotes RCTs as an effective gold standard with regard to identifying cause and effect, but it was considered to be a strength of this study that no attempt was made to adopt this format. Care farming is not concerned with the application of specific, discrete and pre-defined treatment plans and the wide range of contributory aspects that have been shown to apply are not suited to being sufficiently isolated to provide certainty regarding that which is exerting influence. RCTs are furthermore dependent upon the presence of a control group and a strong case can be made that it is unethical to allocate care through a randomised process rather than to meet the needs of the individual concerned.

9.3 Limitations of the study

It is important to first acknowledge the potential influence of my own active role throughout the research process. The fact that I had previously been employed on a number of farms, in the delivery of green care (woodland experiences with young people) and in various community based settings with people with a range of personal needs initially motivated me to undertake this study, but it might equally have impacted on the design of the study, the research methods adopted and the subsequent analysis and interpretation of the data. I also developed a personal awareness of the associated evidence base prior to engaging with data collection, with the specific intent being to influence the selection and design of research tools. A focus was continually placed on adopting an inductive approach to minimise the impact of inadvertent bias, but its complete absence can never be assured. Efforts were always made to collect data in broadly comparable circumstances, but some potentially influential extraneous variables could not be controlled (such as the weather) and these might also have exerted influence.

The most significant challenges and associated limitations were presented by service user questionnaires. The original intention was to obtain a random stratified sample

from the newly developed care farms that CFWM were supporting and for those concerned to complete questionnaires during the first month of their attendance and either before leaving the care farm or after twelve months had elapsed. However, it subsequently became apparent that insufficient numbers of new and committed service users would be forthcoming from this source alone during the data collection phase, and participants were therefore also included from a number of additional, better established farms.

All care farms were asked to involve every new participant and a random sample of current service users, but disparity resulted with regard to the amount of time that people had already been attending the care farm when they first completed questionnaires. Some members of the final sample were furthermore participating in relatively short interventions, and others provided initial data too near the end of the data collection period for repeat measures to be provided after a twelve month period had elapsed. This combination of factors resulted ultimately in differences emerging with regard to both the amount of time that they had been attending the farm when the first questionnaire was completed and that which had elapsed before completion of repeat measures. This, in turn, had a negative impact with regard to the statistical tests that could reasonably be applied to the associated data.

A scenario was also initially envisaged wherein the care farmers themselves would ensure new care farm participants completed the questionnaires devised for the purpose of this study. This was perhaps naïve given the fact that they are already busy people who might also be loath to encourage new and vulnerable participants to engage in paper exercises shortly after having chosen to access hands-on, farm based experiences. The reality was that the researcher was more commonly required to be personally present on the farm when questionnaires were being completed, and this presented logistical challenges, particularly with regard to the collection of follow-up data. Some of those concerned were found to have left the farm, and others did not always attend on the arranged day. This issue did not apply with

regard to geographically more distant farms that directly collected and posted responses, but completed questionnaires were on one occasion sent and failed to arrive for analysis and inclusion.

Some of those who left care farms without warning during the data collection period can be anticipated to have done so because that which was being provided was perceived as failing to meet their personal needs, but it was not possible to directly explore relevant issues with those concerned. It is similarly reasonable to assume that many of those who initially attend the farm are doing so because they perceive it as something that might particularly suit their requirements, and they cannot therefore be presented as a representative sample of the wider population.

The extent of the challenges provided by the study population including people with such a wide range of personal needs and abilities also became increasingly apparent during data collection, and it was not ultimately possible to collect the level of comparable data that was originally hoped. Some of the items could not be conceptualised by some respondents, and others felt that the questionnaire was excessively long. The General Self-Efficacy scale presented the greatest challenges, and was not always therefore completed, but the associated construct appeared nevertheless to have relevance to the personal and communal change found to accompany care farming.

It ultimately proved necessary to provide multiple versions of questionnaires, with some being abridged versions and others being specifically for people who had already been attending the farm for an extended period of time or were participating in a short intervention. This created some further confusion and resulted in the wrong questionnaires occasionally being completed. However, the core content of all versions was kept constant and directly comparable data therefore always emerged regardless of the version that was completed. Sample sizes were reported with regard to all quantitative analyses to provide clarity regarding the number of individuals who had actually provided the data that informed calculations.

The complexity of the relationship between scale scores and actual outcomes sometimes became apparent during the data analysis phase, with it occasionally appearing that people's described experience did not reflect that which scale scores suggested. The cause of such discrepancies remains uncertain, but perhaps highlights the value of applying mixed methods to validate data. It can never be guaranteed that all research participants will provide entirely honest or informed responses, and this will perhaps be of particular relevance amongst vulnerable people who can struggle with the written form and might be attending the care farm, in part at least, in order to connect with people more directly. Such issues certainly presented challenges, but the pragmatic mixed methods approach enabled associated influences to be counteracted through the inclusion of more straightforward and instinctive items alongside validated tools in questionnaires and the application of more qualitative methods to explore personal perceptions more thoroughly.

9.4 Review of the key findings

Various factors contributed towards this being a complex evaluation to undertake. These included the wide variety that is present with regard to that which care farming entails, the complex relationships that exist between the various elements that contribute to health and well-being and the fact that the combination of relevant discourses required quite radically different agendas to be incorporated. In many ways the relationship between social support and health has been theorised similarly to that which is presented as existing between the natural environment (including animals) and health. Whilst some have suggested that they indirectly provide protection from the adverse effects of stress (Dickerson and Kemeny, 2004), others have suggested that improved well-being directly results regardless of the presence of stress (Lahey and Cohen, 2000). The evidence presented in this study suggests that both the natural environment and social support fulfil direct and indirect functions in relation to human health and well-being, but that it is ultimately the latter that exerts the greatest influence with regard to the provision of sustainable change.

Social inclusion, public health and multifunctional agriculture have all previously been presented as having relevance to care farms, and this study has identified positive outcomes in each of these spheres that will impact on our health and well-being as individuals and communities. The applicability of each of these discourses in the UK context, and the manner in which they exert influence, will now be considered independently.

9.4.1 (Multi) Functional agriculture

For the purposes of this study, the relevance of this discourse has principally related to positive outcomes for farming families, farm environments and enabling people to productively engage with the wider natural environment. Production levels on many modern farms are impressive, but additional more hidden costs have often accrued as a result.

“The success of modern agriculture in recent decades has often masked significant externalities, affecting both natural capital and human health, as well as agriculture itself. Environmental and health problems associated with agriculture have been increasingly well-documented, but it is only recently that the scale of the costs has come to be appreciated” (Pretty and Hine, 2001, p. 10).

The satisfaction that farmers derive from their agricultural activities has also sometimes declined as they have become more socially isolated in their rural communities (Price and Evans, 2009). The evidence presented by this research has demonstrated that care farming can provide real and tangible benefits for farmers and farms.

Many of the diversification strategies that farmers have more commonly adopted have separated them from their traditional farm culture and associated lifestyle (Brandth and Haugen, 2011). In contrast, care farming can help to facilitate reversion back towards activities that sit more comfortably with the intrinsic values of farming (Gasson, 1973). Not all care farms have developed from within previously existing

commercial agricultural operations, but care farming is nevertheless an agrarian activity that encourages, and indeed requires, production and consumption to occur in unison, thereby combining old and new agrarian values. Farm diversification activities commonly concern the provision of a service that invites people merely to consume (whether ice-cream or a converted barn), but care farming enables and indeed requires people actively to participate in the food production process that lies at the heart of farming and upon which we depend. Output may be limited in a directly commercial sense, but value is nevertheless generated. The agricultural context is essential and contributes immense value, but the diversity and nature of the operations concerned suggests that multifunctional agriculture might not adequately encompass care farming as a concept. Care farms can equally be examples of new agriculture, and they provide multiple connections that are not associated with other activities more commonly encompassed within the term 'multifunctional'.

Care farming has been demonstrated to meet a wide range of current societal needs. The material assets of the farm are utilised to assist service users to achieve personal and collective well-being. A farm is a place where humans have captured a slice of nature for the purposes of food production. The countryside within a farm effectively reflects enduring notions of a 'rural idyll' that can be perceived as a place within which to escape the pressures of the modern world (Halfacree, 1993). Whether real or imagined, care farms can capitalise upon such perceptions to the mutual advantage of all concerned.

Clearly identifiable products of universal value (food) result from care farm activities and this helps a person to feel that they are engaged in a genuinely useful activity rather than one that has been created merely to fill their time. Positive outcomes similarly result from participants developing an enhanced understanding and appreciation of the nature of agriculture, farming and food production. The negative impact associated with many people having become separated from this

fundamental element of their existence has previously been highlighted, and care farming can support reconnection.

Various green care activities have been evidenced as providing health and well-being related benefits, and all relevant 'natural' aspects can be incorporated in a care farm context. There is no other environment in which all of these are present. Animals, horticulture, woodlands and a host of other elements can be accessed to provide value, but equally there are opportunities to develop an eclectic range of practical skills and to receive the benefits provided by engaging in real and productive work. Activities on care farms typically take place outside in the 'fresh' air and are sufficiently diverse to meet a range of personal interests and abilities.

Some service users who participated in this study indicated that they had sought and obtained solace, support and recuperation from the natural environment, with this particularly being evidenced as applying whilst becoming attuned to people and place. In such instances, the animals were presented as often having filled a particularly crucial social support role, with this applying both to those who had previously been effectively socially excluded and those who were seeking a release from perceived relational obligations. However, animals were not merely presented as acting as a replacement for human support but also provided opportunities for people to develop / rediscover social skills that could subsequently be applied when interacting with other humans.

It has previously been observed that, while some of the positive features associated with green care interventions might relate to the natural elements, others have a more common source and do not directly depend upon the green environment (Sempik *et al.*, 2010). The benefits that are provided as a result of interacting with the wider natural world have been demonstrated by this study to provide value, and indeed contribute to other outcomes, but they are not ultimately suggested directly to facilitate much of the associated change. Indeed, evidence was provided by service users and providers alike to demonstrate that many of the activities that

people choose to engage with on care farms do not directly relate to the more natural elements that a farm incorporates.

“It works on all sorts of different levels doesn't it, that's the thing about a place like this it throws up all sorts of jobs, all sorts of activities, all sorts of things you can participate in, all at different level. Not everybody can lay a concrete floor, not everybody can put up a fence. Some people can knock a nail in, some people can do this, some people like feeding the animals. There are all sorts of different things people can do. So it does cater to all sorts of abilities and needs and skill sets.” (CF 08)

The wide range of work based activities that apply in farm environments allow multiple personal requirements to be accommodated and sufficient variety to be offered to maintain interest. However, value is equally provided by the numerous tasks that must be regularly repeated (relating to crops and animals, and ranging from the daily to the seasonal), with these being particularly appreciated by people who receive security and other benefits from the associated structure. Such diversity enables a farm setting to support the needs of large numbers of vulnerable people and facilitate positive changes in their lives. Related benefits accrue for farm and farmer, and care farming appears to be a unique example of functional agriculture that is distinct from other, more multifunctional, forms of farm development.

9.4.2 Social inclusion and community cohesion

Care farming is never an entirely solitary activity because it requires interaction with a service provider from the outset and commonly takes place within a wider group setting. The importance of the natural context in which green care takes place is undeniable but so too is this social context. The natural environment has essentially been found to operate as a social mediator that provides common ground (literal and figurative) upon which relationships can grow. It provides a shared, non-hierarchical and comfortable space within which everyone can contribute productively for the benefit of the community as a whole.

Vulnerable people in our society can be particularly prone to suffering from social exclusion, and this was found to have applied to many care farm participants. Care farms provide social support from the outset, and the associated social context exerts positive influence at all stages of people's subsequent personal journeys. Social opportunities are provided, social skills are developed and social networks result. The supportive and reciprocal nature of associated relationships was central to many of the positive outcomes that have been identified and was commonly presented as providing immense value.

Community membership historically related to home geographical area or local social system (relating for instance to class, ethnicity or life stage), but this is often no longer the case (Barton, 2003; Gilchrist, 2000).

"People's notions of human fulfilment are increasingly shaped and sustained not by the communities into which they are thrown by accident or birth, but by the communities to which they choose to belong" (Szerszynski, 1998, p. 192).

This new reality has resulted in many people (particularly those who are in some way vulnerable) no longer feeling part of any community. It is therefore critical that functional alternatives are provided given *"...that the communities of which we are members play a significant role in shaping our social identities and patterns of action"* (Crow and Allan, 1994, p. 1).

A healthy and sustainable community has been described as one that has high levels of economic, ecological, human and social capital, with these elements then combining to provide shared community capital (Hancock, 2001). Such communities quite literally provide a sense of communion, wherein it is the sense of belonging that is crucial; shared characteristics attract members and are considered sufficiently strong to overcome other apparent differences (Bell and Newby, 1976). This is the form of community that has been found to be applicable to successful care farms and has been highlighted and valued by service users and providers alike. It is a therapeutic environment that enables people from apparently diverse backgrounds,

and with multiple personal needs, effectively and genuinely to engage with one another in shared activities that facilitate social reintegration and renewal. Communal gardening schemes have previously been described as *“a sustainable vehicle for new versions of social citizenship for people traditionally marginalised in mainstream society”* (Parr, 2007, p. 537) and this has been found to apply equally to care farms.

Gesler (1992) presented the construct of therapeutic landscapes to conceptualise places associated with human health, and this has previously been highlighted as having particular relevance to green care activities (Milligan *et al.*, 2004; Sempik *et al.*, 2010). This concept is founded on the belief that environmental, societal and individual factors all contribute to health and well-being, and therapeutic landscapes were presented to describe places that successfully meet this combination of needs. Such places are beneficial because they provide both an identity (meeting the human need for roots) and a social network (Milligan *et al.*, 2004).

Therapeutic landscapes and communities need not actually be natural in a strict sense (indeed, sanitised versions of reality are sometimes preferred), and can instead be created; the critical factor concerns their successfully meeting inner and outer needs. Gesler (1992) theorised that it was only when these combined needs were met that a healing process could begin that would initiate improved health and well-being.

“The concept of the ‘therapeutic landscape’ is thus concerned with a holistic, socio-ecological model of health that focuses on those complex interactions that include the physical, mental, emotional, spiritual, societal and environmental” (Milligan *et al.*, 2004, p. 1783).

This study has considered care farms from such a ‘holistic socio-ecological model of health’ and has found that they commonly operate (intentionally and otherwise) as therapeutic communities that support and enable health and well-being.

A truly inclusive society is one that is perceived by its members as proactively valuing and respecting everyone whilst simultaneously ensuring that their needs are adequately met. The evidence that has been presented has shown that this applies to successful care farms. Social well-being has been found to grow on care farms at both the individual and collective level, with this being facilitated through the development of genuine and functional support networks. *“Research provides strong evidence that social relationships and networks are life-enhancing and contribute to longevity”* (Berardo, 1985, p. 37), and the relevance of such outcomes in relation to public health is therefore apparent.

9.4.3 Public health and well-being

Science was increasingly presented in industrialised, developed countries during the 20th century as that which should underpin all public health strategies and practices. People became dependent upon pharmaceuticals and the land became dependent on pesticides and fertilisers. Both of these approaches were promoted as providing immense benefits and related value, but this deception was effectively facilitated as a result of many of the associated costs having been externalised. Birds no longer congregate above ploughed fields and the health and well-being of many people has suffered.

Large numbers of people have in recent years become disconnected from the land, the nature of farming and the mechanisms that produce the food upon which we depend (Pretty, 2002). This has contributed to our accepting an unsustainable diet that harms both people and planet. However, increasing numbers of people now appear to be seeking to reverse this situation as a result of concerns regarding both the provenance and the content of the food that is consumed. This is accompanied by a renewed interest in sourcing local, seasonal produce or growing your own. Care farms are ideally situated to capitalise on this interest and simultaneously provide public health benefits. Opportunities exist to generate income through the provision

of ethical and nutritious produce whilst simultaneously supporting the health of the wider community.

The health care sector is currently undergoing quite fundamental change once more, with this relating, in part at least, to the increased prevalence of mental health issues and chronic diseases that often relate to diet and lifestyle. Attention is now once again being given to alternative forms of treatment, with care in the community being promoted as preferable – in relation to cost and outcome – to institutional care. This study has demonstrated that care farms provide a service that can meet the requirements of all relevant stakeholders.

An inter-disciplinary literature review undertaken by the New Economics Foundation (Aked *et al.*, 2008) on behalf of the UK Government identified five core actions that would provide increased well-being if they were accommodated in people's lives. The first of these was 'connect' and emphasised the criticality of social relationships, the second was 'be active' and highlighted the benefits associated with exercise, the third was 'take notice' and essentially concerned the need for reflective / restorative opportunities, the fourth was 'keep learning' and presented the positive outcomes associated with this being a life-long process and the final critical factor was 'give', with this promoting the well-being that results from people engaging in reciprocal actions that allow them to support one another and the wider community. Each of these has been identified as an integral element of that which care farms provide.

Health and well-being improvements have relevance to public health, social inclusion and multifunctional agriculture. This study has demonstrated that the unique combination of elements that can be positively harnessed within an agricultural context can impact on multiple aspects of human health and well-being. When multiple, mutually supportive elements are known to be operating simultaneously, this can provide both strengths and weaknesses. Whilst strength results from the increased likelihood that there will be an element that meets personal preferences and encourages participation, a potential weakness concerns the fact that the

relative importance and influence of specific factors can be hard to isolate. This might, in part, account for why the significance of the social aspect is sometimes subsumed in a broader health or well-being discourse despite contributing immensely in both these arenas.

9.5 A holistic model linking health, care farms and society

A particular strength of care farming relates to the fact that it is able to utilise various integral elements that have each been independently shown to impact positively on human health and well-being. Figure 9.1 conceptualises how the factors that contribute to a care farm experience connect to enable relevant outcomes.

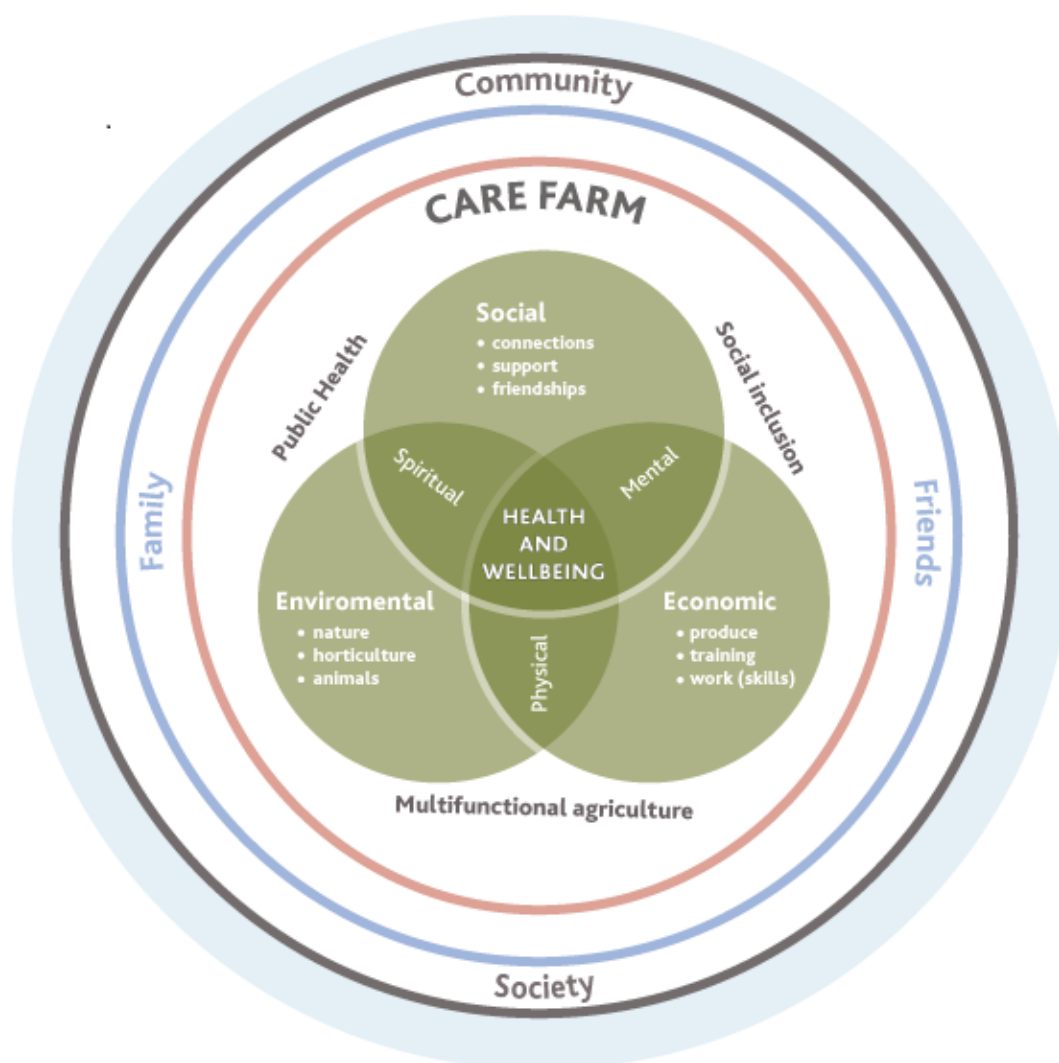


Figure 9.1: A model linking care farms with health and society

As this model demonstrates, the more natural elements of the environment (flora, fauna and vista) certainly contribute, but so also do the social aspects, the physical exercise, the skills that are developed / applied and having the opportunity to engage in productive work with nutritious outputs. Distinctions are not always as clear cut as such a model might suggest, but it incorporates the range of factors that have been shown to have particular relevance and demonstrates how these might positively interrelate to facilitate positive outcomes for service users with very different needs and expectations. The health and well-being outcomes that have been evidenced as directly resulting from participating at a care farm relate to various elements of the human condition, with these including the physiological, the psychological and social functioning. This model incorporates that which has been identified as contributing value, differentiates between that relating to the environmental, the social and the economic and conceptualises how they combine to provide positive outcomes that support healthy individuals and societies.

9.6 Connective agriculture

The term 'Care Farming' was originally adopted in the UK as a direct translation of that which is applied in the Netherlands ('Zorgboerderij'), but it became increasingly apparent as this study progressed that this descriptor did not meet with universal approval. Personal conversations with Dutch stakeholders suggested that they had similar reservations regarding its generic suitability and it has been similarly observed elsewhere that *"the international discussion about definitions and the development of an unambiguous terminology has yet to be finished"* (Haubehofer *et al.*, 2010, p. 315). This study has identified concerns as relating to both the incorporated terms, with service providers and participants feeling that *"'Care Farming' does not describe adequately what we do"* (CF 62).

It has previously been demonstrated that many of the operations included in the CFUK directory neither consider nor present themselves as farms. Many of those concerned are smallholdings, and others operate from a variety of essentially natural

places that can be located in both urban and rural areas. If such operations are to be incorporated, then the name of the activity should more suitably reflect this fact to provide greater clarity for all concerned.

“Danger of if only farm based the message will be weakened than when horticulture, gardens, woodlands and general conservation also included. Aware that many want to keep it 'pure', farmers only, and this builds on what I believe is the ongoing and increasing community of farmers as opposed to broader community.” (CF 26)

It is equally apparent that ‘care’ is only one aspect of that which is provided, with education, training, work, social inclusion, rehabilitation and recovery all having been evidenced as equally critical for some participants. The term care has passive and unidirectional undertones that wrongly suggest this is something that is provided rather than celebrating the fact that everyone actively participates in the process.

“We are not keen on the term care farming – a little too passive, even patronising. Would be good to find a term which is more suitable!” (CF 59)

Conversations with farmers and others who have been involved with NCFI / CFUK since its inception indicate that such concerns have previously been discussed, but remain unresolved. However, the stumbling block would appear to relate to identifying a more suitable alternative rather than a lack of agreement concerning the limited suitability / applicability of the current choice.

“We've debated this for years now and I know they've debated it on the continent as well, what they call it in French or German or Dutch or whatever. I can't think of a better one Chris, that's the problem.” (CF 04)

This may indeed be the case, but it should not mean that the debate does not continue. The breadth of the environments, activities and approaches that can justifiably be incorporated is a strength of care farming, but this should be made explicit and actively promoted to commissioners and other relevant stakeholders if it

is not to be perceived as a weakness. The chairperson of CFUK recently (June 2013) indicated via their website that the board of directors has now concluded that they will continue to refer to the activity as care farming due to the fact that this term is increasingly recognised by both government and the wider population. This reality is acknowledged, but the decision appears to have been informed by convenience rather than conviction.

The need for people to (re)connect with agriculture has been advocated by Jules Pretty for many years (Pretty, 1998, 2002, 2007), and 'Connective Agriculture' is proposed as a more suitable and all-encompassing descriptor of that which has been found to take place on care farms. These are words that frequently crop up in relation to care farming and arguably unite all providers and aspects of provision. Despite the fact that both 'farming' and 'agriculture' concern the practice of growing crops and rearing animals for human consumption, agriculture is a term that accommodates a wider range of methods, philosophies, operations and practices.

Connective features have been demonstrated to apply to many of the positive outcomes that result and lie at the very heart of care farming. Connections can be made with a host of elements that include education, work, inner or outer self, the natural environment, family, friends, wider society and the food upon which we depend. The natural environment can help participants to reconnect with themselves; education and training allow new skills to be developed that can enable connections to be made with the workplace and the associated social environment allows people to connect with others and build the mutually supportive relationships that enable communities to flourish.

9.7 Realising the potential

Care farming has been shown to be an activity that facilitates positive outcomes for individuals and communities, and it is increasingly practised in the UK. However, significant scope remains for the further development of the activity if it is to reach the level currently supported in some other EU countries. The existence of

supportive national legislation and policies has previously been highlighted as a shared feature with regard to the places where care farming has developed most rapidly and appears to be most commonly practised (the Netherlands, Flanders and Norway). Central funding for the National Support Centre for Agriculture and Care in the Netherlands has now been withdrawn, but it has performed an invaluable developmental function, and a replacement national body is now being formed and regional support groups are taking over responsibility for some of its services. The increasing presence of similar bodies in the UK is to be welcomed, but more direct central support is required to facilitate their effective development and functioning.

The value of promoting care farming activities is increasingly acknowledged at an international level, with a recent 'opinion' presented by the European Economic and Social Committee (2012, p. 2) including the following recommendation:

"If it is to become entrenched throughout Europe, social farming needs a conducive environment, greater civil society involvement and fruitful collaboration between different policy areas and administrations (health/social affairs, farming, employment) at European, national, regional and local levels. This means that it should be recognised and provided with targeted support by public authorities to give it sustained access to funding for various aspects of this type of farming."

The current UK Government appear to recognise the benefits that they, and the society they represent, can receive as a result of engaging with the natural environment more broadly and care farming more specifically, but further and more explicit support is now required. The Defra website currently (April 2013) contains the following statement, and this is to be welcomed:

"Ministers have underlined their belief in the importance of the countryside as a valuable learning environment, and have always made clear their keenness to ensure that farm educational visits continue to be available. Therefore,

following further consideration, they have decided that funding should continue for some types of educational access visit under HLS. These are:

- *Educational visits for school pupils up to and including age 16.*
- *Care farming visits (health and educational care services for one or a range of vulnerable groups of people providing a supervised, structured, programme of farming related activities)."*

The UK Government are to be commended for having recognised that their original withdrawal of this funding stream following the Spending Review had been inappropriate, but similar support is also required by those who do not qualify for HLS but are providing comparable opportunities with equal value.

The health and care sectors in the UK are currently undergoing quite fundamental change, and one element of this concerns the increased promotion of 'personal budgets'. These are intended to enable people who receive funded support services to access the forms of provision that best meet their own perceived needs, and will potentially increase the demand for care farm placements given the fact that it is funding constraints rather than a lack of interest that are presented by service users and providers alike as providing the greater challenge. This is further supported by the Dutch experience, wherein the initiation of personal budgets accompanied the substantial increase in the number of operational care farms that took place in recent years.

Such 'choice and control' could ultimately be immensely beneficial, for both care farms and public health, if it allows vulnerable people to become more directly involved in accessing services that specifically suit their individual needs rather than those of wider corporate structures, but it is not yet being implemented as widely or as quickly as was originally anticipated. Service providers who receive payments from personal budgets, and care farm participants who already have such control, indicated that it was not a straightforward process, and greater clarity is required with regard to both process and intent. Current developments in the Netherlands

have raised concerns regarding the long-term sustainability of such funding strategies, with their personal budget system now being scaled down prior to being withdrawn. It has effectively proven to be a victim of its own success, wherein the numbers of people involved and associated costs are judged to have become prohibitive. However, the incorporated SROI would suggest that this judgement has failed to take account of all areas of impact.

This thesis has provided an improved understanding of the form and value of the change that can accompany care farming, but it has equally highlighted the diversity of related processes and these require more detailed investigation. A holistic perspective has intentionally been provided, but the individual strands that are incorporated all require further and more detailed consideration. These concern both the relationships between the various elements of the care farm experience that provide value and distinctions between service user 'groups' in terms of expectations, needs and outcomes. Alternative aspects have been shown to have particular relevance for meeting individual needs, and these require further exploration.

Achieving the aim and objectives of this study was facilitated as a result of the multidisciplinary format, but further studies are required that more directly consider incorporated processes from specific perspectives in order to provide a more comprehensive evidence base. This study has provided greater clarity regarding the overall value that care farms provide, but the evidence base regarding that which takes place remains small and multiple opportunities exist for undertaking valuable studies relating more directly to particular elements of that which this study incorporated.

Social farming must be underpinned by interdisciplinary research in different spheres in order to validate empirical results, analyse its impact and benefits from different perspectives (social, economic, health, individual, etc.) and

ensure the dissemination of experience on the ground. (European Economic and Social Committee, 2012, p. 2).

This study has demonstrated that care farms provide value at multiple levels. This accrues as a result of factors including physical activity, being in a natural environment, horticulture, the company of animals, being engaged in useful and productive activities and being part of a supportive community. The presence of such a multitude of elements, all of which have been independently demonstrated to impact positively on human health and well-being, enables a care farm to provide an environment in which many individuals, with a wide range of personal needs, can flourish. The range of analytical concepts (including public health, social inclusion, multifunctional agriculture, care, rehabilitation, education, training and work) that have been evidenced as underpinning care farming ultimately provides strength, with varied, positive and ethical outcomes resulting for diverse sections of society.

Human kind is an integral element of the natural world and it is to our advantage to remain aware of our own fragile place within it. This requires that we are able to engage with the other elements upon which our transitory existence depends. Farms are places that can fulfil this function and thereby support us in connecting with ourselves as individuals and as part of a larger whole. Dean and Hancock (1992) observed that truly sustainable development requires “... *a form of environmentally and socially sustainable economic activity that enhances human development*” (p. 4), and care farming has been demonstrated to be such an activity.

Sustainable development requires a strong, healthy and fair society that provides for the needs of all its members but that is equally supportive of the more natural environment upon which it depends and of which it is an integral part. Social and environmental sustainability are positively related to one another and both lie at the very heart of care farming. It is perhaps only through quite fundamental changes to our economic, corporate and political systems that it will become truly possible to facilitate the healing of people, society and ecological systems. In the meantime, care

farms provide a useful template for understanding how agricultural spaces and places can facilitate multiple connections that benefit both people and planet. Care farms are a cost effective way of improving the health and well-being of vulnerable members of our society and the incorporated SROI demonstrates how associated outcomes have relevance to us all. It is therefore reasonable to assert that it would be to everyone's advantage for this form of service provision to be further supported and promoted. This study has found care farming to be an activity that is ideally situated to deliver that which is supposedly sought by David Cameron, the current UK Prime Minister:

"I suppose you could explain the Big Society in terms of this farm. Everyone working together for the common good." (CF05)

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Appendix 1

Care farmer questionnaire (1st)

Farm / Farmer Characteristics

1) What is the total size of the farm? acres hectares

2) Which of the following describe your land rights? (Please write approximate acres/hectares of each in the relevant boxes)

Leaseholder	<input type="text"/>	Tenant	<input type="text"/>
Manager	<input type="text"/>	Other (please specify)	<input type="text"/>
Owner-occupier	<input type="text"/>		<input type="text"/>

3) Which of the following crops / land uses do you have on your farm? (Please write approximate acres/hectares of each in the relevant boxes)

Bulbs/flowers	<input type="text"/>	Vegetables / salads	<input type="text"/>
Cereals	<input type="text"/>	Woodland	<input type="text"/>
Grassland / rough grazing	<input type="text"/>	None	<input type="text"/>
Orchard fruit	<input type="text"/>	Other (please specify)	<input type="text"/>
Soft fruit	<input type="text"/>		<input type="text"/>

4) Which of the following livestock do you have on your farm? (Please write approximate numbers of each in the relevant boxes)

Cattle (dairy)	<input type="text"/>	Horses / ponies	<input type="text"/>
Cattle (beef)	<input type="text"/>	Pigs	<input type="text"/>
Chickens (broiler)	<input type="text"/>	Rare breeds	<input type="text"/>
Chickens (laying)	<input type="text"/>	Sheep	<input type="text"/>
Other poultry	<input type="text"/>	Other (please specify)	<input type="text"/>

5) Which of the following best describes your site?

Allotment	<input type="text"/>	Garden	<input type="text"/>
City farm	<input type="text"/>	Smallholding	<input type="text"/>
Farm	<input type="text"/>	Other (please specify)	<input type="text"/>

6) Does all your farming activity take place on one site?

yes

no

7) How old are you?

Less than 35		36 to 49		50 to 65		Over 65	
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yes

no

8) Were your mother or father farmers?

yes

no

9) Are you the principal decision maker on the farm?

yes

no

10) Do you live on the farm?**11) How many members of your family live on the farm (including self)?****12) How long have you been farming here?**

Less than 5 years		5 to 10 years		11 to 20 years		Over 20 years	
-------------------	--	---------------	--	----------------	--	---------------	--

13) Are you on any of these schemes?

Countryside Stewardship		Environmental Stewardship (higher level)	
Energy Crops		Environmentally Sensitive Areas	
English Woodland Grant		Hill Farm Allowance	
Environmental Stewardship (entry level)		Organic Farming	
Environmental Stewardship (organic entry level)		Other (please specify)	

14) Do you have any non-agricultural income sources from the farm?
(excluding care farming)

Accommodation		Rent buildings	
Farm shop		Storage	
Group visits		None	
Recreation		Other (please specify)	

15) How reliant are you and your family on farm income?

Totally		Mainly		Partially		Not at all	
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16) How many people work on the whole farm? (including yourself)

	Part-time	Full-time		Part-time	Full-time
Employees			Volunteers		
Family members			Other (please specify)		

Care Farm Characteristics**17) How many people work on the care farm? (including yourself)**

	Part-time	Full-time		Part-time	Full-time
Employees			Volunteers		
Family members			Other (please specify)		

18) Are you the principal decision maker on the care farm?

yes no

19) Is there a management committee for the care farm?

yes no

20) What is the average number of hours your work relates to the care farm in a week?

Less than 5		21 to 30	
5 to 10		31 to 40	
11 to 20		More than 40	

21) What type of organisation is the care farm? (Please tick all relevant boxes)

Charity		Farm	
Company		Social enterprise	
Company limited by guarantee		Trust	
Co-operative		Other (please specify)	

22) When did you start care farming?

23) What initially motivated you to start care farming?

--

24) What are the main groups of people that attend your care farm? (Please write the approximate % of all your clients in the box)

Autism and challenging behaviour		Mental health needs	
Disaffected youth		Older people	
Drug and alcohol misuse		Physical disabilities	
Ex offenders		Rehabilitation after accident / illness	
Ex service personnel		Unemployed	
Homeless and vulnerably housed		Other (please specify)	
Learning difficulties			

25) How far from the farm gate is the nearest public transport?

Less than 1 miles		1 to 3 miles		More than 3 miles	
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26) How are clients referred to your care farm? (Please tick all relevant boxes)

Community mental health team		Self referral	
Drug and alcohol action team		Social services	
Education department		Voluntary sector	
GP		Other (please specify)	
Probation service			

27) What are / were your sources of development funding? (please write the approximate % of the total in the space provided)

Charitable trusts		Personal finance	
Central government (including regional offices)		Private sector	
Health trusts		Other (please specify)	
Local authority			

28) What are your sources of day to day funding? (please write the approximate % of the total in the space provided)

Client fees – paid by clients		Client fees – paid by local authority	
Client fees – paid by health care trust		Client fees – paid by others (please specify)	
Other (please specify)			

29) How many days a week are care farm clients on the farm?

30) How many clients can you accommodate at the same time?

31) Approximately how many hours long is each session?

32) What is the range of fees paid per client per session?

minimum

maximum

yes

no

33) Do you have provision for residential clients?

34) Which of the following describe what you currently provide for clients or intend to provide in the future? (Please tick all relevant boxes)

	now	future		now	future
Accredited training			Rehabilitation		
Animal assisted activities			Social skills development		
Basic skills training			Work experience		
Day care			Work skills training		
Horticultural activities			Other (please specify)		
Leisure activities					

35) How is the client experience monitored on your care farm?

Don't do at the moment		External assessment	
Written evaluation		Other (please specify)	
Informal discussion			

36) Do you, your partner or employees have formal qualifications in any of the following?

	self	partner	employee
Farming			
Teaching			
Health or social care			
Horticulture			
Horticultural therapy			
Animal assisted therapy			
Other (please specify)			

37) Which of the following PHYSICAL benefits do you think your farm provides?

Development of farming skills		Improved physical health	
Development of other practical skills		Other (please specify)	
Improved nutrition			

38) Which of the following MENTAL HEALTH benefits do you think your farm provides?

Improved mood		Increased self-esteem	
Increased self-awareness		Increased well-being	
Increased self-confidence		Other (please specify)	

39) Which of the following SOCIAL benefits do you think your farm provides?

Development of work habit		Social skills	
Employment opportunities		Team working	
Increased knowledge		Work experience	
Increased personal responsibility		Other (please specify)	
Independence			

40) What aspects of care farming present the greatest challenges to you?

41) What aspects of care farming provide the most satisfaction to you?

42) How do you see care farming developing at this farm in the future?

43) How do you see care farming developing more generally in the future?

44) Do you have any other comments to make about care farming?

Appendix 2

Farmer questionnaire (2nd)

<http://www.surveymonkey.com/s/DVBMSJ3>

This questionnaire was only available online but contained the following questions:

- 1) Is 'care farming' an accurate description of the work that you do?
- 2) Is care or farming the primary focus of your activities?
- 3) What else do you provide (in addition to the care and farming elements), and how important are these aspects?
- 4) How has your farming practice changed over the last 5 years (or since you started farming here)?
- 5) How did you change your farming operation to incorporate care farming provision?
- 6) How has the farm environment (livestock, crops, buildings etc.) and your overall operation changed since you have been care farming?
- 7) How has the natural environment on the farm changed because of care farming?
- 8) How has care farming impacted on any other non-agricultural on/off-farm activities that you engage in?
- 9) What has changed for you personally because of care farming?
- 10) What impact has there been on your family and/or other farm workers as a result of care farming?
- 11) How has overall farm income changed as a result of care farming?
- 12) What feedback have you received from other farmers concerning your care farming activities?
- 13) How do you see your care farm operation developing in the future?
- 14) Do you have any additional comments to make about relevant change or care farming in general?

Appendix 3

Care farmer interview schedule

- How did you first become aware of care farming?
- What does the term care farming mean to you?
- What is the overall ethos of the farm?
- Do you see yourself primarily as a farming operation or a care provider? How important is the farm aspect? The care aspect? Anything else?
- Why did you think care farming might be suitable for you?
- What aspects of your operation do you think provide value?
- Have your original expectations been met?
- What has changed for you because of working as a care farm (negative and positive)? You as a person? Family? The farm environment?
- Has anything changed that you weren't expecting?
- Why do you think people choose to come to the farm?
- What sort of things do people do on the farm?
- What do you think people get from coming to the care farm?
- What sort of people do you think benefit from coming here? Do you think it works better for some more than others? Why and who?
- Do you see any change in the people who come to the care farm? (examples)
- Do you think this change continues away from the farm? Why think that?
- Do you think care farming adequately describes that which you provide?

Appendix 4**Care Farm Project**

We are asking everyone who starts at a farm to please complete a short questionnaire.

Your answers will help with a research project looking at the value that places like this provide.

If you are happy to do this then please write and sign your name to say that it is OK.

If you decide you do not want to carry on then you can of course stop answering the questions at any time.

Your name will not be kept with the answers you give and will not be shared with anyone else without your permission.

Thanks.

Name

Signature

Date

Respondent no.	
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Farm Participant Questionnaire (new starter)

Please tick the box next to the answer you choose.

How old are you?

Under 16		41 to 50	
16 to 20		51 to 60	
21 to 30		Over 60	
31 to 40			

Who do you live with? (please tick all boxes that apply)

Alone		Other relative	
Carer		Friend	
Parent		Stranger	
Partner		Other (please describe)	
Children			

How long have you been coming to this farm?

First week	
Less than 1 month	
1 to 3 months	

Whose idea was it that you come to this farm?

Your own idea		Social worker	
Parent		Probation worker	
School		Key worker (please describe)	
Carer		Don't know	
Doctor / health worker		Other (please describe)	

How near to this farm do you live?

Less than 2 miles		11 to 20 miles	
2 to 5 miles		More than 20 miles	
6 to 10 miles			

How will you usually get to this farm?

Public transport		Taxi	
Own transport		Walk	
Get a lift		Live here	
Minibus		Other (please describe)	

How many days of the week are you coming here?

Would you like to come here more often?

yes

no

not sure

Is this the first time in your life that you have been on a farm every week?

yes

no

Do you regularly spend any other days outside in a natural place?

yes

no

What are you hoping to get out of coming to this farm?

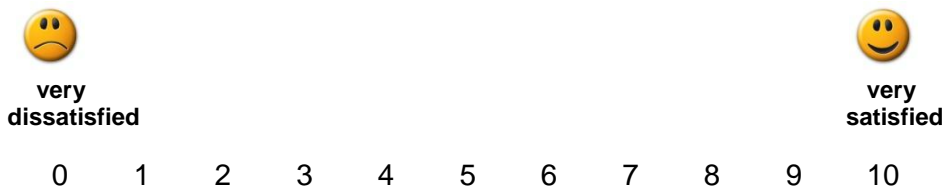
How much do you like each of these things?

	Not at all	A little	Quite a lot	A lot
Animals				
People				
Plants				
Trees				
Nature				
Being outside				
Being with other people				
Getting dirty				
Learning new skills				
Making things				
Meeting new people				
Physical exercise				
Helping things grow				
Trying to fix things				

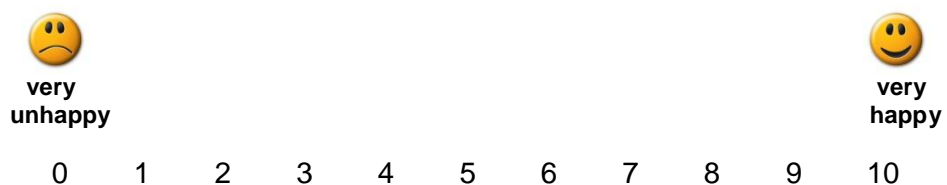
Would you like to develop skills in any of the following?

Animal care		Welding	
Conservation		Woodwork	
Cookery		Woodland/chainsaw	
Growing food		None of these	
Land management		Other (please describe)	
Mechanics			

All things considered, how satisfied are you with life at the moment? (Please circle a number)



Taking all things together, how happy would you say you are? (Please circle a number)



Please tick the box that best describes how you have been feeling over the last 2 weeks **(WEMWBS)**

STATEMENT	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future *					
I've been feeling useful *					
I've been feeling relaxed *					
I've been feeling interested in other people					
I've had energy to spare					
I've been dealing with problems well *					
I've been thinking clearly *					
I've been feeling good about myself					
I've been feeling close to other people *					
I've been feeling confident					
I've been able to make up my own mind about things *					
I've been feeling loved					
I've been interested in new things					
I've been feeling cheerful					

Please tick the box that says how true you think each of these things is

STATEMENT	Not at all true	Hardly true	Mostly true	Exactly true
I generally feel that what I do in my life is valuable and worthwhile				
My life involves a lot of physical activity				
I usually feel that things that happen to me in my daily life are hard to understand				
I am able to adapt to change				
I think of myself as part of nature, not separate from it				
I spend a lot of time in natural settings				
My daily life is usually a source of personal satisfaction				
I can usually see a solution to problems and difficulties that other people find hopeless				
There are people in my life who really care about me				
I feel I am free to decide how to live my life				
I tend to bounce back after illness or hardship				
In general I feel very positive about myself				

Please tick the box that says how true you think each of these things is *(General Self-Efficacy Scale)*

STATEMENT	Not at all true	Hardly true	Mostly true	Exactly true
I can always manage to solve difficult problems if I try hard enough				
If someone opposes me, I can find the means and ways to get what I want				
It is easy for me to stick to my aims and accomplish my goals				
I am confident that I could deal efficiently with unexpected events				
Thanks to my resourcefulness, I know how to handle unforeseen situations				
I can solve most problems if I invest the necessary effort				
I can remain calm when facing difficulties because I can rely on my coping abilities				
When I am confronted with a problem, I can usually find several solutions				
If I am in trouble, I can usually think of a solution				
I can usually handle whatever comes my way				

Thanks for helping with this research project

Appendix 5

Farm Participant Questionnaire (follow up / leaving)

How long have you been coming to this farm?

Less than 1 month		10 to 12 months	
1 to 3 months		1 to 3 years	
4 to 6 months		More than 3 years	
7 to 9 months			

How many days a week have you been coming here?

yes

no

Would you like to have come here more often?

Do you regularly spend any other days outside in a natural place?



yes

no



How much do you like each of these things?

	Not at all	A little	Quite a lot	A lot
Animals				
People				
Plants				
Trees				
Nature				
Being outside				
Being with other people				
Getting dirty				
Learning new skills				
Making things				
Meeting new people				
Physical exercise				
Helping things grow				
Trying to fix things				

All things considered, how satisfied are you with life at the moment? (Please circle a number)



very **very**
dissatisfied **satisfied**
 0 1 2 3 4 5 6 7 8 9 10

Taking all things together, how happy would you say you are? (Please circle a number)



very **very**
unhappy **happy**
 0 1 2 3 4 5 6 7 8 9 10

Which of these things have been most important for you at this farm? (Please tick up to 3 boxes)

Learning new skills	<input type="checkbox"/>	Getting to know other farm clients / helpers	<input type="checkbox"/>
Contact with nature	<input type="checkbox"/>	Getting to know farmer and their family / workers	<input type="checkbox"/>
Looking after the animals	<input type="checkbox"/>	Developing mental strength	<input type="checkbox"/>
Helping plants / food grow	<input type="checkbox"/>	Developing physical strength	<input type="checkbox"/>
Working in woodland	<input type="checkbox"/>	Other (please describe)	<input type="checkbox"/>

How have you changed because of coming to this farm?

Please tick the box that best describes how you have been feeling over the last 2 weeks

STATEMENT	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been feeling interested in other people					
I've had energy to spare					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling good about myself					
I've been feeling close to other people					
I've been feeling confident					
I've been able to make up my own mind about things					
I've been feeling loved					
I've been interested in new things					
I've been feeling cheerful					

Please tick the box that says how true you think each of these things is

STATEMENT	Not at all true	Hardly true	Mostly true	Exactly true
I generally feel that what I do in my life is valuable and worthwhile				
My life involves a lot of physical activity				
I usually feel that things that happen to me in my daily life are hard to understand				
I am able to adapt to change				
I think of myself as part of nature, not separate from it				
I spend a lot of time in natural settings				
My daily life is usually a source of personal satisfaction				
I can usually see a solution to problems and difficulties that other people find hopeless				
There are people in my life who really care about me				
I feel I am free to decide how to live my life				
I tend to bounce back after illness or hardship				
In general I feel very positive about myself				

Please tick the box that says how true you think each of these things is

STATEMENT	Not at all true	Hardly true	Mostly true	Exactly true
I can always manage to solve difficult problems if I try hard enough				
If someone opposes me, I can find the means and ways to get what I want				
It is easy for me to stick to my aims and accomplish my goals				
I am confident that I could deal efficiently with unexpected events				
Thanks to my resourcefulness, I know how to handle unforeseen situations				
I can solve most problems if I invest the necessary effort				
I can remain calm when facing difficulties because I can rely on my coping abilities				
When I am confronted with a problem, I can usually find several solutions				
If I am in trouble, I can usually think of a solution				
I can usually handle whatever comes my way				

Please tick the box that best describes anything you think has happened because of coming to this farm

STATEMENT	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I have learnt new work skills at the farm					
My physical health has improved since coming to the farm					
I have made new friends at the farm					
I have become more confident about meeting new people since coming to the farm					
I have started eating more healthy food since coming to the farm					
I am now more keen to try new things than when I started at the farm					
I sleep better since coming to the farm					
My mental health has improved since coming to the farm					
I feel less stressed because of coming to the farm					
I feel more positive about myself than when I started at the farm					
I have started to enjoy my life more since coming to the farm					
I have developed new interests through coming to the farm					
My life is changing for the better because of coming to the farm					
I have enjoyed coming to the farm					

What have you enjoyed least about coming to this farm?

What have you enjoyed most about coming to this farm?

Could anything be done to make coming here better?

Thanks for helping with this research project

Appendix 6

Service user interview schedule

- Could you describe what you do at the farm?
- Is this place like you expected it to be (what expected before came and what really like)?
- Why did you decide to come here (what wanted to change in life)?
- What did you do before coming here?
- What do you enjoy least / most here?
- What do you think is least / most useful?
- What do you think you contribute at the care farm?
- What has been the greatest challenge about being here?
- Could anything have been done to make coming here better for you?
- Do you think you have changed as a person because of coming here?
 - How does this show itself?
 - What is it about this place that has made that happen?
 - Order of importance of these things?
 - Has all the change been positive?
- Has anything changed away from the farm because of coming here?
- When do you think you'll be ready to leave the farm and what would you like to go on to do?
- Do you think your time here will have a lasting impact on your life – how and why?
- How would you describe this place to someone else?

Appendix 7

SROI Definitions

Attribution: An assessment of how much of the outcome was caused by the contribution of other organisations or people.

Deadweight: A measure of the amount of outcome that would have happened even if the activity had not taken place.

Displacement: An assessment of how much of the outcome has displaced other outcomes.

Drop-off: Relates to duration and reflects reduction in outcome as a result of the weakening in the causal link to the original intervention.

Duration: How long (usually in years) an outcome lasts after an intervention.

Financial proxy: An approximation of value where an exact financial measure is impossible to obtain.

Impact: The difference between the outcomes for participants, taking into account what would have happened anyway, the contribution of others and the length of time the outcomes last.

Impact map: A table that captures how an activity makes a difference. It conceptualises how resources are utilised to provide activities that then lead to particular outcomes for different stakeholders.

Inputs: The contributions made by each stakeholder that are necessary for the activity to happen.

Materiality: Information is material if its omission has the potential to affect the readers' or stakeholders' decisions.

Outcomes: The changes resulting from an activity. The main type of change from the perspective of stakeholders are unintended (unexpected) and intended (expected), positive and negative change.

Outputs: A way of describing the activity in relation to each stakeholder's inputs in quantitative terms.

Scope: The activities, timescale, boundaries and type of SROI analysis.

Stakeholders: People, organisations or entities that experience change as a result of the activity that is being analysed.

Appendix 8

SROI Impact Map

Stakeholders	Changes	Inputs		Outputs	The Outcomes (what changes)
Who will we have an effect on? Who will have an effect on us?	What do we think will change for them?	What will they invest?	Value £	Summary of activity in numbers	Description How would we describe the change?
Current adult service users	<ul style="list-style-type: none"> • Enjoy themselves • New work skills • Job satisfaction • Improved physical health • Improved social skills • New friends / community support network • Less stressed / more relaxed • Increased happiness / confidence / well-being 	Time, effort, and money	£105,626	53 adults were transported to the farm, spent time outside in a natural environment and had the opportunity to engage in a range of productive activities.	<p>Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and received job satisfaction.</p> <p>Service users enjoyed coming to the farm, became more relaxed, felt happier, interacted with others, made friends and became part of a supportive social network.</p> <p>Service users were active in a restorative natural environment, benefited from a healthier lifestyle and physical health improved.</p>
Former adult service users	<ul style="list-style-type: none"> • Enjoy themselves • New work skills • Job satisfaction • Improved physical health • Improved social skills • New friends / community support network • Less stressed / more relaxed • Increased happiness / confidence / well-being • Go to college / gain employment 	Time, effort, and money	£9,360	12 adults were transported to the farm, spent time outside in a natural environment and had the opportunity to engage in a range of productive activities.	<p>Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), become more confident and started a college course.</p> <p>Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and gained employment.</p>
Young people (key stage 3 and 4)	<ul style="list-style-type: none"> • Enjoy themselves • Increased knowledge • Improved social skills • Improved behaviour • Increased confidence 	Time and effort	£0	18 young people spent time on a farm and had the opportunity to learn a range of related skills.	<p>Young people had fun outside, enjoyed the learning opportunities provided by the farm environment, knowledge increased and self-confidence developed.</p> <p>Young people interacted with animals and vulnerable adults, reassessed their own situation / behaviour and developed improved social skills / dealt with issues better.</p>
Project volunteers	<ul style="list-style-type: none"> • Job satisfaction • Increased self-esteem 	Time and effort (valued at minimum wage)	£10,000	5 people shared their skills and provided general support.	Volunteers helped other people (giving something back), contributed to society and felt valued in the workplace.

Stakeholders	Changes	Inputs		Outputs	The Outcomes (what changes)
Project employees	<ul style="list-style-type: none"> • Receive a wage • Job satisfaction 	Time, effort and expertise	£0	8 people were employed	Employees received job satisfaction and an income.
Host farmer(s)	<ul style="list-style-type: none"> • Farm environment improves 	Infrastructure	£0	n/a	The built environment was improved / expanded and the marketplace value of the farm was increased.
	<ul style="list-style-type: none"> • <i>Personal disruption</i> 				<i>More people on the home farm resulted in reduced privacy / personal space.</i>
Families / carers of service users	<ul style="list-style-type: none"> • Less disruption • Improved relationships • Improved quality of life 	Care and concern	£0	n/a	Changes in service user behaviour had a positive impact on home family life and relationships improved.
					Service user was known to be in a safe environment that they enjoy and carer was able to benefit from personal time, relax and recuperate.
Schools	<ul style="list-style-type: none"> • Meet needs of young people 	Money	£12,350	n/a	n/a (included elsewhere)
Care homes	<ul style="list-style-type: none"> • Meet needs of residents 	Money	£8,550	n/a	n/a (included elsewhere)
National Health Service	<ul style="list-style-type: none"> • Reduced use of NHS services 	n/a	£0.00	n/a	Service users no longer required residential hospital treatment, NHS costs reduced / able to redirect resources.
					Service users were physically active, ate more healthily, overall health improved and associated NHS hospital costs were reduced.
European Agricultural Fund	<ul style="list-style-type: none"> • Provide appropriate funding 	LEADER grant funding	£7,000	Barn was refurbished	n/a (included elsewhere)
Customers	<ul style="list-style-type: none"> • Access to local produce 	Money	£1,500	Received produce	n/a
Total			£154,386		

Stakeholders	The Outcomes (what changes)				
	Description	Indicator	Source	Quantity	Duration
Current adult service users	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and received job satisfaction.	Number of service users who had developed new work skills, become more confident and were keen to participate in the farm work.	Questionnaires / Interviews / Conversations	45	1
	Service users enjoyed coming to the farm, became more relaxed, felt happier, interacted with others, made friends and became part of a supportive social network.	Number of service users who had made new friends, their well-being had improved and they helped other people at the farm	Questionnaires / Interviews / Conversations	40	1
	Service users were active in a restorative natural environment, benefited from a healthier lifestyle and physical health improved.	Number of service users who remained active whilst at the project and said their physical health had improved as a result	Questionnaires / Interviews / Conversations	50	1
Former adult service users	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and started a college course.	Number of service users who left the project to study a subject related to skills developed at the project.	Project records and project leader interview	5	2
	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and gained employment.	Number of service users who left the project to go into paid employment applying skills developed on the farm.	Project records and project leader interview	1	2
Young people (key stage 3 and 4)	Young people had fun outside, enjoyed the learning opportunities provided by the farm environment, knowledge increased and self-confidence developed.	Number of young people who talked positively about what they did and learnt at the farm and teaching staff confirmed that they looked forward to, and enjoyed, the experience.	Conversations with young people and teachers	18	1
	Young people interacted with animals and vulnerable adults, reassessed their own situation / behaviour and developed improved social skills / dealt with issues better.	Number of young people who said their attitude / behaviour had changed for the better as a result of attending the farm and related change is supported by teachers.	Conversations with young people and teachers	12	2
Project volunteers	Volunteers helped other people (giving something back), contributed to society and felt valued in the workplace.	Number of volunteers who fulfilled a useful function on the farm and said that their well-being had improved as a result.	Interviews	5	1

Stakeholders	The Outcomes (what changes)				
	Description	Indicator	Source	Quantity	Duration
Project employees	Employees received job satisfaction and an income	n/a			
Host farmer(s)	The built environment was improved / expanded and the marketplace value of the farm was increased.	Most significant improvement to farm as a result of project activities during the year in question.	Interview	1	1
	More people on the home farm resulted in reduced privacy / personal space.	Farmer saying it caused friction within the family.	Interview	1	1
Families / carers of service users	Changes in service user behaviour had a positive impact on home family life and relationships improved.	Number of carers / relatives who reported positive changes in behaviour / relationships at home.	Questionnaires /conversations	40	1
	Service user was known to be in a safe environment that they enjoy and carer was able to benefit from personal time, relax and recuperate.	Number of carers / relatives who received time for themselves and felt the service user enjoyed being at the farm.	Questionnaires /conversations	11	1
Schools	n/a (included elsewhere)				
Care homes	n/a (included elsewhere)				
National Health Service	Service users no longer required residential hospital treatment, NHS costs reduced / able to redirect resources.	Number of service users who had previously required related in-patient hospital treatment, had not required this since attending the project and indicated that the two facts were linked.	Service user records / interviews	15	1
	Service users were physically active, ate more healthily, overall health improved and associated NHS hospital costs were reduced.	Number of service users who were active on the farm, ate the produce grown and said their physical health had improved as a direct result of attending the project.	Service user questionnaires / interviews	50	1
European Agricultural Fund	n/a (included elsewhere)				
Customers	n/a				
Total					

Stakeholders	Outcomes	Dead weight %	Displacement %	Attribution %	Drop off %	Impact
Current adult service users	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and received job satisfaction.	5%	0%	20%	0%	£138,715
	Service users enjoyed coming to the farm, became more relaxed, felt happier, interacted with others, made friends and became part of a supportive social network.	5%	0%	20%	0%	£117,800
	Service users were active in a restorative natural environment, benefited from a healthier lifestyle and physical health improved.	5%	0%	0%	0%	£18,905
Former adult service users	Service users learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, become more confident and started a college course.	5%	0%	10%	20%	£14,005
	Service users learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, became more confident and gained employment.	5%	0%	10%	20%	£9,337
Young people (key stage 3 and 4)	Young people had fun outside, enjoyed the learning opportunities provided by the farm environment, self-confidence developed and knowledge increased.	5%	0%	0%	20%	£14,330
	Young people interacted with animals and vulnerable adults, reassessed their own situation / behaviour and developed improved social skills / dealt with issues better.	5%	0%	40%	20%	£11,902
Project volunteers	Volunteers helped other people (giving something back), contributed to society and felt valued in the workplace.	5%	20%	0%	0%	£18,772

Stakeholder	Outcome	Calculating social return (discount rate: 3.5%)		Impact	% of Total Present Value
		Year 1 (after activity)	Year 2		
Current adult service users	Service users got structure to their day, learnt new skills, did something productive in the workplace (meaningful activity), became more confident and received job satisfaction.	£138,715	£0	£138,715	23.8%
	Service users enjoyed coming to the farm, became more relaxed, felt happier, interacted with others, made friends and became part of a supportive social network.	£117,800	£0	£117,800	20.2%
	Service users were active in a restorative natural environment, benefited from a healthier lifestyle and physical health improved.	£18,905	£0	£18,905	3.2%
Former adult service users	Service users learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, become more confident and started a college course.	£14,005	£11,204	£25,209	4.3%
	Service users learnt new skills, did something productive in the workplace (meaningful activity), developed a sense of purpose, became more confident and gained employment.	£9,337	£7,469	£16,806	2.9%
Young people (key stage 3 and 4)	Young people had fun outside, enjoyed the learning opportunities provided by the farm environment, self-confidence developed and knowledge increased.	£14,330	£0	£14,330	2.5%
	Young people interacted with animals and vulnerable adults, reassessed their own situation / behaviour and developed improved social skills / dealt with issues better.	£11,902	£9,521	£21,423	3.7%
Project volunteers	Volunteers helped other people (giving something back), contributed to society and felt valued in the workplace.	£18,772	£0	£18,772	3.2%

Stakeholder	Outcomes	Calculating social return (discount rate: 3.5%)		Impact	% of Total Present Value
		Year 1 (after activity)	Year 2		
Project employees	Employees received job satisfaction and an income.	£0	£0	£0	0%
Host farmer(s)	The built environment was improved / expanded and the marketplace value of the farm was increased.	£28,500	£0	£28,500	4.9%
	<i>More people on the home farm resulted in reduced privacy / personal space.</i>	<i>-£1,740</i>	<i>£0</i>	<i>-£1,740</i>	<i>-0.3%</i>
Families / carers of service users	Changes in service user behaviour had a positive impact on home life and relationships improved.	£62,654	£0	£62,654	10.8%
	Service user was known to be in a safe environment that they enjoy and carer was able to benefit from personal time, relax and recuperate.	£41,800	£0	£41,800	7.2%
Schools	n/a	£0	£0	£0	0.0%
Care homes	n/a	£0	£0	£0	0.0%
National Health Service	Service users no longer required residential hospital treatment, NHS costs reduced / able to redirect resources.	£51,232	£0	£51,232	8.8%
	Service users were physically active, ate more healthily, overall health improved and associated NHS hospital costs were reduced.	£49,590	£0	£49,590	8.5%
European Agricultural Fund	n/a	£0	£0	£0	0.0%
Customers	n/a	£0	£0	£0	0.0%
Total		£578,801	£28,194		
Present value of each year		£556,329	£26,320		
Total Present Value (PV)				£582,649	
Net Present Value (PV minus the investment)				£428,263	
Social Return £ per £				3.77	

Appendix 9

Chris Leck
BB060
University of Worcester

08 January 2010

Dear Chris,

Your proposed study entitled "The psychosocial value of care farming" has now been reviewed by the Institute of Health and Society Ethics Committee.

I am pleased to confirm that the committee is happy for you to proceed, and we wish you well with your research.

Yours sincerely,



Dr Jon Catling
Chair of IHS Ethics Committee