BIOREGIONALISM IN A UK CONTEXT: THE INTERRELATIONSHIP BETWEEN PEOPLE, PLACE AND NON-HUMAN NATURE

Kyraleigh Hamilton

A thesis submitted to the University of Gloucestershire in accordance with the requirements of the degree of Doctor of Philosophy in the Faculty of Environment

January 2007

Abstract

Bioregionalism advocates the use of 'natural' units rather than administrative units for the delivery of landscape management, planning and decision making. Over the past decade 'bioregional' frameworks have been developed as a means of delivering landscape policy in an integrated manner, across the wider countryside in the United Kingdom. Important within bioregionalism is the hybrid relationship between people, place and non-human nature. This thesis acknowledges this relationship and investigates the concept of a sense of place in a UK bioregional context.

Two types of bioregions were used as the basis for this study: Natural Areas and river catchments. Using evidence from document analysis, interviews and focus groups, I examined the way in which participants related to the bioregion in which they live. The evidence analysed suggests that a sense of place is more than just a concept and occurs at a range of different spatial scales. This sense of place is complex and integral to the relationship between people and non-human nature, with non-human nature being an important factor in how people relate to place.

I concluded that although bioregional frameworks are a relatively recent development within the UK, participants could relate to these units and had a sense of attachment or sense of place in relation to these frameworks. A sense of place was important to the participants within this research and there is the potential to utilise this in relation to working at a wider and more integrated level with the planning, management and conservation of the UK landscape.

AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and it original except where indicated by specific reference in the text. No part of this thesis has been submitted as part of any other academic award. The thesis has not been presented to any other educational institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Kyraleigh Hamilton

24th January 2007

ACKNOWLEDGEMENTS

There are many people without whom this thesis would not have been completed. Firstly I would like to thank the Economic and Social Research Council for funding this project. Secondly I am very grateful to my supervisors, Dr Janet Dwyer, University of Gloucestershire, who offered much support and valuable advice at times when this seemed like an undoable task. I am grateful for the support and constructive advice from Ms Pauline Dooley, University of Gloucestershire, especially during the field work and the final stages of the thesis. Finally I am grateful to Professor Paul Selman, University of Sheffield, for his continued support throughout this process.

I am extremely grateful for the support I have had from my fellow research students and the Countryside and Community Research Unit at the University of Gloucestershire. Without this the experience would not have been as enjoyable. I would particularly like to thank Carol Kambites for proof reading my thesis and offering unwavering support through the whole process. Katie Kelly for reminding me why I was doing this and Richard Curtis for keeping me smiling.

I am also very grateful for the support of my partner and friends, who have put up with me not being around and working until the early hours. I would like to thank Jason for convincing me to keep going. I would like to also thank all of my friends and colleagues at Base 25 whom have offered me continued support whilst completing this thesis.

Finally, and most of all I would like to thank the participants of this research, without whom this thesis would never have been possible. I would like to thank them for their interest, their time and hospitality, they made the experience worth it and I learnt a great deal from them.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Index of Abbreviations

ADAS	Agricultural Development and Advisory Service
AES	Agri-environment Scheme
ANT	Actor Network Theory
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
BSE	Bovine Spongiform Encephalopathy
CA	Countryside Agency
CAP	Common Agricultural Policy
CBC	Convention on Biological Diversity
CDA	Critical Discourse Analysis
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CLA	County Landowners Association
CMP	Catchment Management Plan
CroW	Countryside and Rights of Way Act
CSS	Countryside Stewardship Scheme
DDT	Dichlorodiphyenyl trichloroethane
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EEC	European Economic Community
ELS	Entry Level Stewardship
EN	English Nature
ERDP	England Rural Development Programme
ESA	Environmentally Sensitive Area
FWAG	Farming and Wildlife Advisory Group
GIS	Geographical Information Systems
HAP	Habitat Action Plan

HLS	Higher Level Stewardship
IALE	International Association of Landscape Ecology
IUCN	International Union for the Conservation of Nature
JAMF	Joint Approach to Managing Flooding
JCA	Joint Character Area
LAMP	Levels and Moors Project
LBAP	Local Biodiversity Action Plan
LCA	Landscape Character Assessment
LDU	Landscape Description Unit
LEAP	Local Environment Agency Plan
MAFF	Ministry of Agriculture, Fisheries and Food
NCC	Nature Conservancy Council
NFU	National Farmer's Union
NGO	Non-Governmental Organisation
NNR	National Nature Reserve
NRA	National Rivers Authority
NSA	Nitrate Sensitive Areas
NVZ	Nitrate Vulnerable Zones
OFWAT	Water Services Regulation Authority
OELS	Organic Entry Level Stewardship
PCP	Parrett Catchment Project
PPG	Planning Policy Guidance
PSA	Public Service Agreements
QDA	Qualitative Descriptive Analysis
RBD	River Basin District
RDR	Rural Development Regulation
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation

SAP	Species Action Plan
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SuDS	Sustainable Drainage System
SSSI	Site of Special Scientific Interest
WCED	World Commission on Environment and Development
WFD	Water Framework Directive

Chapter 1

Introduction

1.1: Research Context

Traditionally people and non-human nature have been treated as separate entities within countryside planning, management and decision making. This separation has been reinforced by the reliance upon the socially constructed administrative units through which these processes have been delivered. The result of this has been a fracturing of both the ecological and cultural integrity of the landscape contributing to ecological degradation, habitat fragmentation and loss of non-human nature (Green, 1996). The need for a more holistic approach to landscape planning and management that integrates natural, cultural, social and economic factors, has been advocated by numerous authors (e.g. James and Boothby, 2002; Selman, 2000; 2002). An important theoretical response to this has been made by 'bioregionalism' that puts forward the view that the landscape should be divided up into units based upon similar ecology, geology, topography and culture rather than traditional political divisions (Thayer, 2003). This alternative framework is viewed as a means of integrating non-human nature within planning, management and decision making (Williamson, 1999) and reinforcing the ideas of sustainable living and a sense of place or sense of belonging (Sale, 2000).

During the past ten years a number of frameworks akin to bioregions have been developed by government organisations including English Nature, the Countryside Agency and the Environment Agency. These are the Natural Area framework (now the Joint Character Areas), Countryside Character Areas (now also the Joint Character Areas) and river catchments that have evolved recently into River Basin Districts. These frameworks are based upon the division of the English landscape into units determined by a range of non-human components including vegetation, geology, landform and river catchments (Environment Agency, 2005; Griffiths et al, 2004). These 'bioregional' frameworks were developed as a means of integrating people and non-human nature within the planning, management and decision making process (Porter, 2004) and have a number of clear parallels with theories put forward by bioregionalists.

Two of the key facets of these frameworks which link strongly to bioregional theory are, first, the view that people and non-human nature should be integrated rather than viewed as discrete entities within policy delivery and decision making; and secondly, the idea that people have a sense of place or sense of attachment that is intricately linked to non-human nature and the bioregions depicted by non-human nature (Thayer, 2003). However, despite the emphasis being

placed upon a 'sense of place' by government organisations in their promotional literature regarding these frameworks in the United Kingdom (UK), there has been little attempt at actually investigating the relevance of such a concept in practice. The term has been used by a range of organisations and within policy documents as a 'buzz term' with little definition, or examples of application.

1.2: Aims and Objectives

The primary aim of my research is to consider the concept of bioregionalism and its underpinning philosophies within a UK context, reflecting the interrelationships between humans and non-human nature, interfacing with the cultural concept of place. Non-human nature within this research refers to all biotic and abiotic facets of the landscape excluding people, including vegetation, geology and soils. Place, non-human nature and culture are complex, inseparable and interdependent facets that all act together to form the world as we know it today (Latour, 1993; Whatmore, 2002). My research is based on three primary objectives. Although listed as separate and distinct features within this section what will become apparent throughout the chapters that follow is that they are inseparable. These objectives are:

- To identify if there is a inherent conscious or unconscious awareness of bioregions and bioregional programmes within two case study areas in the UK, the Parrett Catchment in Somerset and the Chiltern Hills Natural Area.
- To explore the relationship between place, non-human nature and people within this bioregional context.
- To investigate the practical implications of a sense of place and the extent to which this occurs on a bioregional scale, in these areas.

Unlike previous research I have aimed to consider the deeply embedded sense of place that I argue is fundamental to people who live and work within bioregions. I aim to identify the way in which this sense of place could be utilised as a means of working more effectively at a bioregional level with local people, for the benefit of people and non-human nature. People and non-human nature are often viewed as separate sides of a duality; however, I contend within this research that through the investigation of a sense of place this dualism is broken down and the significance of the interdependence of people and non-human nature is identified, enabling practical applications to be suggested. This research also investigated the contribution of non-human nature to a sense of place and considered issues of scale in the context of operationalising bioregions as a framework for conservation actions.

1.3: Theory and Methods

My research is founded within the theoretical domain of hybrid geographies (Whatmore, 1997; 2002; Whatmore and Thorne, 1998; 2000) and will be considered from the feminist perspective of Situated Knowledges (Haraway, 1989; 1991): that is, the assertion that no single perspective can provide a full knowledge of any given situation, all knowledge is partial and influenced by an array of different interrelating factors. Knowledge is not abstract from the situation in which it is gained, but influenced and made partial by that situation (Haraway, 1991).

Thus to gain as wide a perspective on this as possible, I used a multi-method approach to investigate the relationship between people, place and non-human nature within a bioregional context. Throughout this research I argue that a sense of place exists for the participants within this research and this sense of place is strongly associated with non-human nature. By analysing policy and promotional documents related to Natural Areas and river catchments I determined the way in which a sense of place and the relationship between people, place and non-human nature were viewed within these documents and by the organisations that promoted them. I then used this as the backdrop against which to analyse the way in which people living and working within two case study areas, view place and to examine whether and how they associated with bioregional frameworks. This was done through a series of interviews and focus groups designed to capture a diverse range of participants with very different degrees of formal engagement with landscape planning and management, carried out in a way that aligns with feminist methodological theory (Charmaz, 1995). A combination of Discourse Analysis (Potter and Wetherell, 2001) and Grounded Theory (Charmaz, 2002) were utilised to analyse the documents, and transcripts from interviews and focus groups. These methods again were aligned with a feminist perspective, recognising the partiality of the knowledge and the situation in which that knowledge was produced by the participants involved.

I will now briefly discuss the structure that this thesis will take, with a short overview of each chapter.

1.4: Structure of the Thesis

Chapter Two introduces the concept of bioregionalism and the way in which this views the close interrelationship of people and non-human nature as fundamental to the survival of both people and non-human nature. A central concept in bioregionalism is that of landscape ecology, that considers the connectivity of the landscape and its suitability for the dispersal and migration

of species. Landscape ecology is viewed as a 'wider countryside' theory and in recent years it has begun to investigate the relationship between cultural landscapes and ecological integrity and the way in which these should be integrated to improve connectivity across the landscape. In other words, landscape ecology provides a scientific rationale for spatially joined-up land and water management, rather than fragmented decision-making based on administrative boundaries. Finally I introduce Natural Areas and river catchments generally.

Chapter Three introduces the concept of a sense of place. The fluidity of this concept is often viewed as making a sense of place intangible and difficult to define or discuss in any great depth. However, I demonstrate the way in which a sense of place has been aligned with a series of other concepts including distinctiveness, identity and belonging that allow a fuller understanding of this concept. Following this I consider the theory of hybrid geographies or hybridity and the way in which people and non-human nature are intricately connected and cannot be viewed at any point as separate. The theory of hybridity is discussed from its early historical origins which are important in establishing the close interconnection of people and non-human nature.

Chapter Four introduces the history of conservation, agricultural-planning, water and landscape policy within the UK and the way in which this has resulted in a system that views people and non-human nature as discrete entities. I argue that this separation in policy has resulted in a conservation process that has conceptually isolated non-human nature within a series of designated sites. However, rather than protecting the species and habitats of the UK, this approach has compounded the isolation, fragmentation and disconnection of non-human nature. Furthermore, conservation, planning, agricultural and water policy all act in conjunction to produce dualisms that have exacerbated the attrition of non-human nature and the separation of non-human nature and people in practice, despite the interdependent nature of this relationship. These dualisms are discussed within this chapter and include the urban/rural and culture/nature dualism. This chapter also discusses the more recent shift from a separatist view of people and non-human nature towards a more integrated and holistic view in the conservation/environment literature, and the approaches that have been developed to achieve this within the UK.

Chapter Five first introduces the two case study areas I worked within for this research, the Chiltern Hills Natural Area and the Parrett Catchment. I then discuss the different methodologies utilised within my research. This approach changed throughout the research and this change is mapped and the rationale for these changes is identified. Within this chapter I introduce the data collection techniques including a systematic review of documents, document analysis, interviews and focus groups. Included within this is the identification of a series of

problems associated with the methods and the data collection techniques used. To analyse the evidence gained I used feminist adaptations of Grounded Theory and Discourse Analysis, these are discussed in depth.

Chapter Six presents the results of the document analysis and discusses its importance within my research. The aim of this chapter is to establish whether of not official organisations perceived a sense of place as being important to the conservation of non-human nature and the extent to which people and non-human nature were presented as either separated or interrelated, i.e., whether 'official' organisations promote bioregional frameworks and the concept of a sense of place. This provides a benchmark against which to explore the views expressed by interviewees and focus group participants, about these issues.

Chapter Seven discusses bioregional awareness among different groups of people within the Chiltern Hills Natural Area and the Parrett Catchment, and its relationship to non-human nature. It examines whether the type of bioregion, (a Natural Area or a river catchment), affects the level of awareness among people living or working within them. Chapter Eight seeks to identify the phenomenon 'a sense of place', as expressed by participants in these areas, exploring the interrelationship between people and non-human nature that contribute to this sense of place. Chapter Nine then discusses the implications of this for practical land use decision making in the two areas. It also considers the implications of these findings for the use of bioregional frameworks and the conservation of non-human nature in the UK.

Chapter Ten presents the conclusion of my research and their implications and the limitations of this research. Factors considered are the importance of a sense of place to future conservation efforts, the future roles of bioregional units within the UK and the positive implications of accepting the interrelationship and interdependence of people and non-human nature within policy, practice and academia.

Chapter Two

Bioregionalism: The Relationship between Non-Human Nature, People and Place

"Bioregionalism promotes the unique characteristics of a region, defined not by political boundaries but by natural boundaries" (Swearingen-White, 2003, p.317).

2.1: Introduction

Within this chapter I introduce the concept of bioregionalism and the way in which recent British land use policy is shifting towards bioregional frameworks that act to interrelate people, place and non-human nature, based on the division of the landscape into natural units, as opposed to administrative units delineated by political boundaries. In the first section I will discuss bioregionalism as an idealised concept and also introduce the concept of a sense of place, which will be developed in the next chapter. I then consider the practices in the United Kingdom that correspond to this concept of bioregionalism and form the basis of this study: Joint Character Areas (JCAs) and river catchments. These two frameworks are used to investigate the place based relationship between people and non-human nature and the extent to which this can be utilised to achieve a more ecologically and socially sustainable means of living and working within the wider landscape.

2.1.1: Early Origins of Bioregionalism

There is much contention regarding the definition, origin and aims of bioregionalism (Alexander, 1990; Dodge, 1981; Sale, 1985). The term bioregionalism originates from *bios* the Greek for life and the French for region that emerges from the Latin from territory *Regia* (Dodge, 1981; Sale, 1985; 2000). Bioregionalism refers to: a set of beliefs or an ideology that advocates natural regions as opposed to administrative regions for the organisation of human activity; a land ethic based on the sustainable interrelationships of humans with their natural environment; the belief that non-human nature has as much right to life as humans and the acknowledgement that diverse human and non-human cultures and ecosystems are more stable than uniform monocultures (Alexander, 1996; Sale, 1985; 2000; Thayer, 2003). Bioregionalism advocates the division of the landscape into areas of similar vegetation, topography, geology and culture, known as bioregions, rather than according to administrative or political boundaries, affording a holistic framework for policy delivery and decision making (Metzner, 2003; Sale, 2000). A bioregion can be defined as "a unique region definable by natural (rather than political) boundaries with geographic, climatic, hydrological and ecological character capable of supporting unique human and non-human living

communities" (Thayer, 2003, p.3). However, the definition of what identifies a bioregion is hotly debated (Alexander, 1990; Dodge, 1981; Sale, 1985).

Contributions to bioregionalist literature have come from a number of disciplines including ecofeminism, deep ecology, social ecology, regional planning, archaeology and English literature (Booth, 1999; Desai and Riddlestone, 2002; Sale, 1985; Snyder, 1980). Although there is a substantial literature base bioregionalism cannot be claimed by any one academic discipline. Bioregionalism was developed as an alternative means of living sustainably with the land (Berg, 1978; 1990a; 2001) and, it is argued, was never intended as an academic discipline, though many have treated it as such (Russ, 1995). This may mean that the strength and continuity of the bioregional movement has stemmed from the fact that it has remained relatively obscure and has managed to avoid being theorised (Aberley, 1999). However, academic debate regarding bioregionalism is beginning to increase (Alexander, 1996; McGinnis, 1999a; Russ, 1995).

The provision of a complete history of bioregionalism would be virtually impossible, however, it is important to this research to identify the key points in bioregional development. With so many disparate beginnings in a plethora of disciplines, bioregionalism has come to mean different things to different people, with all the varying facets having their own unique history. Sale (1985) links the emergence of bioregionalism to the feminist upsurge of the 1960s, whilst Alexander (1996) suggests its emergence was a counter discipline to biogeography and part of the Californian political counter culture. This is a point supported by Aberley (1999) who identifies bioregionalism as evolving during the period between 1950 and 1970, in response to the political disillusionment of the 1960s. Metzner (1995) places bioregionalism as one of four socio-philosophical or radical ecologies, the other three being deep ecology, ecofeminism and social ecology and Warren (2000) suggests that bioregionalism is an environmental ethic. There is reference to bioregionalism as both a grass-roots activist movement and a Christian-based alternative spirituality (Aberley, 1999). This plethora of ideas re-emphasises the pluralistic nature of the bioregional movement and discourse and the inherent difficulties of producing a coherent history although attempts have been made (See: Aberley, 1999; Plant, 1990a; Sale, 1985; Thayer, 2003).

2.1.2: Early Antecedents of Bioregionalism

A number of early antecedents to bioregionalism are relevant to this research as they are concerned with the alternative use of natural as opposed to political boundaries through which to organise and connect human activities with place and non-human nature. The early study of regionalism by authors such as Lewis Mumford, Frederick Jackson Turner and Howard Odum

reveals the emergence of concerns surrounding the divisions between people, place and non-human nature as the result of administrative boundaries (Mumford, 1973; Sale, 1985; 2000). Regionalists of the early twentieth century advocated the subdivision of the land based on natural features, not political or administrative boundaries. Turner was concerned with what he termed 'sections' or geographical regions largely determined by geology, which he viewed as influential in explaining settlement patterns, social customs and migration, advocating the use of geographic regions as opposed to administrative regions within the United States (Bennett, 1975; Turner, 1932). Sale (2000) whilst suggesting Turner's work as having parallels to bioregionalism, suggests that it was largely ignored by governments and dismissed by academics. However, Turner has been represented as an influential figure in the Frontier history of the United States, identifying the interdependent relationship between pioneer settlements and non-human nature (Vasishth and Sloane, 2002; Eff, 2004). Eff (2004) discusses Turner's view that pioneer settlements adapted their culture to the physical conditions of the Frontier, rather than culture determining the characteristics of the Frontier (Turner, 1893). This early regionalist view of the connection between people, place and non-human nature paved the way for further research. However, Turner died in 1932 and Sale (1985) felt Turner's work had not become very influential, with his death occurring before regionalism became established within academia. Nevertheless, the very fact that Sale (1985) is discussing Turner's work is evidence that it has had at least some influence.

Unlike Sale (1985), McGinnis (1999a) identified Lewis Mumford as the first advocate for ecoregionalism, an alternative to administrative regions that integrates nature and culture. Within his 1938 seminal work *The Culture of Cities* Lewis Mumford advocated regionalism as an alternative to the existent State system within the United States, for organising human activity (Mumford, 1938). Unlike regions that are currently used within the UK, Mumford was not referring to divisions within the land determined by political agency; he contested the role of human-defined regions, describing their boundaries as 'imaginary' suggesting their only benefits were convenience and increasing political control. Mumford's regions however, emerged from 'natural' features; in much the same way as Peter Berg later identified bioregions (Berg, 1983a). Mumford's critique of the industrialised State, from which these early bioregional ideas derived, can be traced back as early as 1919 (McGinnis, 1999a), although Sale (1985) claims they were unknown to Frederick Jackson Turner.

Within his text, Mumford identified three features within regional areas that can be linked to the concept of bioregionalism today:

- Each will have a specific geographic character that is composed of natural features;

- Each area will exist within dynamic equilibrium that may evolve over time;
- There will be no definitive boundaries, they will merge into each other (Luccanelli, 1995; Mumford, 1938).

The fundamental feature within Mumford's concept of regionalism is his statement that "at no moment in time is the divorce between the man-made environment and the earth complete" (Mumford, 1938, p.318). The recognition of this led contemporary bioregionalists such as McGinnis (1999a) and Sale (1985) to identify Mumford as providing an important foundation upon which bioregionalism has been built.

Regionalism was not the only early antecedent to bioregionalism. The writing of the forester and conservationist Aldo Leopold during the 1940s also provides evidence of the early evolution of the idea that non-human nature is valuable in its own right and not just as a human resource (Leopold, 1949). Leopold's 1949 'Land Ethic' published in '*A Sand County Almanac*' contends that humans are just citizens in the land. Alexander (1990) suggests that Leopold's 'Land Ethic' provides an early example of bioregional thinking by advocating the need for humans to become ecological citizens by living in a socially and ecologically sustainable manner. Karen Warren (2000) has emphasised this with her interpretation of Leopold's 'land ethic', identifying three primary features: 1) humans are co-members of an ecological community; 2) humans should respect the land; and 3) it is wrong for humans to disrupt and destroy the stability, integrity and beauty of the biotic community. Kalinowski (2004) suggests that Leopold's Land Ethic was the foundation upon which bioregionalism was constructed.

Given that bioregionalism is founded on the basic precept that non-human nature and people are viewed as equal, Warren (2000) has criticised Leopold for having an anthropocentric view of non-human nature, arguing that he failed to accept non-human animals as sentient beings and valuable in their own right. Warren's contention comes from the fact that Leopold hunted large animals as a hobby, so in her eyes he could not appreciate the value of non-human nature (Warren, 2000). However, one may question whether it would be possible to discuss non-human nature without being influenced by anthropocentrism.

I have identified the long standing view that people, place and non-human nature are intricately interconnected and interdependent and is relevant here as it supports a strong foundation of thinking that has informed bioregionalism (Alexander, 1990; 1996; Wolmer, 2005). However, Thayer suggests that:

> "Words ending in-*ism* are conceptually dangerous and immediately raise red flags. Bioregionalism is no exception, coming under criticism as utopian, idealistic, oversimplified, or just plain fallacious" (2005, p. 4).

Wolmer (2005), whilst identifying bioregionalism as utopian, introduces the concept of ecoregionalism derived from Mumford, and the interchangeable way the term is used with bioregionalism. Ecoregionalism is primarily concerned with the relationship between boundaries and non-human nature, again emphasising the importance of land management within 'natural' as opposed to human identified boundaries. However, this is where the similarity ends. Whilst bioregionalism recognises the relationship between non-human nature, people and place that is important within my research, ecoregionalism is primarily concerned with the scientific implications of the fragmentation of ecological integrity by administrative boundaries (Wolmer, 2005).

The concept of bioregionalism underpins this research because countryside organisations within the UK have in recent years developed a bioregional framework, based upon natural rather than administrative boundaries, and advocated the notion of the interrelatedness of natural, social, cultural and economic facets within the British landscape (Countryside Commission and English Nature, 1996; English Nature, 1997a; Environment Agency, 1997b). This is an important arguement within bioregionalism and its antecedents (Berg, 1978; 1998; 2001; Berg and Dasmann, 1977; 1978; Dodge, 1981; Thayer, 2003). Although these agencies and organisations do not make reference to bioregionalism, many of their arguments for developing these alternative frameworks are paralleled within bioregionalism. With this in mind I will present a brief consideration of the key facets of bioregionalism that are influential within this research.

2.1.3: Key Concepts within Bioregionalism for this research

Bioregionalism has been defined as a "decentralised, self determined mode of social organisation; a culture predicated upon biological integrities and acting in respectful accord, and a society which honours and abets the spiritual development of its members" (Dodge, 1981, p.10). Aberley (1999) contends that bioregionalism has come into existence in response to the social and ecological crisis that is existent in the world, the recognition of this crisis being the common thread that connects all of the disparate disciplines that have contributed to the bioregionalist body of thought (Alexander, 1996; Flores, 1999). This crisis is described by Aberley (1999) as the result of increasing globalisation, industrialisation and capitalism and the failure to recognise the complexities and interdependence between non-human nature and human cultures (Berg, 1978). Aberley (1999) further suggests that a clear understanding of what

bioregionalism is cannot be gained from reading the literature and the only way these concepts become apparent is through experience.

Despite the lack of a clear consensus on the meaning of bioregionalism a number of unifying concepts emerge from within the literature. Michael's (1983) lists three primary facets of bioregionalism: 1) a belief in the value of acknowledging natural, as opposed to administrative, regions; 2) a practical land ethic and; 3) favouring of locally and regionally diverse cultures as guarantors of environmental adaptation (Alexander, 1996). Two further facets are important to this research: the awareness of interconnection and interdependence between humans and non-human nature (in the form of landscape ecology); and the relationship people have to the places in which they live and/or work and the implications this poses for bioregionalism as a practical framework (Haenke, 1996; McGinnis, 1995; McGinnis et al, 1999). These different facets together underpin the aims and objectives of this research.

The concept of bioregionalism has come under much criticism for being idealistic, unrealistic and failing to consider the complex social, political and economic structures that are embedded within current administrative frameworks (Alexander, 1990; 1996; Thayer, 2003). Throughout this research there is an underlying thread: the contention that non-human nature, place and people are inseparable and fundamentally intertwined. I will provide evidence for this interconnection by exploring two approaches in the UK: English Nature's Natural Areas (more recently Joint Character Areas), and the Environment Agency's catchment areas.

2.1.4: Bioregions as an alternative to political or administrative boundaries

Bioregions can be defined as "any part of the earth's surface whose rough boundaries are determined by natural characteristics rather than human dictates, distinguishable from other areas by particular attributes of flora, fauna, water, climate, soils and landforms, and by the human settlements and cultures those attributes have given rise to" (Sale, 2000, p.55). Bioregionalists believe that administrative or political boundaries create false divisions within the landscape, leading to the fragmentation of the ecological and social integrity of the landscape as a whole (Sale, 1985; 2000; Thayer, 2003). An ecosystem does not simply end on reaching a 'invisible' political boundary, these boundaries are viewed as a means for governments to organise people within specific communities, regions or countries (Berg, 1976), with little account being taken of natural features and the ecological integrity of these areas (Berg, 1978; 2001). Administrative boundaries frequently take little account of the non-human features in the landscape and are seen as dismissing the ecological integrity and interdependence of non-human nature of which humans are part (Berg, 1978; Russ, 1995; Sale, 2000; Simonis, 1994). Bioregionalists claim that political

boundaries have failed to provide a framework for tackling environmental problems (Flores, 1999) and instead, invisible divisions have been created that fragment the decision making process across the landscape. Political boundaries are seen as failing to correspond with natural boundaries at all levels, from global to local (Lipschutz, 1999) with substantial negative implications for non-human nature, resulting in its fragmentation, isolation and degradation. Non-human nature, people and place are becoming isolated from each other, and in the case of non-human nature, fragmented and degraded partially as the result of separatist policies that are being delivered in an *ad hoc* manner by different institutions that often fail to interact across boundaries (Hamilton and Selman, 2005a).

Bioregions, on the other hand, are viewed by bioregionalists as the 'natural alternative' to political or administrative boundaries, maintaining the integrity and interdependence of ecological systems. As discussed earlier in this chapter non-human systems have been advocated as a means of human organisation for over a century. Flores (1999) discusses the mapping of the arid west within the United States by John Wesley Powell in 1890, which identified twenty-four 'natural providences', in contrast to the 140 political units within this area today. Raymond Dasmann, an environmental conservationist working for the International Union for the Conservation of Nature and Natural Resources (IUCN), in 1973 made the first comprehensive attempt to map the world's 'biotic provinces', based on flora and fauna distinctions (Dasmann, 1973). Dasmann built upon a foundation of the work of late nineteenth century ecologists including Alexander von Humboldt (1849), who identified altitudinal changes in vegetation composition; Philip L. Sclater (1858) who attempted to identify natural regions based on bird fauna, and Alfred Russell Wallace (1876) who identified floral and faunal regions across the earth, which subsequently became known as Wallace's Realms (Dasmann, 2002). Dasmann's biotic provinces were primarily based on Lee Dice's (1923) biotic provinces or Life Zones and the mammalian distribution of North America. However, in his autobiography Dasmann reported struggling with the identification of the biotic provinces of Latin America, China and the former USSR and therefore turned to Miklos Udvardy (1975) who had attempted a similar task within zoogeography, identifying geographical provinces (Berg and Dasmann, 1977; 1978; Dasmann, 2002). Dasmann later teamed up with Peter Berg and furthered Berg's early work in bioregionalism, based on the appreciation of ecological integrity (Berg and Dasmann, 1978).

There has been much debate surrounding the way in which bioregions are identified in practice. Dodge (1981) discusses six mechanisms by which bioregionalists have sought to define bioregions: 1) biotic change – the shift in species composition from one area to the next; 2) watersheds; 3) landforms; 4) cultural/phenomenological – the development of a 'sense of place'; 5) spirit places – places that are believed to have psychophysical influences such as Uluru; 6)

vertical phenomena – the difference between hill people and people that live on flat land. McGinnis (1999a) suggests that a bioregion can be any means of defining an area based on natural features such as a watershed, a biome, a biotic province or an ecosystem, with the key being the links to indigenous cultures. Sale (1985) discusses that different sized bioregions identified by different non-human features can be nested within one another, the largest being an eco-region (identified by the extent of native vegetation), then the georegion (based on coherent often physiographic features such as water sheds), finally morphoregions (where geo-regions divide into smaller units). Sale states:

> "A watershed, for example, will often change its character perceptibly as it flows from its headwaters to its mouth; with it change the kinds of human activities that accompany the river on its journey and thus the varying styles of human culture and agriculture along the way" (2000, p. 58).

There are a number of different means by which bioregions are presented within the literature, but, predominantly, the watershed is identified as the best distinguishing feature (Berg, 1990a; Parsons, 1985; Thayer, 2003). Berg and Dasmann (1978) suggest that a watershed could represent an area around which people could organise themselves, as often water has delimited historical and settlement patterns. However, watersheds are often extremely large and may cross national boundaries, such as the Mississippi watershed that drains 1.2 million square miles and crosses the boundary between Canada and North America. Here in the UK, the River Ribble Catchment in the northwest of England drains an area of 2128 square kilometres (Environment Agency, 1999). The River Danube flows 2,780 kilometres and crosses eight countries in Central and Eastern Europe including Germany, Romania and the former Yugoslavian countries (Baldon, 1992).

Berg and Dasmann (1978) suggest that a bioregion, although initially identified by natural features, will be determined by the people living within the area. Dodge (1981) concurs that the bioregion should finally be defined by the people living within it, emerging through the interaction between people, place and non-human nature. Alexander (1996) suggests that bioregion boundaries may not exist on the ground as they are in constant flux, with Sale (1985) agreeing that boundaries of a bioregion are not fixed, they will merge into one another. Lipschitz (1999) also suggests there are no hard and fast boundaries, as revealed by Sale's (1985; 2000) concept of nested bioregions. Sale contends that the nesting hierarchy allows for a mix of cultures and does not require the identification of distinct regions. This view of a nested hierarchy is shared by Thayer (2003) who indicates that one of the advantages of bioregionalism is that it recognises there are no distinct boundaries in nature, and even within distinct physical regions the

boundaries can be somewhat fuzzy. Alexander (1990) argues that some of the different means of identifying bioregions are mutually exclusive and if used in conjunction with each other will create different boundaries.

It could be argued that bioregional principles can be applied without identifying a distinct bioregion. The BioRegional Group based in south London practices bioregionalist principles of sustainable living, yet does not identify itself as belonging to a particular bioregion. For its group members it is enough that they are attempting a sustainable existence (Desai and Riddlestone, 2002). Dodge identifies that "the idea, after all, is not to replace one set of lines with another, but simply to recognise inherent biological integrities for the purpose of sensible planning and management" (1981, p.7).

Lipschutz (1999), although agreeing with the need for bioregions, suggests that there is a need for political boundaries first and foremost, with bioregional frameworks being secondary. He argues that although political boundaries may appear somewhat arbitrary, they have been in place for a long period of Western history and the thought that bioregionalism can abolish political boundaries is somewhat idealistic, given the existing longstanding complex usage of administrative units (Alexander, 1996; Meadowcroft, 2002). Political boundaries in the UK not only act to organise countries and regions within countries, but they also act to zone resource allocation and distribution, and determine what can and cannot be done within an area. However, bioregionalists believe that by identifying a specific bioregion this will facilitate the development of a sense of place, which in turn will encourage people to learn about an area and want to preserve its natural systems (Berg, 1978; Dodge, 1981; Lipschutz, 1999).

2.1.5: Bioregionalism and Ecological Integrity

A fundamental aim of bioregionalism is the development and practice of an alternative and sustainable means of living on the planet (Aberley, 1990). Whilst this ethic itself is not a primary concern within this study, its underlying principles of ecological connectivity and the links with human action are critical. Sale (1985), who has been criticised for promoting a simplistic and radical view of bioregionalism (Alexander, 1990; 1996), discusses a social and ecological crisis caused by the technocratic nature of modern society, resulting in the need for this 'alternative means of living'. To achieve this, bioregionalists identify the need to appreciate and understand the complexity and interdependence of ecological systems and recognise that humans are just a single species within the complex web of life (Berg, 1978; Berg and Dasmann, 1977; 1978). Berg (1990a) acknowledges that other groups in society also recognise the ecological crisis caused by humans. However, he suggests that environmental activists, in particular, only respond after an

environmental disaster has occurred, and concentrate on lobbying and protesting against the future occurrence of that specific event. In his view there is a need to recognise the complexities and potential negative connotations of human action *before* they occur, not after the event. He goes on to suggest that "environmentalists have found themselves in the position of knowing how bad things are, but are only capable of making a deal" (Berg, 1990a, p. 13).

In his later work Berg identifies the importance of recognising and understanding ecological principles in developing a sustainable alternative to the industrial worldview. These principles include ecological interdependence, self regulation or autopoeisis, diversity, heterogeneity and long term stability (2001). Alexander (1990) and Berg (1998) contrast the bioregionalist perspective with more recent, and in their view, more anthropocentric notions of sustainability, such as those typified by the Bruntland definition (World Commission on Environment and Development, 1987). In their view, this definition portrays an anthropocentric view of sustainability, a view that dismisses the intrinsic value of non-human nature in its own right and reduces it to a resource to be utilised for human benefit. They argue that bioregionalists recognise intrinsic worth when discussing sustainability, believing that whilst humans are dependent on non-human nature for survival, non-human nature can largely survive without humans. For them, the understanding of ecological principles is a fundamental necessity to living sustainably. Bioregionalism thus places greater importance on 'natural' systems, as opposed to systems created and controlled by humans (Dodge, 1981). It identifies system functioning and dynamics, such that action within one area of a natural system will have ramifications for other aspects of that system (for example, deforestation within the upper reaches of a watershed increasing flooding and sedimentation downstream). Bioregionalists also acknowledge the unique nature of each bioregion, each having a specific climate, native vegetation and soil which predisposes a specific region to be more suitable for certain activities than other bioregions (Glover and Slagle, 1983; Sale, 1985).

Bioregionalists argue that one of the primary causes of rapid environmental and social degradation is the way in which humans have conceptualised environmental problems and produced policies that are ignorant of the ecological and social complexities of an area. Lipschutz (1999) suggests that global policies cannot possibly take into account local ecological complexities and it is this ecological complexity that bioregionalists acknowledge and seek to work with, and adapt to (Berg, 2001). The identification of ecological complexity at a local as well as global level has led bioregionalists to advocate the need for a localised, decentralised and area-based means of organising policy (Berg, 1978; 2001; Dodge, 1981; Lipschutz, 1999; McGinnis, 1999a; 1999b). The same strand of thought is apparent in modern sustainable development actions linked to Bruntland and the 1992 Rio Convention. Feldman and Wilt (1999)

suggest that the principles of Agenda '21' fit the bioregional perspective of taking a localised approach to tackling local problems. Lipschutz and Mayer (1996) argue that groups working at the local level have a tendency to use the language of bioregionalism, even if they are not specifically targeting bioregions. This has been important to the suggestion that bioregionalists should consider organising themselves at the community level rather than the level of the bioregion (Lipschutz, 1999). However, working at the community level may be a more inclusive mechanism for social action, but may not be so inclusive for the consideration of non-human nature, which is of primary concern to bioregionalism. Thayer (2003) sees no inherent conflict in this area, pointing out that there may be a hierarchy of bioregional units that exist but it is the relationship between people, place and non-human nature, throughout this hierarchy, that is important.

Self-regulation is viewed as a characteristic of bioregions, suggesting that all systems, social and ecological, self-organise: a trait also known as autopoiesis (McGinnis, 1999b). McGinnis (1999b) suggests that people have evolved autopoietically in order to respond to place, just as non-human nature evolves autopoietically. This emphasises the close relationship of human and non-human systems and place that is fundamental within this research. Bioregions however, are not in equilibrium, with everything balanced; they are dynamic and fluid, changing in response to interaction with people, especially with current levels of environmental degradation. Bioregionalists accept that non-human nature can adapt to a certain amount of human perturbation; however, this adaptation is reduced as systems are simplified and become increasingly uniform (Berg, 1978; Dodge, 1981; Thayer, 2003). There is a belief, supported by evidence of early ecologists, that the more diverse a system is the more stable that system is (Aberley, 1999; Alexander, 1990; Berg and Dasmann, 1977; 1978).

As the world has become more technocratic and globalised Aberley (1999) suggests it has become more uniform and subsequently less stable. As with agricultural monocultures, uniformity leaves ecological and social systems more vulnerable to perturbations, with an increased likelihood that negative impacts will have a more damaging impact on a simplified system (Berg, 1998; House, 1999; Sale, 1985). Complex, diverse systems are generally more able to buffer and adapt to damaging activity than more uniform monocultures (Alexander, 1990; 1996; Begon et al, 1996; Spellerberg, 1996). Although the issue about complexity and stability has been under discussion for many years now, it is still a source of contention in the ecological literature (Begon et al, 1996; Elton, 1958; May, 1972; 1977; 1993). Mathematical modelling related to food webs indicates that more complex systems are unstable (May, 1972). However, it is nevertheless broadly agrees that in many ecosystems heavily modified by human action, diversity needs to be reintroduced, and an aim of bioregionalism is to encourage and facilitate

ecological, cultural and social diversity (Berg, 1983b). Whatever the true picture with regard to diversity and stability, it seems clear that the stability and survival of non-human nature is linked more broadly to the relationship between people, place and non-human nature.

Bioregionalism identifies *Homo sapiens* as a species that shares its living place with a complexity of other species, communities, populations and natural systems. This perspective influences any action that occurs within an area and encourages people to engage with positive activity towards non-human nature, seeking a means by which they can 'give back to nature what has been taken from it' (Metzner, 1995). Many of the arguments put forward by bioregionalists beg many further questions, particularly in an 'old world' context of longstanding human-non-human co-evolution (for example, what is natural?). Yet within the UK the recent development and application of bioregional frameworks provides a unique opportunity to investigate the current relationship between people, place and non-human nature in a bioregional context.

2.2: Bioregionalism and Landscape Ecology

There is an array of literature that identifies the need for a wider landscape approach to conserving biodiversity (Cook and Van Lier, 1994; Forman, 1995; Selman, 2000; Zonneveld, 1994). It would be impossible to consider the potential of a bioregional framework for integrated biodiversity action without considering a fundamental aspect of that integration: the role of people. Forman and Godron (1986) identify humans as a fundamental component of the landscape and therefore landscape ecology. Of primary importance to bioregionalists is the question of whether bioregions provide a framework for people to reconnect with non-human nature (Alexander, 1990; Berg and Dasmann, 1978; Sale, 1985). Thus I will briefly consider the role of landscape ecology in not only linking people, place and non-human nature, but also bridging the gap between the concept of bioregionalism promoted in the United States and the use of bioregions in the UK.

2.2.1: Early Landscape Ecology

Landscape ecology is often referred to in purely ecological terms as being the study of the spatial and temporal interrelationships between ecological components within a landscape (Gurevitch et al, 2002). This originated in early ecological studies that considered the implications of spatial habitat patterns including size, positioning and shape in relation to species survival. Early landscape ecology was founded on a number of historical conceptual frameworks including MacArthur and Wilson's (1967) Island Biogeography Theory and the debate surrounding nature reserve design known by the acronym SLOSS, (Single Large or Several Small) in relation to

nature reserves (Begon et al, 1996; Forman and Godron, 1986; Selman, 2000). Island Biogeography Theory raised important concerns regarding the viability of isolated reserves in the midst of hostile land uses (Pullin, 2002). MacArthur and Wilson's theory was based on a series of mathematical models concerned with the colonisation of islands by species from the mainland. The primary premise was that with increasing hostile environment between the island and the mainland there would be a decrease in the number and diversity of species colonising that island (Begon et al, 1996; Pullin, 2002). This theory has been extrapolated by conservationists in relation to isolated fragments of semi-natural habitats within a hostile landscape such as urban areas or agricultural land (Lunt and Spooner, 2005; Selman, 1993). Although criticised for being too simplistic and not considering complexities within the landscape such as the presence of habitat corridors (Boecklen and Gotelli, 1984), the theory has significant implications for the spatial arrangement of protected sites within a landscape and their long term ecological viability (Dunning et al, 1992).

The SLOSS debate encouraged ecologists and conservationists alike to consider the most suitable size and number of nature reserves to allow for the support of the most species (Huggett, 1998; Selman, 2000; Van Lier and Cook, 1994). This debate encouraged researchers to consider both habitat patch dimensions and the implications of the surrounding landscapes. This debate sparked concern regarding the implications of reserve shape (Blouin and Conner, 1985), the distance between reserves and the influence of connecting features on the ecological integrity of the landscape (Boecklen, 1986; Pullin, 2002). Connectivity and connectedness have become essential principles within landscape ecology following the findings of research suggesting that many species need to be able to migrate within and between habitats to fulfil all aspects of their life cycle (Forman and Godron, 1986). This will become increasingly important, given the implications of climate change and the inevitable migration of some species within the UK (Countryside Council for Wales and Wales Landscape Partnership Group, 2001).

Landscape ecologists have used these principles to consider the impacts of management regimes on specific habitats (Baldwin et al, 2004), the role of meta-population theory (Edwards et al, 1994) and the implications of increasing connectivity via corridors, other linear features such as hedgerows or habitat stepping stones (Beier and Noss, 1998). Many of the principles such as connectivity have sparked much debate among researchers although Beier and Noss (1998), in their review of literature related specifically to habitat corridors and their benefits or limitations for connectivity, found general support for them.

The early studies in landscape ecology were concerned primarily with traditional ecological approaches based on theoretical hypotheses and mathematical modelling. More contemporary

studies tend to concentrate on empirical studies related to specific species (Cale, 2003) or features within the landscape such as corridors (Dover, 2000). Texts produced by Forman and Godron (1986) and Forman (1995) concentrate on viewing the landscape as a mosaic of interacting habitat patches and linear features. Harrison and Bruna (1999) consider the ecological implications of large scale conservation concentrating upon ecological factors such as the edge effect, fragmentation and specific species characteristics. However, working at a wider scale can often be impractical: to consider all species and habitats within one landscape and their complex interactions would be a highly demanding task. Thus many broader landscape ecological studies are theoretical, rather than practical. Landscape ecologists have also been criticised for only considering spatial rather than temporal relationships (Turner et al, 2001) and considering the ecological integrity of the landscape but excluding the human aspects (Lunt and Spooner, 2005).

2.2.2: Landscape Ecology: Integration of People, Place and Non-human Nature

In recent years, as Fry (2001) discusses, landscape ecology has begun to bridge the gap between the ecological requirements of species and social, cultural and economic needs within the wider landscape. This has been encouraged by the International Association of Landscape Ecology (IALE), whose definition of landscape ecology is pertinent to this research:

> "Landscape Ecology is the study of the interaction between temporal and spatial aspects of the landscape and its flora, fauna and cultural components" (IALE (UK) Website, 2004).

The International Association of Landscape Ecology (IALE) was formed in 1992 with the main aim of considering ecology at the landscape level. Landscape ecology has been identified as fundamental in linking planning with ecological studies. Bunce and Jongman (1993) identify six important concepts within landscape ecology that can be used to integrate ecology and planning: 1) sustainability; 2) hierarchy of landscapes – landscapes that operate at different scales; 3) gradients; 4) biodiversity; 5) meta-populations – the interrelationships between different sub-populations, their dynamics and the implications for connectivity and; 6) data capture and analysis – the development of Geographical Information Systems (GIS). These factors are also fundamental to bioregionalism and some of them are of relevance to bioregional frameworks in the UK including sustainability, landscape hierarchies, biodiversity and GIS (Porter, 2004). GIS was of fundamental importance to the development of English Natures Natural Areas (now JCAs) allowing for greater flexibility in overlaying ecological and human components within the landscape (Porter, 2004). However, whilst GIS provides a practical tool for assessing and manipulating landscape features in an abstract way, it is still dependent upon human decision

making. This means there is still a need for an understanding of the complex relationship between people, place and non-human nature. As suggested by Meinig:

> "landscapes mirror and landscapes matter, they tell us much about the values we hold and at the same time affect the quality of the lives we lead" (1979).

Landscape ecologists have tended to compartmentalise the people aspect of the landscape. The relationship between people and the landscape is largely seen as a negative one, recognising the impacts of fragmentation, degradation and isolation and the need to overcome these problems, rather than considering the complex interplay of human motivations for achieving this in practice, especially within the UK where much of the land is in private ownership (Harvey, 1997). I believe that if people are to be considered in a wider context, as bioregionalists suggest, then there is also a need to understand the relationship between people and place and to utilise this understanding to put into practice the concepts that are discussed within landscape ecology. Gurevitch et al (2002) suggest that realistically, political and economic realities influence purely ecological considerations. It is impossible to view them as separate, when considering landscape scale studies. Boothby (2000) argues that realistic social principles and strong policy are required if landscape ecological theory is to be applied in practice. Humans have impacts upon the landscape in many ways sometimes landscapes change slowly in response to these changes, but often the impact is relatively fast and over a large spatial scale.

2.2.3: Integrating People and Non-Human Nature in Practice

The underlying philosophy of landscape ecology is holism that is viewed as multi or trans-disciplinary (Zonneveld, 1988), bringing together diverse subject areas such as biology, geography and planning (Rowe, 1988). In 1996 Cheshire County Council, The University of Salford, English Nature and John Moores University developed a holistic sub-regional ecological network framework known as LIFE ECONET (James et al, 2000). This project explored ways in which ecological networks could be used to integrate environmental issues into landscape planning and management, therefore interrelating people and non-human nature through landscape planning and management. James et al (2000) describe how ecological networks based on clusters of key habitats; corridors and stepping stones; buffer zones and nature restoration areas were considered in three agricultural case study areas (Cheshire, England, Emilia-Romagna, Italy and Abruzzo, Italy). The project argued that in addition to engaging with local stakeholders, ecological connection could be achieved through targeting of Agri-environment Schemes. However, it was found that there was no 'natural' scale at which all economic, social and natural components came together, the authors suggesting that localised environmental issues

are better dealt with at a local level. They simultaneously suggested that local authorities with limited resources tend to concentrate on areas that they are legally required to protect, such as designated areas, which results in the continued dismissal of the wider countryside. This example illustrates how a seemingly straightforward belief that landscape ecological principles can be used to integrate people and non-human nature, is undermined in practice by the actual complexities of politics, designations and the difficulty of engaging with local stakeholders.

Jongman (2002) discusses how an integrated approach based on ecological principles is becoming increasingly influential within Europe, arguing that there are numerous threats to biological diversity across much of the world, and that these threats have extended and are also impacting upon cultural diversity. This reduction in distinctiveness is a threat to the interaction of people, place and non-human nature. Bioregionalists suggest that this reduction in diversity leads to a reduction in stability and a permanent loss of many species and cultures (Sale, 1985). The development of ecological networks across Europe is viewed as fundamental to the survival of much biodiversity and cultural diversity (Jongman, 2002) but to achieve this, ecological networks need to be integrated into landscape planning. Jongman concludes by identifying the need for multi-disciplinary problem solving that includes socio-economic functions, political functions, ecological processes, genius loci (place based appreciation) and educational functions. However, Jongman does not identify a way in which this integration can be achieved.

2.2.4: Landscape Ecology and River Catchment Planning

Much landscape ecology overlooks the influences of river catchments in the wider landscape. Although few studies have been carried out specifically considering the role of landscape ecological concepts within river catchment functioning, in recent years these have begun to increase. Bioregionalists identify the importance of landscape ecological concepts at the watershed scale as well as at the scale of a land-based bioregion, therefore within this study it is important to consider both as both types of bioregion are considered.

Forman and Godron (1986) identify a watershed or river basin as an area drained by a river or streams and its tributaries. However, they suggest the landscape as something distinct that may or may not correspond to the boundary of a watershed. Often rivers are viewed as linear features within a landscape that can act as a conduit for species dispersal and a habitat in itself for a range of different species (Petts and Callow, 1996). Burt and Pinay (2005) identify river catchments as important landscape elements, recognising they have often been overlooked by scientists that have concentrated on specific aspects of a landscape. They go on to discuss the complex interactions between river catchments and surrounding hill slopes in relation to biogeochemistry

and riparian habitats. This paper recognises that river catchments, though often treated as separate from the landscape, are a fundamental part of a wider landscape. Edwards and Dennis (2000) specifically tackle the issue of the landscape ecology of water catchments identifying catchment boundaries as defined by topography. Whilst addressing specific river related issues such as nutrient levels and fluvial based habitats, the use of river catchments in relation to delivering policy targets would involve not only considering these specific issues but would require the integration of a range of information that has been identified at much smaller spatial scales. Falkenmark (2004) suggests that the catchment is composed of two mosaics the human water related and the water dependent and terrestrial ecosystems, recognising the importance of the interrelationship between them. Whilst it has long been recognised that agricultural and industrial land uses can have negative impacts upon a river catchment (Burt and Johnes, 1997) few studies actually investigate river catchments from a landscape ecological viewpoint that considers the landscape as a mosaic of different elements, including river catchments (Forman, 1995).

Allan et al (1997) have argued that the influence of land use on the ecological and physical integrity of a river system is scale dependent, as with most landscape interactions, with in-stream ecological conditions being determined locally and issues such as sediment load being a larger scale issue. A catchment is influenced at a range of different spatial scales by a variety of factors that will enhance or reduce the quality of this interrelationship such as flood events that act to increase people's awareness of a river, but may also instil a view of separation between people and non-human nature. However, as with the study of terrestrial ecosystems, landscape ecology has been used primarily to consider species and habitats within a river system rather than the interaction between people and non-human nature. The interaction between people and river catchments is limited to studies regarding sediment loads, flooding and pollution instances. Weins (2002) has contended that it is "time to take the 'land' out of landscape ecology" (p. 501). By this he is suggesting that landscape ecology moves beyond looking at the 'natural' aspects and begins to consider the cultural as well. I suggest that river catchments and landscape units are more than just an interaction between different species and habitats or non-human nature and people, they involve a complex interaction between people, place and non-human nature.

So in summary whilst landscape ecology provides an excellent foundation upon which to consider the interrelationship between place, people and non-human nature at the moment it still has a tendency to concentrate upon theoretical concepts and GIS studies based on the ecological integrity of a landscape at a range of spatial scales. Bioregionalists contend that landscape ecological concepts are also fundamental when considering the interaction of people and non-human nature within a bioregion (Thayer, 2003). They have claimed that landscape ecology can

be used as a means of developing a living practice that relates to the ecological integrity of a specific bioregion, such as the rehabitation of northern California (Berg, 1978).

Chapter Three

Sense of Place: Hybridity and the Relationship between People, Place and Non-human Nature

"Individuals sense of places is both a biological response to the surrounding physical environment and cultural creation" (Hayden, 1995, p.16)

3.1: Sense of Place: Introduction

In this chapter I will consider the concept of a sense of place and the way this has proved central to my research. There is a considerable array of literature that discusses sense of place and, as will become apparent, there is little consistency in the use of the term, academics and landscape practitioners often glossing over its intricate relationships between people and non-human nature. My research has fallen within the realm of hybrid geographies and ecofeminism; both of these theoretical views will be considered and related to my wider research aims and arguments.

3.1.1: Space and Place

It is important to differentiate between space and place. Space and place are two concepts that are used to answer the 'where and what' questions in geography (Taylor, 1999). Over the past few decades there has been a prolific literature published that considers space and place, however, there is a tendency to use the terms interchangeably and often writers fail to distinguish the differences between them. I will first discuss the differences between space and place. There is a complex literature on this, but for the purpose of this research only a brief introduction is necessary.

A simple distinction of place and space has been made by John Agnew (2005) who identifies space as a location somewhere and place as the occupation of that space or location. Massey (2005) suggests there are three main premises of space: 1) space is a "product of interrelations" (p.9); 2) space is heterogeneous and conceived of multiplicity and; 3) space is continually being constructed and reconstructed. Whilst space may be seen as bounded in relation to city, county, regional and local boundaries (Graham and Healey, 1999), place is viewed as unbounded (Massey, 1994) and more ambiguous. We often take for granted the concept of space and our spatial distribution throughout an area and the existence of places throughout these spatial planes (Crabtree, 2000). Gray (2000) identifies the difference between space and place: space being viewed as separate and dehumanised, something that is the onerous product of cartographers that have the power to define and organise spaces, whereas place is viewed as a "sensual construction of meaningful locations" (Gray, 2000, p.8).

Space is an important backdrop upon which people, place and non-human nature interact and co-exist. However, space has tended to be used in relation to its spatial context, with the mapping of the spatial patterns of both natural and social characteristics being a common theme within much geographical research (Agnew, 2005; Crabtree, 2000). Despite this some authors treat space and place as interchangeable. Tuan (1977) in his text *Space and Place* suggests that space and place are in fact complementary and should not be viewed as binary opposites. However, Rose suggests that both space and place are fluid and ambiguous and therefore difficult to describe and study stating that:

> "space…and place…far from being firm foundations for disciplinary expertise and power, are insecure, precarious and fluctuating" (1993, p. 160).

In his analysis of the development and progress of the concepts space and place in human geography over the past forty years Taylor (1999) uses many of the arguments presented by Tuan (1977) to expand his view of space-place tension. Space-place tension he argues is the result of everywhere having the potential of being space and place dependent upon who is viewing them. Within this research I replace the idea of space-place tension with that of landscape-place tension. Within a bioregion everywhere has the potential of being a place and a landscape dependent upon the context and particular viewpoints.

Hayden (1995) states that place is difficult to define, arguing it can have multiple meanings, be based on physical appearance, a sense of ownership and even a place of memory. He further argues that the physical production of space began with the first indigenous settlers and became increasingly more complex with time. Places can act to trigger memories and there has been a long debate over the extent to which nature and culture are entwined (Hayden, 1995). Place is often viewed as more abstract, less clearly demarcated than space (Massey, 2005). Massey (2005) contends that place occurs as the interrelationship between space and time. Places can be viewed as being interwoven together through space (Agnew, 2005). Agnew (2005) states that feminists argue that there has been a general failure to acknowledge pluralism or multiple perceptions of place. I suggest that places and a sense of place are plural, with places having multiple meanings to people at any one time. I extend this further and include the interrelationship between people, time and space and also contend that place is often more of an evocation than a discrete entity. Within this research I consider space in the terms of the landscape, rather than any more abstract concept of space and argue that the landscape is in turn the product of the interrelationship between people, place and non-human nature. In this chapter I will show that this relationship between people, place and non-human nature has become more

intangible with technological advances (Graham, 1998) and researchers have argued that this has resulted in the advent of the concept of placelessness or non-place (Agnew, 2005; Relph, 1976). However, I contend that both landscape (space) and place are the by-product of the interrelationship between people and non-human nature.

3.1.2: Sense of Place: An Ambiguous Term?

A sense of place is a concept that has been used prolifically within the academic literature, most notably within cultural Geography, since the late 1960s (see Relph, 1976; Tuan, 1977). The cultural turn of the 1980s marked an increase in studies surrounding meaning and social constructivism, which included a move away from viewing place as abstract and one dimensional towards the consideration of the meanings that people attach to place and the multiple social constructions of place (Daniels and Cosgrove, 1993). The idea of a sense of place has also found its way into policy documents in relation to landscape, biodiversity and nature conservation issues (Biodiversity Steering Group, 1995). However, there is still much confusion regarding the actual meaning of a sense of place and whether or not it exists.

Crozier (2003) proposes that although the term 'a sense of place' has increasingly become popularised within academic discourse there is often little analysis of the concept itself and its wider implications. It was suggested within an early text by Relph (1976) that place was variable and primarily individualistic, although he goes on to argue that places are more than just differentiating one area from another, there is an emotive relationship between people and places. Places are viewed as areas with a personal history that can change in meaning over time with changes in the way in which people interact with them (Pascual-de-Sans, 2004).

Place can be viewed as a space utilised for social interaction that has a meaning to the people that interact with it (Petrzelka, 2004). Petrzelka goes on to suggest that "place is a space that has social boundaries and meaning-meaning brought about primarily by the social interactions occurring there" (2004, p.387). The primary argument is that place is a social construction and therefore a sense of place is a by-product of this social construction process. Sense of place has been used interchangeably with different concepts including a sense of belonging, sense of attachment, character of place, sense of being at home, sense of ownership, *genius loci* and as the opposite to placelessness (Arefi, 1999; Relph, 1976). Although a sense of place is viewed by Jackson (1994) as ambiguous with little meaning attached to it, Dakin (2003) identifies this ambiguity as useful, enabling a broad definition and subsequent application of the term.

Jivén and Larkham (2003) claim that the term *genius loci* has undergone a series of transitions in meaning. Early translations identify *genius loci* as being the aesthetic appreciation of landscapes (Jivén and Larkham, 2003) and this expanded to include any places or landscape. Jackson (1994) suggests that the translation of *genius loci* has undergone so many transitions that the original meaning has become somewhat blurred and it is increasingly being referred to as a sense of place. *Genius loci* has also been used interchangeably with the idea of the 'character of place' (Jivén and Larkham. 2003), the interchangeable manner in which these concepts are utilised within the literature may lead to the assumption that they are one and the same thing. I suggest that the 'character of place' is primarily based on physical differences between areas, be it through geology, vegetation or landform and I would suggest that an overemphasis on physical and visual character in identifying a sense of place is an oversimplification of a complex term. A sense of place is less tangible than the way in which landscape character alone would portray it.

Conzen (1966) identifies the way in which sense of place and *genius loci* are used: "group identity is thus closely linked with the form and history or place, creating a sense of place or *genius loci*" (p.69). But whilst *genius loci* can contribute to a sense of place, it is primarily viewed as the spirit of place (Barnes, 2004; Group 75, 2005) or as suggested by Loukaki (1997), a place's fingerprint. Spirit of place is a concept often related to landscape and is a familiar concept for landscape planners, designers and artists, in fact *genius loci* is often considered in relation to art and the representations of landscape through art (Group 75, 2005). Relph (1976) suggests that "the spirit of place lives in its landscape" (p.30). Spirit of place is viewed as resulting from a combination of facets that give a place a special feel and personality (Relph, 1976; Steele, 1981) and I would argue is just one of the factors involved with the identification of a sense of place. *Genius loci* or spirit of place concentrates on the visual aspects of place (Armstrong, 2004) and this is why it has become subject of discussion within the planning arena (Jivén and Larkham, 2003). Although this has links with sense of place, for the purpose of my research it forms only one aspect of the concept and I contend that a sense of place is more congruent with a sense of belonging/attachment or identity of place. However, it has been argued that there is a need to bring the term 'down to earth' and to move away from the ambiguous use that has dominated academic literature (Seddon, 1997, p.106). Within this research I relate a sense of place to a sense of belonging, or a sense of home, and contend that this sense of being at home in a place is the result of a close interrelationship between people and non-human nature.

3.1.3: Sense of Place as Sense of Attachment/Belonging

I contend that a sense of place is closely interrelated to a sense of identity. A sense of place within this study is more than the visual appreciation of an area, it is a deep seated feeling of attachment that one has to a particular place. People interact with places on a daily basis, but not all places will elicit the same response from people. Different people view places in different ways and it is often argued that a sense of place is deeply personal, making it rather intangible and difficult to measure. However, Tuan (1977) has suggested that an attachment to place or as he terms it 'homeland' is a worldwide phenomenon that he views as reassuring to people. This homeland or place is viewed as a driver for the development of a sense of identity that in turn results in loyalty to a specific place. He suggests that place is where people believe it to be and occurs at a variety of spatial scales. Luckermann (1964) identifies place has having six different interpretations: 1) location – the way in which a place relates to other things; 2) an integration of nature and culture – "each place has its own order, its special ensemble, which distinguishes it from the next place" (p.170). 3) As interconnected spatial interactions; 4) localised; 5) emerging or becoming – in terms of historical components; 6) meaning – that which is characterised and applied by people. It is this final point that underpins a sense of place. A sense of place relates to the meaning of a specific place to people and this meaning is influenced by many factors including length of residence, presence of a specific landscape feature, culture, history, the degree of attachment we have to a place, intuition and instinct. As argued by Clifford and King (1993), places differ from each other and there are no two places that are identical.

Gray (2000) argues that place is a product of the way people associate and relate to a specific area in everyday lives. He goes on to suggest that the political economy has increasingly globalised everyday living, resulting in groups of people forming a group identity in relation to a commitment to a specific place or cultural practices (Nadel-Klein, 1991). Through globalisation and the perceived separation between people and place, there has developed a much heightened awareness of place and the meaning of being in place (Feld and Basso, 1996; Blunt, 2003).

Relph (1976) suggests that place is not experienced clearly, rather that places are "sensed in a chiaroscuro of setting, landscape, ritual, routine, other people, personal experiences, care and concern for home, and in the context of other places" (p.29). He also suggests that ritual, custom and myth also act to strengthen attachment to place. Hampton (1970) asserts that attachment to place increases with the length of time that someone lives in a place, although he also suggests that this attachment may be more about an attachment to the people in that place rather than the place *per se*. All landscapes and places are experienced by individuals in different ways and

Lowenthal (1961) argues that it is this individuality that is being addressed when considering place. This is supported by Relph (1976) who argues that people who have an attachment to a specific place will have multiple experiences that influence the depth of care:

> "It may be that it is just the physical appearance, the landscape of a place that is important to us, or it may be an awareness of persistence of place through time, or the fact that here is where we know or are known or where the most significant experiences of our lives have occurred. But if we are really rooted in a place and attached to it, if this place is authentically our home, then all of these facets are profoundly significant and inseparable" (Relph, 1976, p. 41).

I concur with Relph that no one factor delimits a person's sense of place; it is influenced by multiple experiences and facets of day to day life. This deep sense of attachment to a specific place can result from a great depth of knowledge regarding a place such as the way in which a farmer may know their land (Gray, 2003) or be the result of specific memories of a place. Arefi (1999) has contended that memories may continue long after the loss of a place and it is the memory, not the place that is significant. A sense of place is influenced and shaped by our life experiences (Clifford and King, 1993; Rishbeth, 2001) and a product of our relationship with the landscape (Maser, 1998; Rishbeth, 2001). Sopher (1979) has discussed the relationship between the landscape and a sense of being at home, with specific components of the landscape being socially constructed eliciting a sense of place. However, landscape is only one component of a sense of place (Muir, 1999). Primarily sense of place is related to meaning: the meaning that we attach to a specific place. "Place is both a centre of meaning and external content of people's actions" (Knox, 2005, p.2).

It has been argued that a sense of place is often associated with rural areas (Muir, 1999). Sometimes this association is very particular, borne of a close relationship over time. For example, Gray (2000; 2003) argues that hill sheep farmers in Scotland have a distinctive sense of place and this sense of place is sustained due to the intricate relationship between the farmers and their land. This sense of place is viewed as being influenced by knowledge, familiarity and dependency. Farmers, especially those within remote areas of the Scottish Highlands are dependent upon a specific place for their economic survival as well as there often being a heightened social relationship between farmers within these remote areas (Gray, 2000). Gray (2003) identifies the same deep seated sense of place between farmers and their land within the hills of Nepal. More broadly it has been suggested that the countryside in England is part of the English national identity in the same way as the Australian 'bush' depicts the identity of Australia (Head, 2000). Even though there is a wider literature that illustrates the unrealistic and

idealistic way in which this perception has been portrayed (Atkins et al, 1998; Short, 1992; Wright, 1993), many writers affirm a strong association between England and the countryside (Atkins et al, 1998; Lowerson, 1992; Head, 2000). However, there is a significant body of evidence that identifies the presence of a sense of place within urban localities such as the West Midlands (Allen, 1999). It is important to be aware that a sense of place is not just perceived as a rural phenomenon but there is evidence to suggest it is widespread.

A sense of place can apply to areas of varying spatial scales, from the local to the national (Muir, 1999). Allen (1999) asserts that nationhood relates to the concept a sense of place, the Welsh and the Scots having a strong regional identity and attachment to their country and culture. Often national identity and place attachment is an emotive issue, raising questions surrounding culture and whether or not a person is indigenous to a country. Allen (1999) suggests that all people need to belong and this belonging may be related to local place attachments or more national attachments. Blunt (2003) argues that identity can relate to place and often evolves around a shared sense of identity. Mabey (1993) asserts that a sense of rooted territoriality or nationhood is imprinted in people by their relationship to places.

It is claimed that people have multiple identities which will evolve over time in relation to a series of different facets, of which place is one. Blunt (2003) suggests that to fully appreciate this there is a need to recognise the situatedness of that identity. Wallwork and Dixon (2004) identify that national identity is important to many people within the UK, national identity being developed through a range of place and space interactions. They discuss how national identity has been deeply embedded, potentially falsely, within the arguments surrounding the hunting ban. The British countryside, often idealised as a place of harmony and social cohesion, (Little and Austin, 1996; Short, 1992) has been used as a backdrop for the arguments for and against the hunting ban. The pro-hunting stance contended that hunting was a part of the English countryside and therefore fundamental to the national identity of England, as England is often represented in terms of the rural with urban areas being glossed over or totally ignored (Wallwork and Dixon, 2004). Little and Austin (1996) show the way in which a sense of place is conflated with territorial debates and national identity that often creates an idealised perception of place as presented within the 'rural idyll'.

In his text '*Belonging*' Peter Read (2000) suggests that non-indigenous Australians can develop a 'love' for the land that is independent from that developed and conveyed within aboriginal history. Val Plumwood (2000) argues that this dismisses the complexity that exists in relation to the sense of belonging that exists within Australia and is presented by indigenous people. If she is correct, migrants must therefore have no sense of place when they move from one area or

country to another, however, Armstrong (2004) argues that this is not the case and many migrants have a divided sense of belonging to a place. Bryan (2005) investigated sense of place in relation to the migration of people from Jamaica to England, identifying that home is linked to identity, and homesickness is a common phenomenon for migrants.

People attach meaning to place and it is argued that this meaning represents a symbolic relationship between groups of people and place (Armstrong, 2004). Arefi says "proper connection to places is characterised by social, historical and physical connectedness and calls for social interaction and continuity of the lived experience" (1999, p.188). History is seen as important to sense of place and it is suggested that the longer the relationship between people and a place has existed, the stronger the sense of place is (Armstrong, 2004). However, place is also viewed as subjective and internally constructed (Knox, 2005), although Knox goes on to suggest that shared experiences create place, with meanings deeply embedded in place. Every place has a history and in the UK especially, this history is deeply intertwined with people and the relationship between people and non-human nature. De Bres and Davies (2001) suggest that people interpret themselves, and are often interpreted, dependent upon where they live. Pride in place may develop as the result of this and is often represented by participation in community festivals that act to promote local identity and pride of place.

People interrelate with place in many different ways: they live in place; work in place and even name place. A factor that is common throughout the literature is that this sense of place is important to the well-being of people (Blunt, 2003; Meinig, 1979; Tuan, 1977) and although there are many other factors that influence place the landscape is central to the development of place (Tuan, 1977). Place can often create unequal power relations (Gray, 2000), identifying the need to consider differentials of power within an area, a view which is supported by Tilley (1994) and Gupta and Ferguson (1997). This relationship between place and power is a common thread within much of the literature on place, primarily in respect of land ownership (Duncan, 1995; Smith, 1993). Land ownership in rural areas often demarcates the divide between the wealthy and the less wealthy, with the wealthy owning land and therefore having the power to construct place in a particular manner.

3.1.4: Placelessness: Inauthentic Versus Authentic Sense of Place

A sense of place is socially constructed but there is also the assertion that a sense of place can be created and there is a difference between authentic and inauthentic senses of place (Relph, 1976). In the late 1960s literature discussing the relationship between placelessness and increasing mobility specifically in relation to the changing role of church buildings or cathedrals

evoking a sense of place was being published. Placelessness is the losing of a sense of place due to the processes of mass production and the increasingly uniform landscapes that this produces. Relph (1976) argued that in the past there has been a tendency to work with local differences, yet this adaptation to difference was lost with increasing technological advancements. Some of these views are becoming increasingly relevant given today's highly mobile and technocratic society. He points to processes of 'Disneyfication', 'museumisation' and 'futurisation' all of which result in the conversion of place into some idealised utopia in which either the present is manipulated (in the case of Disneyfication); the past is idealised and immortalised often in an inaccurate manner (museumisation); or an idealised future is presented, paying no regard to the existing place in which it is being produced (futurisation). Disneyland is the ultimate fabrication of place, a place created with the sole purpose of attracting tourists, yet this place has become a model for other cities within the United States (Vanderbilt, 1999). Vanderbilt (1999) identifies Disneyfication as the process of the "substitution of urban reality" with an imagined place. Disney did not just influence place and what we conceive as place but also had an impact on art and culture (Hebdige, 2003). Museumisation on the other hand is the process of, in a sense, mummifying place and not allowing for change (Relph, 1976). In the UK there are a number of examples of places being returned to an earlier stage in their evolution and this can be witnessed in relation to the practices of nature conservation that (re)create 'traditional' management regimes to support semi-natural habitats that may not exist without human interference, and a desire to keep things the same (Adams, 2003).

Relph (1976) identifies that a "sense of place may be authentic and genuine or it can be inauthentic and contrived or artificial" (p.63). He also argues that "an authentic sense of place is above all that of being inside and belonging to your place both as an individual and as a member of a community, and to know this without reflecting upon it" (p.65). Tourism can be viewed as an erosion mechanism, eroding sense of place by producing an inauthentic appearance to place, one which is tailored to 'outsiders' rather than people within an area and one that has become uniform to fit with tourist expectations rather that the individuality of a place (Relph, 1976). People are guided by 'tourist attractions' yet fail to appreciate the surroundings and the settings in which these attractions occur. Commodification of places is a common phenomenon across the UK and other countries including the United States with places often having their complex and multi-faceted histories oversimplified for tourism (Arefi, 1999).

Waterton (2005) shows how restoring a place to an earlier stage within its history can destabilise a sense of place and result in conflict between people that reside within an area and those that are trying to create change. The Hareshaw Linn community project, in Northumberland National Park, involved the reconstruction of a Victorian walkway and a series

of bridges. However, the project was initially developed by the National Park Authority with little interaction with local communities, and was concerned with the re-establishment of semi-natural habitats. Waterton (2005) suggested that there was an element of mistrust that developed within this project as ownership was perceived to be with the National Park and not the local community. She argues that by overlooking the perspectives of local communities and developing a project based on reconstructing semi-natural habitats, the National Park Authority was effectively excluding the very people that had developed a deep seated sense of place within the area, failing to consider what aspects of the project were important to the continuation of this relationship. This is important when considering Joint Character Areas (JCAs) and river catchments and the emphasis that is now being placed upon community involvement and the importance of these senses of place (Countryside Commission and English Nature, 1996; Somper, 2005).

It has been argued that increasing globalisation results in a separation of people and place (Cox, 1968; Gray, 2000). Advances in transport links, media technologies and telecommunications means that it is no longer difficult to move from one place to another or communicate across large distances. The development of the Internet and e-mail technology means that communication across the globe occurs in a matter of seconds, reducing the need to visit places (Whatmore, 2002). Media advancements allow places that may have been unfamiliar to become familiar through news reporting and global networking, shifting the dynamics of a sense of place (Morley, 2001). These rapid technological changes can be viewed as exacerbating the concept of placelessness or lack of place (Knopp, 2004). Within the UK, developments in farming have resulted in a decline in local diversity due to the fragmentation of the landscape and removal of many semi-natural habitats, arguably reducing landscape distinctiveness that is closely correlated to a sense of place. Petrzelka (2004) argues that rural communities that were dependent upon agriculture and the land for their survival are now changing communities influenced by different facets of globalisation. She argues that place is constructed and reconstructed depending upon social and political processes, these same political and social processes are perceived to be slowly diminishing a sense of place.

Modernity is viewed as the driving force behind the commodification and the devaluation of place (Arefi, 1999). It has been argued that loss of place is a phenomenon in both rural and urban areas (Dijst et al, 2005) due to urbanisation, industrialisation and globalisation. Clifford and King (1993) also suggest that there exists a 'genuine' meaning of place and that of a 'created' meaning through the distortion and simplification of history. However, there is little discussion surrounding what an authentic place actually is, although there is a wealth of discussion surrounding inauthentic places. Arefi (1999) refers to these inauthentic places as

non-places, places that lack distinct characteristics. This is a difficult notion to comprehend given many authors suggest that a sense of place is multi-layered, subjective and individual (Knox, 2005). Arefi (1999) claims that there exist manufactured meanings of places and places of invented traditions and meanings are created to sell place as a product. Place will therefore become conflated with that manufactured meaning and will be viewed as inseparable from it, making it difficult to identify whether or not there exists a genuine sense of place. Armstrong (2004) relates a sense of place to a strong sense of history and contact with people, claiming that this sense of history distinguishes an authentic sense of place from an inauthentic sense of place. However, if a sense of place is socially constructed, whether manufactured or not, individuals may still have a deep seated sense of attachment to that place. As Armstrong suggests it is the meanings that are embedded within place that are the significant factor, and different individuals will attach different meanings to different places.

> "We propose that designers need to develop more theoretically unformed concepts of sense of place, authenticity and character, which furthermore should be informed to a much greater extent by the views of the people clinically involved" (Jivèn and Larkham, 2003, p. 79).

This quotation suggests that place can be recreated or created, developers can imbue a sense of place into an area. As places are becoming increasingly homogeneous, developers are being enlisted to create distinctiveness, which is often marketed to tourists (Knox, 2005). Although, it seems that some places may be visibly more distinctive than others such as the Lake District, Dartmoor or the Cotswolds. Yet a sense of place is not just based upon distinctiveness it may be invisible and concern a close relationship between a person and a place in which they grew up. According to Pascual-de-Sans "places cannot exist without us and we cannot exist without places" (2004, p. 349).

Through writing about place we are inscribing meaning onto a place. Cosgrove and Domosh (1993) argue that "we are not just representing some reality, we are creating meaning" (p.35). The way in which we write about a place shows as much about us as it does about the place we may be describing. When Hepple and Doggett (1994) write about the Chilterns they are inscribing their own meaning and own constructions onto the Chilterns. Tuan (1991) provides an overview of the way in which human speech and place naming can bring places into being, language being seen as a driving force towards the creation of place. There are other ways in which places can be manufactured aside from writing about them. A number of researchers highlight the importance of a sense of place to planning and the creation of a sense of place within new developments (Jivén and Larkham, 2003; Knox, 2005). Knox (2005) argues that

good urban design involves strengthening a pre-existing distinctiveness and sense of place, this is often dependent upon aesthetics and the visual aspects of place. An example of this can be seen in the production of the Chilterns Building and Design Guide, that attempts to infuse a sense of place or sense of identity within to an area through the use of specific building materials that are perceived as being 'characteristic' to the area (Chilterns Conference, 1999). The Countryside Character framework has aimed to identify and promote local distinctiveness with the aim of facilitating a sense of place that will result in people being encouraged to protect their local places (Griffiths et al, 2004). Landscape Character Assessments also sought to identify 'characteristic' elements and encourage development that strengthen these, through planning policy.

A sense of place can be altered or distorted with increasing mobility. However, this mobility may not be by choice, it may be forced migration and this may exacerbate a sense of placelessness. Pascual-de-Sans (2004) identifies that, although migration may occur, people may still form a sense of attachment to certain places, for different reasons, reasons that are fluid and changeable. He argues that though through our lives we pass through many places, some briefly, some more permanent, certain places will etch on our memories more deeply than others: this is termed idiotopy – one's own place. Given the high mobility of people across the UK and the potential for people to live and work in different places, motorway connections have made travelling from one area to another simple. In much of rural England many of the population commute to and from work, and some only reside in these areas at weekends therefore enhancing the potential for placelessness. This is an issue my research seeks to investigate.

3.1.5: Bioregionalism and a Sense of Place

Bioregionalists have suggested that there is a fundamental link between people and place that can be explained through a bioregional framework (Goldstein, 1999; Gorsline and House, 1990; McGinnis, 1999a; Thayer, 2003). As stated by Parsons:

> "Bioregionalism clearly does not mean one thing. It is not so much a fixed ideology as a diverse set of notions informed above all by a sense of place" (1985, p.5).

The primary focus and ultimate aim of the bioregionalist movement is the idea of rehabitation of people, learning to live with non-human nature in a specific place (Metzner, 1995). A number of bioregionalists contend that this involves the identification and development of a sense of place (Alexander, 1990; 1996; Goldstein, 1999; Gorsline and House, 1990; Sale, 2000; Thayer, 2003).

These authors suggest that people living within an area have an affinity to that area, and are therefore better placed to identify the boundaries of a bioregion. A sense of place can be equated to a sense of being at home (Alexander, 1990). Berg (1978) claims that increasing mobility has resulted in people becoming separated from place, resulting in a loss of care for the non-human environment, people increasingly viewing non-human nature as a commodity. Bioregionalism has been viewed as a means of facilitating the development of a sense of place, reintroducing people to the place in which they live and all of its ecological, social and cultural complexities that make one place distinct from another (Berg, 1990a).

Berg (1990b) identifies that bioregional politics are strongly influenced by those people that associate with place and work for positive interaction with non-human nature in these places. Flores (1999) shows that many settlements across Europe and America have developed as the result of the existence of natural features such as water courses and raised landforms, necessary for human survival. This dependence upon non-human nature is contended to have acted as a restraint in the past against damaging environmental activities (Macnaghten and Urry, 1998; Merchant, 1980). However, with increasing economic growth and development, and now globalisation it has been contended that people have separated themselves from place and non-human nature, allowing for its over-exploitation (Merchant, 1980; Plant, 1990b; Sale, 1985). By re-establishing a connection with non-human nature, bioregionalism should facilitate the development of a sense of place or sense of belonging, and encourage a more sustainable way of living (Alexander, 1990; Berg, 2001; Dodge, 1981). However, in reality bioregionalist ideals are only being practised by small groups of people within small watersheds, primarily in North America (Berg, 1999; Plant, 1990b).

Berg (1998) and McGinnis et al (1999) suggest that loss of a sense of place should be counteracted by education programmes that advocate the value of specific places and increase the knowledge of ecological interconnections, encouraging an increased understanding of the purpose of sustainable living. But Goldstein (1999) has argued that place is a socio-cultural construct, and a specific place can have different meanings to different people, therefore it is likely that not all groups of individuals will have strong place-based associations and some may find the principles and aims of bioregionalism alien to them. Other pressing concerns in people's lives such as poverty, health and educational needs may mean they are indifferent to environmental problems, or have other more 'pressing' issues, in which case people may never conceive of a 'sense of belonging'. A bioregionalist-based education system is advocated by many within the movement, providing a means of propagating bioregionalist principles (Aberley, 1999; Berg, 1978; 2001; Dodge, 1981). However, it is felt that such education will be

fighting against a deeply embedded philosophy that views human and non-human nature as separate entities.

McCloskey suggests that "ecology and community are two sides of the river of life which are being lost together. Then they must be restored together" (1996, p.1). There is a long history of researchers who have discussed the close interrelationship between people and the non-human landscape (Adams, 1996a; Macnaghten and Urry, 1998). In contrast to this analysis of modern societies, common among bioregionalists is the belief that indigenous people have a deep seated sense of place that is intricately linked to the natural systems of an area, and it is suggested that more often than not, these people identify with naturally occurring bioregions. House (1999) discusses the relationship between indigenous Native American Indians and the salmon, seen as a totem animal, of the Pacific Northwest region of North America. He explains the depth of understanding of the natural process of rivers related to where these indigenous populations have settled, and the way in which they adapted to suit the environmental conditions of that place (House, 1999). As a totem animal the salmon is viewed as spiritually important and intricately linked to place (McGinnis et al, 1999).

Goldstein (1999), unlike many bioregionalists, identifies that this place based knowledge may not be ecologically sound. Silt cores taken from Mexican lakes showed evidence that erosion was a significant problem for indigenous peoples within Mexico prior to Columbus 'discovering' America and the Spanish introducing the plough (Goldstein, 1999; O'Hara et al, 1993). As he suggests, we shouldn't assume that all indigenous knowledge was, and is, based on sustainable adaptation within the constraints of the natural environment. Nevertheless Gorsline and House (1990) discusses this idealistic notion that cultures adapted sustainably to the natural environment, suggesting that this primitive adaptation still exists within marginal cultures today, such as nomadic herdsmen. It could be argued that these groups of peoples may be adapting more to changing cultural and societal expectations than to the natural environment. These perspectives, while no doubt of some significance in the USA, have less immediate resonance in a European and particularly a UK context. Within the UK with no true 'indigenous populations', this sort of close relationship is difficult to identify.

Bioregionalists also suggest that if people are to live sustainably within non-human nature then they should work and adapt to the natural seasonal, climatic and vegetational variations of an area. Bioregionalism aims to integrate people with non-human nature based at the ecosystem level by considering and adapting to local natural variations within an ecosystem and the wider variations of a whole ecosystem or bioregion and beyond, recognising the interconnectedness

and interdependence of human and non-human nature: "there is no independent existence" (Gorsline and House, 1990, p. 41).

McGinnis (1999b) suggests with increasing globalisation there is a danger that the cultural sense of place will be lost, resulting in the further degradation of ecosystems. If people do not associate with an area they are less likely to want to act to preserve it (Berg, 2001). Local knowledge is seen as fundamental to the development of a sense of place and bioregionalism supports and encourages increasing the knowledge of people in relation to the bioregion in which they live (Berg, 1978; Dodge, 1981). McGinnis et al (1999) consider the question of whether it is possible to restore a sense of place, contending that ecological and cultural restoration should be place-based and criticising the notion often prevalent in policy that ecological restoration should be based on sound, objective, scientific principles. Like most bioregionalists, McGinnis acknowledges the benefits that science and technology have brought for society. However, he also argues that the application of science and technology has done a lot of damage to both ecological and social systems, and there is a need to re-establish people's connections to place in a holistic manner, (not through a reductionist scientific approach). This perspective is echoed in some UK critiques of modern agricultural systems, which call for a shift away from intensive agriculture in the UK, towards a more integrated and holistic view of farming (Boothby, 2000; Condliffe, 2000; Porter, 2004).

3.1.6: Place and the Interrelation between People, Place and Non-Human Nature

Massey (1994; 2005) contends that place is often unbounded, with difficulty arising when distinguishing one place from another. However, I contend that sense of place occurs on multiple levels and spatial scales, evolving in relation to time and personal circumstances. Pascual-de-Sans (2004) on the other hand contends that places are bounded "as vague as place may be, it needs boundaries. A place without boundaries is not a place" (p.351). By boundaries Pascual-de-Sans is not referring to borders, administrative lines, but boundaries of the self that are constructed by the self at any one time within a certain place, a set of boundaries that say 'this is my place'. It is also argued that there are many different ways of relating to places, including physical surroundings (Tuan, 1991), yet this is not the only way and this may be where natural concepts such as river catchments and JCAs fall short in terms of sense of place. A place is shaped by the interaction of people and place and this is formed by life history and changing relations to place with movement. Just because mobility exists and is ever-increasing does not therefore mean that people cannot develop idiotopy, it does not mean people do not become attached to certain places and not others, but people can be attached to a myriad of places, each with different amounts of commitment, nostalgia and connection.

There is much support for the notion of an increased commitment and nostalgia for place as a result of the relationship between people and non-human nature. As shown, often a sense of place is viewed as analogous with sense of identity. Mitchell (2000) has contended that identity is often a by-product of working with the land. It is often perceived that working with the land in industries such as farming and forestry increases a sense of place, due to the intense relationship between people and the landscape and the dependency of people on the landscape. However, Burgess et al (1988) contend that any interrelationship with non-human nature may be valued to the people involved in that interaction. They revealed that many urban dwellers felt that their lives were not enriching enough due to the lack of open space or land, re-emphasising the need that people apparently have for a close relationship with non-human nature.

Non-human nature itself has different meanings to different people, it is not just 'out there' but is an intricate part of us as people and our places, with non-human nature often being the facet that demarks one place from another (Gold, 1984). Non-human nature is constructed in many different ways and in the rapidly globalising world it is being greatly influenced by the media. Gregory (2000) argues that often the media is influential in determining what is natural and influencing the way in which the general public perceive what is nature. This relationship between people and non-human nature and its potential in defining a sense of place is illustrated by Wondrak (2002) who discusses a wildlife centre in Estes Park Colorado and the differing ways this was used to construct different meanings of place. This study was carried out following the passing of a new law that made illegal the displaying of caged animals for profit. This law was passed in direct opposition to a proposed new interpretative wildlife centre based around the display of wild animals within caged environments. In this situation Wondrak (2002) established that there were multiple senses of place at play within this area, both supporters of the new centre and opponents used the concept of a sense of place to support their arguments. This study emphasised the unstable relationship between people, place and non-human nature and the way in which this relationship can be appropriated to support both arguments for the development of a wildlife centre and against this development. Those for the development argued that a wildlife centre would enhance local character and increase the number of tourists attracted to an area, being a gateway community, a community that exists on the edge of a national park. Those against this development argued that a wildlife centre would reduce the sense of place of the area and erode the character of that place. Hence this example illustrates is the complex interaction between people, place and non-human nature and the way in which it can be appropriated to suit our needs, leading to the question of whether there can ever exist an 'authentic' or 'artificial' sense of place given the intricate relationship between people, place

and non-human nature. People bring subjectivities and preferences to places (Steele, 1981) and it is these that lead to the dynamic nature of place.

Cheney (1989) suggests that bioregionalism is based on the relationship between people, place and non-human nature, with non-human nature being viewed as an intricate component of place (Michael, 1996; Sorvig, 2002). There exist a series of dualisms within this line of enquiry, the primary one being the culture/nature dualism that bioregionalism attempts to break down and this research concerns itself with the way in which these dualisms are false, given that place is dependent upon the existence of both people and non-human nature within an intricate relationship. People cannot exist without non-human nature and place would not exist without the relationship between people and non-human nature which people then interpret and socially construct (Sorvig, 2002). However, there has been a long history of human's domination of non-human nature and it is difficult to move beyond these deeply embedded dualisms (Simmons, 1993; Smith, 1996). Norberg-Schulz (1980) asserts that non-human nature "is the basis for people's interpretation and it is in relation to nature that places and objects take on meaning" (p.71).

Bioregionalists argue that the stronger the sense of place that exists within an area the greater the likelihood that people will care for non-human nature (Berg, 1978; Thayer, 2003). Relph (1976) supports this view and Burgess et al (2000) argue that farmers often have strong place based knowledge and will test the appropriateness of management in relation to different places. They go on to suggest that the uptake of agri-environment schemes for conservation purposes was influenced to some extent by the way in which farmers perceived the landscape. I suggest that this relationship between people, place and non-human nature is theoretically grounded within the concept of hybridity (Whatmore, 2002), which affirms that place is a hybrid of non-human nature and cultural impacts. Before considering this notion of hybridity I will discuss the notion of dualisms and the way in which ecofeminists identify problems associated with dualistic thinking.

3.2: Ecofeminism: The Relationship between People, Place and Non-Human Nature

Ecofeminism is often dismissed by mainstream feminists as being radical, idealistic and essentialist (Sargisson, 2001; Warren, 1987) and has been described as the "fluffy face of feminism" (Sargisson, 2001, p.52). Ecofeminism is often perceived to be composed of theoretical standpoints that are diametrically opposite to what mainstream feminists have been trying to achieve since first-wave feminism, namely the emancipation of women from masculine oppression (Sargisson, 2001). I will briefly introduce ecofeminism and its different

facets, its theoretical foundation and the criticism that has befallen ecofeminists. Finally I will identify the way in which ecofeminism and bioregionalism complement each other and develop the means of using ecofeminism alongside the concepts of hybridity as a basis for investigating the relationship between people, place and non-human nature within a bioregional context.

3.2.1: What is ecofeminism?

Ecofeminism aims to counteract all forms of oppression and this includes the oppression and destruction of the non-human environment. Ecofeminism has a number of fundamental aims, identified within table (3.1).

Table 3.1: Aims of Ecofeminism

- To include the ecological concepts of holism, diversity and equality within the critique of patriarchal frameworks.
- To take account of ecological perspectives in feminist research and feminist perspectives in ecological research.
- To provide a theoretical place that encourages the diversity of non-human nature and human culture.
- To provide a theoretical framework that provides the means for deconstructing and rethinking what it means to be human.
- To challenge the patriarchal bias within scientific and technological research and analysis.
- To recast ethical concerns and to make central moral/ethical values such as care and friendship.
- To encourage and promote activism and grassroots movements that aim to tackle issues from the bottom up rather than the hierarchical top down approach.

(Adapted from Warren, 1996a; 2000)

Ecofeminism is fundamentally concerned with ecological interdependence, diversity, resilience, adaptability and limits (Spretnak, 1989), key concepts within both landscape ecology and bioregionalism. It is claimed that these factors are being destroyed under the collective umbrella of capitalism, interconnected parts are being fragmented, diversity in culture and non-human nature is being lost, and that a less diverse environment (whether it be cultural or natural) is less resilient, less adaptable and more vulnerable to destruction (Spretnak, 1998). This is evident in the UK: for example, increased agricultural technology and the drive for profit has resulted in the loss, fragmentation and isolation of many semi-natural habitats (Shoard, 1980; 1997). This is of concern to ecofeminists who believe in the interconnected whole, working from the standpoint of holism with fragmentation being viewed as a form of social domination (Radford-

Ruether, 1989). Within this research I acknowledge the threat that people have created to non-human nature and place. If distinctiveness is lost as the result of declining diversity and increasing fragmentation there is the potential that this could undermine the emotional connection of people and place.

Ecofeminism evolved from a number of social movements during the late 1970s and early 1980s including the feminist, peace and ecology movements (Eisler, 1990; Mies and Shiva, 1993). The term ecofeminism was coined by a French writer Françoise d'Eaubonne in 1974 (Merchant, 1992). The perceived relationship between women and non-human nature began to be investigated within the literature of the late 1970s and early 1980s, with seminal texts by Susan Griffin (1978) *'Woman and Nature: The Roaring insider her'* and Carolyn Merchant's (1980) *The Death of Nature.* The early feminist movement was primarily concerned with achieving equality between men and women (Rose, 1997), many women seeing the main purpose of feminism to be to 'catch up' with men (Mies and Shiva, 1993). However, it also became apparent that environmental destruction at the hands of humans has resulted in the onset of an 'ecological crisis' (Sale, 2000). Dorothy Dinnerstein (1989) asks: "What good are equal rights if there is no Earth?" (p.194). Mies and Shiva (1993) mirror this perception by indicating that to 'catch up' with men many feminists want women to have an equal share of what men take from non-human nature. Humans are responsible for the 'ecological crisis' being identified by many scientists and it is therefore only humans who can act to reverse these negative trends. It may be 'male' dominated science and technology that has resulted in the demise of the non-human environment, but women too have used, aided and allowed these developments. Feminism may want equality but, "the question for women is what kind of public power we want to share: the kind that is killing the world or the kind that is focused on keeping the world alive?" (Dinnerstein, 1989, p. 195).

The theoretical concepts that fall under the umbrella term ecofeminism are pluralistic and multi layered. Some authors argue that it is the pluralistic nature of ecofeminism that makes it appear incoherent (Biehl, 1991; Carlassare, 1999). Davion (1994) discusses this multiplicity of ecofeminism and suggests that although it is evident that there are different aspects of ecofeminism, ecofeminism tends to be wrongly seen as a single voice and it is often the more radical aspects of the theory that are highlighted by critiques. Others believe that the pluralistic nature of ecofeminism needs to be celebrated rather than dismissed, the ecological crisis is a complex problem and there will not be just one solution (Sandilands, 1993). Fundamental to all facets of ecofeminism is the recognition that humans are an intricate part of non-human nature and are not separate. Karen Warren claims:

> "Everything is interconnected with everything else; all parts of an ecosystem have equal value; there is no free lunch; 'nature knows best'; healthy balanced ecosystems must maintain diversity; there is unity in diversity" (1987, p. 7).

Ecofeminists accept that humans are an integral part of ecosystems and are also the predominant threat to the landscape upon which we are dependent. Christ (1990) argues that we as people have lost sight of the fact that the Earth is our home, we tend to consciously or unconsciously accept that humans are superior to everything else.

3.2.2: Ecofeminist Theory within this Research

Ecofeminism has primarily developed from the view that non-human nature and women have been perceived from a perspective of subordination (Warren, 2000). The relevance to my research is that ecofeminism also identifies the way in which people and non-human nature are intricately interrelated and interdependent (Diamond and Ornstein, 1990). This view of people and non-human nature as intertwined has been presented within many different fields including deep ecology (Naess, 1989), social ecology (Bookchin, 1980) and the field of environmental ethics (Buckingham, 2004). Ecofeminists attempt to deconstruct the relationship between people and non-human nature through an integrated view of the way in which we use language and the involvement of many women's groups in environmental activism (Mies and Shiva, 1993). In this research I also consider the use of language and the way in which it is used to describe place and non-human nature. Ecofeminists also value diversity, the diversity of both non-human nature and human cultures (Mies and Shiva, 1993); this is also a fundamental factor within my research. I suggest that the diversity of culture and non-human nature contributes to place. Ecofeminism and bioregionalism share many common theoretical underpinnings both of which fit within hybridity, the view that people and non-human nature cannot be separated but are intricately intertwined (Whatmore, 2002).

Ecofeminism promotes the emancipation of all oppressed groups, non-human nature being just one of them. Whilst many ecofeminists contend that there are significant links between the oppression of women and the oppression of non-human nature, I am primarily concerned with the integration of people, place and non-human nature and recognising the interdependence that exists between non-human nature and human culture. This recognition in turn challenges the view of non-human nature as a subordinated 'other' and acknowledges the role of non-human nature in the survival of place and people. A factor that is central to ecofeminist debate. At the heart of ecofeminism is the drive to emancipate non-human nature and move away from viewing non-human nature as an 'other'. In this research I maintain the integral relationship

between people and non-human nature and the co-dependence that exists and the importance of viewing these as interrelated.

3.2.3: Conceptual Connections: Ecofeminism and Dualisms

Warren (1996a; 2000) lists ten means by which feminism and non-human nature are connected: 1) historical and causal; 2) conceptual; 3) empirical; 4) socio-economic; 5) linguistic; 6) symbolic and literary; 7) spiritual and religious; 8) epistemological; 9) political and; 10) ethical. I will primarily concentrate on the proposed conceptual and epistemological connections between feminism and non-human nature as these are the most pertinent to my research. A full discussion of all of these viewpoints can be found within Warren (1996a; 2000).

Conceptual interconnections between non-human nature and people are seen as the "heart of ecofeminism" (Warren, 2000, p.24). Warren (1996b) identifies a conceptual framework to be a set of beliefs, assumptions, values and attitudes that influence the way we view the world. Conceptual frameworks are important to this study as I argue that the landscape and places within the landscape are socially constructed and the relationship between people and non-human nature can be viewed as socially constructed. The relationship between people and non-human nature is often instinctual and not clearly obvious to people. Social constructions of this relationship can be multiple and will be influenced by many different facets, not least gender. A number of studies have found that women's construction of non-human nature can be based upon a whole array of factors (Burgess et al, 1988). Burgess et al (1988) identify that groups of women often have a negative view of woodlands that has been influenced by the way in which woods have been presented within folk and fairy stories. Kern (2005) also identifies that the length of time a woman may have resided in an area and therefore the amount of familiarity she has with an area influences whether she constructs an area as being safe or unsafe.

Plumwood (1993) contends that many constructions of non-human nature have resulted from the presence of hierarchical value dualisms. Dualisms represent disjunctive pairs such as culture/nature, man/women and objective/subjective, in which the latter of the two is primarily seen as related to the feminine and is devalued and perceived as inferior to the first (Birkeland, 1995). Within chapter four I will discuss the way in which landscape policy and practice has tended to be based on a number of dichotomous divisions including culture/nature and urban/rural and the way in which this contributed to the divides between people, place and non-human nature. These dualisms are androcentric and are seen to act as a mechanism for creating theories and driving institutions (Birkeland, 1995). She considers them to be androcentric or pertaining to male dominance because throughout history it has been predominantly men that

have been in the position to develop, deliver and drive policy and practice (Merchant, 1990). One of the primary functions of feminism has been to diminish this dominance and provide a voice for women (Peet, 1998). Although historically policy and planning have been based upon a largely male perspective, there is some change. However, this is not enough: value dualisms are still deeply embedded within social and political infrastructures.

Ecofeminism provides a critique of this dualistic worldview, as others have done previously. Head (2000) in his text on cultural landscapes recognises the role of dualisms such as culture/nature in influencing the way in which we perceive the world, with nature often being viewed as subservient to culture. This idea has been reproduced by a number of authors from a range of different backgrounds (Simmons, 1993; Smith, 1996). However, ecofeminists have presented a more integrated view of non-human nature, one that considers humans and non-human nature as equal. I suggest that in addition to being equal they are inseparable and interdependent, a key feature of hybridity.

Plumwood (1993) identifies five features that can be related to the creation of dualisms: 1) backgrounding – the refusal to identify that the devalued term contributes to the valued term; 2) radical exclusion – the magnification of the difference between the pair; 3) homogenisation – the devalued are viewed to be similar to each other, differences within that category are minimised or dismissed; 4) incorporation – the characteristics of the valued group are viewed as being more important than those of the devalued; 5) instrumentalism – the devalued category has inferior meaning, purpose or function in relation to the valued character. For example, consider the culture/nature dualism with relation to wolf eradication (an example adapted from Emel, 1995). Using this model ecofeminists would contend that those who seek to eradicate wolves refuse to accept the way in which non-human nature influences and contributes to culture. Wolves are apex predators and act to control populations of grazing animals that could have an impact for farming communities (back grounding). The difference between non-human nature and people is magnified whenever a decision occurs regarding a conflict of interest between the two, such as the conflict regarding wolf reintroduction within North America or Northern Scotland (a case of radical exclusion). All wolves are seen as a threat, although it is lone wolves that threaten livestock and this is often after the rest of the pack have been killed by hunters or farmers out of fear (thus homogenisation) (Emel, 1995). The needs of wolves in North America are seen as inferior to the needs of the rancher (incorporation) and finally non-human nature is seen as having an inferior function by comparison with culture, in this case agriculture versus nature conservation/wolf reintroduction (instrumentalism). Plumwood (1993) claims that this model can be associated to the male/female dualism, in which male attributes are viewed as objective and rational, whilst female aspects are viewed as emotional and

intuitive, and are considered as inferior. It is therefore her assertion that non-human nature and women are connected, in that within a perceived patriarchal society both non-human nature and women are the devalued aspect of disjunctive pairs (Diehm, 2003).

Important to my research is the role of language and the use of value dualisms which often occur unconsciously. Although ecofeminists have identified the presence of dualisms in the way in which we talk about non-human nature, it is difficult to pinpoint the way in which they have moved beyond these. In their theorising, if the relationship between people, place and non-human nature is to be addressed there is a need to deconstruct these dualisms.

3.2.4: Ecofeminism and the Importance of Community Participation

One of the ways in which ecofeminists have suggested that we can view non-human nature is as active and not just as passive (Haraway, 1991). Non-human nature is not just there to be manipulated and controlled by humans, non-human nature is an active source upon the earth, and floods are often beyond the control of humans (Environment Agency, 2001). Ecofeminists argue that often research takes a top down view of the relationship between people and non-human nature and overlooks or views as simplistic the knowledge of local people; this is often emphasised by the consideration of indigenous views versus scientific views (Mies and Shiva, 1993; Warren, 2000). Although in recent years many governmental organisations have recognised the importance of involving local communities in projects and working from the 'grass-roots' as it may be termed, there are often problems of communication, assimilation and dissemination of results.

Baker (1995) argues that the concerns of ecofeminism are often of more relevance to the developing world. Many ecofeminists promote grass roots or bottom up activism in response to environmental crisis from the perspective of developing countries (Mies and Shiva, 1993). However, analytical arguments are no less valid in respect of the western world: ecological devastation impacts upon the whole of the globe (for example, the impact of global warming (Pickering and Owen 1997). Fundamental to the link between people and non-human nature is the idea that we cannot understand ecological degradation without addressing social inequality (McMahon, 1997). Mies and Shiva (1993) concur with this view and cite the way in which processes of ecological degradation such as agricultural change in the developing world, has dual impacts in decimating non-human nature and adding further burdens upon women within these areas. Several authors have used the critique that developing countries are suffering at the hands of capitalistic corporations that are not only degrading the non-human environment to make a profit but are exacerbating poverty, malnutrition and the spread of disease (Mies and

Shiva, 1993), and farmers within the developing world have been encouraged to produce single crops for export, limiting subsistence farming, degrading the land, as they often use high yield varieties that are dependent upon high chemical inputs, and reducing their ability to feed their own families (George, 1992). I suggest that technological development within the western world has certainly resulted in social inequalities just one example being agricultural development. Whilst not so obviously severe the Common Agricultural Policy (CAP) in the UK has had serious impacts on farming families (Harvey, 1997). Large farms have enlarged often at the expense of smaller farms this has resulted in farmers losing their land and changes within the local economy, and has had a knock on effect on rural villages that are unable to sustain services.

3.2.5: Summary: Ecofeminism and Bioregionalism within this Research

Ecofeminism contributes to the theoretical framework of hybridity through which I consider the wider concept of bioregionalism and the extent to which bioregions in the UK facilitate, or have attached to them, a sense of place. Ecofeminism and bioregionalism are opposed to the traditional anthropocentric view of non-human nature, where humans and non-human nature are viewed as separate entities. Also of primary concern is the concept that non-human nature knows no bounds and is not constrained by political and/or administrative boundaries. Non-human nature in the UK is a hybrid and has its current form and structure as the result of human interaction within specific areas, but also specific areas (due to their non-human characteristics such as soil type) have limited or enabled the kinds of activities that have occurred within that area.

In both ecofeminism and bioregionalism there is a recognition that the basic concepts of diversity, stability, interconnectedness and autopoiesis are the driving forces within non-human and cultural systems and there is a need consider these factors within the decision making process. The importance of small scale communities is recognised within both ecofeminism and bioregionalism and political activism is an important part of this. Bioregionalism and ecofeminism are both inclusive frameworks that recognise that human societies and non-human nature have their own intrinsic value and this is recognised in the way in which people relate to their place. Finally both recognise the imminent threat of the ecological crisis and the need to act in an inclusive manner to prevent this. The theoretical concept of hybridity is one means by which non-human nature, place and people can be viewed (as they are) as a whole.

3.3: Hybrid Geography

Although disciplines such as Landscape Ecology present an opportunity to begin to bridge the gulf between so called 'cultural' studies and 'natural' studies, this bridging is still in its early stages and it concentrates largely upon ecology. Hybridity does not at any point consider people and non-human nature as separate, they are considered to be intricately intertwined. Latour (1993) also identifies place as being a hybrid, a by-product of the interrelationship between people and non-human nature, a contention which is at the heart of my thesis.

3.3.1; Hybrids and the UK Landscape

Hybrid originates from the Latin *Hybrida* and is defined by the Oxford English Dictionary as "a thing made by combining two different elements" (p.408). The term hybrid has been used to describe many different things, such as the combination of two different plant species to produce a completely new plant. This research is concerned with what is termed by Whatmore (2002) as hybrid geographies. This view is based upon the contention that every aspect of our lives is influenced by hybridity, with a hybrid being a combination of natural, social and cultural facets. People are viewed as hybrids, as are landscapes, place and non-human nature (Whatmore, 2002). No person is ever completely separated from non-human nature and non-human nature is largely influenced by human action, even in the most remote parts of the globe. Even Antarctica is vulnerable to the impacts of people. Bruno Latour describes a hybrid as "a thing like appearance that is part natural and part social and that embodies a multiplicity of historical-geographical relations and processes" (1993, p445). This Latour contends is associated with place and this is the underpinning theory for this research that place and a sense of place is developed upon the basis of an integration between people and non-human nature. I take this a step further by contending that people associate with specific bioregions, which I also contend are hybrids, part natural, part social and part cultural.

It is difficult within western Europe to identify any part of the landscape that has not been altered or influenced in someway by human activity, this human activity is so much part of the landscape that the landscape and humans can be viewed as evolving together rather than in isolation from one another (Roberts, 1998). Swyngedouw (1999) suggests that the majority of river basins within Spain are heavily influenced by human action and that waterscapes should be defined as hybrids. This can also be said of UK river basins as well as landscapes and I would argue that landscapes, waterscapes and places are all hybrids, the result of an inseparable relationship between people and non-human nature. In identifying with bioregions people are presenting a deep seated recognition of their relationship with non-human nature and a

preference for non-human rather than administrative divisions. Swyngedouw (1999) argues that hybridisation is a process of production, a process of transgression recognising that landscapes change over time, producing multiple hybrids as people view and interact with landscapes in different ways. I suggest that bioregions are hybrids and as with the landscape, they have always been hybrids and have never been either just social or just natural (Swyngedouw, 1999). This is clear in the emphasis placed on human identification with bioregions in the bioregional literature. Swyngedouw (1999) concludes his paper by considering the distribution of power that influences the changes in the hybrid relationship of people and non-human nature. He argues that farmers in the UK have the power to alter this relationship, in turn they are influenced by local physiological conditions and local government policies, which in turn are influenced by wider national policies and national and or global climatic influences. This example shows that although as people we may contend that ultimately it is us that hold the power through which to alter the relationship between people and non-human nature, non-human nature is equally able to alter this relationship. It could be argued that even climatic conditions are influenced by people in the form of global warming, yet the climate has changed naturally for millions of years. Although it may be exacerbated by human action, this does not mean it is *controlled* by human action (Roberts, 1998). Latour (2000) contends that all that exists are assemblies of different qualities, human and non-human, and there is a need to move beyond the dichotomies that exist and consider a more integrated approach. Bioregionalism may provide a practical means by which to begin to break down some of the value dualisms that have become engrained within both academia and policy making.

Light (1997) examines the different ways in which people view non-human nature and considers whether the changing way in which media technology presents non-human nature influences our perception of what non-human nature is. She views the use of media to present nature as a form of commodification and contends that it blurs the meaning that we apply to non-human nature. Cronon (1995) has contended that non-human nature beyond human existence is socially and culturally constructed. However, although all humans construct the world in different ways, dependent upon a variety of factors including gender, where we live and ethnicity, non-human nature still exists beyond this. By viewing place and the interaction of non-human nature and people as a hybrid, I am acknowledging the interdependence of both facets and the difficulty in distinguishing one from the other in the ways that dualisms have tended to.

Zimmerer (2000) views conservation as composed of social-nature hybrids. Zimmerer (2000) discusses the role conservation geographies could have in forging a link between human and physical geographies as they acknowledge the hybrid relationship of people and non-human

nature within the landscape and conservation. He concentrates on four themes within conservation: territory; scale; boundaries; and environmental linkages; which are viewed as being composed of multiple nature-society cross-overs or hybrids. He claims that conservation is no longer about drawing boundaries or cordoning off areas it is about crossing over and this is fundamental within bioregionalism and the bioregional thinking that has influenced JCAs and to a lesser extent river catchments in the UK (Porter, 2004). The idea of crossing over identifies new hybrid relationships between society and nature.

Pieterse (2001) argues that boundaries such as political and administrative boundaries are not disappearing, however, there is an increase in cross-boundary activity. He goes on to say that hybridity is meaningless without the underpinning assumption of difference, purity and fixed boundaries. As political boundaries are increasingly becoming weaker, boundaries that emphasise cultural differences, religious differences and non-human differences are increasingly becoming more distinct (Pieterse, 2001). Thayer (2003) argues that the use of bioregions as opposed to administrative and political boundaries allows for cultural and non-human distinctiveness to correspond as it is assumed that cultural differences are the by-product of the interaction of people, place and non-human nature.

3.3.2: Hybrids and Cyborgs

Donna Haraway presents a different view of hybrids and it is worth noting this in a separate section for two reasons: 1) it is slightly different to the concept of hybridity thus far discussed; 2) it contributes to the underpinning theoretical notion of situated knowledges that the research methodology of this study is based upon. Haraway (1989) discusses the concepts of dualisms and contends that the dualism nature/culture cannot be viewed separately as they construct each other. Haraway argues that complex interactions exist between people and non-human nature and these interactions can only be viewed from the partial perspective of an observer or of any person within that interaction.

Whilst Whatmore (2002) discusses hybrids as the means of considering the way in which people and non-human nature interact and Latour (1993) uses 'quasi-objects' which is another term for hybrid, Haraway (1985; 1991) considers cyborgs. However, Haraway does not just view a cyborg as part organism and part social reality, a cyborg is viewed as "a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (Haraway, 2004, p.7). This concept of a cyborg is concerned with science and the role of non-human nature within developing science and technology. Haraway (1992) contends that science, policy, media and life have resulted in non-human nature being viewed as just a place

to visit, somewhere 'out there' not an integral part of our lives (Whatmore, 2002). This concept of a cyborg has been portrayed by Whatmore (2002) as being an attempt to bring hybridity into science and technology studies.

Rudy (2005) has applied the concept of the cyborg to his study of the Californian Imperial Valley and the questions he raises regarding its identification as a watershed, region or cyborg. He discusses the concept of a cyborg as the interrelationship between non-human nature, technology and people. I suggest that this view is parallel with the concept of a hybrid discussed earlier. Rudy views the cyborg as a metaphor and identifies that such metaphors can "provide corrective lenses for the dizzying double vision produced by the nature/culture dualism that fixes nature and landscape as either autonomous natural actors or absolute social productions" (Demeritt, 1994, p.164 cited in Rudy, 2005, p.28). Rudy argues that viewing the Californian Imperial Valley from the cyborg perspective is to move beyond the distinctions being made between social and natural, technological and natural. When viewing a watershed it can be viewed as a false division between non-human nature and culture. The concept of the cyborg and cyborg politics as Rudy shows has the potential of providing a interdisciplinary platform rather than a dualistic one, from which to begin to tackle some of the environmental issues that affect the planet.

Haraway (1989) contends that science only represents 'part of reality' and the other aspects are people and non-human nature, however, we can only view this relationship partially, from a viewpoint that is complicated by our own perspectives and external influences. Cyborgs become a process of considering the interdependent relationship between people, technology and non-human nature (Haraway, 1991). Haraway's cyborg metaphor was developed as a means of viewing the relationship between technology and the human body, primarily in relation to medicine. She viewed technology as only part of the reality of medicine, people and non-human nature being the other aspects. Haraway's view is also made more complex with her view of situated knowledges (Haraway, 1992). Everyone has different views and perspectives regarding for example non-human nature and every person's view will influenced by many different aspects within their lives and may result in a viewpoint that is more or less a cyborg than someone else's view. Haraway's cyborg perspective views a cyborg as being a partial creature in a "post-gendered" world, a world without gender, the cyborg perspective allows for culture and nature to be re-worked, with non-human nature no longer being appropriated by human culture (Haraway, 2004). However, Whatmore (1997) argues that Haraway's cyborg is a political vision designed to highlight the instability of the theoretical boundaries that divide people, animals and machines, rather than an emancipating perspective.

Fundamental to Haraway's argument is the view that non-human nature is traditionally viewed as the 'other' (Haraway, 1992). This is a view shared by many ecofeminists (Plant, 1990a; Starhawk, 1990; Warren, 2000), although Haraway may not class herself as an ecofeminist particularly. She argues that non-human nature is not just a physical place that exists beyond our human construction of it, she argues that:

> "nature is, however, a topos, a place, in the sense of a rhetoricans place or topic for consideration of common themes, nature is, strictly, a common place" (1992, p. 67).

Whatmore (2002) asserts that even though disciplines such as geography claim to be interdisciplinary they are in fact still putting clear boundaries between physical and human geography. Physical geography is concerned with such subject areas as geomorphology, hydrology and glaciology and human geography is concerned with the human aspect of the world, economics, population and politics etc. Haraway (1992) argues that non-human nature is often only viewed as "a physical place to which you can go" (p.67) and not as dynamic and interdependent with human survival.

Haraway (1992) who started her career working with primates, suggests that the best form of representation an animal ever gets is from a human perspective. However, by beginning to break down the value dualisms that have dominated science, social science, politics and every day life we can begin to view non-human nature as fundamental within our lives. Although hybrids and the cyborg perspective are important in that they recognise and attempt to work with a complex interrelationship between people and non-human nature, both are theoretical perspectives. However, being able to mobilise the perspectives in practical work is difficult to achieve and many researchers within this area have turned to Actor Network Theory (ANT) in an attempt to do so.

3.3.3: Hybridity and Actor Network Theory

Whatmore (2002) views Actor Network Theory, or 'Actant Network Theory' (ANT) as important to the concept of hybrid geographies. Although authors including Macnaghten and Urry (1998) and Eder (1996) present a social constructivist view of the relationship between people and non-human nature, primarily from the viewpoint of humans and the way we respond to non-human nature (Murdoch, 2001), Whatmore's ANT considers humans and non-human nature as interconnected and inseparable.

The Actor-Network originally evolved from work of two sociologists Bruno Latour (1992) and Michel Callon (1991) who identified people and non-human nature as actors within interrelating networks (Ryder, 1999). Networks are the foundation of ANT and ANT is reported to be concerned with analysing "how social and material processes (subjects, objects and relations) become seamlessly entwined within complex sets of association" (Murdoch, 1998, p. 359). Murdoch suggests that networks are found everywhere and act to draw things together. He argues that Latour was presenting ANT as early as 1983 in his explanation of the complex interrelationships between scientists, non-human nature and non-human materials within Louis Pasteur's discovery of the anthrax vaccine (Murdoch, 1997; 2001). This description considers the way in which non-human materials, the human mind and non-human bacteria interact to enable the discovery of the vaccine.

However, ANT is not a straight-forward method, it does not lend itself easily to a clear description of what it is and what it intends to achieve. Many of the works that have used ANT often get wrapped up in a complex web of impenetrable language that is difficult for readers to move beyond. However, ANT provides a useful means of identifying hybrids and the interconnection of people and non-human nature within the networks of our lives.

Whatmore's ANT considers the relationship between people and non-human nature in a series of complex networks, these networks allow social systems to move beyond being only based on humans and to include non-human nature (Whatmore, 2002). ANT views non-human nature as integral to all social systems (Law, 1999). Callon (1999) has argued that ANT was a process designed with the purpose of describing networks that are combined from both humans and non-humans. I would suggest that no aspect of human life is without its interaction with non-humans and therefore potentially ANT could be utilised to describe all networks. Whatmore (2002) describes the way in which ANT can be used to consider the relationship between non-human nature and humans in her example of the International Species Information System (ISIS). This network is a computer database where by information on species such as African Elephants that are participating within captive breeding programmes can be input, providing a resource through which zoos and wildlife reserves worldwide can share information (such as DNA profiles) to enable what Whatmore describes as 'optimal pairing'. These animals could then contribute at some point in the future to declining so called 'wild' populations.

Murdoch (1998) views ANT as a useful means of considering the way in which different spatial relationships are interlocked within complex networks of relations between humans and non-humans. It is suggested that this allows us to move beyond the dualistic thinking (Demerritt, 1996), which contributes to the exploitation of non-human nature. ANT can be used to break

down this binary by following networks and the interactions between different actors both human and non-human it allows us to view the close interrelationship that exists between non-human nature and people therefore identifying the false divisions that these binaries create.

ANT is not claiming to present an all encompassing truth, it represents an approach to breaking down the value dualisms that devalue non-human nature. Murdoch (1997) contends that dualisms are a fundamental problem within social theory as they result in two distinct parts that cannot be integrated, that divides the way in which we view the world. He suggests that ANT allows for a viewpoint that is non-dualistic and integrated. By viewing these often separated entities as interdependent and interconnected from the beginning it helps to break down the dualisms that have come to fracture social theory. However, although ANT may provide an integrated perspective of viewing humans and non-humans together, this is not common practice either in theoretical discussions or within practical applications. However, if people are associating with bioregional units and comprehending this association with a sense of place, it may be that on a subconscious level we are aware of the intricate relationship between ourselves and non-human nature, and there is no need for the complexity of ANT to highlight this.

By focusing upon networks such as the Spatial Formation of Wildlife Exchange (SFWE) Whatmore and Thorne (2000) attempt to apply ANT to illustrate the way in which science, people and non-human nature are brought together both locally and globally in an intricate complex relationship. They concentrate upon the story of Duchess an African Elephant in Paignton zoo and consider all the different ways in which people and non-human nature interact in relation to the care and preservation of Duchess and other African Elephants, linking together both global and local networks across space and time. Duchess is primarily part of a display within the zoo, viewed by visitors and known by keepers, her habitat mimics her native habitat, bringing the global into the local. However, stress caused by giving Duchess a new larger, more 'realistic' habitat highlighted the impossibility of being able to release Duchess back into the wild, re-emphasising the difference between global and local. Duchess's DNA is also part of a global captive breeding programme, whereby a database is held which helps maintain a healthy genetic population of elephants within the captive population in case the 'wild' population become extinct. Within networks dualisms are not relevant as there is no point at which people, non-human nature and science are not intricately linked (Whatmore and Thorne, 2000).

In an earlier paper Whatmore and Thorne (1998) discuss the idea of topologies of wildlife and illustrate within their discussion surrounding gladiatorial games in Rome and the conservation of wildlife under CITES (Convention on the International Trade in Endangered Species) that non-human nature has not existed on the margins of human society in history as is often

portrayed. Human society has been interdependent on non-human nature for as long as people have existed. Through the use of ANT linear narratives that have marginalised non-human nature are broken down (Whatmore and Thorne, 1998). Burgess et al (2000) used ANT to identify the way farmers viewed the world and their interaction with Environmentally Sensitive Areas in the South of England. What is emphasised within this research is support for Latour's (1993) concept of hybrid entities that are not purely social or natural, but complex interactions of both.

Bruno Latour (1999) despite being influential in the development of actor-networks argues that ANT was never meant to be a theory of what the social is about, ANT was meant to be a method to learn from actors without imposing on them or interfering, yet the vocabulary of ANT has acted as a stumbling block for this. Callon (1999) on the other hand argues that ANT lacks any significant analysis of the actor, although Callon views this in another way as a strength. He argues that the lack of a stable theory of the actor has meant that the actors are often ill defined. Even though ANT was meant to provide a means of describing networks in which both humans and non-humans are deeply embedded, there is little clear distinction of whom or what the actors are: it is taken as given. Thrift (1999) has also contended that although ANT is meant to present a means of identifying and emphasising the contingency that exists within the world, it has in fact created more uncertainties and un-answered questions.

3.3.4: Hybrids: The Relationship between People, Place and Non-Human Nature

Within this research I will be using ANT in so far as I will be unpicking the relationship between people, place and non-human nature with the aim of identifying the influence of non-human nature on a sense of place, within a bioregional context. I will aim to identify if people relate consciously or subconsciously with bioregions, that I suggest are hybrids. I use the term hybrid rather than cyborg or quasi-object because I view the concept of hybrid to be more flexible. Given that this research is not based upon the analysis of science and technology *per se* the term cyborg, in the political sense in which Haraway meant it, may be misleading. However, I concur with Haraway's view of non-human nature as being viewed as someplace that we visit, and the recognition that non-human nature is a fundamental part of culture. I follow both Haraway's (1991) and Whatmore's (2002) perspectives regarding value dualisms.

3.4: Chapter Summary

In summary a sense of place is a fluid, but hybrid concept that is the product of integral and interdependent relationship between people and non-human nature. Far from being a clear and

measurable concept, place is complex and means different things to different people. Place is closely aligned to a sense of belonging and sense of identity, this deep seated emotional relationship between people and place is at the heart of this research. Although there is the growing argument that globalisation results in a loss of connection with place, this chapter shows that a sense of place can occur on many levels and changes over time, and these changes do not necessarily mean the occurrence of placelessness. In line with ecofeminist and hybridity arguments, in this chapter I have demonstrated the interrelationship and interdependence of people and non-human nature and it is therefore from this perspective that I approached this research.

Chapter Four

Sectoral to Integrated – Approaches to Landscape Planning and Management in the United Kingdom

"Landscape has many meanings, can be approached from numerous perspectives and draws on many disciplines" (Phillips and Clarke, 2004, p.50)

4.1: Introduction

In this chapter I discuss the policy systems for planning and landscape management that have until recently driven countryside planning, management and decision making. I will consider the slowly evolving shift from a separatist or sectoral view of the landscape towards a more holistic means of viewing the different facets of the landscape, and the implications this has had for the interrelationship between people, place and non-human nature.

In this first section I will briefly discuss the English landscape and the different ways in which it has been viewed by academics and policy makers. In the subsequent sections I will then consider the implications of the sectoral approach to policy making historically within the UK; recent changes in policy that advocate a more holistic view of the landscape; and specific examples of the holistic approaches that have been developed including Agri-environment Schemes (AES), Natural Areas and Catchment Approaches. Throughout this section I will highlight the way in which the sectoral approach to policy making and delivery has resulted in a perception that people, place and non-human nature should be treated as separate entities within the landscape rather than as an interrelated and interdependent whole.

4.1.1: The English Landscape

The term landscape has been defined in many different ways (Phillips and Clarke, 2004). I argue that landscape is a social construction; this suggests that the human and non-human world is assigned meaning that is interpreted by the interactions of actors with each other and the world that surrounds them. Limb and Dwyer (2001) have suggested that everything has meaning and therefore is socially constructed. Phillips and Clarke (2004) argue that the landscape is viewed differently by different people and different cultures in different parts of the world. They go on to suggest that different cultures can have varying opinions on the interpretation of one particular landscape. As stated by Blumer:

"people may be living side by side yet living in different worlds" (1986, p.11).

The landscape is often viewed from a purely aesthetic perspective (Appleton, 1991). This can be seen in the designation of Areas of Outstanding Natural Beauty (AONBs) which are a land based designation based on the outstanding aesthetics of a given area within the UK (Chilterns AONB, 2002; Phillips and Clarke, 2004; Preston, 2002). However, many would accept that the landscape is more than the visual appreciation of a specific area. Within this study the landscape is viewed as a dynamic entity within which people, place and non-human nature interact.

The landscape provides a suitable backdrop against which to consider the complexities of the relationship between place, people and non-human nature: a factor that is increasingly being recognised within UK policy, planning and management (Antrop, 2000; 2001; Naveh, 2001; Phillips and Clarke, 2004; Selman, 2002; 2004a). Benson and Roe (2000) claim that the landscape "is used as a theoretical concept and social construct around which an array of disciplines, including Geography, art, literature, and science coalesce to explore...nature-human relationships" (p.3).

Historically there has been an idealism surrounding the English landscape, produced and reproduced, that originated in the Romantic period or eighteenth century (Adams, 1996b; 1997; Merchant, 1980). This was based on the view of a 'natural', sublime landscape untouched by humans and this false conception of the English countryside resulted in many early preservationist ideals regarding conservation, planning and agriculture which will be discussed subsequently (Macnaghten and Urry, 1998; Sheail, 1995a). In reality no area within the UK can be viewed as truly natural (Head, 2000; Macnaghten and Urry, 1998; Selman, 2001; 2004b). The UK landscape has been influenced by humans since the beginning of the Holocene period (Head, 2000; Roberts, 1998). Unlike in early history, when human influence would have been localised and of minimal impact (Head, 2000; Roberts, 1998), anthropocentric impacts have intensified considerably since Roman times and exponentially within the last century (Head, 2000; O'Riordan, 1981; Roberts, 1998). Anthropocentric influence comes in many diverse forms including agriculture, industry and housing development; as well as nature conservation practices (Head, 2000; Sheail, 2000; Shoard, 1980).

Some of the most valued 'natural' landscapes are those that have developed and evolved as the result of human management regimes, such as semi-natural woodland and chalk grassland (Peterken, 1981; Rackham, 1980; 1986; Selman, 2004b). However, this balance between human action and non-human nature expressed through the production of 'valued' habitats has been disrupted (Head, 2000; Selman, 2004a). This deeply embedded relationship between humans and non-human nature produces cultural landscapes, and much of that which conservationists aspire to conserve is the by-product of human action rather than what may occur in the absence

of people (Peterken, 1981; Palang et al, 2000; Phillips and Clarke, 2004; Porter and Preston, 2001; Selman, 2004b).

In the UK, the physical landscape, its varying habitats and landforms are the result of an intricate, interdependent relationship between people, place and non-human nature. As suggested by Antrop (2000) "landscapes are made by society and reflect the changing society and attitudes towards the environment" (p.21). However, despite this there has been a general failure to treat people and non-human nature together within policies. Often non-human nature is viewed as little more than a commodity, and there has been a clear separation of it from people within UK policies (Hamilton, 2003; Porter, 2004). The failure to consider people and non-human nature as connected and interdependent has engendered a policy system that has led to the degradation of non-human, as well as social and cultural systems. It has been complicated by the division of the landscape by administrative boundaries which cut across both non-human and cultural systems, exacerbating this degradation (Boothby, 2004).

4.2: The History and Implications of UK Sectoral Policies affecting Landscapes

It is traditional for decision-making processes with relation to the conservation of non-human nature, planning, agriculture and water policy to be treated as separate entities and the UK has a long history of policies that have considered these facets in isolation. As a result of this there has been a tendency for people, place and non-human nature to be treated independently, with a failure to recognise deeply embedded interconnections that exist between the three. I will give a brief history of this to highlight the detrimental impact this way of thinking has had upon the landscape in terms of the implications for non-human nature and people, emphasising the importance of the recent drive to view these facets as interdependent.

Nature conservation, agriculture and town and country planning have long had important implications for both people and non-human nature. However, the tendency for these to be treated as individual and isolated facets has resulted in the production of policies that have acted to compound the perceived separation of people, place and non-human nature. This same approach also applies in relation to water policy, as water has tended to be treated as independent from other aspects of land use management and planning in the UK. However, although viewed in many ways as isolated sets of policies and practices, these have all had significant implications for each other, and for the relationship between people and non-human nature. Each of these different facets has been influenced by an array of both domestic and international policies (Bishop and Phillips, 2004).

4.2.1: Early Land Use Policies in the UK

The conservation of non-human nature has a long history within the UK, although the reasoning behind conservation has changed substantially (Adams, 1996a; Humbler, 2004; Pullin, 2002). Table (4.1) shows some early policies and their primary functions that encouraged the compartmentalisation of the landscape and dictated land use management and planning.

Table 4.1: Early Policies that Influenced UK Land Use, Management and Planning

Policy	Primary Function
1947 Agricultural Act	• Stabilise agriculture and achieve self-sufficiency. • Emphasis on production. • Guaranteed market prices. • Increase farming incomes and living conditions. • Decrease food prices.
1947 Town and Country Planning Act	• Contain urban spread. • Rebuild urban areas following the war. • Development control within urban areas (this did not extend to agricultural and forestry production).
1949 National Parks and Access to Countryside Act	• Development of a series of National Parks for amenity and quiet enjoyment. • The development of the Nature Conservancy to set up a series of Nature reserves for scientific study. • The separation of amenity and science in terms of site development. • Perception that agriculture within the National Parks would protect the landscape.

(Adapted from: Bishop and Phillips, 2004; Cherry and Rodgers, 1996; MacEwen and MacEwen, 1987; Shoard, 1980)

The planning system has had significant implications for rural and urban land use and development within the UK and, combined with the long history of agricultural support has contributed to serious declines in species and habitats. This laid the foundations for a conservation system based on the preservationist view of keeping people and non-human nature separated (Harvey, 1997; Shoard, 1980). Early policies acted to encourage and support a series of dualisms such as culture/nature and rural/urban, in which the latter part of each of these dualisms is viewed as negative and subordinated in comparison to the former part of the dualism (Haraway, 1989; Plumwood, 1993).

4.2.2: Post-War Agricultural and Forestry Support

During the war years 1939-1945, rural Britain was viewed as being quintessential to what was being defended. There developed the view that farmers should be supported, given their efforts during the war to maintain productivity whilst German 'U' boats threatened food imports. This support came in the shape of early involvement by the state in price support (Cherry and Rodgers, 1996). Following World War II the primary concern for the Labour government was stabilising agricultural production and self-sufficiency following the threat to food supplies during the war (Bishop and Phillips, 2004; Harvey, 1997; Shoard, 1980; 1999). The result of this emphasis on self-sufficiency was a series of Acts to benefit agriculture: the 1946 Hill Farming Act; 1947 Agriculture Act; and 1948 Agricultural Holdings Act. The main premise of these was to emphasise production support. Headage payments were introduced for hill farms with the 1946 Act for livestock, the 1947 Act supported increasing agricultural production and put in place a price support system for farmers that guaranteed commodity prices (Bailey et al, 2004; Dwyer and Hodge, 2001). The 1948 Agricultural Holdings Act on the other hand ensured life long tenancy for tenant farmers, encouraging long term agricultural production (Cherry and Rogers, 1996; Hodge, 1999). The1947 Act also provided grants to support afforestation, which had serious implications for many upland species and habitats (Cherry and Rodgers, 1996).

These policies resulted in radical changes to the British countryside, leaving habitats and wildlife vulnerable to destruction, isolation and fragmentation (Rydin, 1993; Shoard, 1980). Farming production intensified at an unprecedented rate with the shift to a more intensive, specialised and chemically dependent agriculture (Bailey et al, 2004; Dwyer and Hodge, 2001). The impact on non-human nature was devastating and included the removal of hedgerows and reduction in rotation and fallow periods as chemicals supported a more intensive farming system (Ogaji, 2005). This contradicted the common perception of the early post-war period that agriculture would protect the land and farmers would act as stewards to the landscape (Hodge, 1999). Although some aspects of agricultural intensification and industrialisation were evident prior to the 1947 Act (Bailey et al, 2004), what the 1940s acts failed to perceive was the rapid growth in mechanical and chemical technology which would act to not only disrupt the 'natural' landscape but have significant implications for rural social structures (Hodge, 1999; Rydin, 1993). These detrimental changes to social, economic and cultural structures included loss of labour from farming and rural areas, as farm labour was no longer needed with increased mechanisation, and a system that failed to support the smaller and poorer farmers (Rydin, 1993). Larger farms were able to expand at the expense of smaller farms. In addition to this, intensification was beginning to result in large surpluses. With regard to agricultural self-sufficiency the policies implemented were extremely successful, yet this occurred at the expense

of both people and non-human nature. Also, increased mechanisation acted to separate farmers further from the land and emphasised land as a commodity.

4.2.3: The Influence of Early Planning Policies

The impact of the industrialisation in agriculture was exacerbated by the lack of legislative control in the form of town and country planning. Planning within the context of this study refers to the management of change and development (Diamond, 1995). Early post-war town and country planning in the form of the Town and Country Planning Act 1947 was underpinned by the premise of rural protectionism and agricultural fundamentalism (Bishop and Phillips, 2004); in many ways this is still the case today (Bailey et al, 2004). The aim of the Act (1947) was to prevent urban spread and place conditions on planning within urban areas whilst allowing for reconstruction following the devastation of World War II (Booth, 1999; Diamond, 1995; Hodge, 1999). Both the 1942 Scott Report: *Report of the Committee on Land Utilisation in Rural Areas* and the 1947 Hobhouse Report: *Report of the National Parks Committee* emphasised the perceived view that agriculture would protect the rural countryside (Cullingworth and Nadin, 2002). Both of these reports had significant implications for both the 1947 Town and Country Planning Act and the 1949 National Parks and Access to Countryside Act, which placed emphasis on the idealised view of farmers as stewards of the landscape (Newby, 1979). Planning control did not extend to either agricultural or forestry developments. Thus early agricultural and planning policy acted to reinforce this idealised notion of sublime landscapes and hardworking rural folk (Merchant, 1980), which whilst preoccupied with rural aesthetics, failed to consider the impact that farm change would have on non-human nature or rural social and economic structures. Rural areas were idealised, and urban areas paralleled with decay (Bailey et al, 2004).

Both the Agricultural and Town and Country Planning Acts failed to view non-human nature and culture as intricately bound together, and this nature/culture duality was further emphasised with the passing of the 1949 National Parks and Access to Countryside Act.

4.2.4: The 1949 National Parks and Access to Countryside Act

During the inter war period there was a call for improved access to the countryside by and for people from urban areas, and a call by early ecologists for the development of reserves aimed specifically at the scientific study of 'nature' (MacEwen and MacEwen, 1987). It is not relevant within this research to consider in great depth the ongoing historical concern regarding access to the countryside - a fuller review can be found in Shoard (1997; 1999). What is significant is that

people wanted access and this battle for access gave significant weight to the development of the 1949 National Parks and Access to Countryside Act (Stephenson, 1989). However, the 1949 Act demarcated an important division between conservation and amenity that still exists today, emphasising the distinction between people, place and non-human nature in UK policy (Bishop and Phillips, 2004).

A number of committees produced a string of reports as listed in table (4.2), supporting the designation of National Parks as areas primarily for amenity, quiet enjoyment and preserving and enhancing natural beauty (Cullingworth and Nadin, 2002; Rydin, 1998).

Table 4.2: Reports that Contributed to the Development of the National Parks and Access to Countryside Act

- 1942 Scott Report: Report of the Committee on land utilisation in rural areas
- 1945 Dower Report: Report on National Parks in England and Wales
- 1947 Hobhouse Report: Report of the National Parks Committee
- 1947 Hobhouse Sub Committee Report: Report of the Special Committee on Footpaths and Access to the Countryside
- 1947 Huxley Committee: Report of the Wildlife Conservation Special Committee

Although these committees were set up to investigate different issues there was much overlap and the overall premise was support for the designation of National Parks (Cullingworth and Nadin, 2002; Parker and Ravenscroft, 1999). In response to the Act the National Parks Commission was formed and charged with identifying and designating National Parks (Sheail, 1976). Ten National Parks were approved: the first, the Lake District was designated in 1951 (Council for National Parks, 1999) and this marked the beginning of the designation of parts of the British landscape for amenity, aesthetic purposes and wildlife conservation (Rydin, 1993). Local authorities were given the power to designate Areas of Outstanding Natural Beauty (AONBs), these were designated primarily for aesthetic purposes and were not viewed in terms of conservation value (Cullingworth and Nadin, 2002; Rydin, 1993). The act also legislated for the formation of the Nature Conservancy that was charged with designating Nature Reserves and Sites of Special Scientific Interest (SSSI) for scientific and conservation purposes, aimed at conserving a representative sample of perceived 'natural' habitats (Sheail, 1976; 1995b; 1997; 2001). The Nature Conservancy viewed Nature Reserves as ideal outdoor laboratories for scientific exploration (Dixon, 1998; Sheail, 2000), marking a clear separation between people and non-human nature.

There was an obvious division between amenity and nature conservation, with National Parks designated with amenity in mind (Adams, 1996b; Sheail, 1976; 1995a), while the Nature Conservancy was concerned with science and the study of 'natural' habitats. This was primarily influenced by the Huxley Committee Report on Wildlife that was produced by a handful of influential ecologists including Arthur Tansley who advocated that nature conservation should not be the responsibility of local planning authorities, but a separate scientific endeavour (Sheail, 2000). Adams (1997) contends that the primary purpose of early conservation was to control and organise nature. The 1949 Act laid the foundation for the separation of people and nature in future EU designations, such as Special Protection Areas (SPAs) and Special Areas for Conservation (SACs) (Pullin, 2002; Spellerberg, 1996).

There were three fundamental flaws in the 1949 Act that are relevant to this study, the first being that access to the countryside through the development of National Parks was not as straight-forward as first perceived (Blunden and Curry, 1990). Due to the majority of land within National Parks being privately owned, and the reluctance of private landowners to grant public access to that land, people were still unable to access large areas of the landscape (Blunden and Curry, 1990). This therefore acted to exclude a large majority of the general public from the countryside in areas that were meant to increase this access. National Parks became primarily planning designations being "national in only the sense of name, and private and exclusionary in nature" (Parker and Ravenscroft, 1999, p.301).

The second flaw within the Act was the reliance on agriculture to maintain conservation within the Parks (Parker and Ravenscroft, 1999). As previously shown there were no planning restrictions at the time on agriculture or forestry, the intensification that occurred in the post war period was also evident within National Parks, with little initial protection being in place. The result of this was the loss of species and habitats that it was thought agriculture would maintain (Parker and Ravenscroft, 1999), with non-human nature being viewed as a commodity. Finally the separation between science and aesthetics has acted to reinforce the divide between people and non-human nature and fails to recognise the importance of the wider countryside. Early Nature Reserves were viewed in isolation and it was not until some years later that scientists became aware of the impact of activities outside of sites on the habitats within the sites (Bishop and Phillips, 2004; Sheail, 2000). Although the 1949 Act did present the opportunity for wider countryside conservation in the provision for the designation of AONBs (Anderson, 1990), they were not utilised in this manner and had little official powers attached to them at this stage.

A major complication to these 1940s policies was that delivery was dependent on varying administrative units including districts, counties and local authorities. The 1947 Act introduced

development plans, which are plans that consider existing land uses and identify areas suitable for development, within county boundaries (Davies, 1999). Although these plans have evolved significantly in the last sixty years, the administrative framework in which they were designed has remained the framework within which planners work, with little co-operation beyond the administrative unit (Healy and Shaw, 1994). A failure of governmental administrative divisions was that there was no co-operation or consistency across them. Administrative divisions not only cut across landscape designations but also divided habitats, potentially resulting in different management systems either side of the administrative boundaries. Different designations cross administrative boundaries, therefore areas were managed without consistency and with little cross boundary co-operation (Hamilton and Selman, 2005a; 2005b). This lack of co-operation was not just due to administrative boundaries but also in some cases to the vast array of landowners owning land within one site. The primary objective of administrative units is to provide a rational framework through which to deliver social and economic policies (Porter, 2004; Rydin, 1993), however, this framework failed to appreciate ecological integrity and social inequalities, compounding the impacts of existing legislation (Boothby, 2004). A series of legislation developed prior to the UK's entrance into the EU in 1973 which further enhanced the degradation of the landscape and the separation of people and non-human nature. These are listed within Table (4.3) summarising the main priorities of each of these acts and the primary problems associated with them.

Table 4.3: Policy Influences from 1949-1973

Act	Priorities	Problems Created
Agricultural Act 1957	1) Stabilised price levels 2) Introduced the Farm Improvement Scheme	1) Encouraged further intensification 2) Further marginalised smaller and poorer farms
Agricultural Act 1967	1) Increased farming grants 2) Encouraged the amalgamation of smaller farms 3) Increasing grants for upland farmers	1) Rewarded intensification leading to the destruction and loss of species and habitats 2) Degradation of upland habitats
Forestry Act 1967	1) Provision of planting grants 2) Forestry Commission empowered to develop recreation facilities 3) Designation of Forest Parks, such as the Forest of Dean	1) Main priority was to increase timber production as supported by the planting grants. 2) The difficulty working in partnership with other organisations where land was jointly owned
Countryside Act 1968	1) Creation of the Countryside Commission as replacement for the National Parks Commission 2) National Parks to take full account of local communities 3) Nature conservation to be	1) National Parks were struggling to acquire access agreements from landowners 2) Significantly fewer people made use of country parks than expected, suggesting they were

	considered alongside the enhancement and maintenance of natural beauty 4) Provision of country parks to take the visitor pressure off National Parks 5) Continue to update definitive Rights of Way Acts	not what people wanted 3) Councils were still behind on producing definitive Rights of Way maps 4) National Parks were still mainly under the control of private landowners leading to restricted access
The Local Government Act 1972	1) Established National Park Authorities to manage each park 2) Requirement of each National Park to complete a management plan	1) National Parks on the whole were in private landownership which restricted the influence of the National Park Authority to increase access to the Parks or control conservation on private land. 2)Consideration was not given to land outside of the National Park. Boundaries were treated as solid, therefore any negative land use outside of the boundary could influence non-human nature within the boundary. 3)There was a failure to view non-human nature in a holistic manner and people and non-human nature were considered separately.
Nature Conservancy Council Act 1972	1) Management of conservation was fundamental 2) Development of nature trails	1) Priority was given to nature conservation and little significance was placed on access for SSSIs or National Nature Reserves (NNRs) 2) Nature conservation was only seen as relevant within the boundaries of Nature Reserves

(Adapted from Cherry and Rodgers, 1996; Rydin, 1993; Shoard, 1997; 1999)

The devastating losses of species and habitats and loss of connection between people and non-human nature accelerated throughout the twentieth century, although recent changes have begun to bridge some of the divisions that were initially forged in the 1940s. In 1971 the government commissioned under Lord Sandford a working committee to identify if National Parks were achieving what they set out to achieve. This identified the failure of parks to plan appropriately and advocated management plans for each park (Cherry and Rodgers, 1996). This advocacy for management plans marked the beginning of a more formal approach to organising and in effect controlling the non-human landscape within National Parks and later within SSSIs and NNRs (Sheail, 1999). However, designated sites were unable to protect habitats within their bounds due to activities beyond boundaries (Lowe and Ward, 1998).

The seminal text by Rachel Carson in 1965 *The Silent Spring* acted to raise the awareness of the general public and government of the devastating impacts that *Dichlorodiphenyl trichloroethane* (DDT) was having on non-human nature and the subsequent impacts this could have as it travelled through the food chain (Macnaghten and Urry, 1998; Shoard, 1997). Carson's text

influenced people's acknowledgement of the damage that agricultural intensification was having on non-human nature (Harvey, 1997). On entry into the European Economic Community (EEC), in 1973, the UK became committed to European policy (as well as existing domestic policies), which initially re-emphasised the priority of rural areas for agriculture, and the perceived need for supporting production (Cullingworth and Nadin, 2002; Nadin, 1999; Rydin, 1993). In terms of agriculture this meant joining the Common Agricultural Policy (CAP), which was introduced in Europe in 1957 (Grant, 1997; Nadin, 1999). The objectives of the CAP are listed within table (4.4) illustrating the focus on production.

Table 4.4: Objectives of the CAP

- Increase agricultural productivity and thus ensure a fair standard of living for agricultural producers.
- Stabilise markets.
- Assure availability of supplies.
- Ensure reasonable prices for consumers.

(taken from Defra, 2002a)

Thus existing domestic and European policies continued a downward spiral in habitat and species loss and destruction. Designated sites provided limited protection, for some species and habitats against some of these negative implications (Pullin, 2002; Sheail, 2001; Spellerberg, 1996). However, forty years after World War II, it was estimated that eighty percent of chalk grassland, sixty percent of lowland bogs and ninety-five percent of lowland meadows had been lost to agriculture and development (Hodge, 1999; Nature Conservancy Council, 1984). The 1981 Wildlife and Countryside Act introduced payments for farmers to protect Special Sites of Scientific Interest (SSSIs) on their land (Rydin, 1993). The vast majority of designated sites were, and still are, owned by private landowners, so the Nature Conservancy, or Nature Conservancy Council (NCC) as it became in 1973 (Sheail, 1999; 2000) struggled to secure management agreements upon these sites, providing farmers with payment for profits forgone (Cullingworth and Nadin, 2002).

In 1986 the first Agri-Environment Scheme (AES) was introduced to the UK and this was the Environmentally Sensitive Area Scheme that financially rewarded farmers for managing the land in a so-called 'traditional' manner, to reduce the impact of intensive and chemically dependent agriculture (Harvey, 1997). The support and subsidies for agriculture were also being mirrored in forestry (Cherry and Rodgers, 1996; Owen and Curry, 1996). I will discuss this scheme and other AES that were introduced within the UK in depth in the final sections of this chapter.

During the 1950s and 1960s the Nature Conservancy continued to designate protected sites for scientific purposes (Sheail, 1999), continuing the separation between people and non-human nature. The 1968 Countryside Act placed greater emphasis upon nature conservation, especially in relation to the way in which Local Authorities engaged with the concept, with the formulation of Planning Policy Guidance Note 9 (PPG9) on nature conservation by the government (Rydin, 1998). However, the premise was still on designation and the separation of non-human nature and people and this was further emphasised with the 1968 Act that encouraged local authorities to designate Country Parks for the use of urban dwellers to reduce the visitor impact on National Parks (Cherry and Rodgers, 1996; Cullingworth and Nadin, 2002; Rydin, 1993).

The first international policy to contribute to the array of designated sites was the 1971 Convention on Wetlands of International Importance which resulted in the identification of Ramsar sites and the proposal for Special Protection Areas at European level, which today are viewed in the wider context of Natura 2000, a European wide network of designated sites of importance to wildlife (Burges, 2004; Rydin, 1998). However, the Ramsar Convention was the first to acknowledge the problems of site isolation and the need for wildlife, in this case migrating birds, to have a series of protected sites across their migration paths to protect all aspects of their lifecycle (Rydin, 1998; Spellerberg, 1996). This approach was not however, applied to other species until later.

4.2.5: Early Water Policy in the UK and the Influence of this on People and Non-human Nature

Early water policy in the UK has largely been treated as a separate entity and anything related to water falls under a different policy which rarely interacts with other policies. However, unlike the previously discussed facets of policy, water policy does directly link water and people, primarily from the viewpoint of water utility. There has been legislation passed in the UK surrounding issues of water quality and utility for over a century. Mid nineteenth century water policy included the Public Health Acts of 1848 and 1872, following the discovery of the link between cholera and poor water quality (Pickering and Owen, 1997). In fact much of the next fifty years or so of water policy related to water quality and the implications of this to human health as illustrated within table (4.5). As the table shows a wider area approach to rivers was taken earlier than it was for the land, with the creation of Catchment Boards for whole watersheds in 1930 as the result of flood impact on people (Rydin, 1993).

Table 4.5: Early Water Policy

Policy	Primary Implications of the Policy
Rivers Pollution Prevention Act (1876)	The power of inquiry into and control over domestic sewerage and industrial waste within non-tidal rivers.
Land Drainage Act (1930)	The creation of Catchment Boards to cover whole catchment. These were viewed as a more effective means of tackling flooding and the impacts upon people.
The Water Act (1945)	Shift in concern to water supply. Many smaller communities had extremely poor water supply.

(Okun, 1975; Pickering and Own, 1997)

A river basin can be defined as an area drained by a river and its tributaries stretching from source to mouth. Although this presents an ideal framework through which to consider the interaction of non-human nature and people, early policy was pre-occupied with water quality, utility and later flood control issues. Although there was a clear connection between people and water within early water policy there was no reference given to the conservation of non-human nature. Water supply that had been owned by private water companies came under public ownership during the early twentieth century. This resulted in over 180 different bodies having ownership of water and wastewater systems (Rydin, 1993). This was rationalised following the 1973 Water Act that simplified the manner in which water and wastewater systems were managed. In 1974 ten Water Authorities were developed, each of these worked within river basins, which crossed administrative boundaries such as counties (Rydin, 1993; 1999). Whereas the landscape was largely fragmented by different designations, the water environment was to be managed within geographical river basins that were not constrained by administrative boundaries (Pickering and Owen, 1997; Rydin, 1993).

Although much early water legislation attempted to address water quality issues such as the 1951 Rivers (Prevention of Pollution) Act, 1961 Rivers (Prevention of Pollution) Act and the 1974 Control of Pollution Act, it failed to address a primary source of pollution: diffuse pollution from agricultural activities (Ducros and Watson, 2002; Rydin, 1993). With fields being increasingly ploughed to maximise profit there was also little vegetation in place to prevent soil erosion and to reduce the leaching of chemicals from the soil that subsequently washed into nearby rivers (Harvey, 1997; Pickering and Owen, 1997; Shoard, 1999). Although there has been a long associated link between water quality issues and agricultural intensification it is only recently, with changes to the CAP that reward farmers for positive land

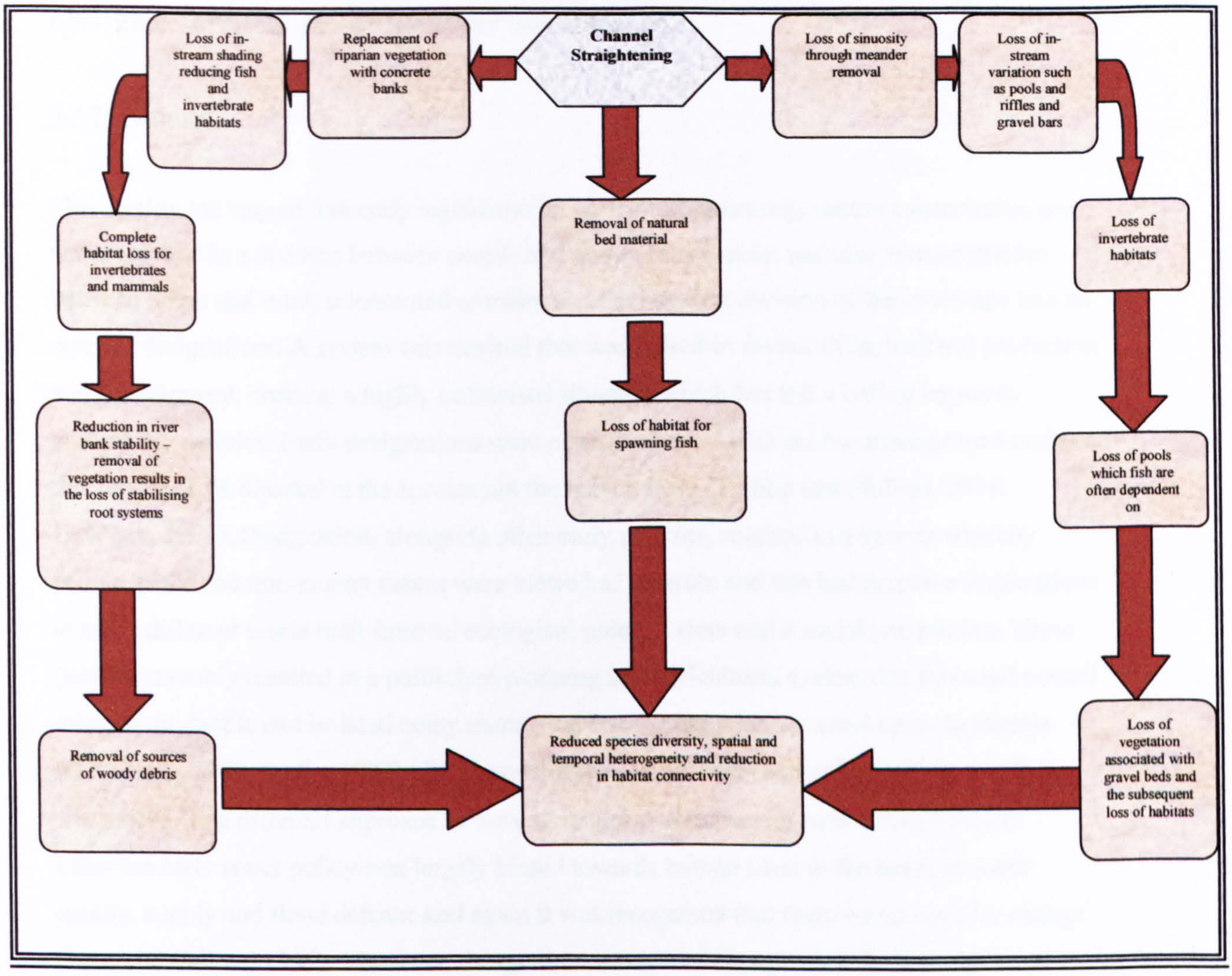
management activity, that the potential for tackling diffuse agricultural pollution has been realised (Burt and Johnes, 1997).

On entering the European Economic Community (EEC) in 1973, water policy continued to be dominated by a concern for water quality, as indicated by the 1975 Drinking Water Directive and 1976 Bathing Waters Directive (Rydin, 1993). In 1989 the Water Act saw a split in responsibility for water between private water companies. The newly developed National Rivers Authority (NRA) was charged with the responsibility for water supply and the water authorities were charged with maintaining the supply infrastructure and this included the introduction of demand management in the form of pricing and metering (Rydin, 1993; 1999). Overseeing this were the consumers 'watchdog' the Office of Water Services (OFWAT) (Rydin, 1993). Both the NRA and water authorities continued to work within a river basin and catchment framework (Pickering and Owen, 1997; Rydin,1993;). However, although catchments or river basins were identified as the framework through which they would work, this did not often happen in practice (Burt and Johnes, 1997).

4.2.6: Flood Defence

In addition to water quality, flood defence was also a priority for the NRA. Channelization, channel engineering that seeks to control, manipulate and entrain a river system, was the primary means of river control (Knighton, 1998). Flood defence was primarily concerned with large scale channel alteration including channel straightening, widening and dredging (Brookes, 1994; 1995; Hey, 1996; Pickering and Owen, 1997). The increasing need for flood control, drainage improvement, maintenance for navigation and the need for erosion protection resulted in the intensification of river regulation schemes (Knighton, 1998). Brookes (1985) estimates that between 1930 and 1980 there were 8500km of mechanical works undertaken within rivers in the United Kingdom. The impact of channel alteration schemes is detrimental not only to the ecological integrity of the channel but also to its geomorphological structure. Figure (4.1) illustrates the negative impacts of channel straightening.

Figure 4.1: The Negative Impacts of Channel Straightening



(Adapted from Hey, 1996; Gurnell, 1995; Edwards and Crisp, 1982)

Past river management systems were often based on single channel reaches and had a tendency to separate human needs and ecological needs. As Angold et al (1994) state a river corridor is "the river and the river channel together, its associated wildlife and adjacent riparian ecosystem" (p.3). This interaction has been ignored in past flood control activities, with concern being focused on human needs. Channel alteration for the purpose of flood control not only results in the loss of spatial and temporal variation that enhances habitat connection, but can act to enhance flooding problems (Brookes, 1996; Brookes et al, 1996; Ward et al, 1999). 'Hard' engineering flood control mechanisms were largely carried out for the perceived utility of people however; within the UK it has been difficult to protect people from the impacts of flooding because there has been a tendency for housing development to occur within floodplains, bringing people into direct contact with river channels and flooding (Cullingworth and Nadin, 2002; Rydin, 1999). Flood events in recent years have increased with intensity as the result of development within the upper reaches of river channels (Brookes, 1996; Petts and

Callow, 1996). So although the NRA has largely treated flooding and water quality in isolation from people, in reality they are intricately interconnected.

4.2.7: Summary

This section has argued that early legislation on agriculture, planning, nature conservation and water resulted in a division between people and non-human nature, and also formed divides between urban and rural, science and amenity and the physical division of the landscape into an array of designations. A system was devised that was biased in favour of agricultural production and development, creating a highly politicised situation which has left a lasting legacy in present day policies. Early designations were often piecemeal with *ad hoc* management regimes that tended to be directed at the species not the habitat level (Bishop and Phillips, 2004; Larkham, 1993). Designation, alongside other early policies, resulted in a system whereby people, place and non-human nature were viewed as separate and this had negative implications at many different levels both from an ecological point of view and a social perspective. These policies arguably resulted in a politicised planning and agricultural system that favoured a small minority of people and isolated many more from connecting with the non-human landscape (Goldsmith, 1983; Rydin, 1993). By the end of the 1960s it was becoming evident that there was a need for a different approach to both agricultural systems and nature conservation. Likewise early water policy was largely biased towards human need in the terms of water quality, supply and flood defence and again it was recognised that there was a need for change (Petts and Callow, 1996). However, things did not begin to change until the late 1980s and early 1990s (Harvey, 1997; Munton, 1983; Shoard, 2001).

4.3: Changes in UK Agriculture Policy: From Separation to Integration

In this section I will consider more recent changes within UK agriculture policy that have begun to view people and non-human nature as more integrated. I will first discuss the concept of sustainable development that has influenced the way in which the relationship between people and non-human nature are viewed in policy for agriculture, planning and nature conservation. I will then map out the changes that have occurred in agriculture both for non-human nature and people. I will finally introduce Agri-environment Schemes as a potential framework for working in an integrated manner with people and non-human nature.

4.3.1: Sustainable Development and Integration

'Sustainable development is a term that was first coined by the World Commission on Environment and Development (WCED), also known as the Bruntland Commission. The Bruntland Commission (1987) in the report *Our Common Future* defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.8). I introduce the concept of sustainable development at this juncture because it underpins many current policies and is often used to support the drive towards 'integrated' countryside policy delivery that considers the relationship between humans and non-human nature (Rydin, 1993). Although many early writers identified the link between industrialisation and the demise of non-human nature (Scott, 1998) including *'Limits to Growth'* (Meadows, et al, 1972), the report of the Bruntland Commission, shows a key turning point in UK policy towards more integrated thinking. Defra suggests that sustainable development entails meeting four primary objectives: 1) social progress that recognises the needs of everyone; 2) effective protection of the environment; 3) the prudent use of natural resources; 4) maintenance of high and stable levels of economic growth (Defra, 2003a). The achievement of these goals can be difficult because they often act in opposition to each other. The term sustainable development is a fluid concept that few people use in the same way. There are varying interpretations of the concept and a general lack of consistency in its use and application at all levels of government and policy delivery (Kambites, 2004; Kirkby et al, 1995). This array of definitions has resulted in much confusion and debate surrounding the actual meaning of this term (Chatterton and Style, 2001).

4.3.2: Does Sustainability mean Integration?

Agenda 21, one product of the 1992 United Nations Conference on Environment and Development (UNCED), placed a responsibility of achieving sustainable development upon local government, within signatory countries (Kambites, 2004; Selman, 1996). It was "a blueprint to encourage sustainable development socially, economically and environmentally into the twenty-first century" (Spellerberg, 1996, p.26). Agenda 21 is based upon achieving the twenty-seven principles of the Rio Declaration, which include principles pertaining to the precautionary approach to activities with relation to the environment, the use of Environmental Impact Assessments and achieving environmental protection (UNCED, 1992). The emphasis placed on sustainable development by global and local legislation should have paved the way for a more integrated approach to planning, management and decision making that includes non-human nature considerations, however, in practice this has been slow to achieve. The important

factor to this research is that the division still exists, and it appears difficult to treat with equal weight social and non-human nature needs.

Within the fifth Action Plan for the Environment (1992) the EC committed itself to the inclusion of environmental objectives within agricultural policies to produce an economically and environmentally sustainable agricultural system (Cobb et al, 1999). However, as Cobb et al (1999) argue there is no consensus even at the European Level as to the interpretation of sustainable development. The third report of the British Government Panel on Sustainable Development (1997) (Sustainable Development Commission, 1998) recognises the negative impacts of agricultural production subsidies on the environment and identifies the need for a reduction of these subsidies in favour of environmental support (Cunningham, 1997).

Following the 1991 Planning and Compensation Act, sustainable development was introduced into land use development plans (Rydin, 1999). This was re-emphasised within the 1994 report *Sustainable Development: the UK Strategy*, which identified the UK planning system as key to delivering sustainable land use planning and development (Wood, 1999). Healy and Shaw (1994) reviewed different interpretations of the environment within development and structure plans, identifying that sustainable development and the environment are now accepted as part of the planning system. Hales (2000) reviewed the progress of sustainable development within the planning system, and concluded that although mechanisms for inclusion are in place, in practice they are not being utilised, while Marshall and Smith (1999) identified much inconsistency in the extent to which planning offices demonstrate concern for the non-human environment. Rural local authorities gave nature conservation substantially less priority than urban areas, within the English Lake District. Counsell (1998) identified that, although there is an awareness of sustainable development within County Councils, there is a large discrepancy between acceptance and implementation.

The 1995 White Paper on Rural England cites sustainable development as one of its key principles to underpin future countryside policies (Evans, 1997). Nevertheless, sustainable development has become a fundamental consideration within UK policy planning and delivery, although there are still concerns regarding the practicalities of implementation. Clarke and Dickson (2003) argue that for sustainable development to be more than a theoretical concept there is a need for the development of science and technology that considers both ecological and social sustainability.

4.3.3: Changing Perspectives in Rural Agricultural and Rural Policy

It was not until the late 1980s that agriculture was eventually brought partially within the Town and Country Planning system. In 1988 the General Development Order was amended to place restrictions on the development of buildings for intensive livestock rearing (Hodge, 1999). Then in 1992 following the 1991 Compensation Act, farmers became required to notify planners of their intention to develop on agricultural land (Dwyer and Hodge, 2001). This has been criticised for failing to control agricultural development as restrictions were only applied to new developments, the use of existing buildings was not covered (Cullingworth and Nadin, 2002). There was little change in the basic premise of planning, to restrict the growth of urban areas (Rydin, 1999). Marion Shoard's *Theft of the Countryside* (1980) acted as a catalyst to increase awareness among the general public of the actual wider implications of agricultural subsidies (Cherry and Rodgers, 1996). With growing concern regarding overproduction, limitations were placed on certain commodities such as the introduction of milk quotas in 1984 (Cherry and Rodgers, 1996; Wilkins, 2000).

4.3.4: CAP Reform

The 1992 and Agenda 2000 CAP reforms, identify the need to move beyond production based subsidies (Gilg, 1996). Cross compliance involved the application of environmental considerations to CAP subsidies (Farmer and Swales, 2004). In the UK, environmental measures were introduced that farmers had to follow in order to receive headage payments (Winter and Smith, 2000). This showed a commitment towards non-human nature. As Farmer and Swales state:

> "The Agricultural Council stated that the renewed emphasis of agricultural policy should be on targeted support measures more orientated for satisfying the general public's growing demand regarding food safety, food quality, product differentiation, animal welfare, environmental quality and the conservation of nature and the countryside. Cross compliance can be viewed of the outcome of this chain of thinking" (2004, p.5).

Additionally a number of Agri-environment Schemes (AES) and Forestry Schemes were introduced in the UK that provided financial reward for farmers that engaged in programs of environmentally beneficial farming (Morris and Potter, 1995) these are discussed in more detail in section 4.3.6. However, even with the minimal shift in emphasis from production subsidies to environmental based payments there was no guarantee that farmers would take up schemes.

With a limited amount of CAP money being put into environmentally based schemes, schemes were oversubscribed. Many farmers were refused entrance to a scheme due to lack of funds (Falconer and Ward, 2000). Winter (2000) reported on 558 interviews in Great Britain, in 1996, with farmers regarding the impact of the 1992 CAP reforms, results indicated that even with schemes aimed at reducing intensification, there was little evidence of this in practice. Farmers claimed that they used scheme payments to help with agricultural management such as ditch clearing rather than environmental management (Winter, 2000), still highlighting the emphasis placed on farming for production. In 1997/1998 only two per cent of the CAP money went to AES and forestry programmes (Falconer and Ward, 2000) highlighting the low priority conservation was given in political terms. It is known also that eighty per cent of CAP support goes to twenty percent of farmers, primarily the most productive farms, which it is argued has compounded existing economic and social problems including: declining farm employment; amalgamation of larger farms; increasing part time farming; increasing suicide rates among farmers; and greater divides between the wealthy and less well off farmers (Booth et al, 2000; Burnett and Mort, 2001; Ogaji, 2005; Parry et al, 2005).

The CAP reforms introduced compulsory cross compliance. The ERDP (England Rural Development Programme) aimed to put greater emphasis on AES. Sixty percent of the budget was aimed at an array of schemes already in place (Condlife, 2000; Ward and Lowe, 2004). However, still only fifteen percent of the CAP at EU level was aimed at AES (Ward and Lowe, 2004). CAP reforms have slowly attempted to promote an awareness of the environmental impact of agriculture on the land; a secondary implication of this is the closing of the gap between farmers and the land. According to Defra (2006) the ERDP:

> "contributes to the delivery of the Government's Strategy for Sustainable Farming and Food by helping farmers and foresters to respond better to consumer requirements and become more competitive, diverse, flexible and environmentally responsible".

This is to be achieved through:

> "a framework for the operation of separate but integrated schemes which provide new opportunities to protect and improve the countryside, to develop sustainable enterprises and to help rural communities to thrive" (Defra, 2006).

In recent years British agriculture has suffered a number of crises including BSE (Bovine spongiform encephalopathy) in 1996 and Foot and Mouth disease in 2001. Both diseases had devastating impacts on agriculture, the rural economy and non-human nature. The identification

of BSE within British beef resulted in a European ban on beef exports and the slaughter of infected cattle (Bennett et al, 1999). English Nature (1998a) discuss concerns regarding the demise of semi-natural habitats such as wet grasslands as beef farmers increased production in order to compensate for the ban on exports. This identifies the delicate balance that exists between non-human nature and people as a change in the agricultural sector had significant implications for the survival of semi-natural habitats. Bennett and Jones (1999) speculate that just the opposite may occur when farmers reduce the number of cattle and thus reduce cattle feed and fertiliser use due to the extensification of cattle grazing in response to the BSE crisis and the availability of AES. In the case of Foot and Mouth, the disease did not just affect agriculture and people that were employed within agriculture, but also the tourist industry. As Roberts suggests:

> "The impacts of Foot and Mouth disease have spread beyond agriculture to other rural businesses and even beyond the rural economy itself" (2001, p. 4).

The public were kept out of rural areas, sports events were cancelled and people did not visit rural areas; this culminated in a significant downturn in the tourist economy (Sharply and Craven, 2001; Roberts, 2001). What is important to this study is that both diseases acted to emphasis the close interdependent relationship between people, non-human nature and agriculture.

4.3.5: AES as a means of Integrating People and Non-Human Nature

In recent years the close connection between people and non-human nature and the importance of the wider countryside has been recognised (Cale, 2003). Landscape ecological principles including connectivity, heterogeneity, diversity and interdependency are increasingly being used in relation to social sciences as well as ecological studies. These principles have been linked with wider countryside initiatives such as Agri-environment Schemes (AES) (Adams et al, 1994; Bunce and Jongman, 1993; MacFarlane, 1998), integrated land management systems (Selman, 1993) and promoted as a mechanism to conserve and connect the wider landscape with existing designated sites (Adams et al, 1994). Although the studies tend not to consider people, place and non-human nature simultaneously, these interdependent relationships have significant implications not only for the wider landscape but also for the success or failure of landscape planning, management and policy delivery mechanisms. It is not sufficient just to identify the negative impacts of people on the landscape and the ecological integrity of its habitats. The interrelationship between people and non-human nature and the co-evolution that has occurred across the UK landscape is also highly relevant.

4.3.6: The Development of AES in the UK and the move towards greater Integration

The first AES, Environmentally Sensitive Areas (ESA) were introduced in the 1986 Agricultural Act (Hodge, 1999; Owen and Curry, 1996; Whitby, 1994). ESAs were based on the designation of landscapes perceived as being of high environmental value, with habitats often dependent upon more traditional farming methods, for example extensive grazing on chalk grassland (Hodge, 1999; Whitby, 1994; Whitby and Lowe, 1994). The scheme was entirely voluntary and farmers were paid for managing the area in a traditional manner such as encouraging raised water levels (Colman, 1994; Hodge, 1999). The voluntary nature of ESAs and subsequent schemes has been criticised throughout the literature because those farmers that subscribe tend to be those that were already farming extensively, rather than intensive farms that benefited the most from production subsidies (Carey et al, 2003; Saunders, 1994; Whitby, 2000; Whitby and Lowe, 1994). Farmers were expected to sign up for a ten year period, payments being based upon entry into management tiers; the higher the tier the more significant management changes were required, and the higher the grant rate per hectare (Hodge, 1999; Whitby and Lowe, 1994).

Although the introduction of this scheme was viewed as the first step to solving some of the issues surrounding production subsidies, production subsidies were still at the forefront of the CAP in the late 1980s (Condlife, 2000). It can be argued that the government was giving out mixed signals by introducing AES to curb the problems of intensification, but still leaving subsidies in place. Nevertheless, ESAs introduced a consideration for the needs of non-human nature, and by recognising the fact that key habitats such as chalk grassland could only be maintained by human management, the schemes highlighted the complex interaction between people and non-human nature in any given place. The ESAs were also important in re-emphasising the cultural nature of the English landscape, something often forgotten by policies, hitherto (Adams, 1996a; Head, 2000; Macnaghten and Urry, 1998; Roberts, 1998).

By 1996 there were forty-three ESAs across the UK (Wilson, 1997), adding to the complexity of existing, invisible boundaries such as administrative units and designated sites (Boothby, 2004). Although ESAs offered some environmental benefits, they failed to work with the ecological integrity of the whole area (Wilson, 1997). There is some evidence to suggest that farmers intensified their activities outside of the ESA whilst being paid for traditional management within the ESA. This has been coined the 'halo' effect and has been viewed as a fundamental problem with ESAs (O'Carroll, 1994; Foud, 1994; Saunders, 1994).

Although ESAs had environmental benefits, farmers were not as receptive to ESAs as was expected (Whitby, 1994). ESA uptake was found to be dependent upon the farmers own characteristics which included: their interest in conservation; age; whether they had other members of the family that would be inheriting the farm and ownership status. Morris and Potter (1995) devised a participation spectrum that considered the motivational factors that influenced AES uptake. Evidence from 101 farmers in the South East of England was analysed and it was identified that the attitude of the farmers towards conservation influences uptake of these schemes, and positive attitudes towards conservation were not high. Attitudes by farmers were still production-biased; farming is a business and if more money could be made by not taking up AES then this would be the most attractive option (Battershill and Gilg, 1997; Wilson, 1997). Early schemes only had limited beneficial impact on non-human nature due to low uptake rates.

There have been a series of AES and Forestry schemes introduced within England since 1986 and these are described briefly within table (4.6).

Table 4.6: AES and Forestry Schemes Introduced in England Since 1986[1]

Scheme	Main Aims
1986 – Environmentally Sensitive Areas	• Five year (later extended to ten) year agreement • To encourage traditional farm management to improve the health and ecological integrity of valued habitats such as chalk grassland and wet grassland • Voluntary scheme • Three tiers with higher payments given for the higher tiers that involved more complex management • Only available to farmers that fell within the boundary of the ESA
1989 – Countryside Premium Scheme	• Removal of areas of land from production to remain fallow • Payments for managing the land for the benefit of wildlife for example the creation of wooded margins • Often set aside was on a rotational basis • Voluntary • Payment per hectare per year
1991-Countryside Stewardship Scheme	• Ten year agreement to manage entered land in an environmentally beneficial way • Voluntary • Annual payment per hectare entered into the scheme • Supplementary grants for works such as hedgerow laying • Additional payments for allowing public access
1991 - Nitrate Sensitive Areas	• Reduce nitrates in drinking water • Management to reduce the risk of nitrates entering water systems, such as maintenance of hedges
1992 - Farm Woodland Premium Scheme	• Conversion of productive agricultural land to woodland • 10 year grant scheme for coniferous woodland, 15 years for broadleaf

[1] Schemes in Scotland, Wales and Northern Ireland developed differently from 1992 onwards

	• Land that is converted to woodland must remain woodland for 30 years if broadleaf woodland and 20 years if less than 50% is broadleaf
1993 – Hedgerow Incentive Scheme	• To encourage farmers to plant, maintain and enhance hedgerows on their land
1994 – Habitat Scheme	• To enhance, create or protect specific habitats • To manage the land for the benefits of specific habitats such as meadow or marsh
1994 – Countryside Access Scheme	• To provide public access across farm land • Access was permissive only and not a right of way • The maintenance of adequate routes of entry for the public and ensuring the area was safe for access
1994 - Organic Aid Scheme/Organic Farming Scheme	• Reduction in pesticide and fertiliser use which are subsequently beneficial to the environment • Requirements to protect natural features such as wetlands • Grant support through conversion to organic farming, support lessens with time • Five year organic conversion payments made per hectare per year • Register as organic producers and have approval by the Soil Association
1995 – Moorland Scheme	• To protect and restore moorland that was not covered by other AES • Reduction in the stocking levels on moorland • Introduction for a plan of moorland management
2001 – Woodland Grant Scheme/ 2005 – English Woodland Grant Scheme	• Grants manage existing woodlands • Grants for creation of new woodlands • Carry out woodland management • Grants available for work that encourages quantity and quality of public benefits • Grants for making changes to woodland composition within the natural woodland cycle of felling and regeneration – offers biodiversity benefits • Payment is dependent on woodland type and higher payments are for native ancient woodland species
2005 – Environmental Stewardship – Entry(ELS)/Organic(OLS)/ Higher Level Stewardship (HLS)	• Whole farm schemes • Payments for environmental management ELS – less complex requirements such as improvements to water quality and maintenance of landscape character such as field boundaries • ELS – flat payment every six months per hectare of land • OLS – similar to ELS except for farmers that manage their land organically, can opt for management options such as buffer strips and maintenance of hedgerows • HLS – more complex requirements such as grassland maintenance and restoration of species rich or wet grassland • Agreements for 10 years with payments every six months

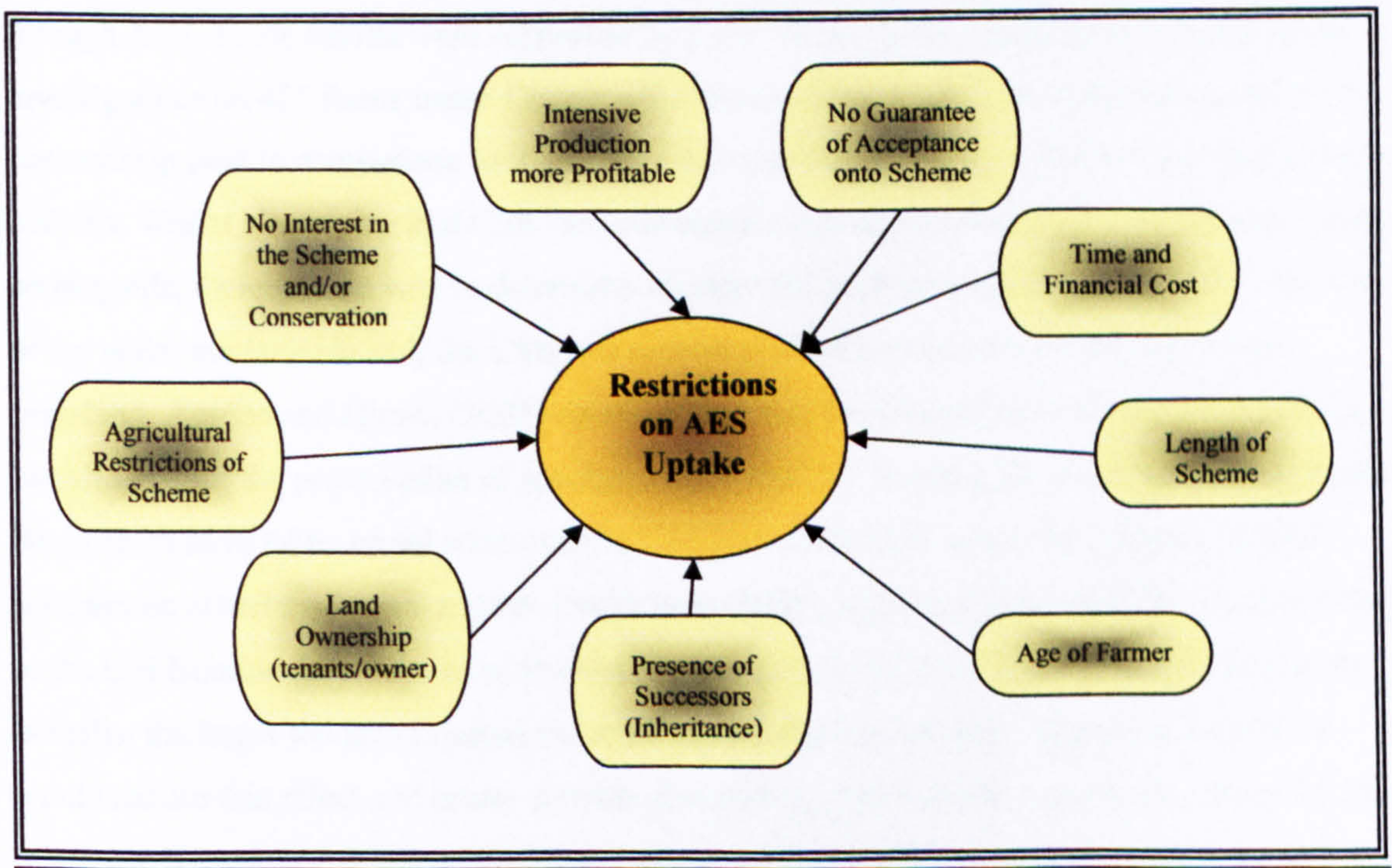
(Adapted from Defra, 2002a; 2005; Forestry Commission, 2005; Hodge, 1999; Shoard, 1999; Whitby and Lowe, 1994)

All AES have the same premise of financial support for farmers based on land management tailored to suit primarily ecological needs (Battershill and Gilg, 1997; Carey et al, 2003; Lobely and Potter, 1998; Wilson, 1997). In response to the influence of Europe on UK water quality and the passing of the Nitrate Directive in 1991, the National Rivers Authority (NRA) developed a series of catchment based designations as means to control pollution. The first of these was Nitrate Sensitive Areas (NSAs), developed in 1991 in corroboration with MAFF and ADAS (Osborn and Cook, 1997; Rydin, 1999). Catchments that were particularly vulnerable to

nitrate pollution were designated as NSAs. Within these designated zones farmers entered management agreements in which they managed the land in ways that restricted and reduced the use of and therefore the discharge of nitrates into water sources, to the EC limit of 50mg/l nitrate (Burt and Johnes, 1997; Elworthy, 1994; Osborn and Cook, 1997; Rydin, 1993). These have added to the complexity of differing land based designations, creating further divisions that identify certain areas as priority above others. However, these designations did concentrate on catchment specific issues highlighting the relationship between place, people and non-human nature.

Many AES have provided benefits to non-human nature, however, a number of studies have highlighted that low payments have restricted uptake and therefore the potential benefit to non-human nature (Battershill and Gilg, 1997; Lobley and Potter, 1998). Morris and Potter (1995) reveal that of their non-adopters 45.5% reported low payments restricted their entrance. Figure (4.2) illustrates other factors limiting uptake identified in the literature

Figure 4.2: Factors Restricting AES Uptake



(Battershill and Gilg, 1997; Carey et al, 2003; Lobley and Potter, 1998; Morris and Potter, 1995; Winter, 2000)

A factor often overlooked is that AES applications cost farmers both time and money (Dwyer and Hodge, 2001), applications for Countryside Stewardship are costly, they may involve consultation with the Farming and Wildlife Advisory Group (FWAG), and take a substantial amount of time and cost to complete, with no guarantee that applications will be successful (Fish et al, 2003). This in itself would be off putting even to the most conservation orientated

farmer. Despite these restrictions to AES uptake, AES tend to be over subscribed with not enough financial support to allow for all applicants to participate within schemes, especially the Countryside Stewardship Scheme (CSS) (Morris and Winter, 2002). Farmers are not the only land owners to take up AES; NGOs that own large tracts of land also utilised AES as a means of funding conservation management upon their land and they were therefore used directly as a means of working with non-human nature (Wynne et al, 1995). However, a study of CSS in Cheshire suggested that AES are unlikely to result in large scale environmental benefits given potential halo effect influences (Morris and Young, 1997).

There has been debate as to just how ecologically beneficial AES have actually been (Critchley et al, 2003). Critchley et al (2003) investigated the relationship between AES and Biodiversity Action Plan targets. This research indicated the results of botanical monitoring in all four UK countries. In twenty-two out of thirty-eight samples it was identified that there were no discernable changes, which suggests there had at least been the maintenance of existing species and habitats. However, there was concern regarding sites that had deteriorated with the authors citing inappropriate grazing regimes, as a fundamental problem (Critchley et al, 2003). Despite these results Critchley et al (2003) did identify that current grassland would be maintained through AES. These results were supported by Carey et al (2002) who carried out ecological investigations on 451 farms under Countryside Stewardship (CSS), assessing the quality of the stewardship land in comparison to the wider countryside with regard to BAP broad and priority habitats. Whilst identifying that CSS land contained more semi-natural grassland than the wider countryside, there was no way to determine whether the ecological quality was higher than that of the wider countryside or if the CSS was maintaining rather than enhancing the current grassland. Ausden and Hirons (2002) also maintain that the Countryside Stewardship Scheme has allowed for the preservation of species such as the Cirl Bunting (*Emberiza* cirlus). Although landowners have taken up schemes such as CSS it is difficult to assess the impacts of these schemes on actual ecological quality. Peach et al (2001) argue that although CSS are beneficial to the Cirl Bunting they need to be in closer spatial proximity to each other to have long term benefits, the larger the area covered the more substantial the benefits. Whole farm schemes would reduce this effect and create consistent environmental benefits over larger tracts of land.

In the mid 1990s the Farming and Wildlife Advisory Group (FWAG) that formed in the 1970s, and the Wildlife Trusts began offering whole farm advice in an attempt to combat the problems of declining standards of SSSIs on private land. Sainsbury's promoted these whole farm schemes the FBAPs (Farm Biodiversity Action Plans) to green their production and encourage farmers to conserve three or four habitats and species (Morris and Winter, 2002). However, as Morris and Winter (2002) found although Sainsbury's funded half of the scheme and sometimes

other organisations the other half, there was still a cost to farmers which was off putting. Of those that did take up the scheme it tended to be based on the reasoning by farmers that they should be 'seen to be doing the right thing'. This indicates the reluctance of farmers to take up schemes based purely on conservation reasons. Falconer (2000) comments that the use of a one-stop scheme for AES advice may allow for a reduction in costs of applications and subsequently increase uptake.

There is a tendency to view cultural factors as economic factors and not in terms of an emotive relationship between people and the non-human environment. MacFarlane (1998) through the use of GIS attempts to consider farm characteristics (including information regarding farm businesses and the farmers themselves), to identify the potential for linking AES management within an Environmentally Sensitive Area in the Lake District. He suggests that with eighty percent of England being farmed there is a need to consider farm characteristics as well as ecological characteristics of the landscape and this includes the identification of cultural factors within the landscape. AES have been identified as one means of integrating socio-economic and ecological factors within the landscape (Boothby, 2000). Naveh and Lieberman (1990) contend that landscape ecology recognises the dynamism of human impact within the landscape. However, there are few studies that truly consider the interaction between people, place and non-human nature. It is important to acknowledge and account for the meanings that people associate with the landscape. As the Council for National Parks (2003) suggests, human attitudes are central to biodiversity conservation: unless biodiversity is valued then it will not be protected sufficiently.

In recent years governments have responded with new forms of support payments, including the new Environmental Stewardship Scheme (Entry Level and Higher Level) and the English Woodland Scheme (Defra, 2006). Environmental Stewardship marks the end of previous AES such as Countryside Stewardship and is delivered based on a whole farm approach (Defra, 2006). Not only do the new schemes work in relation to the whole farm, but their environmental targets are based upon the specific needs of non-human nature within a given area. Also, instead of being delivered through administrative units, there has been recognition among Defra and the countryside agencies of the need to work within units based upon non-natural features such as geology and vegetation (Condlife, 2000; English Nature, 1996).

There is a need to consider different spatial scales in relation to the delivery of AES considering both temporal and spatial interrelationships (Morris and Potter, 1995) and these are beginning to be considered within the new Environmental Stewardship Scheme launched in 2005. The move to a whole farm delivery process forms part of the shift towards a wider countryside approach to

land management that has been advocated by practitioners and researchers alike (Boothby, 2000; Condlife, 2000; Hamilton and Selman, 2005a; Porter, 2004; Selman, 2002). The Environmental Stewardship Scheme has been based on the Joint Character Area (JCA) framework, that divides the UK up based upon boundaries of non-human nature. Specific Environmental Stewardship targets are related to the characteristics of each JCA. This illustrates a definite shift away from the use of administrative units with relation to the delivery of AES, which in the past has acted to complicate targeting. As others have suggested AES provide an opportunity to close the gap between people, place and non-human nature (Tilzey, 2000), and this new approach to targeting AES may be an ideal opportunity (along with the integration of the three agencies) to achieve this.

4.3.7: Summary

AES link specific management to species and habitats characteristic of a particular place so go some way towards bridging the separation between people and non-human nature. Many farmers are not only interested in profits but also value the opportunity of working outside, something which has been termed 'extrinsic farm value' (Battershill and Gilg, 1997). This also indicates that whilst farming can be profit driven there is still some connection between people and non-human nature which is often lost within technical papers regarding AES. Battershill and Gilg (1997) found that eighty percent of farmers interviewed felt that environmentally friendly farming is good husbandry and sixty-four percent were concerned about the impact of chemicals upon non-human nature. MacDonald and Johnson (2000) also show that most of the 130 responses to their questionnaire about the conservation of non-productive habitats identified that farmers felt wildlife to be important. Sutherland (2002) identified that farmers respond in a positive manner towards the environment if the incentives are right for them. Whilst this positive attitude towards nature conservation can only be beneficial to non-human nature, AES are still relatively short term solutions. As Whitby (2000) suggests there is the need for long term conservation of landscape features and for agri-environment policy to be seen from the viewpoint of a public asset.

Although the weaknesses of AES have been widely discussed (Saunders, 1994; O'Carroll, 1994; Whitby and Lowe, 1994), these schemes are increasing in popularity and are providing financial incentives to farmers to participate in conservation activities. This has the potential to provide a landscape that is less inhospitable to biodiversity within the UK countryside. Landscape ecologists have identified AES and other environmental land based schemes as a means by which the ecological coherence of the landscape can be improved (James and Boothby, 2002; MacFarlane, 2000a; 2000b).

4.4: Changes in Nature Conservation Policy and a move towards Bioregional Frameworks

This section will consider changes within nature conservation over the past thirty years and the move towards a more integrated approach to nature conservation following the Convention on Biological Diversity (CBD) and the development of Agenda '21'. Both of these influenced English Nature to develop a wider countryside approach to nature conservation known as Natural Areas, which I will discuss in the final sub-sections of this section.

4.4.1: Nature Conservation Policy: The Designation of Nature Reserves

Until the mid 1970s the designation of Nature Reserves and SSSIs was based on the attempt to designate outstanding examples of British wildlife habitats such as moorland and semi-natural woodland (Sheail, 1999). This not only resulted in the separation of people from and non-human nature but also acted to increase the importance of some habitats and species over others. These designations were criticised for being somewhat *ad hoc* and non-scientific (Sheail, 1999) and Game and Peterken (1984) state that early reserve acquisition was 'subjective'. In his text *A Nature Conservation Review,* Ratcliffe (1977) designed a method of ranking sites based on a number of criteria such as species diversity, rarity and naturalness (Curtis, 1991; Goldsmith, 1983). Table (4.7) shows the ten criteria devised by Ratcliffe. Despite the obvious limitations such as the ambiguity of the concept of naturalness and the fact that no habitats within the UK are natural, the use of such 'scientific' objectives to identify sites for designation has dominated British nature conservation for decades (Head, 2000; Hodge, 1999; Sheail, 1999; Spellerberg, 1992; 1996). The use of such criteria fails to incorporate social and economic factors, which are integral within a landscape that is as culturally influenced as that of the UK (Spellerberg, 1996; Tivey, 1993).

Table 4.7: Ratcliffe's (1977) Criteria for the Designation of Sites for the Protection and Study of British Wildlife

- Area (size and extent)
- Diversity
- Naturalness
- Rarity
- Fragility
- Typicalness
- Recorded History
- Position in an ecological/geographical unit
- Potential value
- Intrinsic appeal

(Ratcliffe, 1977; Spellerberg, 1996)

Conservation was concerned primarily with scientific ideals regarding nature conservation (Adams, 1996b). There are at least twenty-four different types of designated area within the UK (Wragg, 2000) and it is argued that a number of these have acted to protect many species and habitats (Curtis, 1991). Nonetheless, the designation of conservation sites acts as a means of 'othering' non-human nature; in other words designation acts to separate people and non-human nature, with non-human nature being viewed from a control and management perspective (Adams, 1997; Haraway, 1991). Many SSSIs were designated for the purpose of protecting specific species (Sheail, 2000). This concentration on species was compounded with the composition of Red Data lists of threatened and endangered species, developed by the International Union for the Conservation of Nature (IUCN) (Pullin, 2002; Spellerberg, 1996). It has often been distinct, rare, endangered or charismatic species that have been the target of conservation activities (Lowe, 1983; Sheail, 1983). The concern for individual species has neglected the close interrelationships that exist not only between species and habitats, but also between species and humans. However, the increased emphasis placed on sustainable development in the late 1980s meant that UK government began to consider the balance that existed between people and non-human nature, and different habitats and species (Spellerberg, 1996).

4.4.2: The Convention on Biological Diversity as a turning point for Conservation Policies?

In 1992 at the Earth Summit in Rio de Janeiro 157 countries signed the Convention on Biological Diversity (CBC) (Humbler, 2004; McNeely, 1996; Reid et al, 1993). Biodiversity was defined as "the sum of all different kinds of organisms inhabiting a region such as the entire

earth, the African continent, the Amazon Basin, or our own backyard" (Dobson, 1998, p. 10). By signing the CBD, countries agreed to take steps to protect biodiversity within their own country. Prior to the Earth Summit in 1991 the UK government put together an advisory Group on Biodiversity and it was this group that was charged with formulating a plan for biodiversity within the UK. However, the plan was merely to be a series of commitment statements (Bishop and Cowell, 2004). In parallel the RSPB was formulating its own biodiversity plans which involved not just statements of commitment but management objectives for each species and habitat in their charge (Bishop and Cowell, 2004). The RSPB published *Biodiversity Challenge,* introducing the idea of Biodiversity Action Plans, which were subsequently taken up by the Department of Environment that had previously been reluctant to develop a target-orientated plan (Bishop and Cowell, 2004). The subsequent publication of the *UK: Biodiversity Action Plan* (UK BAP) emphasised the UK government's commitment to the CBD (Langslow, 2001; Biodiversity Steering Group, 1994).

The UK BAP identified a series of targets for the restoration, maintenance and enhancement of specific habitats and species within the UK (Biodiversity Steering Group, 1995). These targets were to be achieved through a series of action plans including Biodiversity Action Plans (BAPs), Species Action Plans (SAPs), Habitat Action Plans (HAPs) and Local Biodiversity Action Plans (LBAPs) (Defra, 2002b). However, evidence suggests that BAPs have been far from successful (Knightbridge, 2000) in that BAPs have effectively just formalised an approach to conservation based on designation.

Although BAP targets were initially meant as a wider countryside approach, they have tended to be delivered through designated sites, yet it has increasingly become evident that this was not an effective means of protecting species and habitats, given the existing degradation of sites. Although Boote (2001) reports that SSSIs were initially viewed as a wider countryside designation system, they were bounded sites, many of which are isolated within a wider agricultural landscape, fragmented by roads and developments and increasingly degraded due to land use practices external to the sites (James and Boothby, 2002). Non-human nature has been far from adequately conserved within the plethora of designations. There has been a great decline in semi-natural habitats due to agricultural land use in the surrounding landscape (Munton, 1983). Intensive agriculture within the surrounding area to Halvergate Marshes in the Norfolk Broads resulted in the declining health of this site. The profit from cereal production encouraged farmers to drain the land surrounding the marshes and this had detrimental impacts on the species and habitats of the marshes that were designated (Hodge, 1999). Landowners may perceive that as long as they do not directly intervene in the designated site itself they can do whatever they want beyond the site. In reality SSSIs only offer partial protection and is often

not sufficient as the protected sites are too small to be able to withstand negative impacts outside the boundary (Walton, 1996). This may be less of an issue with larger sites where more of the interior species and habitats or core habitats are protected by land that can act as a buffer around the site (Begon et al, 1996; Pullin, 2002), but in the UK large tracts of protected habitats are rare due to land ownership complexities (Harvey, 1997). The majority of designated sites are owned by private landowners.

Designated sites act to separate people and non-human nature by setting up false boundaries (Spellerberg, 1996). Many species are dependent upon more than one habitat feature for survival, including those habitats which are found beyond designated areas (Forman, 1995; Sheail, 2000; Selman, 2001). Non-human nature does not recognise socially constructed boundaries that are used to organise policy delivery within the UK (Countryside Commission and English Nature, 1996; Cullingworth and Nadin, 2002; Porter, 2004; Porter and Preston, 2001; Walton, 1996). If the conservation of non-human nature is to be achieved in the UK there is a need to consider the wider countryside beyond designated sites (Langslow, 2001; Porter, 2004). This has been long recognised within the literature with Peterken (1977) identifying the important role that the wider countryside plays in ensuring the survival and regeneration of semi-natural woodland and the complex array of species dependent upon this habitat. Site boundaries often cross administrative boundaries which mean that management and conservation activities may be inconsistent and *ad hoc*. It is usual for larger designated sites to have multiple 'owners' and these may be local authorities, NGOs, conservation organisations and private landowners. All of these different land owners may have different views on management and little communication between the different owners leads to a lack of consistency of management.

Natura 2000 is a European wide network of protected areas primarily designated as Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) to secure them against damaging land use (Burges, 2004). SPAs constitute a network to protect the migration paths of birds and were initiated under the 1979 Birds Directive, while the 1992 Habitats Directive required the designation and protection of 'priority habitats' as SACs. Whilst Natura 2000 considers ecological connectivity on a wide scale with regard to birds, it is not able to consider the connectivity of the landscape for more sedentary species that do not travel long distances and are restricted by lack of habitats. Natura 2000 also fails to consider social and cultural influence and meaning within the landscape. This system within the UK still works within the constraints of early preservationist views such as the exclusion of people, which, given that Europe is composed of cultural landscapes, make the long term viability of such a designation questionable.

4.4.3: Bioregional Planning in the UK

In the UK, the move to a more holistic approach in countryside planning and management has been mirrored in the changing attitudes of Non-Governmental Organisations (NGOs), government agencies and local authorities. Countryside organisations have in the last fifteen years begun to identify biogeographic zones as an alternative to administrative regions to assist in policy delivery. Four biogeographic frameworks can be identified across the UK and these are English Nature's Natural Areas and the Countryside Agency's Landscape Character Areas, both now combined in Joint Character Areas, Scottish Natural Heritage's Natural Heritage Futures and the Environment Agency's Catchment Management Areas (now River Basin Districts).

In particular, English Nature's Natural Areas and the Environment Agency's Catchment Management Areas both approximate well to bioregions and aim to deliver more holistic and integrated countryside decision-making and policy delivery (Barth and Fawell, 2001; Glaser, 2001; Preston, 2002; White and Howe, 2003). This section considers both Natural Areas and catchment areas, as units through which to consider the integration of place, people and non-human nature in England.

4.4.4: Natural Areas and the Attempt to Integrate People, Place and Non-human Nature

In 1991, the Nature Conservancy Council, government advisor on nature conservation, became English Nature (now Natural England). This provided an opportunity to move beyond traditional site-based conservation targeting towards a more holistic approach to conservation (Porter, 2004). Faced with the challenge of delivering emerging BAP targets, and evidence suggesting designated sites alone could not provide a suitable infrastructure to achieve these targets, in 1993 English Nature produced a 'biogeographic' framework known as Natural Areas, as a wider countryside approach to pursuing and achieving biodiversity targets. Porter (2004) also contends that one aim of the Natural Area framework was to recognise the importance of people to the conservation of non-human nature, identifying the role of the concept: a 'sense of place' in encouraging people to relate to non-human nature and its conservation needs.

A number of policy requirements acted as an important driving force for the development of a wider countryside approach. These included the UK BAP and the Birds and Habitats Directive (Porter, 2004). Although non-statutory, the UK BAP placed emphasis on achieving biodiversity targets across the UK, solidified further in the passing of the Countryside and Rights of Way Act 2000 that 'officially' acknowledged the need to conserve biological diversity. Porter (2004)

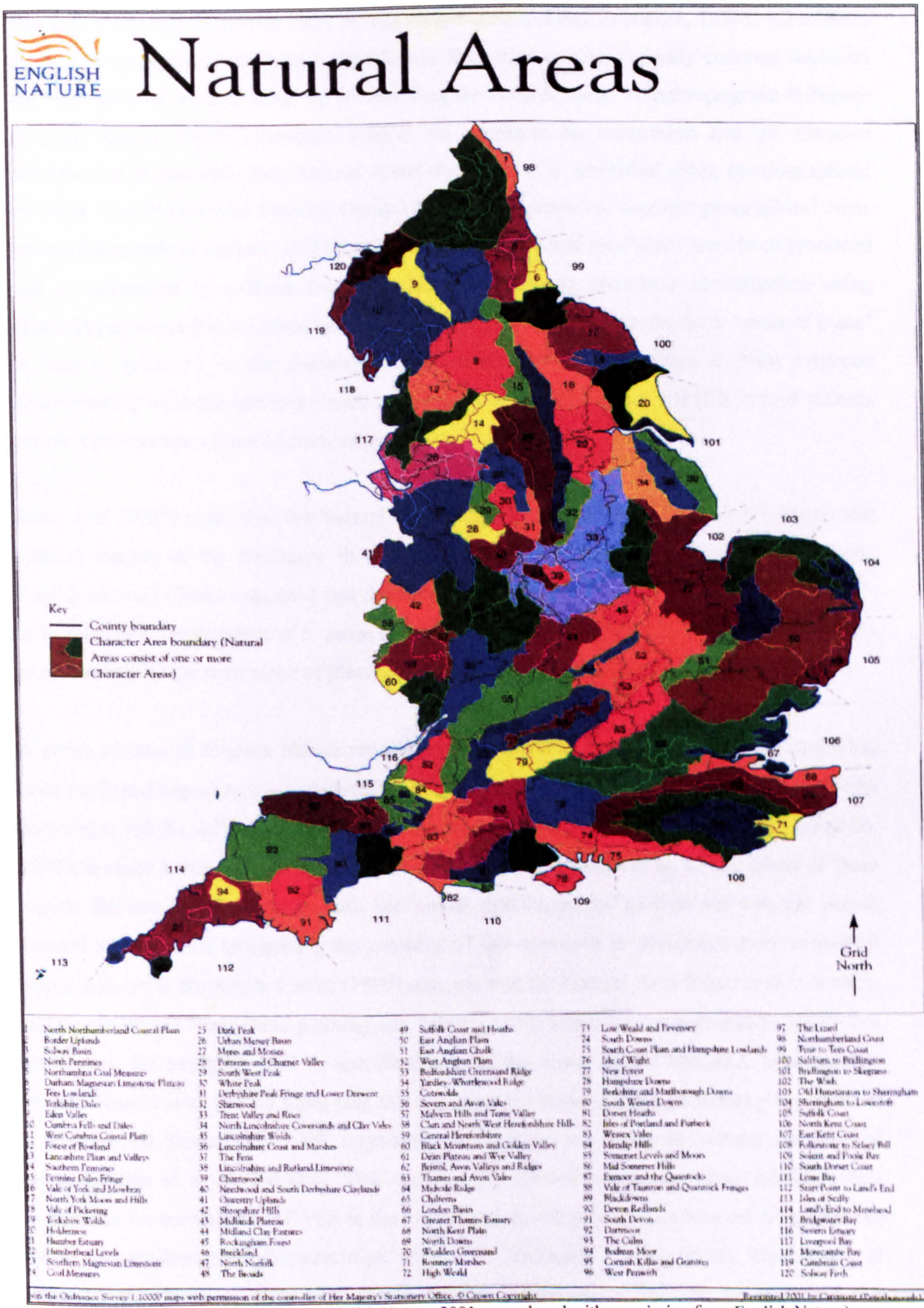
identifies that the EU Birds and Habitats Directives placed statutory responsibility upon English Nature to achieve 'favourable condition' of habitats within designated sites which he contends can only be achieved by considering influences within the wider countryside.

Natural Areas were viewed as a framework for achieving both internal agency aims, of integrating departments and providing a tool for targeting resources more effectively, and external aims, primarily the production of a framework through which to link designated sites across a wider landscape, whilst acknowledging wider countryside impacts and benefits to non-human nature (Porter, 2004). Until this point, designated sites had tended to be treated distinctly and the relationships between them and with the wider countryside were largely ignored (James and Boothby, 2002; Hamilton and Selman, 2005a). Natural Areas offered the potential to provide a framework to link people, place and non-human nature at the wider landscape level.

4.4.5: The Development of the Natural Area Framework

English Nature's framework involved the division of the English landscape into discrete units known as 'Natural Areas' of which ninety-seven terrestrial and twenty-three maritime units were identified, shown in figure (4.3).

Figure 4.3: Map of Natural Areas



(English Nature, 2001, reproduced with permission from English Nature)

This division was based on the collation of a variety of data sets including geological maps, species and habitat distributions, historical flora and fauna information and land use, all input into GIS as separate layers that were subsequently overlain (English Nature, 1999). All of these discrete 'biogeographic' units were identified as distinctive and ecologically coherent based on the integration of these different layers including the consideration of anthropogenic influence (English Nature, 1998a). However, despite the emphasis on integration and the frequent references to human influence, Natural Areas were primarily identified using physiographical evidence. The Biodiversity Steering Group UK identified them as "discrete geographical areas encapsulating unique features" (1995, p. 76). All landscapes and landforms have been produced and or influenced by cultural factors within the landscape, therefore identification using primarily physiographic evidence inevitably includes people. Although the term 'sense of place' is used in reference to the distinctiveness of each Natural Area there is little evidence demonstrating what this actually means with regard to Natural Areas and if it indeed reflects people's perceptions of non-human nature.

Jones et al (2001) argue that the Natural Area framework aimed to consider both natural and cultural aspects of the landscape in an integrated way, including socio-economic drivers. English Nature (1998a) suggested that the views of local people were to be included within this to facilitate the development of a 'sense of place'. However, there is little discussion of exactly what is meant by the term sense of place and the way in which this can be assessed.

A series of internal English Nature reports and considerable external academic literature has been published regarding the perceived benefits of the Natural Area framework in terms of its potential to aid the delivery of species and habitat targets such as lowland grassland (Jefferson, 1997), lowland heathland (Michael, 1996) and invertebrates (Drake et al, 1998). Many of these reports are concerned primarily with the spatial distribution of species and habitats across Natural Areas, whilst recognising the potential of this approach to encourage more consistent target delivery in the future. Cooke (1999) suggests that the Natural Area framework is suitable for the targeting of woodland planting and Tilzey (2000) identifies the potential to utilise this framework for targeting AES to specifically meet the needs of the character of a specific Natural Area. Porter (2004) notes that this has been the underpinning philosophy for the new Environmental Stewardship AES: targets for this scheme are driven by natural and cultural characteristics of a specific area. This marks a significant move away from administrative boundaries for the delivery of AES to the consideration of boundaries of Natural Areas that are based on physiographic characteristics within the landscape (Defra, 2006). Boundaries of Natural Areas are recognised as being 'fuzzy' or transitional rather than the hard and fast administrative boundaries that have acted as the framework for all countryside planning,

management and decision making in the past (Cullingworth and Nadin, 2002; English Nature, 1997a). Natural Area boundaries are viewed as transitional in recognition of the fact that species and habitats rarely show clear boundary divisions, they merge slowly from one assemblage to another and hard, fast boundaries tend to overlook this (English Nature, 1999).

Natural Areas attempt to link people, place and non-human nature within a bioregional framework that has not been considered in the past. However, this framework has primarily been considered as a tool for the conservation of non-human nature (Cooke, 1999; Glaser, 2001). Natural Areas were primarily developed by English Nature whose main priority is nature conservation. In the late 1990s English Nature piloted a project known as 'Lifescapes' to investigate the relationship between human facets of certain Natural Areas and so called 'ecological goods' (Porter, 2004), identifying the close relationship between people, place and non-human nature. In addition the merger of Natural Areas and Countryside Character Areas to produce the Joint Character Area (JCA) framework has also given a stronger focus on linking people, place and non-human nature within a bioregional framework. This is because Countryside Character Areas were more explicitly cultural in origin (Countryside Commission, 1993).

4.4.6: The Joint Character Area Framework

In parallel to the development of Natural Areas the Countryside Commission (now Natural England) was developing its own framework known as Countryside Character Areas (Porter, 2004). It had been argued that there was no consistent way to incorporate landscape character into the decision making process and Landscape Character Assessments were developed to provide this opportunity (Swanwick, 2000). Landscape Character Assessments (LCAs) were developed based on the concept of distinctiveness and the division of the landscape based upon this distinctiveness. Swanwick suggests that countryside character and landscape character are almost synonymous, with two main differences:

> "first, that countryside character is a broader integrating concept that draws together landscape, wildlife and archaeological and historical aspects of the countryside; and second that it focuses largely on the rural environment, while landscape character is concerned with all types of landscape in both town and country" (2004, p.109).

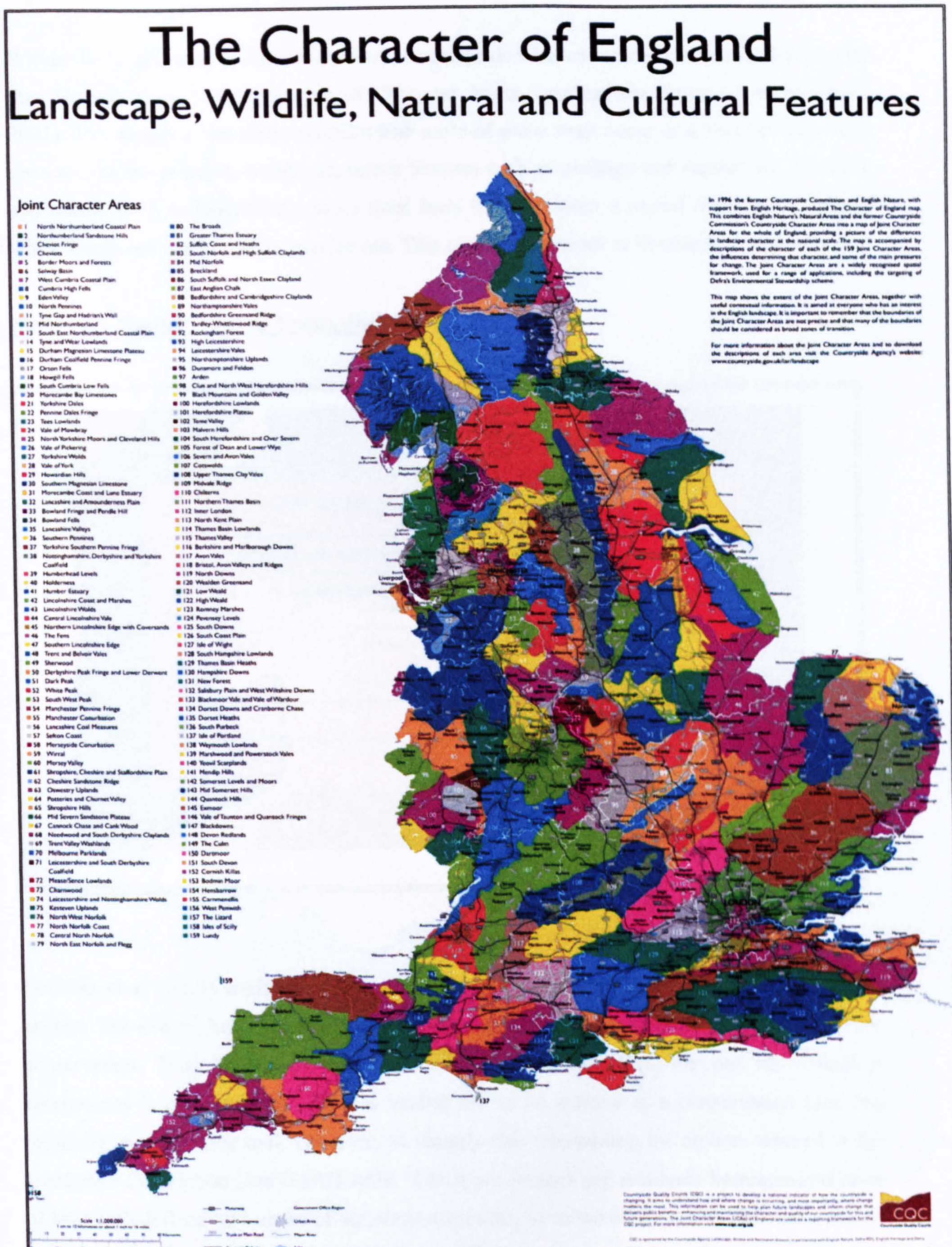
LCA provides a methodology through which the landscape can be subdivided into discrete spatial units known as 'character areas' based upon the character of that area interpreted through the integration of a range of landscape facets including land use, geology, vegetation and

settlement patterns (Countryside Agency and Scottish Natural Heritage, 2002a; 2002b; Hamilton, 2003). Character Areas are identifiable at a range of spatial scales from national to local. LCA was also used as a tool to identify Landscape Character Types which are areas of landscape with broadly similar "patterns of geology, landform, soils, vegetation, land use, settlement and field pattern in every area where it occurs" (Countryside Agency and Scottish Natural Heritage, 2002a, p. 19). The Countryside Commission originally published its integrated guidance to landscape assessment in 1987. This guidance was superseded in 1993 by the *Landscape Assessment Guidance* (Countryside Commission, 1993) and subsequently in 1999 and 2002 (Countryside Agency, 1999). Each review further developed the integrated methodology of LCA. LCAs are a tool that can be used to identify a sense of place, and Countryside Agency and Scottish Natural Heritage (2002a) recognise that the landscape is formed as a result of the relationship between people and place. A sense of place in a LCA is seen as being closely integrated with distinctiveness; people are viewed as identifying with the distinctiveness of an area (Countryside Agency and Scottish Natural Heritage, 2002a).

CCAs, unlike Natural Areas, were based on a systematic analysis of datasets within the ecological statistical computer package TWINSPAN, which is a software programme initially designed to identify patterns within species assemblages and distributions (Environmental Information Centre, 2003). Datasets included altitude, landform, ecological characteristics, land capability such as agriculture, farm types, settlement patters, field density, and pattern and geology (The Telematics Centre, 1999). TWINSPAN was used to statistically assess the presence or absence of each of the attributes. The information from these datasets was overlaid using GIS, and both professionals and stakeholders discussed the location of character areas. This information was assessed in kilometre squares for the whole of England (Swanwick, 2004). From this process 159 Character Areas were identified that like Natural Areas, did not follow administrative boundaries (Preston, 2001; Swanwick, 2000). The primary purpose of the areas was to identify the distinctive character within the landscape, based on the combination of the different variables discussed (Countryside Agency, 1999).

In 1994 as a result of government review, English Nature and the Countryside Agency were encouraged to work together on their mapping frameworks, the result being the publication of the Joint Character Map of England as illustrated in figure (4.4). This national map is based on a combination of landscape and nature conservation and it was found that many of the Natural Area and Character Area boundaries already coincided, even though Character Areas were identified in a more consistent and statistical manner (Porter, 2004).

Figure 4.4: The Joint Character Map of England

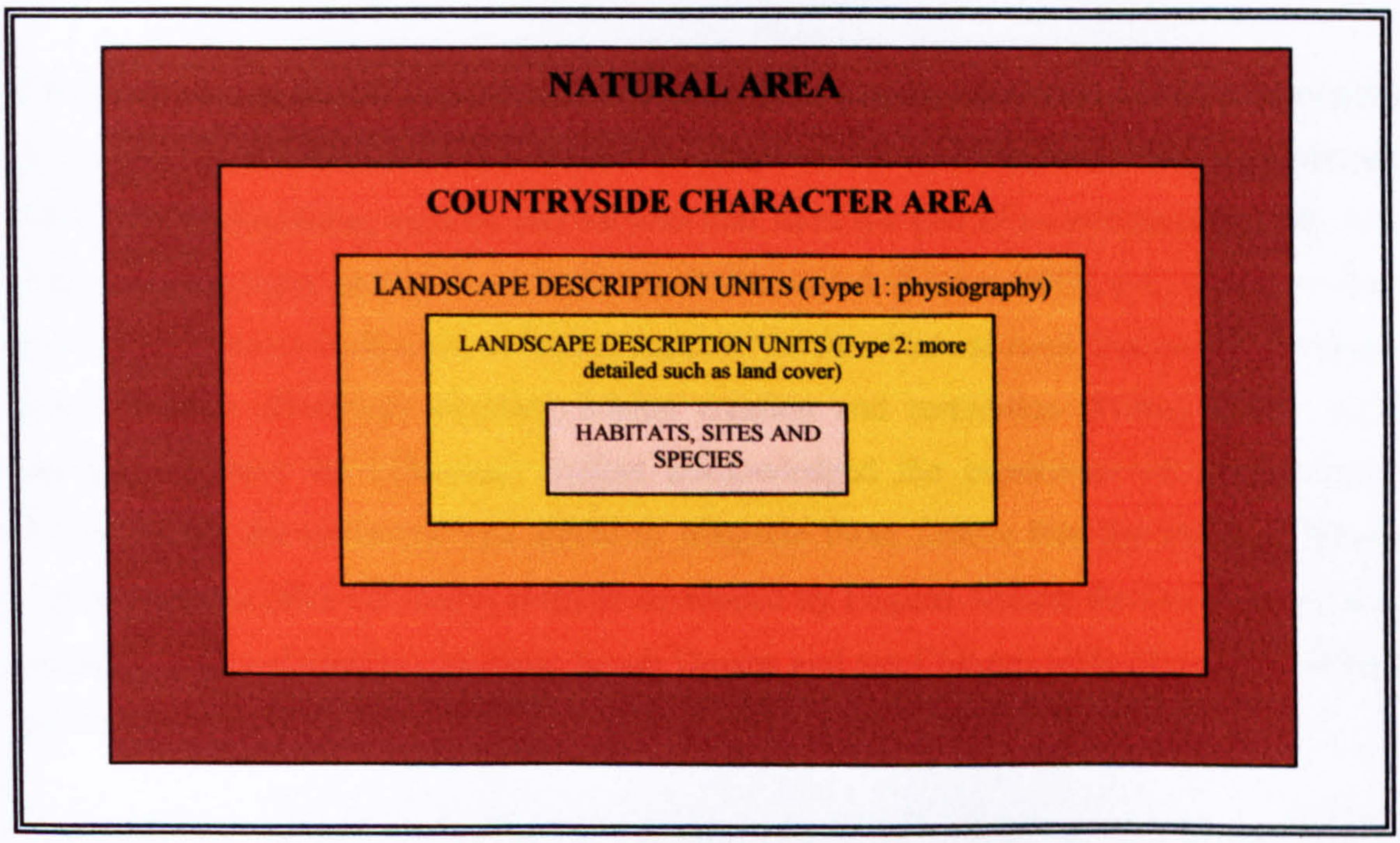


(Countryside Agency and English Nature, 1996, reproduced with permission from Countryside Agency)

The process used to identify Joint Character Areas (JCAs) was also used to develop a national landscape typology (Swanwick, 2000). Datasets were combined digitally to identify common characteristics in the landscape and these became generic landscape types.

Within the Joint Character Area framework, Countryside Character Areas are somewhat smaller than Natural Areas, with a number of Character Areas forming one Natural Area (Preston, 2001). This suggests that distinctiveness and sense of place may occur at a smaller scale than the variation based purely on physiographic features such as geology and vegetation. The JCA and related LCA techniques at a more local level thus represent a nested framework through which integrated work could be carried out. This nested framework is illustrated in figure (4.5).

Figure 4.5: Spatially Nested Framework



(Adapted from Preston 2001)

Griffiths et al (2004) consider the use of this nested hierarchy within the Living Landscapes project. The aim of this project was to identify the potential of LCA for the purposes of nature conservation. They argue that the relationship between the landscape and its ecological components is complex and LCA has tended not to be utilised as a conservation tool, but primarily as a planning tool. However, to identify this relationship the authors worked at the Landscape Description Unit (LDU) scale. "LDUs are distinct and relatively homogeneous units of land each defined by a series of *definitive attributes*, so called because they define the spatial extent of each landscape unit" (Griffiths et al, 2004, p.15). This may appear too small to be utilised practically on a national scale. On the other hand, the Joint Character Area map and its

broadly defined areas are considered too large for locally based analysis (Griffiths et al, 2004). What is of interest to this study is that the JCA framework has allowed for the integration of both ecological and cultural factors at a range of different spatial scales, and it is therefore a framework that has the potential to reconnect people, place and non-human nature.

The JCA framework has evolved in recent years. JCAs are now the largest units within the nested hierarchy, followed by Regional Character Areas, and Local Character Areas and are more or less congruent with what were Natural Areas. This shift in reference has come just prior to the integration of English Nature, the Countryside Agency and the Rural Development Service of Defra to form a new agency known as *Natural England*. From 1st October 2006, this agency is now responsible for nature conservation, landscape and AES.

4.4.7: Lifescapes: An Early Practical Application of a Bioregional Approach in the UK

Lifescapes was an initiative based on the concept of sustainable biodiversity "that acknowledges and embraces, cultural, social and economic influences on land use; integrating anthropogenic influences on the plants, animals and habitats that form the foci of conservation activity rather than excluding them, as often been in the past" (Stone and Thomas, 2002, p.1). It was produced by English Nature with the aim to further improve the then Natural Area framework, developing ways of more effectively targeting habitat creation and restoration (Porter, 2004). Unlike previous attempts the Lifescapes project acknowledged the importance of socio-economic factors within the landscape and aimed to integrate these factors into the targeting process. There were five pilot Lifescapes projects developed by English Nature: the Forest of Bowland; Suffolk Coast and Heaths; the Fens; South Downs and the Chiltern Hills (Porter and Preston, 2001).

Lifescapes provided an opportunity for English Nature to consider the relationship between people, place and non-human nature. Lifescapes was viewed as a means of bringing together the Countryside Agency's characterisation work, English Heritage's Historic Characterisation work and the Natural Area work of English Nature, in an integrated and holistic manner (Jensen, 2005). The Lifescapes projects were only piloted for three years, yet within this timeframe progress was made towards integrating biodiversity targets with cultural and historical objectives (Porter, 2004; Selman, 2004b). However, whilst identifying the need to integrate socio-economic, cultural and historic factors into a wider countryside approach, Lifescapes was still primarily concerned with delivering biodiversity targets. A number of the pilots concentrated primarily on targeting farming activities to encourage the uptake of AES management options that specifically emphasised the particular ecological characteristics of that

Natural Area (Lee et al, 2001a; 2001b). Porter (2004) explains how Lifescapes also aimed to facilitate economic growth, encourage local level partnerships and encourage availability of, and access to, data sources regarding biodiversity information.

Whilst the Lifescapes pilots developed a number of successful individual projects based on these priorities, they acted primarily to raise awareness regarding the benefits of understanding the relationship between socio-economic factors and biodiversity targeting (Jones et al, 2001; Kent County Council, 2001). Through Lifescapes, English Nature was acknowledging the close interrelationship between people and non-human nature in a variety of ways including economic, historical and cultural relationships. Natural Areas were seen to need "stronger links to how people see their surroundings; not simply in terms of biodiversity, but as a patchwork of farmland, woods and downs, all interwoven with cultural associations and history. Through Lifescapes we are exploring this wider landscape, in which biodiversity has to be delivered" (Porter and Preston, 2001, p.3). However, there is evidence that whilst Lifescapes may have aimed to develop this integrated approach within a Natural Area framework, the results have primarily been desk-based in the form of complex GIS simulations (Edworthy, 2002; Jones et al, 2001), and have not developed on the ground. Lifescapes was only a five year pilot project and these projects finished during 2002/2003.

4.4.8: Summary

In this section I have discussed the way in which nature conservation in the UK has been based primarily on the designation of sites and the short-comings of this process. Even following the CBD and the development of the UK BAP there was still an emphasis on the use of designated sites to protect non-human nature. However, as shown within this section it became increasingly evident that designated sites alone were not sufficient to protect, enhance and restore non-human nature and therefore a bioregional approach in the UK was formulated, the Natural Areas framework. This framework took a wider countryside approach to considering non-human nature, and also integrated social, economic and cultural factors within the decision making process.

4.5: The Evolution of the UK River Catchment Approach towards the Integration of People, Place and Non-Human Nature

Within this section I discuss the evolution of the river catchment approach within the UK. Unlike land based schemes such as Natural Areas, river catchments have been used as a framework for theoretically working with all aspects of the water environment for many years

(Hutchings, 1999). However, although the catchment approach has always been viewed as an integrated approach, in practice it has been anything but. Until recently, river catchments in the UK have been a non-statutory framework and this section will consider the changes in this approach the move towards a more integrated approach.

4.5.1; Changing Water Policy: Planning and the River Catchment Approach

Bioregionalists primarily identify watershed boundaries as a suitable 'natural' boundary to demark a bioregion (Berg, 1978; Plant, 1990a; Thayer, 2003). The UK has a well established catchment management process in place that has evolved significantly over the last century. The National Rivers Authority (NRA) (now Environment Agency) proposed catchment frameworks in 1990. The framework divides the landscape in relation to river catchments or smaller sub-catchments. River catchments are described as being "the surface from which a river collects surface runoff, and contains surface gradient down which water travels internally to the system, to a point of discharge" (Cook, 1998, p.34). Catchment Management Plans (CMPs) were the formal framework through which water could be integrated within development plans and for development plans to consider river catchments (Hutchings, 1999; Rydin, 1993; Slater et al, 1994). The role and use of CMPs was intensified by the 1991 Water Resources Act which required the NRA to incorporate the conservation and enhancement of water bodies into its normal functions (Gardiner, 1994).

Unlike other 'natural unit' frameworks CMPs were originally identified as working in conjunction with the planning system. It was found that this was not happening in practice, yet planning authorities recognised the importance of them (Slater et al, 1994). River catchments can cross many different administrative boundaries, which means many different planning authorities need to co-operate across administrative boundaries, planners have found this difficult (Rydin, 1993; Wood et al, 1999). Although promoted by the NRA as an integrated framework for considering the relationship between planning and river management, concern for non-human nature was not included among the NRA goals until the 1991 Water Resources Act (Rydin, 1993). The 1991 Act dictated that the NRA should have regard for the conservation and enhancement of natural beauty, amenity, conservation and recreation (Rydin, 1993).

As a result of the 1991 Act and following the 1992 'Earth Summit' Local Environment Agency Plans (LEAPs) were introduced, as a means of tackling local environmental issues in an integrated way, encouraging partnerships across a wide range of sectors (Jones, 1999; Wood et al, 1999). The catchment areas identified for CMPs were to act as the physical framework through which this could be achieved. In large rivers such as the Thames, LEAPs were divided

into upper and lower sub catchments (Jones, 1999). At the centre of the LEAP vision was a multi-disciplinary approach and multi-sector partnerships (Environment Agency, 2002a). LEAPs were integrated into practice within all catchments in England and Wales (Jones, 1999). LEAPs have also been used to incorporate public involvement in relation to environmental issues as required by Agenda 21 (Trenam, 2000) and the delivery of BAP targets.

The Mersey Basin Campaign aimed to reverse the poor water quality and industrial dereliction of the River Mersey catchment. The relative success of this project was based on cross boundary co-operation; however, this was driven by more than just CMPs or LEAPs: it was primarily driven by considerable local stakeholder involvement (Wood et al, 1999). Given that LEAPs were still non-statutory; this cross boundary co-operation was unusual.

In 1996 the NRA merged with Her Majesty's Inspectorate of Pollution and the local Waste Regulation Authorities to form the Environment Agency, which continued with the LEAP process. However, although LEAPs advocated the integration of varying issues related to the human and non-human environment, in practice factors such as development, pollution and water quality were still viewed in isolation. It was not until the early 1990s that engineers and ecologists alike recognised the close interrelationship between different components within a river catchment such as ecological components and land use, and the need to 'work with the river and not against it' (Gregory and Davies, 1992, p.118). They identified that there was a need to enhance the 'functional integrity of a river and floodplain', with an ecologically sound foundation (Ward et al, 1999). The embracing of ecological factors within river management and planning became important for the Environment Agency as evidenced by the LEAPs. However, LEAPs were still non-statutory, and administrative boundaries were and are still the primary framework through which all water management and planning decisions are made and delivered. This means that at any given time, a number of varying management decisions could be made that will have different impacts on varying parts of the catchment without, consideration given to the wider catchment.

The 1992 Earth Summit placed greater emphasis on the role of river catchments in delivering conservation targets. In England and Wales, LEAPS were integrated into practice within all catchments, acting as a framework to meet the needs of the maximum number of users (Jones, 1999). However, despite the potential provided by CMPs and subsequently LEAPs in relation to integrating people, place and non-human nature, they had a number of limitations as recognised by Newson and Newson (2000): 1) insufficient spatial information, with a tendency for information to concentrate upon certain reaches within a catchment; 2) lack of co-operation between different local authorities within the catchment; 3) the unstructured approach of public

consultation and finally; 4) the failure to be precise with regards to targeting in the wider catchment. Although CMPs and LEAPs were aimed at wider catchments there was still a tendency for specific issues such as flooding and pollution to take precedence over factors affecting non-human nature.

Flooding has been of major concern to the Environment Agency and the general public alike, and this phenomenon is one of the factors that encourage public involvement within catchment areas. Since the devastating floods of 1998, flooding rose up the political agenda and was therefore given higher priority by the Environment Agency (Cullingworth and Nadin, 2002). As a result there was a review of planning guidance on flooding prior to the onset of the 2000 floods, which were viewed as the worst flooding events since records began four hundred years earlier (Cullingworth and Nadin, 2002). Scrase and Sheate (2005) claim that although flooding brings people into direct contact with the water environment floods are still equated as "acts of God" and there has been little move within policy to dissipate this view. They also contend that treating flooding as completely unaffected by, and independent of, people means that people have little protection (in terms of insurance) against flooding. Flooding in the UK is often the result of highly modified landscapes and river channels, primarily modified by people. People have actively attempted to control rivers for centuries. Managing flood control in an environmentally sustainable way was one of the priority targets within LEAPs.

4.5.2: Integration of People, Place and Non-Human Nature in Relation to River Catchments

The 1991 Water Act gave responsibility to all water companies to, where possible, act to increase and enhance biodiversity on their land. Powe et al (2004) carried out a study investigating the willingness of customers to pay a proportion of their bill towards conservation and found that ninety percent of 268 customers of Southern Water were willing to do so, indicating the importance of conservation to people. Rispoli and Hambler (1999) carried out a study regarding people's perception towards wetland conservation, as they suggest that in the past people did not value the preservation of wetlands. However, out of a sample of seventy-eight people the authors found there was an overall positive attitude towards the conservation of wetlands. This may be due to a change of attitudes towards conservation in general rather than specific changes in relation to wetlands. However, whatever the reasoning behind these results, this identifies that people value conservation.

With a shift towards integrated management there is a need to understand the interrelationships between people and non-human nature at a catchment scale. Catchments have widely been claimed to be an ideal framework for meeting the integrated needs of people and non-human

nature. However, there are many barriers to them working in practice, including a separatist view regarding different policy issues; a failure to co-operate across administrative boundaries; limited understanding regarding the interrelationships between rivers and their surrounding landscapes; and the sheer size of river catchments (Edward-Jones, 1997; Falkenmark, 2004; Hillman and Brierley, 2005). Newson and Newson (2000) argue that a catchment scale may be too large for effective integration, and we may need to consider a hierarchy of scales with links between meso and micro scales.

It is increasingly being recognised that negative impacts in one section of a river catchment have detrimental impacts for other areas within a catchment (Falkenmark, 2004; Hutchings, 1999). CMPs and LEAPs marked the beginning of this recognition, however, 2002 was the final year of the LEAP framework. Following the 2000 Water Framework Directive (WFD) and the 2002 Johannesburg World Summit on 'Sustainable Development', a new vision was developed which included increasing public collaboration within catchment based planning and management (Environment Agency, 2002a). Early thoughts regarding this were incorporated into Environment Agency documents known as 'Making it Happen' which aimed to incorporate LEAP targets that had not been met into a wider remit for river catchments in the UK (Environment Agency, 2002a; 2002b).

4.5.3: The Impact of the Water Framework Directive on the River Catchment Approach

Key to the WFD is the incorporation of people into decision making processes surrounding river basins (Barth and Farwell, 2001). The aims of the WFD are indicated within table 4.8.

Table 4.8: The Primary Objectives of the Water Framework Directive

- Expanding the scope of water protection to all waters including both groundwater and surface waters
- Achieving and/or maintaining 'good' status, in terms of ecological quality, for all waters within a set time
- Water management to be based on river basins, overriding administrative structures and boundaries
- A combined approach for control of pollutants incorporating both emission limit values (ELVs) and water quality standards (WQSs), sometimes known as environmental quality standards (EQS)
- Prices and charges for all services related to water use, such as water supply and wastewater collection and treatment, to reflect the true economic cost
- To more closely involve both interested parties and citizens in the process of protecting water
- To streamline water legislation with the incorporation and repeal of seven old directives relating to water

(Barth and Farwell, 2001, p.103)

In an attempt to find a common terminology for the planning process across all of Europe, the WFD has introduced the concept of River Basin Districts which incorporate two or more catchments (Barth and Fawell, 2001), for which River Basin Management Plans must be prepared. RBDs are viewed as an integrated approach that will override administrative boundaries in relation to water issues and act as a framework through which rivers will be viewed as integral networks influenced by both human activity and non-human influences (Barth and Fawell, 2001). River Basin Management Plans will take the place of LEAPs but will work in wider catchments than LEAPs previously did (European Commission, 2000).

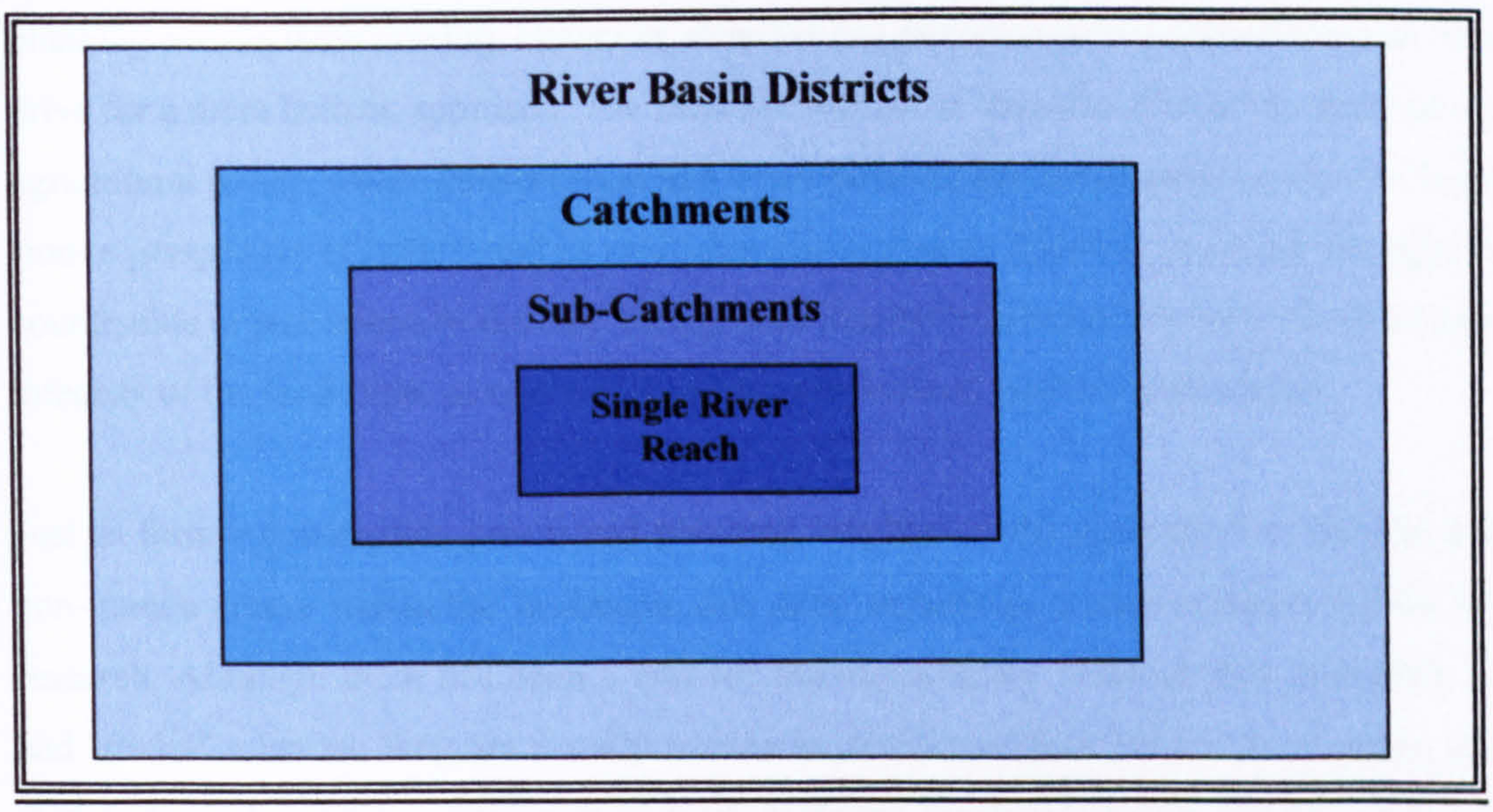
A river basin is "the area of land from which all surface run-off flows through a sequence of streams, rivers and possibly, lakes into the sea as a single river mouth, estuary or delta" (European Environment Agency Website, 2003). As can be seen this definition, unlike the one earlier, does not include reference to people and the cultural relationships that occur within a river catchment. The European definition refers only to the physical nature of a river basin. As suggested by Edwards and Dennis (2000), the development of a truly integrated approach is difficult within catchments or basins, given the multiplicity of issues and the sheer size of some river basins.

RBDs will be obligatory, unlike CMPs and LEAPs before them (Edward-Jones, 1999), and therefore could potentially have significant implications for the future of holistic planning and management at a catchment scale. The WFD thus provides an opportunity for the integration of people, place and non-human nature in a statutory manner. Many of the objectives of the WFD concentrate upon 'traditional' issues such as pollution control with new targets being set for toxin levels in river water (Barth and Farwell, 2001). However, what is different in the WFD is that there is a greater consideration of the ecological quality of rivers, highlighting the integration of non-human nature into human-based policies. This incorporation of ecological status highlights the close interrelationship between human action and the direct impact on non-human nature, which has been lacking within previous water policy. The WFD therefore provides an opportunity for the development of an integrated framework that, because of its statutory nature, may be utilised.

A Common Implementation Strategy has been agreed to provide guidance for the implementation of the WFD, of which public participation is a fundamental part (Defra, 2003b). This guidance is being tested in the Ribble pilot River Basin Project, with the aim to publish the Common Implementation Guidance in late 2004 and prepare a prototype River Basin Management Plan by 2007 (Defra, 2003c). River basin management has become an integrated part of the Environment Agency's 'Making it Happen' vision.

River basins, river catchments and sub-catchments form a nested hierarchical framework similar to the JCA nested hierarchy, with each catchment composed of sub-catchments and single river reaches as the smallest component of this hierarchy. This hierarchy is illustrated within figure (4.6).

Figure 4.6: The Nested River Catchment Hierarchy



The identification of RBDs has evolved since the beginning of the process. RBDs are now composed of one or more large river catchments and are the largest part of the nested hierarchy illustrated within figure (3.4). The scale of these districts may make working within such a framework in an integrated manner difficult and will potentially be too large for people on the ground to associate with.

4.5.4: Summary

This section has discussed how catchment areas have been utilised for many years as a means of working with water resources. However, until recently this has been largely focused upon human need in terms of water quality, supply and flood defence. Although throughout the 1990s the role of river management in influencing the ecological integrity of the river catchment was recognised, there was little attempt to tackle this relationship directly. Until the passing of the 2000 WFD, all catchment based plans were non-statutory in nature and therefore were not integrated within formal planning. This meant that rivers and their catchments were not considered within development planning, although there was recognition of the negative impacts that development within the catchment could have for both non-human nature and

flooding within a river. Under the WFD, catchment-based plans known as RBDs will become statutory with the acknowledgement that ecological integrity is an important aspect of a river catchment. However, the impact of this process will not be seen for a number of years.

4.6: Chapter Summary

As outlined in this chapter, in the UK it has been common practice to consider the landscape and all components of the landscape including people, as separate entities within policy, planning and decision making. However, over the last decade it is possible to trace an increasing drive for a more holistic approach. The final sections have considered how the three areas of agricultural policy, nature conservation and water policies has developed the view of landscapes from a perspective of holism and its multi-functional nature. This has spawned attempts by countryside organisations to develop bioregional frameworks based on the ecological and social integrity of the landscape, as opposed to administrative and political boundaries.

Just as former countryside policy and planning heightened the separation of people, place and non-human nature within the landscape, this deep separation is also apparent within academic research. Although there has been a call for interdisciplinary research that integrates 'natural' and 'social' sciences, they are usually treated as distinct subject fields. Even within landscape studies there has been a tendency to treat different facets of the landscape separately (Fry, 2001). Within this study, the bioregional frameworks that I consider have attempted to some degree to integrate people and non-human nature and, by definition, to provide an interdisciplinary framework. As Brown and Mitchell comment:

> "healthy landscapes are shaped by human cultures as well as the forces of nature, that rich biological diversity often coincides with cultural diversity, and that conservation cannot be undertaken without the involvement of those people closest to the resources" (2000, p.70).

Landscape and catchment based frameworks are beginning to provide an important means through which to explore the complex interactions that exist between non-human nature and people (Bishop and Phillips, 2004; Phillips and Clarke, 2004; Porter and Preston, 2001). Conferences such as the conference on Multi-functional Landscapes – Interdisciplinary Approaches to Landscape Research and Management, held in Denmark in 2000, highlight a growing shift away from the separatist view of the landscape towards the identification that the landscape is dynamic and multi-functional, the result of interaction of social, economic, cultural and historical factors with non-human nature (Fry, 2001; Terkenli, 2001; Tress et al, 2001).

Chapter Five

Methodology

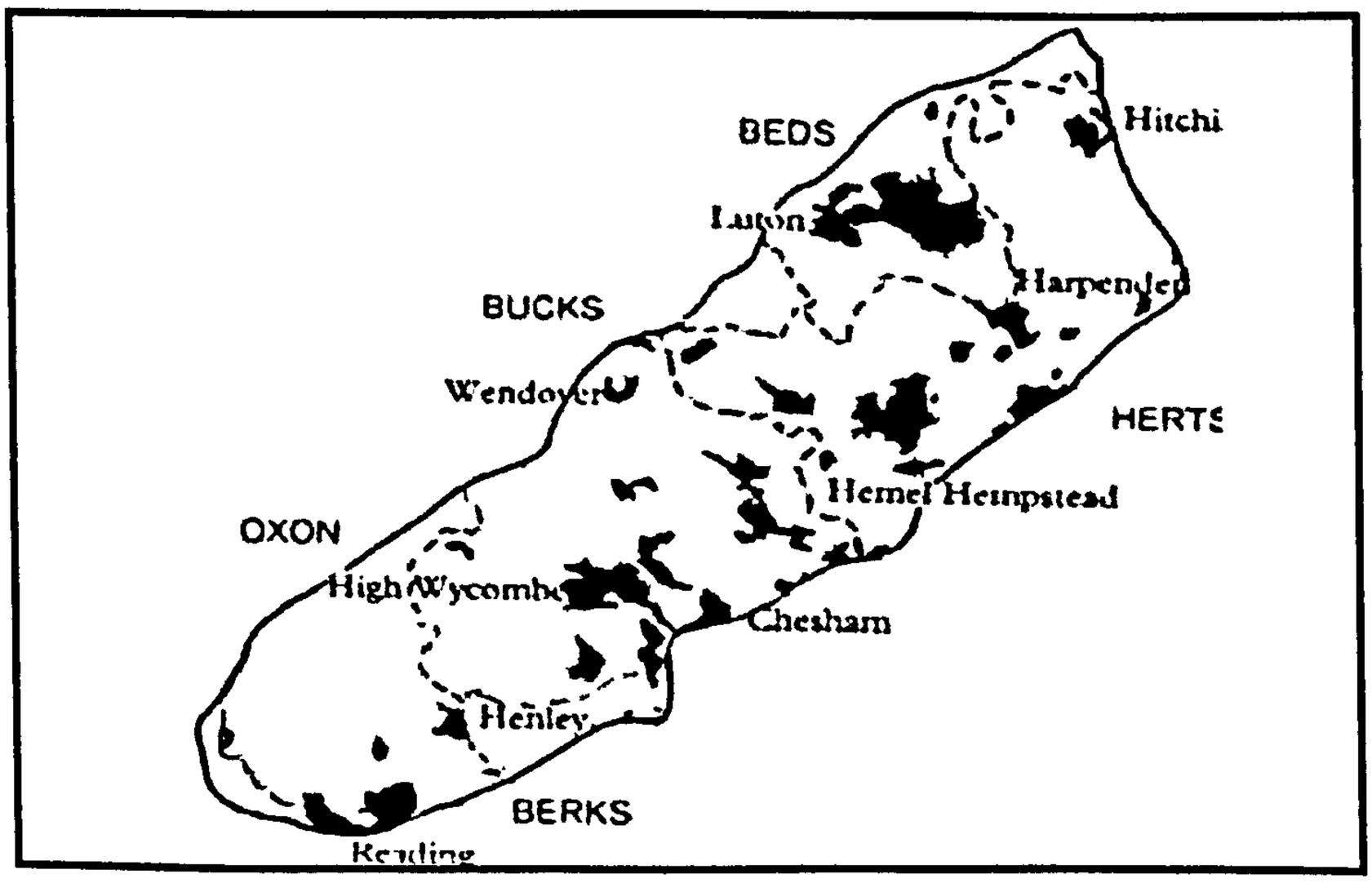
5.1: Introduction – The Case Study Areas

In this chapter I will initially introduce the case study areas in which this research was carried out and then discuss the methods used and the implications of these methods for the research process. I will then discuss the analysis of documents followed by the interviews and focus groups, distinguishing why and how I applied the approaches used.

5.1.1: The Chiltern Hills Natural Area

Dodge (1981) suggests that bioregions can be both land based and water based, the Chiltern Hills Natural Area now Joint Character Area (JCA) provides a suitable land based bioregion through which to consider a sense of place. I use the term Natural Area as opposed to the newly derived term of JCA as the majority of participants within this research were not aware of the changes to terminology. Therefore to keep consistency throughout the thesis I use the term Natural Areas. The Chiltern Hills Natural Area crosses four county boundaries: Oxfordshire; Buckinghamshire; Bedfordshire and Hertfordshire; and is JCA number 110 on the revised Joint Character Area map reproduced in Chapter Four. Figure (5.1) shows the Chiltern Hills Natural Area in isolation from the rest of the UK.

Figure 5.1: The Chiltern Hills Natural Area



(Reproduced with permission from English Nature, English Nature, 1997a, p.6)

The Chiltern Hills is widely accepted as being among the most distinctive of all the Natural Areas as a result of its unique landscape characteristics (English Nature, 1997a; Jones et al, 2001). The Chiltern Hills are delineated by a Cretaceous chalk ridge that reaches heights of 300 metres above sea level and is easily recognised, in contrast to the adjacent Aylesbury Vale. The Natural Area covers an area of 1,640km^2 and stretches as far as Hitchin in the north-east, from the Goring Gap in the south-west. Although the steep ridge limits agricultural land use, the associated dip-slope is suitable for farming and this farmland is separated by areas of woodland and a series of valleys (Chilterns AONB, 2002; English Nature, 1997a). The Chiltern Hills Natural Area is almost congruent with the boundary of the Chiltern Hills Area of Outstanding Natural Beauty (AONB) that encompasses "the most scenically attractive parts of the chalk escarpment, its rolling foothills and the heavily wooded south-east facing dip slope" (Chilterns AONB, 2002, p.3). Unlike the AONB, the Natural Area also includes large urban areas within the boundary. The AONB actually separates and has a detached block that falls between Luton and Hitchin, so as not to include urban areas in the boundary (Chilterns AONB, 2002).

> "The AONB boundary has been drawn to include those parts of the Chiltern Hills that are of the highest landscape quality and to omit other areas, especially to the south, which have been more affected by development" (Chilterns Conference, 1999, p. 5).

Natural Areas on the other hand aim to include the whole of the UK, being based primarily on congruent relationships between landscape components including geology, soils and vegetation, do not exclude any areas. The Natural Area incorporates these major urban centres which include Luton, parts of Reading, High Wycombe and Hemel Hempstead.

As with the majority of English landscapes, the Chilterns Hills are composed of a series of semi-natural habitats that have been influenced by anthropogenic action for centuries (Countryside Commission, 1992). The Chilterns Hills Natural Area Profile, produced in 1997, provides an overview of the semi-natural habitats within the area which include chalk grasslands, scrub, acidic grasslands and heathland and a high concentration of semi-natural ancient woodlands including beech woodlands, beech hangers, mixed semi-natural woodlands and plateau woodlands (Hamilton and Selman, 2005b). The Chilterns are one of the most heavily wooded areas within England and as such, many of these woodlands are offered specific protection within designated sites. The Chilterns beech woods especially are seen as being of national biodiversity importance due to their species assemblages that include Helleborines *(Epipactis)* (Ling and Ashmore, 1999). Within the Natural Area boundary there are a large number of designated sites including seventy-nine SSSIs and three National Nature Reserves

(English Nature, 1997a). Many of these sites have complex landownership with multiple owners. Given the semi-natural status of many of these habitats, they are reliant on human management for their survival.

5.1.2: The Historic Inter-relationship between People, Place and Non-Human Nature in the Past in the Chiltern Hills

There has long been a close interrelationship between people, place and non-human nature within the Chilterns Hills, with evidence of Palaeolithic settlement within the area as well as Roman and Medieval influence (Countryside Commission, 1992). Many of the beech woods that exist in the present day are remnants of plantations that were initially developed for fire-wood in previous centuries but with the increasing reliance of populations in and around the Chilterns on the beech furniture trade, plantations were expanded and managed on a coppice rotation system (Countryside Commission, 1992). The beech furniture trade was established in the Chilterns during the eighteenth century and continued into the nineteenth century (Mabey, 1998). The Chilterns landscape as we know it today developed from both this relationship between people and the beech woods and farming within the valleys (Mabey, 1998). Hepple and Doggett (1994) identify the Chilterns as a cultural landscape, a product of the furniture trade and farming. Today the Chilterns is dominated by arable farmland, and intensification of agriculture in recent years has resulted in a shift away from more 'traditional' farming techniques and therefore a subsequent loss and degradation of some of the semi-natural habitats, most notably chalk grassland habitats (Countryside Commission and English Nature, 1996). Other changes include hedgerow removal, loss of remnant parkland, increasing road infrastructure and urbanisation due to increases in the number of people moving into the area. Most of these changes have been mirrored nationally (Harvey, 1997). It has been suggested that changes in agriculture are the biggest threat to the Chilterns landscape today (Countryside Commission and English Nature, 1996).

As a result of the interrelationship between people and place there has developed in the Chilterns a 'characteristic' building style that dominates many of the villages within the Natural Area. The Chilterns Conference (1999) *Building Design Guide* identifies the 'characteristic vernacular buildings' that are composed of a combination of flint, brick and tiles which formed many of the early farmsteads of the area. The *Building Design Guide* was developed in order to maintain "the distinctive qualities of the Chilterns landscape" (Chilterns Conference, 1999, p.8). The primary purpose of this document was to ensure the maintenance of the character of the Chilterns, recognising that people not only associate the Chilterns with beech woods but also with the built environment. Although there is an attempt within the boundary of the AONB to

maintain this traditional housing structure, beyond the boundary yet still within the Chilterns Natural Area, there is little attempt to do so.

In the late nineteenth century railways were developed to link the Chilterns and London (Countryside Commission, 1992). Whilst initially beneficial in relation to the furniture trade, in recent years the rail network has attracted commuters to the area (Chilterns AONB, 2002). Compounded by the decline in the furniture trade, which in many ways continued the connection between people, place and non-human nature in the Chilterns, and changing agricultural practices that are reliant on fewer and fewer people, the relationship between people, place and non-human nature has appeared to lessen. However, given the semi-natural character of many of the Chilterns 'characteristic' habitats there is a need for this relationship to be maintained to ensure the survival of these habitats. A number of priority species are dependent upon the sympathetic management of these semi-natural habitats for their survival. These include the Dormouse (*Muscardinus avellanarius*), the Ghost Orchid (*Polyradicion lindenii*) and the narrow-lipped helleborine (*Epipactis leptochila*) all of which are nationally rare. The Chilterns is probably best known for its association with the Red Kite (*Milvus milvus*), and it is seen somewhat as a local emblem with a 'Red Kites in the Chilterns' event programme being developed in Chinnor (The Chinnor Net, 2003). Red Kites originally located in Wales and Scotland were reintroduced to the Chiltern Hills in 1989 and their populations have been steadily increasing ever since (Wotton et al, 2002). This highlights a distinct relationship between people, place and non-human nature in the Chiltern Hills. Many priority species are at risk due to habitat loss, fragmentation and isolation (Lee et al, 1999). Loss of habitat is not just the result of direct human influence but also indirect human influence due to the rise in populations of the Grey Squirrel (*Sciurus caroliniensis*) introduced into the UK in the mid-nineteenth century, and rise in populations of all species of deer, some native and some introduced. These species are a direct threat to woodlands especially, as squirrels strip bark from beech trees and leave them vulnerable to disease (Chilterns AONB, 2002).

5.1.3: The Chilterns as a Lifescapes Project Area

The Chiltern Hills Natural Area became one of English Nature's Lifescapes pilots in 2000 and projects were developed to consider the relationship between nature conservation and socio-economic factors within the wider countryside. Although the Chilterns cross four county boundaries it is asserted that the area still maintains its distinctive identity and this proved attractive for a Lifescapes project based within the biogeographic Natural Area framework. Edworthy (2002) states that the primary aim of the Chilterns Lifescapes was to "increase the wildlife value of the countryside, outside special sites" (p. 1).

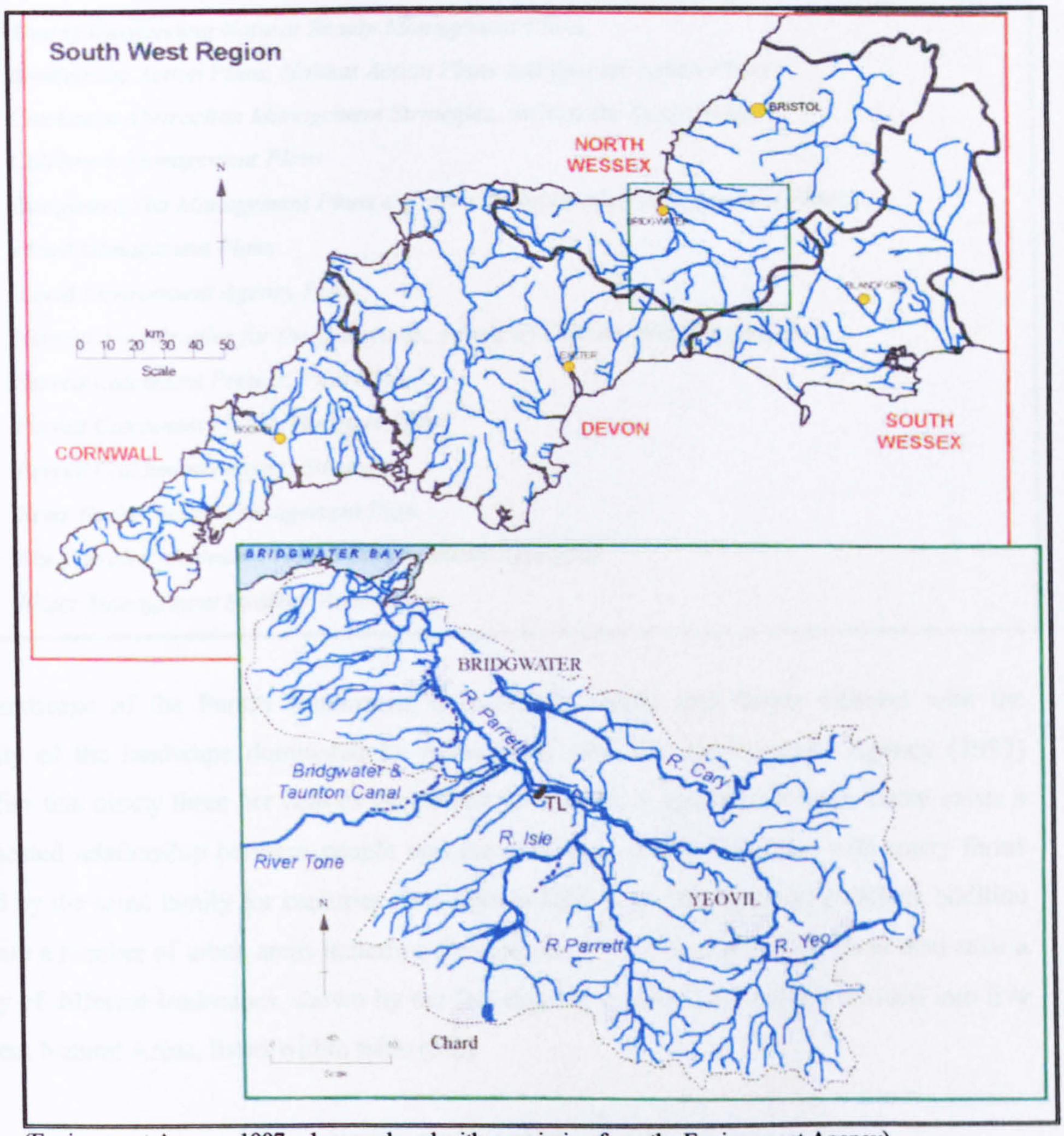
The Lifescapes project was primarily based on the creation of a GIS habitat modelling programme designed to identify potential areas for habitat expansion for UK BAP priority habitats (Lee et al, 2001a; 2001b). This model was created for the whole of the Natural Area and was based upon a set of decision rules that identified suitable management options for certain parcels of land (Lee et al, 2001b). However, the model did not take account of variations in either the cultural or the physical landscape, which therefore restricted its practical use, given that seventy five per cent of the Chiltern Hills is composed of agricultural land (Lee et al, 2001b). The model provided a framework that had potential for use in targeting Agri-Environment Schemes (AES), and a pilot project was set up in four areas of the South Oxfordshire Chilterns, targeting farms that would be most suitable to take part in AES management aimed specifically at maintaining and restoring priority habitats (English Nature and ADAS, 2002). Once identified through the habitat modelling framework, farmers were approached and encouraged to adopt a whole farm conservation plan and enter the Countryside Stewardship Scheme (CSS). This project also gained information as to why farmers were not taking up CSS locally. The Chilterns project developed a useful Natural Area wide Geographic Information System (GIS) based programme that in the future may be put to more practical use (Edworthy, 2002).

5.1.4: The Parrett Catchment

Berg (1978) primarily developed his bioregional theory based on the concept of the use of watersheds rather than administrative boundaries through which to work with the landscape and live in a more sustainable manner. With this in mind the Parrett Catchment was determined as my second case study site. The River Parrett Catchment is relatively small in relation to many catchments within the UK, such as the Ribble and the Severn, and therefore potentially more manageable and meaningful as a discrete biogeographic unit for study. The Parrett Catchment also has a well established integrated approach to considering landscape issues, primarily flooding, with the development of the PCP that provided a wealth of information related to holistic catchment management. Included within their remit is the consideration of a "sense of place" or local identity within the catchment which is fundamental to my research and a key aspect of bioregionalism (Thayer, 2003).

The River Parrett Catchment as illustrated in figure (5.2) encompasses an area of 1251km^2. The source is located near Cheddington and it enters the Severn Estuary at Stert Point Bridgwater (Environment Agency, 1997).

Figure 5.2: The River Parrett Catchment



(Environment Agency, 1997, p1: reproduced with permission from the Environment Agency)

The Parrett Catchment, unlike the Chiltern Hills Natural Area, is primarily contained within one county (Somerset) although a small proportion crosses into Dorset and Devon. It covers the entirety of Somerset County. The River Parrett has a number of large tributaries that include the River Tone, the River Yeo, the River Isle and the River Cary (Environment Agency, 1998). As a result there is a plethora of plans that have been produced by different organisations, including the Environment Agency, the Parrett Catchment Project (PCP) and the Farming and Advisory Group (FWAG) that consider both the Parrett Catchment as a whole and the different tributaries and designated areas within the catchment (Environment Agency, 2001; 2002b; 2003). Some of these are included within table (5.1).

Table 5.1: Plans for the River Parrett and its Tributaries

- *Area of Outstanding Natural Beauty Management Plans*
- *Biodiversity Action Plans, Habitat Action Plans and Species Action Plans*
- *Catchment Abstraction Management Strategies, such as the Tone CAMs*
- *Catchment Management Plans*
- *Designated Site Management Plans e.g. Area of Outstanding Management Plans*
- *Flood Management Plans*
- *Local Environment Agency Plans*
- *Natural Area Profiles for the Quantocks, Levels and Moors, Blackdown Hills*
- *Parrett Catchment Project: Pilot Plan*
- *Parrett Catchment Project Business Plan*
- *Parrett Catchment Project: Strategy*
- *River Basin District Management Plan*
- *The Parrett Catchment Project: Sustainability Appraisal*
- *Water Management Strategy Action Plan*

The landscape of the Parrett Catchment is extremely varied and deeply cultural with the majority of the landscape dominated by agricultural use. The Environment Agency (1997) identifies that ninety three per cent of the Parrett Catchment is agricultural land. There exists a deep-seated relationship between people and the landscape within this area, with many farms owned by the same family for centuries (Blackdown Hills Rural Partnership, 2004). In addition there are a number of urban areas including Bridgwater, Yeovil and Taunton. There also exist a variety of different landscapes, shown by the fact that the Parrett Catchment is divided into five different Natural Areas, listed within table (5.2).

Table 5.2: Natural Areas within the River Parrett Catchment

- Somerset Levels and Moors
- Mid Somerset Hills
- Exmoor and the Quantocks
- Vale of Taunton and Quantock Fringes
- Blackdowns

Within the catchment there are a range of designated sites including over forty-five SSSIs, two AONBs, three ESAs and an array of National and Local Nature Reserves. As with the Chilterns, the landownership within the Parrett Catchment is complex with many designated sites having

multiple owners. The variation within the landscape provides an ideal opportunity to identify not only if people have a developed sense of place within the area, but also to investigate if this is related to the catchment as a whole, as put forward by many bioregionalists (Thayer, 2003). Each Natural Area within the Parrett Catchment has its own distinctive characteristics and English Nature contends that it is these distinctive characteristics that result in the development of a sense of place (Countryside Commission and English Nature, 1996; Porter, 2004).

5.1.5: The Parrett Catchment as a Cultural Landscape

The Parrett Catchment incorporates the whole of the Somerset County, which has historically been controlled by large rural landowners and recently farmers have become more influential in local politics (Woods, 1997). The political influence of landowners within this area has created an ongoing conflict between farmers and conservationists, a conflict that came to a head in the mid eighties when they clashed regarding the designation of large parts of the Somerset Levels and Moors as an SSSI (Woods, 1997). However, since this demonstration much of the landscape within the Parrett Catchment has been designated as an Environmentally Sensitive Area (ESA), where farmers can join an agri-environment scheme and get paid for managing the landscape in a more traditional manner (Whitby and Lowe, 1994). As in the Chiltern Hills, in recent years commuters and second home owners have moved to the area (Wood, 1999), however, a large proportion of the area is still composed of long established families (Levels and Moors Partnership, 2006).

Both the Quantock Hills AONB Management Plan and the Blackdown Hills Management Plan refer to the areas as cultural landscapes, recognising the important relationship between people and non-human nature (Blackdown Hills Rural Partnership, 2004; Quantock Hills AONB Joint Advisory Committee, 2004). Throughout the Parrett Catchment there is evidence of the long established relationship between people, place and non-human nature as shown by a range of Scheduled Ancient Monuments and evidence of early hunter-gatherer communities, Bronze and Iron Age settlements (Environment Agency, 1997; English Nature, 1996; 1997b; 1998b). There has been a particular relationship between the landscape within the lower-catchment (primarily the Somerset Levels and Moors) and the land use that has occurred there. Farming practices have evolved considerably over the past fifty years. Farmers were encouraged to drain land for agricultural use during the 1970s and 1980s, but are now being encouraged to allow seasonal flooding for conservation purposes (Green and Robins, 1993). As a result of seasonal flooding within the levels and moors the RSPB has purchased and manages a large proportion of the land as reserves for a range of nationally and internationally important wetland bird species, including Lapwing (*Vanellus vanellus*) and Snipe (*Gallinago gallinago*). Land use further up

the catchment, whilst being influenced by national trends of intensification and a recent shift to agri-environment schemes, has on the whole not directly been influenced by flooding regimes. The upper catchment is contains an array of priority habitats and species and primarily semi-natural habitats including sessile oak woodlands, lowland heath and species rich grassland (Blackdown Hills Rural Partnership, 2004).

The Levels and Moors Project (LAMP) emphasises the cultural nature of the landscape of the levels and moors and aims to facilitate a sense of place and ownership of this area among the people that live there (Levels and Moors Partnership, 2006). This project recognises the importance of the relationship between people, place and non-human nature that has become eroded during the past generation. Within the upper catchment both the Blackdown Hills AONB and the Quantock Hills AONB Management Plans discuss the relationship between people, place and non-human nature, again recognising (at least on a theoretical level), that this relationship exists.

5.1.6: Flooding within the Catchment and the Parrett Catchment Project

In recent years flooding within the lower reaches of the River Parrett Catchment has intensified. Although this may be beneficial to wetland bird species it causes problems for residents within the lower catchment (Green and Robins, 1993). In response to major flooding events in 1997, and again in 1999/2000, Somerset County Council developed the Parrett Catchment Project (PCP) which aims to tackle flooding issues using a whole catchment approach (Land Use Consultants, 2001). The aim of the PCP was to consider the catchment in a holistic sense, in correspondence to the view of catchments put forward by the WFD (FWAG, 2001a). The main objectives of the project include devising an integrated Parrett Catchment Management Plan and developing a sustainable approach to flood management within the catchment (Land Use Consultants, 2001).

It was recognised within the Parrett Catchment that flood events were getting progressively more severe. In addition to climate change effects, it was identified that urban development in the upper catchment, due to the rise in housing and industrial need, has increased run-off resulting in a shorter lag-time between heavy rainfall and that water reaching the catchment (FWAG, 2001b). The consequence of this was intense down-stream flooding, primarily within the Somerset Levels and Moors, although during 2000 flood waters reached as far inland as Taunton (Land Use Consultants, 2005). The PCP identified the need to consider the catchment as a whole, recognising the issues of catchment transfer, which is when an action in the upper catchment, (such as deforestation), has implications for the lower catchment (Knighton, 1998).

The PCP developed a stakeholder group composed of twenty-seven partner organisations operating within different parts of the catchment including British Waterways, FWAG and South Somerset District Council (Somper, 2005). Initial funding for the project came from the EU LIFE environment initiative Joint Approach to Managing Flooding (JAF) (Somper, 2005). This funding ended in May 2006.

The PCP has embarked on a number of catchment wide initiatives targeting both urban and rural land uses. In close collaboration with FWAG, farmers in the upper to mid catchment were approached to become involved in a range of schemes aimed at reducing flooding in the lower catchment. These schemes included woodland planting (Nisbet and Broadmeadow, 2003), arable reversion to grassland (FWAG, 2001c) and storage reservoir development (FWAG, 2001b). The PCP was also involved in lobbying to gain AES funding for further flood control schemes on farmland. In addition to this, the PCP has adopted the SuDs (Sustainable Drainage Systems) approach to manage runoff within developed areas (Somper, 2005). The PCP is also involved in the consultation process with regard to development within the Parrett Catchment. Although the PCP appears to be attempting a holistic approach to managing the Parrett Catchment, many of its schemes are extremely small and it is not clear how many farmers have actually been involved with them. Proposals for the agricultural projects were formulated in 2001 but as yet (2006) there have been no progress reports or assessments made available. This project has the potential to link people, place and non-human nature on a catchment scale but opportunities to monitor this project have been lost and therefore the true potential may not be realised.

The PCP works on the philosophy that if the identity of the Parrett Catchment can be promoted enough, people will become aware of its existence and this will facilitate a sense of place and a wider concern for catchment issues. Somper explains this:

> "developing a strong identity for the catchment with all of the stakeholders helps to make sustainability more relevant and worthwhile for local businesses, residents, farmers and local people, i.e. everyone can identify with the local 'brand'. This makes it easier to use the brand to increase "sense of place" and a shared agenda through, for example, fun promotional events that both celebrate the area and raise awareness about the issues" (2005, p. 7).

The PCP is closely integrated with the Levels and Moors Partnership (LAMP) which, as previously referenced, is concerned with promoting the local identity of the Levels and Moors. Joint ventures include the development of a Parrett Catchment Trail, which is a fifty mile hiking

route from the source to the mouth of the River Parrett. The Parrett Trail, combined with LAMP, again provides opportunities to instil a "sense of place" into the communities within the Parrett Catchment. However, although alluding to a "sense of place", little work has been carried out to identify if this "sense of place" or Parrett identity exists. Therefore the Parrett Catchment proved a suitable case study in which to investigate the relationship between people, place and non-human nature.

5.2: Methodological Approach

In overview, a combination of document analysis, semi-structured interviews and focus groups was used to investigate bioregionalism within a UK context. However, over the twelve months during which the main body of data collection and analysis was carried out, my methods evolved significantly from an initial positivistic, evidence-based systematic review of documents (Boaz et al, 2002; Davies, 2000a; Young, 2003) to a method that acknowledges the influence of situated knowledges (Haraway, 1988), that rejects the occurrence of a definitive 'truth' and accepts that all knowledge is context bound and often sensitive to specific situations (Cope, 2002; Haraway, 1988; 1991). In certain aspects this corresponds to "standpoint theory" (Hoffman, 2001; Harding, 1991; Peet, 1998) which identifies that within any situation there are multiple perspectives that contribute to the lived 'reality' of social research (Cope, 2002; Falconer et al, 2002), though standpoint theory originated from an essentialist viewpoint that women experience and view the world differently to men (Hoffman, 2001). Hoffman (2001) goes on to identify that social position influences and controls the production of knowledge. Based on the acceptance of these theories, this research evolved using a methodology that utilised feminist methods for data collection and analysis. Although the existence of a true feminist process within research is difficult to pinpoint, this type of research is reliant upon increased reflexivity, awareness of potential sources of power differences and the ways in which these may influence both data collection and analysis (Brunkskell, 1998; Moss, 2002; Valentine, 1997). All of this has been embedded within an overall theoretical concept of hybridity that considers all things to be the by-product of both natural and human processes (Swyngedauw, 1999; Whatmore, 1997; 2002; Whatmore and Thorne, 1998).

When I initially considered how to investigate aspects of bioregionalism within a UK context the aim was to carry out a systematic review (Boaz et al, 2002) of all documents relating to this, as a means of informing subsequent interviews. However, as this process evolved I became increasingly aware that this was counter productive to the human and non-human nature based research I envisaged. Thus I will begin by discussing the systematic review process, the limitations it posed to this research and the way the document analysis evolved to be less

important, using an approach based on a more flexible yet still controversial adaptation of Grounded Theory (Glaser and Strauss, 1967), and Discourse Analysis (Potter and Weatherell, 1987).

5.2.1: Evidence Based Research

In a way, all research is evidence based, in that all research is based on collecting and analysing evidence from a variety of sources. However, evidence based policy and practice have now become 'buzz' words within policy based research and government documents (Evans and Benefield, 2001). Solesbury (2001) argues that there has been a need for policy to be informed by a more substantial evidence base than it has in the past, especially in light of the public becoming increasingly sceptical of research, science and politics (Davies et al, 2000). Solesbury (2001) naively suggests that evidence based policy is a driver for the policies developed by 'New' Labour to be more transparent and open, and Davies et al (2000) identified the manifesto of 'New' Labour as being based on the sentiment that "what matters is what works". In a speech David Blunkett, the then Secretary of State for Education and Employment (2000) contended that there is a need for more relevance and timeliness in research, as research is often *ad hoc* and inward looking (Evans and Benefield, 2001). Blunkett (2000) suggested that past policies have tended not to be based on sound evidence and good research. He argues that research is often based on issues not directly related to people, that does not consider everyday realities of life and is not accessible to the communities upon which it is based. He emphasised the systematic review process, which is seen as one of the primary methods for undertaking evidence based policy research (Boaz et al, 2002; Greenhalgh, 1997). Thus the political context in which this 'evidence' based process is embedded should not be overlooked (Hammersley, 2001).

A systematic review is "an overview of primary studies which contains an explicit statement of objectives, materials and methods and has been conducted according to an explicit statement of objectives" (Greenhalgh, 1997, p.672). Systematic reviews have also been described as a "staged process of identifying, locating and assessing the research evidence in a particular area" (Joseph Rowntree Foundation, 2000, p.2). The perceived need for a new approach to evidence assimilation and use was first identified within medical research where it increasingly became evident that there were copious amounts of existing results based on data gathered within Randomised Controlled Trials (RCT) that were not being utilised (Petticrew, 2001). A method was needed through which existing data could be utilised to a fuller degree, in a process similar to that of meta-analysis, with benefits of rigour and transparency (Davies, 2000a; Greenhalgh, 1997). What followed was an increasing use of past data through the process of systematic review (Dixon-Woods and Fitzpatrick, 2001; Green and Britten, 1998; Hawker et al, 2002).

Although initially used for medical research systematic reviews have been applied to both quantitative and qualitative research across a wide range of disciplines, but predominantly health studies and education (Davies, 2000a; Hawker et al, 2002). More recently the potential to use a systematic review process in conservation biology studies has been identified (Pullin, 2002; Pullin and Knight, 2003). The systematic review method is viewed as a rigorous, transparent and comprehensive process whereby all research in a particular area is synthesised, including all types of literature such as research papers, journal articles and grey or unpublished literature (Boaz et al, 2002; Evidence Network, 2001; Hawker et al, 2002).

5.2.2: The Systematic Review

Whilst it is suggested that there is no 'gold' standard methodology involved in producing a systematic review it is argued by Boaz et al (2002) that there is a need for an agreed standard and process to maintain rigour and transparency. In the UK the Department for Education and Employment established a Centre for Evidence Informed Policy and Practice in Education at Queen Mary's University London, to provide ministers with the 'best evidence' to support practice (Davies, 2000b). It is within this centre that agreed standards for systematic review have been developed and promoted (Boaz et al, 2002; Young, 2000). This method is viewed as not only a way to integrate all existing research in a given area but also to provide a stronger foundation to guide decision making within that area (Mulrow, 2001). Table (5.3) shows the step by step process that makes up a systematic review.

Table 5.3: The Systematic Review Method

1. Establish the need for a review – is there a lot of research within the area? Are their existing reviews?
2. Formulate a method to inform the strategy – a search strategy.
3. Search for as much relevant material as possible using all available databases, including grey literature searches.
4. Develop criteria for selecting material for inclusion within the review – is it relevant to the research questions?
5. Develop a form to be filled in for all data that is to be included and appraise the evidence extracted – quality criteria.
6. Synthesis the research findings.
7. Be as objective as possible.
8. Prepare a review that can be updated regularly.
9. Disseminate information.

(Adapted from Boaz et al 2002; Evidence Network, 2001).

Evans and Benefield (2001) identify seven key aims within a systematic review which are shown within table (5.4):

Table 5.4: Aims within a Systematic Review

- Use explicit research questions.
- Make sure the search methods are transparent and reproducible.
- Ensure exhaustive searches are carried out of published and unpublished materials making use of all available database searches.
- Develop clear criteria for assessing the quality of the studies under review.
- Have a clear list of criteria for the inclusion and exclusion of studies.
- Carry out joint reviewing as a strategy to reduce researcher bias.
- Produce a clear statement of findings within the review and disseminate information.

(Adapted from Evans and Benefield, 2001)

One of the primary priorities of these reviews is for them to be both transparent and reproducible, to enable researchers in the future to follow the method through and to enable additions to the existing reviews when new research becomes available (Boaz et al, 2002; Evans and Benefield, 2001; Evidence Network, 2001). Throughout the literature there are many advantages identified in carrying out such reviews and this initially influenced my decision to undertake a review of the uses, benefits and limitations of biogeographic units within the UK. Some of the attractions included the under-representation of reviews within this field of study, with Natural Areas and other biogeographic units such as Landscape Character Areas having been present for ten years when this research began (Hamilton and Selman, 2005a; Porter, 2004). It appeared an ideal time to carry out such a review. I intended to use this review as a foundation upon which to investigate biogeographic units within England, identifying areas that had previously not been researched, based on the assumption that the systematic review would be based on a fuller body of evidence than a traditional literature review (Petticrew, 2001; Rickinson, 2003). Having a scientific background, a process that claimed to be based upon a replicable and explicit method that, standardised, could act to inform policy and practice (Boaz et al, 2002; Pullin, 2002) was attractive to me. Informed by the work of Pullin and Knight (2001) and Pullin (2002), who suggest there is a need to close the gap between research and practice within the field of conservation biology, I initiated, though never drew to its fullest conclusion, a systematic review. Pullin and Knight (2003) suggest that "evidence based conservation provides a methodological standard in conservation that will increase credibility with funders and policy funders" (p.90). Although this method was not utilised to its fullest extent, I discuss it within this chapter as it aided the subsequent decision making process both in terms of the research questions I was investigating and the theory and methodological approach I eventually went on to use. Data gathered in the initial phase of this review also provided an excellent foundation upon which to proceed with the document analysis.

I will briefly discuss the method that I used, the limitations that I found and the influence of this in changing my approach and overall view of research.

5.2.3: The Review Process

The initial questions under investigation within this research were: 1) do bioregions in the UK provide a more appropriate framework for guiding planning and management decisions in relation to biodiversity than administrative boundaries? 2) What are the policy implications of such bioregions? Although these questions evolved quite dramatically as the review process continued, the initial questions did provide a foundation upon which to further develop the concepts that became central to the subsequent substantive research. I began an exhaustive search of current literature regarding catchments and Natural Areas, including the policy documents that influenced these frameworks; journal articles published within this area; internal agency documents and other grey literature such as unpublished documents. This literature search was primarily carried out using bibliographic databases including Injenta, EBSCO, PLANEX and SILGLE at the British Library in London. Web searches using the search engines Google, Yahoo, UK Plus and Lycos were also carried out. I made specific searches on Natural Areas and river catchments, on biodiversity conservation and management and on the two specific case study areas, the Chiltern Hills Natural Area and the River Parrett Catchment.

Early on within the search, a number of key limitations to such a review became evident. Books and book chapters are rarely covered within databases and much discussion (regarding river catchments, primarily) was found within books which had to be searched for manually making an exhaustive search very difficult (McManus et al, 1998). This was compounded by the tendency of, primarily, social scientists but also natural scientists to use obscure titles, which hides the true nature of the research. Also there is a time-lag between the publishing of material and its appearance within a database leading to questions regarding the up to date nature of the evidence being used (given the emphasis placed on timeliness of research by Blunkett, 2001).

Although it is suggested that a systematic review can be carried out using both quantitative and qualitative data (Boaz et al, 2002; Davies, 2000b; Davies et al, 2000), there is little guidance regarding how this can be done (Hawker et al, 2002). I designed a review framework, adapted from Hawker et al (2002). An example of this is illustrated in Figure (5.3) below:

Figure 5.3: The Review Framework

Review Framework

Full Reference:

Date of Review:

Emerging Categories (i.e. linking biodiversity):

Case Study Site or Scale:

Type of Reference:

Justification for Use:

Research Aims	
Project Details	
Conceptual or Theoretical Approach	
Sample	
Methodology	
Validity Measures	
Methods (data collection and analysis)	
Main Findings	
Authors view of what the findings tell us	
Reviewers view of what findings tell us	
Strengths and Weaknesses	
Links	
Questions for Interviews	

(Adapted from Hawker et al, 2002, p. 271)

After initially identifying over one hundred documents within related areas, thirty documents were included in the review and a comprehensive list of these documents can be found within

Appendix (I). My initial aim had been to review this evidence to consider whether bioregions provided a more suitable framework than traditional administrative frameworks for guiding planning and management decisions for biodiversity in the UK, however, this evolved significantly. The positivistic approach of a systematic review (Hammersley, 2001) appeared to obscure the human and non-human nature aspect of my research. The research findings were no longer attached to the human or non-human participants, and the review concentrated on a series of judgements regarding the quality of the research and an assimilation of results presented in the literature.

Although a large body of data was identified using the systematic review, this was still insufficient to guide an investigation into bioregionalism in practice. Given the number of years bioregions had been present within the literature there was a lack of substantive research within the area, especially in relation to the way in which 'ordinary' people relate to them. Little research was evident related to the use of bioregions in practice. The work was primarily abstract and theoretical, largely ignoring the human element within the landscape. This highlighted the need to look beyond existing research and its policy implications to the realities of the interrelationship between people and non-human nature within bioregions. Whilst systematic reviews may offer significant benefits, especially to quantitative studies, it would be naive to suggest that they could be applied across all research areas given the limited guidance for reviews regarding qualitative research, and the limited consideration of theory and how this impacts upon the quality of research evidence (Dixon-Woods and Fitzpatrick, 2001; Hawker et al, 2002). Many theoretical perspectives (most notably feminist research) deal with multiple perspectives and often emotional relationships including the consideration of both subjectivity and positionality, which do not fit well with a review system that has both political and positivistic underpinnings (Hammersley, 2001).

The literature considered thus far raised important questions, such as how do people relate to place within a bioregional framework? How is ecological connectivity conceived and utilised and what is the existing awareness of bioregions? The systematic review process also emphasises the importance of objectivity which can act to mask the realities of people's lived experiences (Bondi, 1990a), with results being presented from the perspective of the seemingly powerful position of the researcher. In view of the nature of bioregional theory and practice, it increasingly became apparent that there was a need for research that considered both humans and non-human nature and their interactions within these bioregional frameworks which acknowledged that there are multiple perspectives that exist and any one representation is only a partial representation of this interaction. The decision to not continue with the systematic review was made for these reasons: 1) a lack of substantive evidence regarding bioregional

frameworks in the UK; 2) the need to consider the people that lived and worked within bioregions if a comprehensive view of bioregions in practice was to be gained and; 3) the need for bioregions to be viewed from multiple perspectives. Following this decision I applied Grounded Theory (Glaser and Strauss, 1967) and Discourse Analysis to a selection of the documents that I had previously reviewed and I decided also to use interviews and focus groups to complement this approach.

5.3: Grounded Theory

Within this section I will describe the origins of Grounded Theory, the reason why I applied this within my research and the feminist adaptations I made to this method.

5.3.1: The Origins of Grounded Theory

I applied Grounded Theory to this research to gain a greater understanding of the theory of bioregionalism being presented within the documents published on bioregional frameworks in the UK. Grounded Theory is the "discovery of theory from data systematically obtained from social research" (Glaser and Strauss, 1967, p.2). Originally developed by Barney Glaser and Anselm Strauss, sociologists investigating chronic illness and death during the 1960s (Goulding, 1999; Glaser and Strauss, 1967), Grounded Theory was conceived as a systematic method for analysing and collecting data. Glaser and Strauss published this theory in a text entitled *'The Discovery of Grounded Theory: Strategies for Qualitative Research'* in 1967. It has been identified that Grounded Theory has its theoretical underpinnings within symbolic interactionism (Goulding, 1999; Haig, 1995) which is concerned with interactions and relationships in day to day life (Humm, 2003). Symbolic interactionism is a term coined by Herbert Blumer (1969) and was concerned with the subjective meaning of social behaviour and relationships (McClelland, 2000), though theoretical writing in the area of symbolic interactionism has been associated with Max Weber (1864-1920) and George Henry Mead (1863-1931) much earlier (McClelland, 2000).

Glaser and Strauss (1967) developed Grounded Theory in response to increasing disillusionment with Grand Theory, positivism and extreme empiricism (Goulding, 1999; Haig, 1995; Robson, 2002). Grounded Theory is not a theory *per se* but a specific approach to research in which theory production is 'grounded' within the data under investigation and is often referred to as a common-sense approach to research (Robson, 2002). The theory produced by this process is formed as a product of, and emerges from, the data being considered and it is suggested that researchers should approach this method with no or few preconceptions of the

research area (Glaser and Strauss, 1967). The process of entering the research situation with a blank canvas is one of the most controversial positions within Grounded Theory (Charmaz, 2000; Goldkahl and Cronholm, 2003; Harry et al, 2003) and proved difficult if not impossible in the case of this research.

5.3.2: The Grounded Theory Method

Glaser and Strauss (1967) devised a three strand coding process for use on interview transcripts through which theory emerges by use of the constant comparative method within the data under investigation. Coding refers to "the process of collecting observations or responses into groups which are like one another, and assigning a symbol (known as a code) as a name for the group" (Robson, 2002, p.546). The constant comparative method is a process through which both coding and data are continually compared throughout the study, often resulting in substantial memo production (Dick, 2001). Memo production occurs simultaneously to the coding and provides written evidence of the researcher's thoughts and of the theory that is evolving within the data (Dick, 2001; Glaser and Strauss, 1967). Although Grounded Theory was initially devised for use with interview transcripts (Glaser and Strauss, 1967), it can be applied to all forms of, primarily qualitative data, including documents and narratives (Strauss and Corbin, 1998; Silverman, 2001).

The three strand coding process includes open coding, axial coding and selective coding (Robson, 2002; Sarantakos, 1998; Silverman, 2001). This process occurs within sequence and table (5.5) illustrates the assumptions and characteristics of each stage.

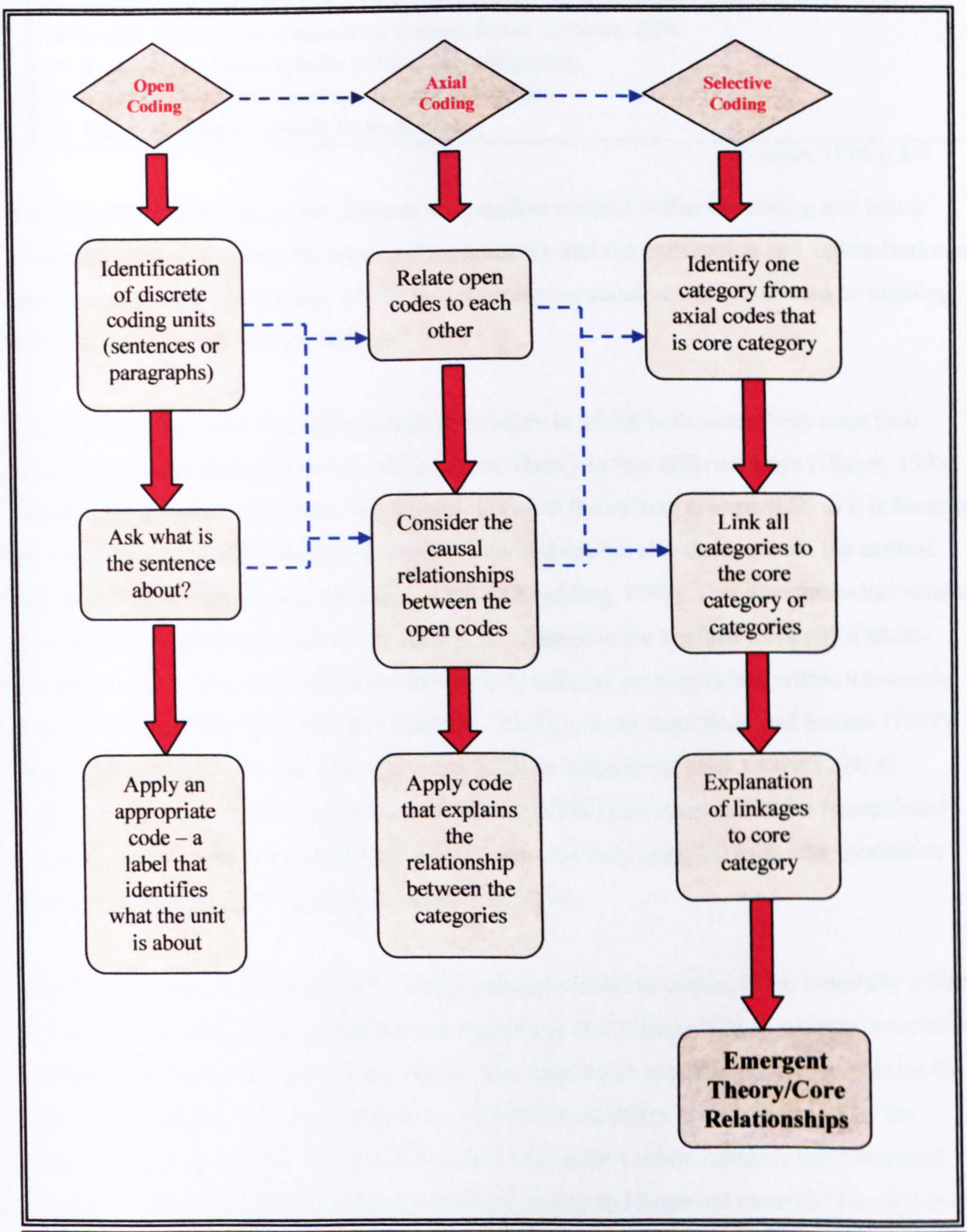
Table 5.5: The Coding Process within Grounded Theory

CODING PROCESS	KEY CHARACTERISTICS
Open Coding	• The initial means of interpreting data. • The data is investigated in discrete parts – in this study sentences. • A descriptive code is applied to each sentence, for example one of the codes identified was cultural landscape. • The code is a label illustrating or providing a description of what each sentence is about. • There is no upper limit to the number of open codes and there can be in excess of one hundred. • If a new code is identified, the researcher does not go back and re-code the whole document, it is considered part of the process of emerging theory.
Axial Coding	• The process of relating open codes to one another and applying a new code. • The identification of casual relationships within the data. • A mechanism for explaining the relationships by linking them into more concise categories. • The number of codes decreases dramatically at this stage.
Selective Coding	• The identification of one category as the core category. • There can be more than one core category and each must be treated separately. • The process of linking all of the existing axial categories to the core category or categories. • This may be limited to identifying the major relationships within the data.

(adapted from Goulding, 1999; Hamilton, 2003; Robson, 2002; Silverman, 2001)

Figure (5.4) identifies the process that I initially used the three strand coding approach of Grounded Theory.

Figure 5.4: The Coding Process within Grounded Theory



(adapted from Hamilton, 2003)

Glaser (1978) lists five criteria that are necessary for identification of the core category or categories during the selective coding process; these are shown within table (5.6).

Table 5.6: Core Category Criteria

- The core category must be central and account for a large proportion of behaviour.
- It must be based on reoccurring themes drawn from the data.
- It must relate meaningfully to the other categories.
- Analysis should be based on the core categories.
- The core category should be modifiable.

(Glaser, 1978, p.95)

It is suggested that the use of the constant comparative method within the coding and memo production processes allows for increased transparency and the verification and legitimisation of the research (Glaser and Strauss, 1967). This constant comparative method should be ongoing until saturation occurs (Glaser, 2002a).

Glaser and Strauss came to a methodological juncture in which both researchers went their separate ways and promoted the use of Grounded Theory in two different ways (Glaser, 1992; Glaser, 2002b; Goulding, 1999). This division between the authors is important, as it influences not only the way in which Grounded Theory is carried out but also the emphasis the method places on theory emergence itself (Glaser, 2002b; Goulding, 1999). This divergence has resulted in numerous adaptations of Grounded Theory, an adaptation for feminist work and a Multi-Grounded Theory have been presented that include utilising existing theory within a research area (Charmaz, 2000; Goldkahl and Cronholm, 2003), a factor that Glaser and Strauss (1967) suggested should be avoided. Although many of these adaptations exist, Glaser (2002a) contends with specific reference to Kathy Charmaz (2000) and other qualitative research that researchers may claim to be using Grounded Theory but they often fall back into Qualitative Descriptive Analysis (QDA) (Glaser and Holton, 2004).

Glaser (1978) stresses the importance of the emergent nature of theory, being especially critical of Strauss's concern for the coding process suggesting that "Strauss's book without conscience, bordering on immorality...producing simply what qualitative researchers have been doing for sixty years" (Glaser, 1992, p.3). Strauss on the other hand places greater emphasis on the positivistic coding process, and in collaboration with Juliet Corbin, contends that Grounded Theory is "closing the embarrassing gap between theory and empirical research" (Strauss and Corbin, 1998, p.7). When describing a Grounded Theory method it is suggested that the researcher is explicit regarding which 'type' of Grounded Theory is being used, because as Charmaz (1995) identifies there are two distinct types and this will have implications for collection, analysis and presentation of findings.

Within the document analysis and subsequent interview analysis I adapted the way in which I used Grounded Theory to a process that whilst following Glaser's (1978) view of theory emergence via theoretical sampling and constant comparison, took the a more flexible approach presented by Charmaz, who identifies the need to keep the human story at the forefront of the research and to make research as accessible as possible to a wide audience (1995). This principle is discussed in greater depth in the following sections. As my research emphasis is on people and non-human nature I did not want my data collection and analysis to mask them in anyway, by becoming dependent upon abstract categories and codes that had little relevance to the research participants.

5.3.3: Analysing the Documents

Unlike the suggestion by Glaser and Strauss (1967) that a Grounded Theory study should be approached with few existing pre-conceptions of the research area, I did have knowledge of the literature and the research regarding the use of biogeographic units within the UK. However, the research evolved through the data collection and analysis process into something quite different from what I initially envisaged. This evolution in a large part was the product of applying Grounded Theory methods.

I made the decision to use a multi-method approach as I felt it was important not only to consider what 'official' documents presented but also to investigate the human aspect of these units, how people on the ground see and relate to these units and non-human nature. Whilst secondary within this study the document analysis was still felt to be a relevant guidance tool in shaping the process of theoretical sampling and the development of the interview schedules.

Grounded Theory has the advantage that it can be applied to research areas that are relatively new or have a weak literature base (Goulding, 1999). Whilst there is a prolific literature base regarding bioregionalism, the literature relating to the use of bioregional units such as Natural Areas within the UK is rather limited (Hamilton and Selman, 2005a). Although there is a wide literature regarding catchment areas this is often based upon issues surrounding water availability and quality, with only a limited literature considering whole catchments in relation to nature conservation. Grounded Theory was therefore considered to be an appropriate approach.

Glaser (1978) suggests that researchers read widely around the research topic being studied but avoid specific data directly relevant to the study. This is one of the primary limitations that I have found with Grounded Theory and in concurrence with Goldkahl and Cronholm (2003) I feel that an awareness of prior theory within an area of study can add to the richness of the data

gathered and reduce the risk of 'reinventing the wheel'. In the case of this study it was near impossible for me to go into the research field with little knowledge of the research area. It would be naive to suggest that preconceived ideas were not an issue in this research. I would contend that this is the case with most other research carried out using Grounded Theory approaches (Charmaz, 1995; Harry et al, 2003).

The initial documents chosen for analysis were based on available published literature regarding Natural Areas and river catchments in the UK. As the literature base was somewhat larger for river catchments I considered initially documents related to catchment areas and nature conservation and this evolved into the consideration of all documents related to both of the case study areas. In addition to that, the coding aided me in identifying the specific conservation policy documents that were relevant within this study and the primary drivers for the development of Natural Areas. Grounded Theory has the advantage that often the sampling approach is purposive and subsequently theoretical, and not dependent upon being representative (Charmaz, 1995; Robson, 2002; Silverman, 2001). Purposive sampling occurs when the researcher uses their own judgement to determine the documents used or the participants interviewed and is particularly useful when there are limited sample sizes (Robson, 2002) as there were within this study. Theoretical sampling on the other hand occurs during the data collection stage when some analysis has been carried out and this analysis leads the researcher to ask more refined questions and possibly widen the sample base (Charmaz, 1995). Theoretical sampling very much formed the basis of the interview sampling process and to a lesser degree acted as a guide in determining the documents to be analysed. Theoretical sampling is viewed as fundamental within Grounded Theory which allows emerging concepts to guide further data collection rather than be determined by stringent sampling procedures that dictate what/who/how many (Glaser and Strauss, 1967; Goulding, 1999; Haig, 2001). I identified interconnections within the data through constant comparison of codes and this led to further data collection and provided a fuller picture of bioregionalism (Dick, 2001). Nevertheless, it is impossible to get a full and objective view of everything that is going on (Haraway, 1986; 1988; 1999).

Table (5.7) provides a list of the documents analysed using Grounded Theory.

Table 5.7: Documents used within this Research

Policy and Generic Documents

Biodiversity Steering Group, 1994. *Biodiversity: The UK Action Plan*, HMSO, London

Biodiversity Steering Group, 1995. *Biodiversity the UK Steering Group Report Volume 1: The Rio Challenge*, HMSO, London

European Commission, 2000. *Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy*, Official Journal 22 December 2000 L 327/1, European Commission, Brussels

UK Biodiversity Group, 2001. *Sustaining the Variety of Life: 5 Years of the UK Biodiversity Action Plan: Report of the UK Government, the Scottish Executive, the National Assembly of Wales and the Northern Ireland Executive*, DETR, HMSO, London

Wynne, G., Avery, M., Campbell, L., Gubbay, S., Hawkswell, S., Juniper, T., King, M., Newbery, P., Smart, J., Steel, C., Stones, T., Stubbs. A., Taylor, J., Tydeman, C and Wynde, R., 1995. *Biodiversity Challenge*, Second Edition, RSPB, Sandy

Natural Area Documents

Edworthy, M., 2002. *Chilterns GIS Project: Summary*, English Nature, Oxfordshire

English Nature, 1998. *Natural Areas: Nature Conservation in Context, CD ROM*, English Nature, Peterborough

English Nature, 1997. *Chilterns Natural Area Profile*, English Nature, Peterborough

English Nature and ADAS, 2002. Pilot Agri-environment Scheme Targeting in the Chilterns: Farmer Questionnaire Analysis, English Nature and ADAS, Oxfordshire

Griffiths, G., Porter, S., Simmons, E., and Warnock, S., 2004. *The Living Landscapes Project: Landscape Character and Biodiversity Final Report, English Nature Research Reports Number 475*, English Nature, Peterborough

Jones, P., Mortimer, S., Park, J., Parker, G., Stabler, M., Ansell, D., and Griffiths, G., 2001. *A Socio-economic Profile of the Chilterns Natural Area: Costing Biodiversity Targets and Linking Biodiversity to Socio-economic Drivers, Contract Number TC/18/01*, School of Agriculture, Policy and Development, University of Reading

Lee, J.T., Bailey, N., Bayliss, J.L., and Thompson, S., 2001a. *Development of a Biodiversity and Landscape Map for the Chilterns Using a GIS based Model Phase I: Production of Land Use Map for the Chilterns Natural Area, Contract Number TC/12/00*, The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford

Lee, J., Griffiths, G., Warnock, S., Bailey, N., Bayliss, J., Vogiatzakis, I., and Thompson, S., 2001b. *Development of a Biodiversity and Landscape Map for the Chilterns using a GIS Based Model: Phase II: Habitat Model: Formulation, Operation and Results, Contract Number TC/17/00*, The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford

Catchment Documents

Environment Agency, 1997. *Local Environment Agency Plan: River Parrett Consultation Report*, Environment Agency, Exeter

Environment Agency, 2001. *Local Environment Agency Plan: Third Annual Review*, Environment Agency, Bridgwater

Environment Agency, 2002b. *The Parrett Catchment Water Management Strategy Action Plan Spring 2002*, Environment Agency, Somerset

Environment Agency, 2003. *The Tone Catchment Abstraction Management Strategy Consultation Document*, Environment Agency, Exeter

FWAG, 2001a. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (a) Temporary Retention of Floodwater in Floodplain Areas*, FWAG, Taunton

FWAG, 2001b. *Parrett Catchment Project: Proposal for the Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (b) Small Reservoir Flood Storage by Interception in Mid Catchment*, FWAG, Somerset

FWAG, 2001c. *Parrett Catchment Project: Proposal for Development of Pilot Project in Upper-Mid Catchment: Farming Water 1 © i: Arable Reversion to Woodland*, FWAG, Somerset

FWAG, 2001d. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchments: Farming Water 1 © ii: Arable Reversion to Grassland*, FWAG, Somerset

Land Use Consultants, 2001. *The Parrett Catchment Project: An Action Strategy for Integrated Catchment Management*, Land Use Consultants, Somerset

Lewin, Fryer and Partners Consulting Engineers, 2003 *Parrett Catchment Flood Management Plan Consultation Draft*, Lewin, Fryer and Partners, Somerset

Nisbet, T R., and Broadmeadow, S., 2003 *Opportunity Mapping for Trees and Floods, Final Report to the Parrett Catchment Project Wet Woodlands*, Forest Research, Surrey

Turner, A., 1998 *Local Environment Agency Plan: River Parrett Action Plan*, Environment Agency, Bridgwater

Having identified documents through the systematic review, I went through two of the three coding processes, open and axial coding. From this I found the need to not only consider more specific case site documents but also to analyse key policy documents that act as drivers for work within both Natural Areas and catchments. The initial open coding resulted in the production of over 300 different codes across a variety of topics. However, I subsequently realised that unlike the contention of Glaser (1978), that often codes jump out at you during the coding process, this was not the case and there were whole sections of documents that proved difficult to code in a manner that would identify the meaning of the section. This was due to the complex nature of some of the policy documents and also because bioregionalism as a concept is extremely complex and difficult to investigate through agency produced documents.

I was already aware of the existence of projects within my case study areas based on bioregional units, so I proceeded to analyse documents regarding the Chiltern Hills *Lifescapes* project and The Parrett Catchment Project organised by Somerset County Council. As with the previous documents I continued to use both open and axial coding, with little evidence of the emergence of one specific core category. If some of the initial codes presented interconnections then they evolved to categories which were viewed as more substantive codes (Charmaz, 1995).

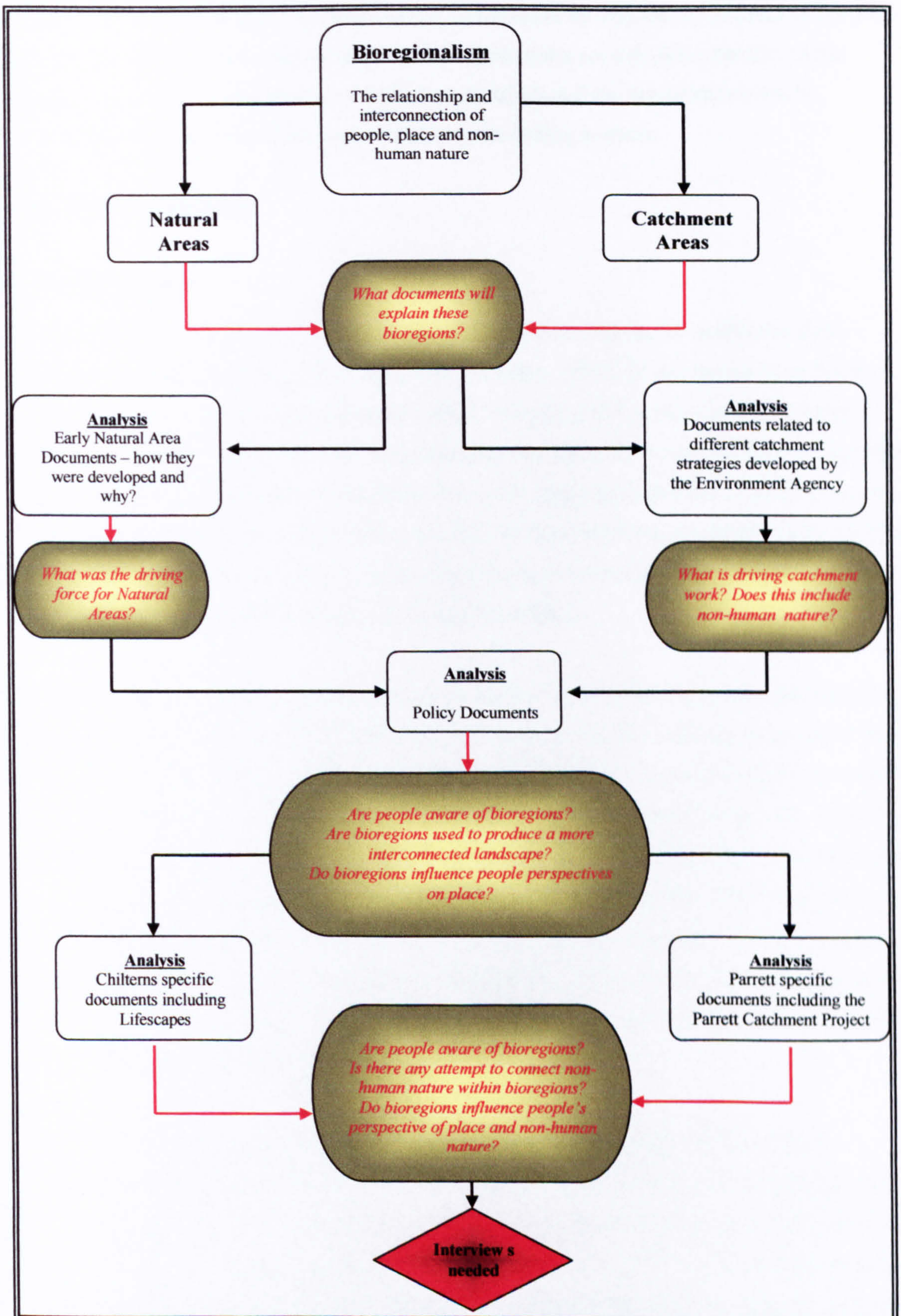
I coded by sentence and this was extremely time consuming a major limitation within Grounded Theory (Goulding, 1999; Robson, 2002; Sarantakos, 1998). As suggested by Goldkahl and Cronholm (2002) there is the continued risk that the data set will become too focused and any variation within the data may be missed. I felt this was a problem throughout the document analysis. It also became apparent that whilst the coding process was identifying important relationships, within and between the documents, that had implications for bioregionalism, it was a very one dimensional process. It was not just what was being said that had relevance in the documents but how it was being said, which is overlooked within the coding process and lacking in the Grounded Theory methodology itself. Grounded Theory as identified has the remit of being abstracted from time, place and people (Glaser, 2002a), which I felt to be a disadvantage within the research setting and not necessarily a pre-requisite of good research. I therefore used the memos I had produced to consider how these documents were being

presented and what this indicated about the power relationships the document writers had in relation to both non-human nature and the people that lived and worked within these units.

Given the nature of the documents, a very one sided view of bioregional units within the UK was emerging: that of the organisations or agencies that had developed these units. There was little if any evidence of how people that lived within these areas related to them or the intrinsic value of non-human nature within the documents, factors which are at the heart of bioregionalism. This resulted in my developing a three tier interview system which aimed to look at how the government agencies that developed these units considered them, the way the organisations charged with working with non-human nature considered them and how people that lived and worked in the area related to these units, and to non-human nature within them.

Figure (5.5): illustrates the decision process involved in deciding the type of documents to be analysed.

Figure 5.5: The Decision Making Process during the Document Analysis



As Figure (5.5) shows the primary conclusion from the document analysis was that there was an evident need for further substantive research not based on documents but based on face to face contact with the people that lived and worked within these bioregions. In addition to this the document analysis was developed to give more depth and a greater understanding to the research area using a combination of Discourse Analysis and the consideration of the considerable number of memos produced during the coding process.

5.4: Discourse Analysis

5.4.1: Introduction

Discourse Analysis is used to investigate the way in which language is used to construct different versions of realities (Silverman, 2001; Tonkiss, 1998). Discourse can be defined as "the relation between language and social reality" (Humm, 2003, p.66). Discourse Analysis provides a method through which to study language and therefore social realities that underpin or are being represented and constructed by the use of language (Johnstone, 2002; Potter and Wetherell, 1994; Tonkiss, 1998). Michel Foucault, portrayed discourse analysis in his 1979 text *The History of Sexuality* as a means of investigating power structures that underpin language and therefore social realities (Humm, 2003; Phillips, 2000).

Discourse analysis is based primarily on the analysis of texts within documents and interview transcripts (Silverman, 2001) and considers the way in which people present accounts of their realities or the world around them (Potter, 1996). It is embedded within the social constructivist and post Structuralist perspectives I used a version of discourse analysis within my research as there was a need to consider the way in which the language within these documents was being used to present theories and ideas, rather than being singularly concerned with what was being reported. Given that discourses are identified as "products and reflections of social, economic and political factors, and power relations" (Widdicombe, 1995, p.107), it was important for the advancement of my research to be aware of the influential discourses which were influencing the use of bioregional units within the UK.

However, the difficulty with using discourse analysis is that as with Grounded Theory (Charmaz, 1995) there is no consistent step by step approach (Robson, 2002; Silverman, 2001). Instead what is available is a plethora of methods adapted for their own specific purposes, with little agreement or guidance regarding which process is more suitable for what kind of study (Phillips and Jørgensen, 2002). As suggested by Tonkiss (1998) discourse analysis "is a messy method" (p.250). During the 1980s a number of different approaches based around the analysis of language were put forward under the umbrella term of discourse analysis (Potter et al, 1990),

this range of approaches which often consider different aspects of language has resulted in confusion and contention regarding how to carry out discourse analysis. Two of the primary types of discourse analysis that are Critical Discourse Analysis (CDA) developed by Norman Fairclough (Fairclough, 1995a; 1995b; Fairclough and Wodak, 1997) and Discursive Psychology that considers Interpretative Repertoires (Potter and Wetherell, 1987). Critical discourse analysis and Discursive Psychology are similar in that they draw on the idea based within Post Structuralism that discourse is essential for social practices and representing lived realities (Phillips, 2000). I intended to look at people's perceptions and feelings so Discursive Psychology offered a more appropriate method, given the emphasis placed on subjectivity and interpretation. Discourse analysis is viewed as "a fluid, interpretative process which relies on close analysis of specific texts, and which therefore does not tend itself to setting up hard-and-fast rules of analysis" (Tonkiss, 1998, p.254).

5.4.2: Discursive Psychology

Given my aim to adhere to feminist theory I was concerned with selecting an approach that would provide insight to the discourses present within the documents I was analysing, while also aware of my own interpretations and the subjectivities that this would produce. Discursive Psychology is a version of discourse analysis produced and explained by Jonathan Potter and Margaret Wetherell (1987) in their text *Discourse and Social Psychology* (Potter et al, 1990). Their primary assertion is that discourse is constitutive of social practices and Potter and Wetherell (1995) identify the role of Discursive Psychology to investigate the way in which discourses construct both subjects and objects. Discursive Psychology is based on Foucault's theory that language constructs different versions of social reality (Willig, 1999) Discourses are viewed as being context bound and will be influenced not only by the speaker or writers own interpretations, but also by the historical context in which they are produced (Willig, 1999). This adheres to Haraway's (1991) situated knowledges. The aim of Discursive Psychology is not to find the 'truth' about certain situations but to look at the different ways in which they are talked about (Potter and Wetherell, 1995) which is why the method was attractive for this research. Also there is an awareness of positionality within Discursive Psychology - positionality of not only the researcher carrying out the research but the people who are producing the texts, be they written or spoken (Willig, 1999). The main aim is to consider the way in which speakers construct their realities (Parker, 1999; Phillips, 2000; Wiggins and Potter, 2003). However, there is no standard methodology, Tonkiss (1998) suggests whilst based on a systematic approach to the data, texts can always be interpreted in different ways. Potter and Wetherell (1994) also identify there is no way to learn discourse analysis except by doing it, and offer the analogy of riding a bike.

Discursive Psychology is based on the identification of Interpretative Repertoires within spoken or written texts, though although this type of discourse analysis has primarily been carried out using interview transcripts. Interpretative Repertoires are identified as "broadly discernable clusters of terms, descriptions and figures of speech often assembled around metaphors or vivid images" (Potter and Wetherell, 1995, p. 89). Interpretative Repertoires is another name for discourses (Potter et al, 1990). Potter et al (1990) use an example of a repertoire based on community used to emphasis the positive facets of community that justify/valorise a community uprising on one hand and on the other, the community repertoire is used to identify positive community relations with people such as the police. Interpretative Repertoires are means of constructing social realities in different ways depending on the context in which they are being presented. For example, Edley and Wetherell (2001) identify two competing Interpretative Repertoires within transcripts of a study of men and their interpretation of feminism, that of feminism as equality and feminism as a means to control men. The purpose of using this form of discourse analysis within my research was to identify the range of meanings and arguments that are constructed and used within the documents, and subsequently the interview transcripts.

5.4.3: The Application of Discursive Psychology

After carrying out the Grounded Theory coding approach and producing a number of memos I had a good knowledge of the different types of Interpretative Repertoires that were being reproduced within the different documents. I determined categories by identifying instances of related text through a process of reading and re-reading the documents, having reviewed the documents as part of the earlier systematic review. Re-reading documents or transcripts is identified as being important within discourse analysis as it enables the researcher to become immersed within the data and this allows for a fuller understanding of the different potential meanings that are embedded within a text (Hayes, 2000).

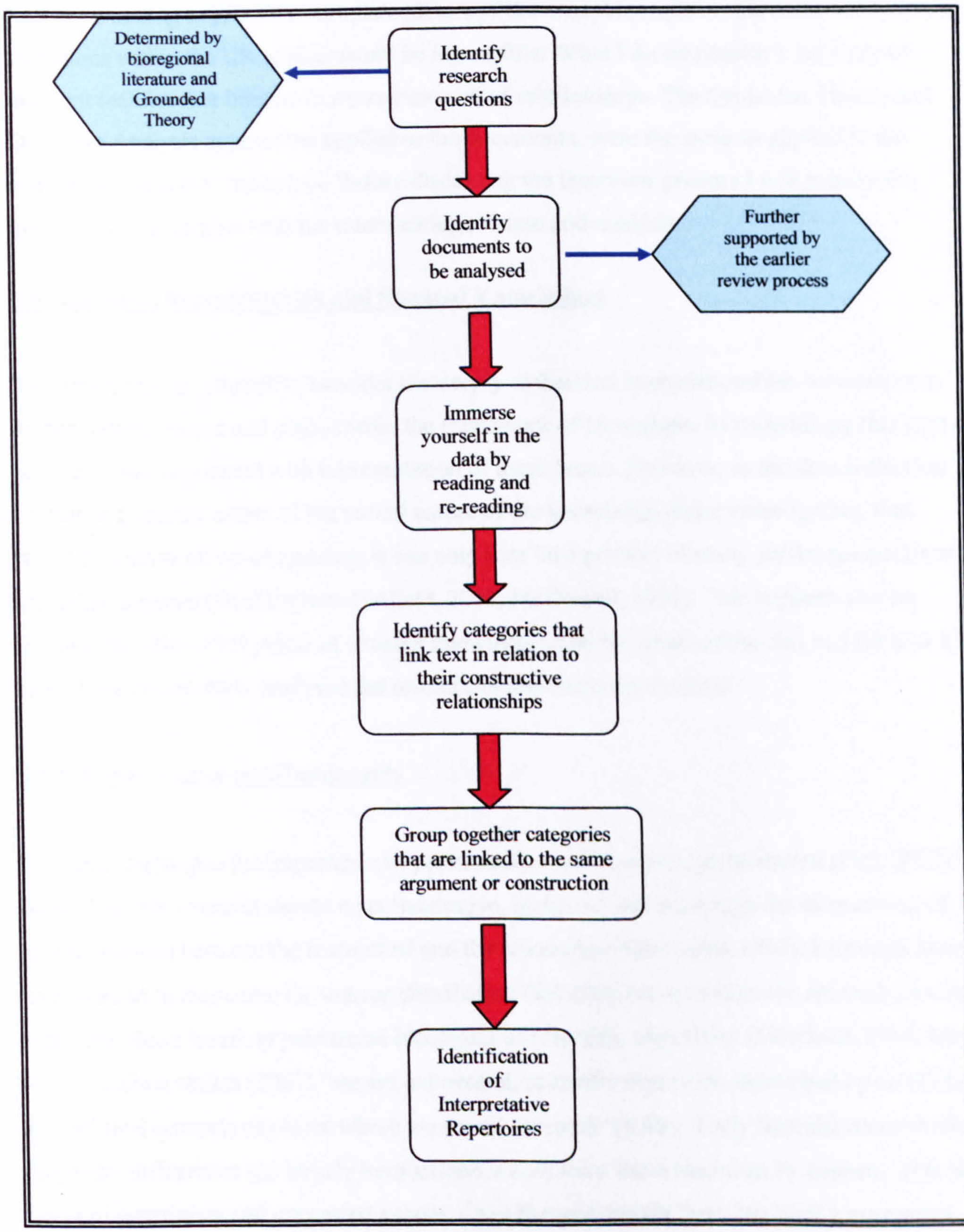
I used the initial category identification of Grounded Theory as a foundation upon which to identify Interpretative Repertoires within the texts being considered (Potter and Wetherell, 1987). Given the initial reading carried out within the area of bioregionalism and the Grounded Theory approach used I was already clear the research areas that were of interest within this study: place, ecological connection, and the relationship between people and non-human nature. Portions of text relating to these were analysed to identify Interpretative Repertoires. Some categories were joined together at this stage to identify larger categories or 'repertoires' of similar meaning or groups of arguments representing specific social realities (McKinlay and Potter, 1987; Potter and Wetherell, 1987; 1995). Interpretative Repertoires often represent the author or speakers concerns regarding an issue and I viewed this from within the context of the

document itself and within the wider context, for example I asked questions such as what is the purpose of this document? What is the author trying to achieve in constructing the document? To what extent is this is a representation of a wider organisational view or a personal opinion?

Following the identification of categories within the text I then proceeded to consider the different repertoires that were evident. One example of a repertoire identified within the documents considered is what I called the 'natural science or ecological science' repertoire. Ecological arguments were used not only to illustrate so called 'good' biodiversity, that which was useful for human use or was endangered or threatened, but the reverse in that 'natural science or ecological science' arguments were being used to emphasise 'bad' biodiversity such as non-native species and the need to control these. Interpretative Repertoires were also identified in relation to place, control over non-human nature and the relationship between people and non-human nature. After identifying the existence of these repertoires as part of the analysis I explained them in relation to the emerging theory that was evident from the Grounded Theory approach. This analysis was carried out paying particular attention to the interpretative nature of both Grounded Theory and Discourse Analysis and therefore the impacts of my own disciplinary background and preconceptions regarding this process. Although I identified these repertoires, documents can be read and interpreted in varying ways by different people. This, and the added complexity that there are no clear cut standard processes of carrying out discourse analysis, make the results found here somewhat subjective and reliant upon my own interpretation and construction of these texts.

Figure (5.6) shows the steps taken in identifying Interpretative Repertoires within the documents analysed.

Figure 5.6: Identifying Interpretative Repertoires



Although the document analysis did provide a basis upon which to construct the interview schedule that was subsequently used, the document analysis was not the priority within this research. The analysis of semi-structured interviews and focus groups formed the primary focus of this research. The document analysis emphasised the need to actually talk to people within

my case study areas in order to get a clearer picture of the different realities related to bioregions within the UK.

I am not claiming to present a complete picture of the complex realities that exist in relation to bioregions within the UK as this would be impossible. What I do emphasise is an array of different realities that interact in a complex web of relationships. The Grounded Theory and Discourse Analysis approaches applied to the documents, were the same as applied to the analysis of interview transcripts. Before discussing the interview process I will present the theory which underpins both the interviewing process and analysis.

5.5 Feminism, Representation and Situated Knowledges

This research is an attempt to consider the deeply embedded interrelationships between non-human nature, people and place within the framework of bioregions. In undertaking this type of research I was concerned with representation of these facets. However, as the data collection continued I became aware of the partial nature of the knowledge under investigation, that research is never all encompassing; it can only ever be a product of many partial perspectives enmeshed together (Buckingham-Hatfield, 2000; McDowell, 1993). This supports Donna Haraway's (1989; 1991) view of situated knowledges and the implications this had for how I carried out the research, analysed the results and presented my findings.

5.5.1: Representation and Positionality

Feminism highlights the importance of positionality, intuition and interpretation (Pini, 2002) suggesting that research should be collaborative, inclusive and encourage the dismantling of power relations between the researched and the researcher (McDowell, 1992). Feminists have endeavoured to overcome the uneven distribution that often occurs within the research process, especially those based on patriarchal ideologies of scientific objectivity (Merchant, 1980; May, 1997). Skelton claims (2001) "we are not neutral, scientific observers, untouched by emotional and political contexts of places where we do our research" (p.89). Early feminist concentration on gender differences has largely been extend within third wave feminism by concern with other forms of oppression and oppressed groups. Over the past decade there has been a movement towards the consideration of difference and representation, which is particularly evident within rural research, especially the identification of the need to research so called 'neglected others' (Philo, 1992). This has been extended by ecofeminists to include non-human nature and the relationship between non-human nature and people (Warren, 2000). This move away from the linear consideration of women in terms of gender, to identifying the relevance of difference, is

the result of criticism from both within and outside of feminism that suggested feminist research has been too universalistic and essentialist, largely dismissing diversity within and between women and other oppressed groups, such as ethnic minorities (Bondi, 1990a; Longhurst, 2001; Smith, 2001; Warren, 2000). Theoretical evolution within feminism has begun to identify the role of multiple standpoints (McDowell, 1993). The 'cultural turn' of the nineties within social science resulted in escalating research into differences within society, different forms of oppression and different oppressed groups. It should be noted that feminist perspectives are partial, flawed and not free from inconsistencies, each with their own viewpoint and inherent advantages and limitations (Hoffman, 2001). Whilst this research does not consider gender issues or directly consider another 'oppressed' group, it does attempt to consider the interrelationship between people, place and non-human nature and I aimed to do this in as an emancipating way as possible. Feminism generally accepts that experience and identity are socially constructed (Bondi, 1990a), also identified by feminists is that 'nature' and specific places are also socially constructed, bound within historically conceptualised realities (Humberstone and Pedersen, 2001).

5.5.2: Situated Knowledge's

Donna Haraway's concept is based upon the rejection of an all encompassing universal 'truth' (1988). The main tenet of the argument is that all knowledge is context specific and situation sensitive (Cope, 2002). This stems from early critical Marxist and feminist work which identifies the partial nature of all knowledge (Rose, 1997). Haraway's view of situated knowledges acknowledges the unrealistic view of science as objective and that biases exist, with different perspectives influencing both knowledge gained and knowledge shared (Cope, 2002; Haraway, 1988; 1991). It acknowledges that the partial perspective is not just determined by the context, history and views of the participant but is also influenced by the researcher's own experiences, history and views (Haraway, 1991; Rose, 1997). As Rose (1997) identifies, Haraway's situated knowledges is a position that is negotiated from a range of other knowledges, recognising the knowledge of both the researcher and the researched, in opposition to the position of relative authority often presented by academics. Haraway (1991) also contends that feminist objectivity stems from presenting partial and situated knowledges. McDowell (1993) claims, whilst discussing Haraway's theory, that local knowledge can be viewed as 'objective', as it is partial.

I am aware within this research that all interviews and focus group data is context, person and history specific. Given the number of interviews and focus groups I carried out it would be tempting to suggest that I had gained a full picture of people's view of place and the relationship

between people and non-human nature within bioregions, but this is unrealistic, even an array of partial knowledges will never construct a full picture. Interview participants are often people willing to take part in research, those that want their voice heard, but there are many that for a variety of reasons do not want or are unable to take part within research, so their views are never verbalised and heard. Haraway (1988; 1991) identifies the way in which researchers often place themselves as presenting "ways of being nowhere whilst claiming to see comprehensively" (1991, p. 191) as a 'god-trick'. A 'god-trick' is Haraway's analogy for something that she sees as impossible or an illusion such as scientific objectivity and the idea that a researcher can be abstracted from the research they are enmeshed within.

> "Relativism and totalization are both "god tricks" promising vision from everywhere and nowhere equally and fully, common myths in rhetorics surrounding Science. But it is precisely in the politics and epistemology of partial perspectives that the possibility of sustained, rational, objective inquiry rests" (Haraway, 1988, p. 584).

Objectivity it viewed as existing through partial perspectives and embodiment (Haraway, 1988; 1991; 1992). Haraway (1988) suggests you cannot be either one thing or another. "One cannot "be" either a cell or a molecule – or a woman, colonised person, labourer and so on- if one intends to see and see from these positions critically" (Haraway, 1988, p. 585). There is no one feminist standpoint (Haraway, 1988; Rose, 1997), subjectivity and positionality is fluid, producing multiple partial knowledges which can be 'stitched' together (Haraway, 1988). Within this research my position as a researcher was fluid and context specific, changing in relation to the situation and person I was interviewing thereby the partial knowledges I have gained from each interview are different, and in Haraway's words by 'stitching' them together I will still only produce a partial yet fluid knowledge, situated and subjective. As suggested by Latour (1977) and supported by Skelton (2001) "we are not neutral, scientific observers, untouched by emotional and political contexts of places where we do our research" (p. 89).

Another important concept of Haraway's perspective is that what she calls 'webbed connections' (1991). She contends that there are webs of both knowledge and power in which local knowledges are situated. Using the idea of fluid positionality, Haraway (1991) identifies the way in which localised knowledges are interrelated to global knowledges within an entangled, webbed relationship. The analogy of webs is something that Haraway also uses to describe the entwined and hybrid relationship between people, non-human nature and non-living technology (1991), a concept which, as identified in Chapter Three, is of importance within this research.

I will now present the way in which the interviews and focus groups were carried out linking the method to key aspects of feminist theory that were a driving force behind this research.

5.6: Interviews and Focus Groups

I conducted both semi-structured interviews and focus groups. The use of semi-structured interviews and focus groups in addition to document analysis allowed for the triangulation of methods (Valentine, 1997). I used three different methods of data collection and subsequently analysis to identify any apparent convergences, inconsistencies and contradiction of results (Nairn, 2002; Valentine, 1997). This provided an opportunity to not only see what is 'officially' being presented within documents about bioregions but also to investigate what the people that live and work within these areas think, therefore gaining a fuller appreciation of the research area. These interviews were conducted between January and September 2005, with a small number of follow-up interviews being carried out September 2005 – January 2006.

5.6.1: Gaining Access

Given that the primary aim of my research was to consider the relationship between people, place and non-human nature within the context of UK bioregions, I decided that there was a need to interview a range of different people, to provide more insights into the awareness of and relationship people have with bioregions in the UK. As I was investigating two types of bioregion a range of participants were needed from both the Chiltern Hills Natural Area and the Parrett Catchment. I initially began identifying interview participants in a purposive manner (Robson, 2002) in that I selected the participants based on my own judgement of whom I thought would be appropriate to interview within this research (Parfitt, 1997; Robson, 2002; Sarantokas, 1998). A representative sample would have been impossible to achieve.

The participants fell into one of three groups as follows: 1) Government Agencies such as English Nature and the Environment Agency – these were the agencies that had developed, promoted and utilised Natural Areas and river catchments. I felt it was important to gain as a full an understanding as possible of the reasoning behind the use of each bioregional approach, the expectations the agencies had for these bioregions and their practical use from an agency perspective. Interviews with these participants included head office interviews and then local office interviews within the specific case study areas, to identify the way in which information, knowledge and expectations filtered down and were accepted or not through agency hierarchies.

2) Land-management organisations, which includes organisations such as the RSPB and the National Trust –that own and manage large tracts of land within the two bioregions. This

grouping also included local government offices such as Parish and County Councils and AONB offices that also managed large tracts of land within the case study areas. By interviewing selected individuals from the land-management organisations it allowed me to gauge the extent that they were aware of the existence of these bioregions and the way in which they interpreted the relationship between people, place and non-human nature within these bioregions, if at all.

3) Other people that lived and/or worked within the bioregions – referred to as land-managers and land users. Additionally I felt that these people were potentially the most informative to consider the relationship between people, place and non-human nature, as unlike the participants within both the agencies and land-management organisations, some of these participants would not be familiar at all with the concepts of Natural Areas or river catchments. If bioregions are to be successful it is important that the people that live and work within them actually relate to them, if this does not happen then programmes such as Natural Areas become a bureaucratic exercise developed by agencies, abstracted from the realities of these areas. This group incorporated land managers such as farmers and estate owners.

In terms of the decision making that drove the identification of participants from agencies and the land-management organisations, I approached organisations, councils and conservation groups that owned and managed land within either of the two case study areas. I also tried to contact equivalent organisations within each of the two areas, although this was not always possible. The RSPB, for example I was only able to interview one contact in the Parrett Catchment. I was interested in talking to people within these organisations who in the main part worked practically in the field with site management, as I felt that these people would be more likely to have knowledge of bioregional frameworks and their practical applicability on the ground. I also felt this group would give me insight to their perceptions of place and the interrelationship of people, place and non-human nature within a bioregional framework.

Making initial contact with agencies and the land-management organisations was relatively simple and I did this via the telephone or e-mail. I found that most organisations with the exception of English Nature and the Environment Agency, had websites with key contacts and therefore it proved a simple matter to determine the most appropriate person to make contact with. However, the ease of gaining access to these potential participants stopped at the initial identification of the most appropriate person. Within English Nature, the Environment Agency and Department of Environment, Food, Fisheries and Rural Affairs (DEFRA) this proved even more difficult as there was the added complication of getting past gate keepers. This proved to be amongst the most time-consuming and frustrating aspect of the fieldwork, I had to go

through a number of 'gate-keepers' in order to contact the person I wished to speak to. However, I must add that once I had made that initial contact each person within the agencies or the land-management organisations was very willing to participate in the research.

Gaining access to people that lived and worked within the two case study areas proved more difficult. I initially decided to target farmers as a large proportion of both the Parrett Catchment and the Chiltern Hills Natural Area is farm land (Environment Agency, 1997; Jones et al, 2001) and agriculture has a significant impact on non-human nature (Harvey, 1997). However, as the research developed it became increasingly evident that I needed to consider other groups, particularly land users and community groups, and largely did this through snowball sampling. I resorted to snowball sampling after initial efforts to identify participants through the yellow pages, websites and organisations such as the NFU resulted in only a small number of participants. I also targeted existing groups such as the Chiltern's Society, Rambler's Association and the Women's Institute. After initially gaining responses there was then the difficulty of arranging interviews, especially with farmers as I had to work around lambing, ploughing and harvesting. An added complexity especially within the Parrett Catchment was the distance that I needed to travel to reach a participant and the isolation of a number of the participants which meant that only one or two interviews could be carried out in a day, making the interviewing a slow process.

I wanted to get as wide a range of perceptions as possible within the timeframe I had available and I therefore interviewed participants from a range of demographic groupings. Participants included men and women from a wide age range, the youngest being ten. I also included participants from both rural and urban areas. The primary criterion for my selection was the willingness of participants to be interviewed. The reason for such a wide target group was the belief that all people interact with the non-human environment that surrounds them, therefore the relationship that people may have with that non-human environment is not just limited to people working within environmental organisations or farmers.

In the Parrett Catchment fifty-four people participated in thirty-two interviews, five of which were focus groups. Within the Chiltern Hills Natural Area, (in which recruitment proved more difficult as will be discussed subsequently) fifty-five participants were interviewed in total in thirty-four interviews, four of which were focus groups. A list of the characteristics of each group of participants is given in Appendix (III). Given the sheer size of the case study areas, with the Parrett Catchment covering approximately 1251km^2 (Environment Agency, 1997), and the Chiltern Hills Natural Area covering approximately 1640km^2 (Jones et al, 2001). The focus groups are described in more detail in section 5.6.4.

5.6.2: The Interview Process

Although there is no method that can be identified as specifically feminist (Brunkskell, 1998; Moss, 2002), though a number of authors do advocate ways in which feminists carry out research (McDowell, 1992; Neuman, 2003; Pini, 2002), often using multi-methods (Kelly et al, 1994), which is what was decided within this research. Table (5.8) identifies some of the aspects of feminist research that were influential in the way I carried out my research.

Table 5.8: Characteristic Features of Feminist Research

- Be open and understanding.
- Avoid taking control and to have an awareness of power differences between participants and researcher.
- Listen carefully and become emotionally engaged.
- Encourage the participants in whatever way suits them.
- Empowerment of participants.
- Use of multi-methods.
- Use research for advocacy.
- Be reflexive and aware of positionality and potential biases.

(Adapted from Neuman, 2003)

Bearing these factors in mind I decided to design the interview schedule in as unstructured a way as possible to allow participants to talk freely, to allow flexibility in questioning and not be constrained into yes/no answers (Sarantakos, 1998; Silverman, 2001). Although I wanted the interviews to be as unstructured as possible I was aware I needed some kind of outline that I could use to prompt or guide participants if they moved too away from the research area (May, 1997). I therefore designed a research schedule/checklist which is illustrated within Appendix (II) based around areas of discussion using key words to act as reminders to myself of the points that I needed to raise. Given the use of a schedule or checklist, these interviews can be classed as semi-structured (May, 1997; Neuman, 2003). However, the interviews carried out with agency representatives did require more detailed prompts as I had an expectation that given their position within agencies they would prefer specific questions guiding the interviews rather than an open ended discussion. With regard to other participants the questioning was less formal and more like a conversation. One participant commented "this is not like what I expected...I like this, it is more relaxed...like we are just talking" (Stephanie, land user). Within these interviews I used a minimum number of leading questions, for example I started all interviews by asking participants to describe the area and from that point on the interview became more like a conversation as I followed on from what the participants described.

Prior to beginning any of the interviews I assured all participants that I would keep their identities anonymous and fully explained the way in which the information I was gathering would be utilised. As suggested throughout the literature on interviewing I gave all of the participants pseudonyms (Moss, 2002; Neuman, 2003; Robson, 2002; Valentine, 1997), rather than codes or numbers as this research is about gaining insight into people's thoughts and feelings, anything other than pseudonyms would act to depersonalise the research. I made it clear that it may be possible that some of the agencies or the land-management organisations such as English Nature and the Environment Agency may be identifiable and there may be points at which I would need to directly refer to those agencies. Both Herod (1999) and Mullings (1999) suggested in their research that there was a need to clearly identify agencies or companies; I felt this was necessary in certain cases. The research related to aspects of the development of programmes that were specifically tied to certain agencies and or organisations and some of the questions were specifically targeted at personnel within these agencies so it would have been impossible to discuss, if reference could not be made to that agency. All participants verbally accepted this and I also offered them access to their transcripts after the interview so they were aware of what was said. Before commencing the interviews I confirmed that the interview would last between an hour and an hour and fifteen minutes giving the participant the opportunity to identify if this was a problem at that time. The majority of the interviews were carried out face to face with six interviews in total being carried out by telephone, which did add restrictions that are listed within table (5.9).

Table 5.9: Restrictions of Telephone Interviews

- Limited interview length.
- Participants easily broke off.
- There was no way to interpret body language.
- Interviews were interrupted.
- Participants were at times distracted (they may have been trying to do more than one thing at once)
- The phone acted as a barrier to detailed discussion.

The majority of the interviews were recorded using a dictaphone; I asked permission before doing so. A small minority refused to be recorded, but agreed for notes to be taken. Whilst interviewing a number of farmers it became apparent that whilst the dictaphone was switched on they were extremely reluctant to talk, with one participant referring to it as a 'bug', yet once I switched off and just took notes the participants became forthcoming, suggesting to me that by recording the interviews there may be a chance that even those participants that agreed to be recorded were put off by the presence of the dictaphone. However, the initial awareness of the dictaphone wore off and most participants appeared to forget they were being recorded, and

interviews were very animated. I had access to a telephone transcription machine which allowed me to record telephone interviews, I asked permission to do so before beginning any of the interviews and all of the participants said they were happy for this to happen.

Many feminist researchers suggest that reflexivity is required when carrying out interviews, to take account of power relations (Cope, 2002; Madge et al, 1997; Valentine, 1997).

> "We must recognise and take into account our own position, as well as that of our research participants, and write this into our research" (McDowell, 1992, p.409).

Pile (1991) has discussed that traditional interviewing styles can often be hierarchical taking little account of positionality and reflexivity (Pile, 1991). Whilst carrying out the interviews I was acutely aware of my positionality and the preconceptions the participants had of me as a student researcher. This positionality shifted dependent upon whom I was interviewing. During the interviewing of participants within key government agencies I was aware that the participants were in powerful positions and this was used on a number of occasions in a very patronising manner. I found as Valentine (1997) suggested that people in power are used to being in control and therefore wanted to dominate the interview process by turning questions back onto me, refusing to answer questions, cancelling interviews at the last minute, continually looking at the clock during the interview and answering telephone calls during the interviews. These are problems that both Mullings (1999) and Herod (1999) faced within their research. This kind of relation, where the power is switched from interviewer to participants, is rarely discussed within the literature. Most often the interviewer is perceived to be the one holding that power and the way in which this is disseminated (McDowell, 1992).

Whilst carrying out interviews with land managers and land users within the area the interviews were generally a more relaxed experience. However, I feel that the insider/outsider dichotomy (Madge et al, 1997; Skelton, 2001) needs to be mentioned in relation to these interviews. Skelton (2001) discusses the way in which an interviewer's position as either insider or outsider can have implications for the results gained. My position within the insider/outside dichotomy was fluid and unstable within all of the interviews carried out. I found that especially within the landowner and land user interviews I was initially viewed as an outsider, but as the interviews progressed and participants realised I was not working for any particular agency this position shifted. All interviews with land managers and land users were carried out in a setting of their choice and all but one chose for me to go to their homes, which I felt immediately made them more comfortable. This is opposite to the more formal setting of the agency and land-

management organisations, which all took place within offices, often shared offices, which resulted in many interruptions and problems with interference on the taping device.

I initially started by asking participants to talk about the area and then interjected with probes such as "what do you think about that?" "How do you feel about the area?" I tried to make the interview no longer than I had initially agreed. There were occasions where the interviews had to be interrupted and re-started due to factors outside the influence of both myself and the participant. These interruptions did lead to problems with consistency of answers, participants forgot where they had got to and what they had already said, although I made a note of what had been said to that point, it still took some time to get back into the rhythm of things.

In requesting that someone take part in an interview I was asking someone to let a stranger into their home and talk about their life and feelings towards non-human nature with little shared information. I agree with May (1997) who claims that it is unreasonable to expect people to divulge what they may consider personal information, if the interviewer is unwilling to answer questions put by the participant. I answered any question that the participants asked me, and in some cases it aided the progression of the interview, especially in relation to the farmers I interviewed. Many asked if I had experience of farming and when they were aware I had, they seemed more willing to discuss issues of concern with me related to their relationship to the land and the often negative impact of government policies on this relationship. This shows the way in which my position along the insider/outsider dichotomy shifted, depending on whom I was interviewing and the types of questions they posed.

Within any research it is important to recognise difference, especially those within and between participants and within and between participants and researcher (McDowell, 1992; Rose, 1997). I was aware that differences between my participants may have influenced the way in which they interpreted the questions I asked and comments I made. For example when I talked about how the participants felt about 'the area' different participants identified this to mean different things, for some it was their local village and community, for others it was the whole county. When talking to the land-management organisations they interpreted the area to be the area in which they worked. Another indication of this difference in understanding arose when I asked participants about what they thought biodiversity and nature conservation were: often responses mirrored educational and experiential backgrounds.

Although this was not an issue, I did feel that I had a responsibility to present the views of my participants as honestly as possible. As suggested by Pile "an interviewer needs to relinquish the claim to represent other people and also concede to them the space to speak for and to be

themselves" (1991, p.467). This was a difficult balance to strike, when to let participants get completely off topic and when to guide them back to the topic under discussion. In many of the interviews participants would wander away from the topic. To get them back to the point I would use terms such as 'and you were saying that...' However, I found that the more informative interviews occurred when I had conversations with participants regarding things other than the research at hand: this helped to build up a trust with the participant and resulted in much richer results than some encounters that just revolved around the interview topic. I found this especially prevalent with some of the farmers and young peoples groups that I interviewed.

However, whilst I am aware that a researcher's positionality is important within any research, it is also apparent that often the subject of reflexivity and positionality turns into an act of self indulgence on the researcher's part, shifting priorities away from the research at hand (Kobayashi, 2003). I have therefore limited my discussion around this topic to specific factors that impacted upon my research.

5.6.3: Transcription

All recorded interviews were fully transcribed into a rich text file in Nvivo, a software programme for computer assisted analysis of qualitative data (Richards, 1999; Robson, 2002). Where interviews were not permitted to be recorded I made notes during the interview, including some word for word quotations and these were transcribed in as full detail as possible into Nvivo. I chose to transcribe my own data as I felt that it put me closer to the participants and what they were saying (England, 2002), allowing me to fully immerse myself in the data. During interviews that I was given permission to record I still took detailed notes due to concerns of potential technical faults, and for affirmation, during the transcription process, of any areas that were unclear on the tape (Valentine, 1997). The transcriptions were extremely useful in identifying points at which I had missed valuable information by not prompting participants further, this enabled me in two cases to go back to participants, and delve more into these areas (Neuman, 2003).

Ley and Mountz (2001) have suggested that the researcher at least has the power of interpretation within a research project. However, I do not feel this interpretation is as straight forward as is suggested. All research that involves interpretation is vulnerable to direct or indirect interviewer bias (Neuman, 2003; Sarantokas, 1999). Although I tried to avoid interviewer bias, there were a number of transcripts that were produced from detailed notes and no matter how detailed the notes are, things will have been missed and there is more of a potential for misinterpretation. Where possible I tried to overcome this by showing participants the transcripts I had produced, but not all participants wanted to see this. As suggested by Rose

(1997) "how a research project is understood is not entirely a consequence of the relation between the researcher and the researched" (Rose, 1997, p.319). There are always many factors that may influence the way in which research is interpreted. In this section I hope to have revealed where there are possibilities of misinterpretation, which no research is immune from.

I transcribed all interviews within twenty-four hours of completing them and the initial coding was carried out soon after. This allowed me to record any issues of body language that I had noted and made transcriptions easier as the longer the time lapse between transcription and the interview, the more chance there is of details being forgotten and interpretations of poorly recorded words being incorrect (Valentine, 1997). This also allowed on several occasions for modifications to be made to the interview schedule prior to the next interview being carried out.

5.6.4: Focus Groups

The third point within the triangulation process was the use of focus groups. Focus groups are a type of open-ended group interview with three or more participants discussing a specific topic (Pratt, 2002; Robson, 2002). I carried out nine focus groups in total, five within the Parrett Catchment and four within the Chiltern Hills Natural Area. I recruited participants from existing groups of people which included farming community groups, church groups, young people's groups, council groups and ramblers. Although some researchers suggest focus groups should have between eight and twelve participants (Robson, 2002; Stewart and Shamdasani, 1990), within my research most groups were smaller with one only having four participants. Only two had between ten and twelve participants, the remaining groups had between five and eight participants. Recruiting participants proved extremely difficult as, unlike with an interview, there were potentially twelve people that needed to be available at one time in one place. I relied on personal contacts initially to arrange focus groups as I had a number of contacts within both areas, subsequently I contacted groups primarily via e-mail and sometimes by phone. With those that wanted to participate but were unable to correspond with other members of the group, I undertook one to one interviews. However, there were a few occasions where this was impossible and potential participants were unavoidably lost.

I followed the same schedule with the focus groups as I did with the interviews, although two hours were allowed for each focus group as more participants needed the opportunity to engage with the discussions. I initiated each focus group by explaining what my research was about, which triggered discussion prior to any questions being posed. At the beginning of each focus group I did a round of introductions as some people in the group were familiar with each other, but others were not. Brown (1999) presented in Robson (2002) identifies the difference between heterogeneous and homogeneous groups, with the latter being seen to share a common

background, position or experience and the former not. Within this research all but two of the groups could be classed as heterogeneous groups. Although I sourced from existing groups, these groups often had heterogeneous membership such as Ramblers Groups or Youth Groups, therefore not all of the members would share the same experience, background or position and within all groups there was a gender and age mix. However, all members of each group did have some familiarity with each other.

I endeavoured to carry out focus groups in places that were familiar with the participants so that they were comfortable. On a number of occasions this involved meeting in people's homes. I was lucky within this research in that I was always able to find a meeting point, in all cases participants suggested locations which included church halls, youth centres and a pub.

Although the main aim of the focus groups was to consider bioregionalism within a UK context, they also provided me with a means by which to consider group interaction and the way in which this influenced or did not influence responses, constructions of reality and discussion (Myers and Macnaghten, 1999; Pratt, 2002; Robson, 2002; Sarantokas, 1998). Group interaction was both an advantage and a limitation. Within all of the groups there presented certain dynamics which meant some participants dominated the discussion, with others struggling to be heard. I attempted to moderate this process by directly asking the quieter members of the group if they wanted to add anything, in most instances they would then put their own point forward. However, two of the groups were composed of adults and children, in the first of these the adults dominated and children tended not to want to add anything when asked, in the second group it was the opposite: the young people dominated the discussion and input from the adults in the group was very limited. As Pratt (2002) suggests, the power dynamics that exist within focus groups are often more complex (and sometimes hidden from view) than those that are evident in interviews.

It was more challenging within the focus groups, to maintain the focus on the issues which were being discussed. With more participants and their existing familiarity, the tendency to go off topic was high. I managed this by intervening and posing another question. I let my prompts be guided by the way in which the participants were responding to the discussion, this worked well and there were no instances whereby the conversation could not be brought back to the discussion points. However, as all but two groups were recorded with the participants agreement, one problem that did occur was that of participants talking over each other, which made transcription difficult. As with the interviews I also made notes, although at certain points there were pieces of discussion lost because of over talk and therefore there is the possibility that I may have misinterpreted certain aspects of the discussion. Where this occurred I have not

directly quoted any of the discussion and I did not code these sentences. Although attempts were made with the note taking to make them as detailed as possible, as I was the only facilitator within the group, at times it proved difficult. With the two focus groups that were not recorded a friend accompanied me with the permission of the group and made notes whilst I facilitated discussion. Transcribing these notes was more difficult given that someone else had made them and may have interpreted the discussion in a different manner to myself. All transcripts were transferred as rich text files into Nvivo.

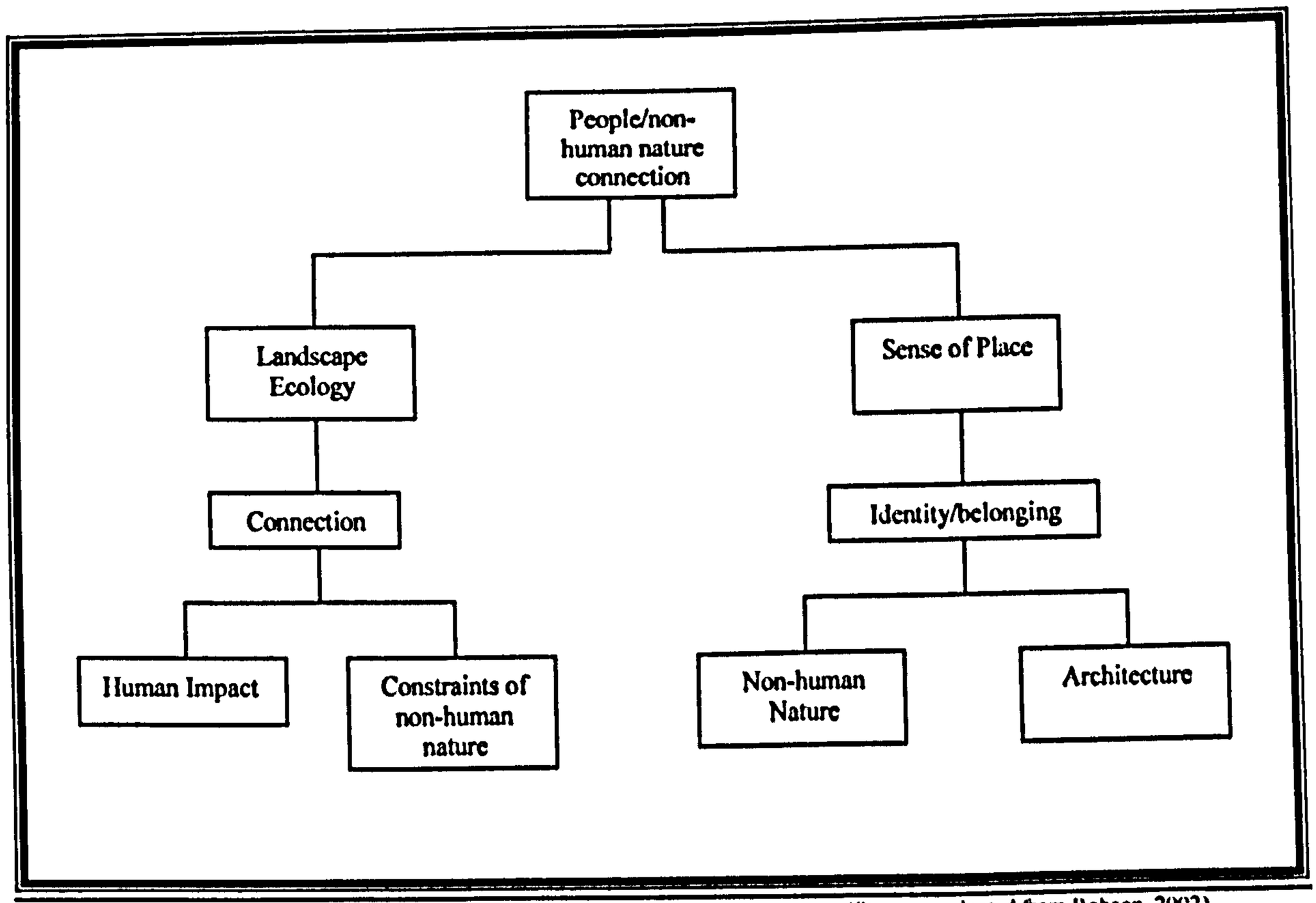
5.6.5: Nvivo Analysis

It is becoming increasingly common for computer software to be used to analyse and code qualitative data from interview and focus group transcripts (Seale and Kelly, 1998). I used one such programme, Nvivo. Although I initially coded all of the transcripts by hand, I subsequently went on to code them in Nvivo for convenience. I wanted to do the initial coding by hand to completely immerse myself in the data and aid with any changes or additions I wanted to carry out in subsequent interviews and focus groups.

Nvivo allowed for the linking of codes that are known as nodes or roots, to memos which is fundamental within Grounded Theory (Richards, 1999; Robson, 2002). Using computer software as opposed to doing all of the analysis by hand allowed for richer analysis. I found it easier to identify relationships within and between the transcripts when illustrated together on a computer screen rather than lost amid hundreds of sheets of paper. Although coding manually allows for immersion into the text, which I found was lacking when faced with computer analysis, it did result in relationships being lost as it relied on both the ability to be able to organise what was in excess of a hundred transcriptions and to identify these links manually was virtually impossible, many of the less obvious connections may have been lost if not for the use of Nvivo.

Using Nvivo I carried out both a Grounded Theory analysis based on the assumptions of Charmaz (1995; 2000) and identified Interpretative Repertoires. This analysis also helped me identify dualisms used by participants such as nature/culture and subjective/objective. Nvivo allowed for substantial memo production (Glaser and Strauss, 1967; Glaser, 2002a; 2002b). Nvivo, allows coding to be broken down into a tree like structure, with nodes representing the point at which the branching of the tree or data occurs, which allows for the linking of data (Robson, 2002). Figure (5.7) gives an example of a tree within my own research.

Figure 5.7: An Example of Linkage within an Nvivo Index System



(Structure adapted from Robson, 2002)

Although extremely simplistic this illustrates the way in which different nodes can be connected indicating the way in which different codes connect together. Attached to this can be as many memos as are needed.

5.7: Chapter Summary

Within this chapter I have discussed both the data collection and data analysis methods. I used a mixed method approach to gain a rich depth of data. I used document analysis, semi-structured interviews and focus groups in a triangulation process. Grounded Theory and discourse analysis were used to identify the way in which three different groups of participants viewed the relationship between people, place and non-human nature. In the next chapter I will discuss the results of the document analysis and in the chapters that follow the results for the interview and focus groups.

Chapter Six

Document Analysis: The Relationship between People, Place and Non-Human Nature in Official Documents

6.1: Introduction

This chapter is separated into four distinct sections that consider the relationship between people, place and non-human nature within a range of policy and organisational documents that support the evolution of bioregional frameworks within the UK. The first section considers the results from the analysis of the key policy documents identified within the systematic review process. The second section considers key documents concerned with the development and introduction of Natural Areas. The third section concentrates upon work carried out in the Chilterns Natural Area as part of English Natures Lifescapes program and the implications this has for the way in which English Nature is portraying the relationship between people, place and non-human nature within work carried out at the Natural Area level. Finally, the fourth section considers the analysis of documents related to river catchments and catchment management processes within the Parrett Catchment Somerset that includes work done by the Parrett Catchment Project (PCP). Lifescapes and the PCP are the most bioregionally advanced approaches to Natural Areas and river catchments within the two case study sites and therefore are of significant value within this research. The document analysis provides valuable insight into the way in which non-human nature is portrayed to the wider audience and findings can be compared with how people that live and work within specific areas view non-human nature and their relationship to place within a bioregional framework.

6.1.1: Policy Documents

Within this section I will discuss the results of the document analysis of four policy documents: 1) the UK Biodiversity Action Plan; 2) the Biodiversity Steering Group Report; 3) the Biodiversity Challenge – a document produced by Non-Governmental Organisations (NGOs) regarding biodiversity action and; 4) Sustaining the Variety of Life – Five years of the UK BAP. The policy documents were selected based upon their significance to, and role as the driving force behind, policy making related to non-human nature and the relationship between non-human nature and people in the UK. Unfortunately there were no corresponding key documents that considered solely the concept of a sense of place.

Through the systematic review process it was identified that two primary documents in recent years have influenced the way in which non-human nature is dealt with on a practical level and these are: 1) *Biodiversity: The UK Action Plan* (1994) and; 2) *The Biodiversity Steering Group Report* (1995). *Biodiversity: The UK Action Plan,* which was the Government's response to the Convention on Biological Diversity (CBD) (Langlsow, 2001). The CBD committed the UK to the protection, conservation and enhancement of biodiversity within its boundaries. This document is fundamental to this research as it clearly identifies the official means by which the UK intended to work with non-human nature and provides insight to the way in which government viewed the relationship between people and non-human nature. The UK BAP also acted as a driver in the development of Natural Areas, as the framework was designed as a means to more effectively deliver BAP targets.

The Biodiversity Steering Group Report (1995) is the guidance document produced by the government appointed Biodiversity Steering Group that would aid the development of species and habitats plans and targets within each of these plans. This document provided a detailed explanation of the aims and objectives of Biodiversity Action Planning, which habitats and species were to be targeted and the way in which Biodiversity Action Plans (BAPs) would be applied in practice. This document provides valuable insight into the way in which the government and policy advisors were interpreting the UK's commitment to non-human nature and identifies the extent to which people, place and non-human nature were viewed as interrelated within policy guidance.

I also analysed *Biodiversity Challenge* (Second Edition) produced by Wynne et al (1997) on behalf of a number of environmental Non-Governmental Organisations (NGOs). This is an update of the first document to advocate the use of Biodiversity Action Planning as a means of working to improve biodiversity within the UK. *Biodiversity Challenge* was initially produced as guidance for enhancing, maintaining and restoring biodiversity within NGO owned sites and was the voluntary sector's contribution towards achieving the implementation of the Convention of Biodiversity. However, the UK government recognised the potential of this process of targeting and expanded the process to all priority species and habitats within the UK in the form of Habitat Action Plans (HAPs) and Species Habitat Plans (SAPs). The *Biodiversity Challenge* is a document primarily produced by the RSPB, a NGO that is concerned with the conservation of Britain's bird species and may be perceived to be more likely to be driven by the needs of non-human nature in its own right, rather than in relation to the needs of people. This document provides an insight to the way in which NGOs viewed their commitment to non-human nature in light of the CBD. It also was fundamental in informing the way in which the government have worked with non-human nature and the target driven nature of conservation practice in the

UK that I posited in Chapter Four, has resulted in the separation of people, place and non-human nature.

The final document analysed within this section was *'Sustaining the Variety of Life: 5 Years of the UK Biodiversity Action Plan* (UK Biodiversity Group, 2001) that reports on the progress of the Biodiversity Action Planning five years after the introduction of the UK Biodiversity Action Plan (BAP). The UK Biodiversity Group Report (2001) not only identified the perceived achievement of the BAP process, but also provided an opportunity to consider the actual progress made and the changes in focus, attitudes and opinion regarding non-human nature within the UK. This report provides an insight to the way in which the relationship between people and non-human nature has been viewed in terms of BAPs. This is important to this research as it affords an opportunity to assess if there have been any changes in the way in which the relationship between people and non-human nature are presented within 'official' documents.

All of the documents within this section enabled the investigation of: first, the way in which non-human nature is portrayed through policy and influential reports; second, the way in which people are viewed in relation to non-human nature and thirdly, if there is the consideration of the concept of a sense of place. Both the bioregional literature and some of the literature regarding bioregional frameworks within the UK identify the development of a sense of place as important to the conservation of non-human nature (English Nature, 1998; Thayer, 2003). I therefore concluded that this concept of a sense of place had potential implications for policy development and there was a need to investigate the presence of this concept within the documents.

6.1.2: People and Non-Human Nature

All four documents recognise the complexity of both the concept of biodiversity and the practical aspects of any form of conservation practice, as well as the fragility of the landscape, as it exists today. Although all of the documents recognise the negative impacts of people on non-human nature and the subsequent degradation, isolation and fragmentation of non-human nature, they are primarily concerned with the conservation of non-human nature for human benefit. There is little discussion in any of the documents regarding the intrinsic worth of non-human nature: only the UK BAP and the Biodiversity Steering Group Report provide any evidence of the consideration of this intrinsic worth and this only forms a small proportion of the documents and is discussed as a secondary perspective in terms of conservation:

> "Moreover, the true significance of biological diversity in the UK is even greater than the number of species present and their intrinsic value, or their value to us as a nation" (Biodiversity Steering Group, 1994, p. 48).

One of the primary themes that presented itself throughout the coding process of all four documents was integration, and all the documents presented the need for the conservation of non-human nature to be integrated within the policy process as illustrated below:

> "The need to integrate environmental concerns into Government policy and decision-making is well recognised" (Biodiversity Steering Group, 1994, p. 10).

> "Therefore, biodiversity objectives must be central to the policies which drive the major sectors of the economy, such as agriculture, forestry, fisheries, transport, regional development and energy" (Wynne et al, 1997, p. 3).

> "It is stressed that consideration of the implications for biodiversity should be integrated into all sectors of economic and social activity, as an important component of sustainable development and as a principal measure of its success" (UK Biodiversity Group, 2001, p. 10).

These documents present a clear shift in policy away from treating people and non-human nature as separate entities by forwarding the view that non-human nature should be integrated into all governmental policies, social and economic activities. However, just as McDowell (1993) (with regard to feminism) argues that it is not sufficient to 'just add women and stir', it is not enough just to add non-human nature to policy documents as an after-thought. If true integration is to occur then non-human nature needs to be incorporated as more than just an after-thought. None of these documents provide a detailed explanation of how this integration would work in practice. The interpretative repertoire of integration identified by the Discourse Analysis is entwined throughout these documents. In a variety of different ways this repertoire continually emphasises the benefits of integrating non-human nature within policies yet does not identify how this will be achieved in practice. These documents also do not show what is actually meant by integration. For example integration could mean that equal emphasis and weight is to be given to non-human nature within policies, or simply that non-human nature will be mentioned within policies. Given the content of the remainder of the policies in question, I would suggest it is the latter. However, the idea of integration was found to be fundamental within the coding process and the basis of the core category or theoretical concept for all of these documents was that of the integration of non-human nature into human systems, be they

policies, processes or organisations (Biodiversity Steering Group, 1995; UK Biodiversity Group, 2001; Wynne et al, 1997).

The report by the UK Biodiversity Group (2001) discussed the progress of the UK BAP and given that within this document emphasis was still being placed upon the need to integrate non-human nature within policy and all sectoral work, it suggests that this has still largely not occurred. However, the report does suggest that this is being encouraged by the publication of the Spring 2000 Green Minister's Biodiversity Checklist, stating that this was "an important first step in encouraging all Government Departments and their Agencies to take account of biodiversity" (UK Biodiversity Group, 2001, p. 31). This report was five years into the BAP process and still at this point one of the fundamental repertoires evident within the BAP and the UK Steering Group report, integration, was only just being encouraged.

Whist emphasising the importance of integration on one hand through a series of what I will call integrative repertoires, these documents on the other hand portray people as superior to non-human nature. Although it is implied that this superiority is paired with a responsibility for conservation, conservation is viewed in relation to its benefits to humans and not in relation to the intrinsic worth of non-human nature. This supports the view of ecofeminists that non-human nature is often viewed as subordinate to people and not in relation to its own intrinsic worth (Plant, 1990a). Within the Biodiversity Steering Group Report (1995) four primary reasons are listed for conserving biodiversity: 1) moral and aesthetic; 2) stewardship; 3) benefit to society and; 4) economic value. Conservation listed under the heading moral and aesthetic is concerned with the way in which non-human nature enriches the lives of people with no mention of the intrinsic worth of non-human nature. Under the sub-heading stewardship, the idea of the intrinsic worth of non-human nature is equally elusive and whilst suggesting people have responsibility for non-human nature it is suggested that this is because people have power:

> "Human beings exercise determinative power over other creatures: with this dominion comes responsibility" (Biodiversity Steering Group, 1995, p.15).

These documents illustrate the clear need to integrate people and non-human nature yet there is no reference to the fact that humans are dependent upon non-human nature for survival. Wynne et al (1997) within the *Biodiversity Challenge* identify a number of different limitations that they associate with the government's BAP process. This is the only document analysed that explicitly identifies the interdependence of people and non-human nature, although this only consists of two sentences within the whole of the document:

> "If we allow ecological change to continue at the headlong pace of recent decades, we are taking a big risk with our futures. The conservation of biological diversity is an issue which is in all our interests to take seriously" (Wynne et al, 1997, p. 1).
>
> "The quality of our lives is intimately bound up with the maintenance of biodiversity" (Wynne et al, 1997, p.1).

These quotations show that although the authors are discussing that people need non-human nature it is not clearly identified that this need is one of survival. All of these documents are concerned foremost with the conservation of 'priority' habitats and species and do not give equal standing to all of non-human nature, this in itself puts non-human nature on an unequal footing to people, reinforcing the culture/nature dualism that has been identified by many researchers (Haraway, 2001; Plumwood, 1993; Whatmore, 2002).

The UK Biodiversity Group Report (2001) gives reference to the impacts the BAP process has had on priority species and habitats but fails to consider the impact on the wider countryside. It states that "numbers of BAP priority species and habitats show signs of recovery, those which are stable and those still in decline" (2001, p. 23). This process results in many species and habitats being overlooked as they do not fall under the 'priority' heading (Knightbridge, 2000). It also inserts a hierarchy within any management and enhancement projects, leaving a certain sector of non-human nature vulnerable to misuse.

All of the documents within this section identify the UK landscape as being cultural; this in itself is recognising the fact that people, nature and place are intricately linked (Head, 2000). Although, this is not discussed within the documents explicitly, I suggest this as another integrative repertoire, the integration of people and non-human nature within the landscape. Throughout the documents there is a recognition that all of the landscapes in the UK are semi-natural and are therefore the by-product of this integration as illustrated within the UK BAP:

> "Keeping livestock has been the major factor behind the creation of grasslands in the UK; **meadows** are cut for hay to feed to stock in winter, while **pastures** are grazed by animals" (UK BAP, 1994, p. 34).
>
> "Today's countryside has been shaped and maintained largely by farming activities, and even semi-natural areas depend on the continuation of certain forms of traditional agricultural production" (Biodiversity Steering Group, 1995, p. 50).

In fact many of the species and habitats that are viewed as 'priority' within the UK are dependent upon this interaction for survival and one of the main threats to this has been the changing trends in agricultural practices including increased mechanisation and chemical use (Harvey, 1997).

> "The UK has a history of low-intensity agriculture and human land-use on which, over hundreds of years, many species have come to depend. As a result, many of our most diverse habitats would be lost without some sort of management" (UK Biodiversity Group, 2001, p. 65).

Much of the discussion within all of the documents, although primarily about non-human nature and the integration of non-human nature within policies and procedures, still presents a dualistic view of nature and culture. Integration is viewed as attaching non-human nature to existing policies, there is little discussion in any of the documents as to how this will be achieved. Although reference is made to working in collaboration with businesses and encouraging the uptake of more biodiversity-friendly development, it is still very much an issue that falls on the periphery of mainstream policies, giving rise to a dualistic view with non-human nature on the weaker side of this binary. There are twenty-five specific references within the Biodiversity Group Report discussing the potential role of businesses in conserving and enhancing non-human nature, yet there is little discussion regarding how this is to be achieved leading to the impression that conservation is an add-on or afterthought rather than a truly integrated part of society.

> "Industry and business should be encouraged to take account of the need to conserve biodiversity, and to raise greater awareness of biodiversity among their staff" (UK Biodiversity Steering Group, p. 74)

6.1.3: Sustainability

Sustainability formed another facet within the integrative repertoire. All of the documents present the concept of sustainability as necessary to the conservation of non-human nature. However, this is presented primarily as benefits of non-human nature to people and the need to conserve it to protect human need, reinforcing the culture/nature dualism that has driven much conservation in the past (Plumwood, 1993). All of the documents reference the UK Strategy for Sustainable Development that was produced based on the Brundtland definition of sustainability:

> "Development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.8).

Whilst there have been many adaptations made to this definition (Kambites, 2004), within these documents sustainable development and sustainability primarily relate to economics and human need rather than the need of non-human nature. The survival of non-human nature is recognised in some ways as a pre-requisite to the survival of humans, however, this is still dominated by the perspective of human usage. The division of non-human nature into priority or endangered and non-priority or non-endangered emphasises the lack of concern for all species. Whilst this may act to encourage the sustainable use of the landscape to conserve these species there is a question mark surrounding the conservation of species that are not considered to be of priority.

As evidenced in the following, sustainability within these documents is primarily related to human usage with reference being given to sustainable exploitation of non-human nature:

> "Our objective is to assist developing countries to maximise the sustainable exploitation of the social and economic benefits of forests, while conserving them as major factors in the conservation of global biodiversity and as factors in climate change" (UK BAP, 1994, p.129).

> "This concept is an underlying theme of *Sustainable Development: The UK Strategy* (Cm2426) which seeks to achieve economic development to secure higher standards of living, now and for future generations, whilst also seeking to protect and enhance the environment now and for our children" (Biodiversity Steering Group, 1995, p. 14).

> "Not least, we owe it to future generations to leave a world no less rich than the one we inhabit" (UK Biodiversity Group, 2001, p.9).

Whilst all the documents are indicating primarily the need to work within the UK's sustainable development policy there is also evidence presented within the *Biodiversity Challenge* that biodiversity is an important indicator of sustainable development:

> "We believe that the conservation of biodiversity is a key 'test' of sustainability; development cannot be regarded as sustainable unless biodiversity is conserved" (Wynne et al, 1997, p. vii).

Since the publication of these early documents there appears to have been a shift in the interpretation of sustainable development from the initial anthropocentric view presented within both the *UK BAP* and the Biodiversity Steering Group Report. As noted by the chair of the UK Biodiversity Group within the foreward of the 2001 document there has been "a broadening and deepening of the understanding of the concept of sustainable development and the part that the conservation of biological diversity plays in it, through all sectors of society" (Lambert, 2001: in UK Biodiversity Group, 2001, *Foreword*). Nevertheless, I still feel there is a tendency towards an anthropocentric view of non-human nature, especially given that biodiversity on the whole within this document is viewed in terms of economic value. Human benefits of biodiversity are intertwined into the documents evidencing further the culture/nature divide that exists within conservation programmes:

> "In recent years, fish farming has become increasingly important. In 1992 it registered a first sale value of £150 million" (UK BAP, 1994, p. 104).

> "Wise and sustainable use of biodiversity is essential to the continued success and development of these industries. Businesses are increasingly recognising that conserving biodiversity should be an integral part of their business planning and policies" (UK Biodiversity Group, 2001, p.99).

> "The priority for the Biodiversity Steering Group in costing biodiversity targets should be to establish the costs and savings entailed for the statutory sector. The wider costs and benefits to society as a whole could be investigated later" (Wynne et al, 1997, p. 84).

This research considers the relationship between people, place and non-human nature and it is therefore important to identify the way this is presented within policy documents. This provides a baseline against which to consider the way people that live and work in bioregions perceive their relationship to place and non-human nature. Although I suggest that sustainability is another integrative repertoire, I also recognise that there is a human based slant upon sustainability in many UK policy documents, not just those related to biodiversity. Sustainable development and sustainability are often used interchangeably (Kambites, 2004) and both terms can be viewed as rather ambiguous and 'buzz' words. At the centre of the UK's approach to sustainable development are 10 guiding principles produced by the former Department of Environment, Transport and Regions (DETR) and listed within table (6.1) that place people at the centre of this concept with the well being of people being seen as the priority.

Table 6.1: 10 Guiding Principles for Sustainable Development

- Putting people at the centre.
- Taking a long term perspective.
- Taking account of costs and benefits.
- Creating an open and supportive economic system.
- Combating poverty and social exclusion.
- Respecting environmental limits.
- The precautionary principle.
- Using scientific knowledge.
- Transparency, information, participation and access to justice.
- Making the polluter pay

(DETR, 1999 in: UK Biodiversity Group, 2001, p. 73)

None of the documents provide an explanation of what sustainable development is or evidence the ambiguity of the term. However, sustainable development is important to the integrative repertoire that was presented throughout these documents and provides evidence of the culture/nature dualism which has dominated British policy making. These documents evidence the way in which non-human nature is being treated as distinct and separate from people. By only 'adding biodiversity and stirring' we are not recognising the hybrid nature of the landscape in which people are only a part (Haraway, 1991).

6.1.4: The Wider Countryside

Within these four documents another interpretative repertoire became evident and that was the 'wider countryside repertoire'. There was a range of different presentations of this argument within each of the documents, making it fundamental within this research given that bioregional frameworks are wider countryside approaches. Integral to the wider countryside repertoire was the concept of ecological linkage. This identifies the importance of firstly a connected landscape for non-human nature and secondly the role of the wider countryside approach in achieving this connectivity. All of the documents identify landscape linkage as being of significant importance to the survival of non-human nature and this is epitomised within the extract below:

> "Habitat re-creation has an important role to play in increasing the area of land available for associated species, linking sites to enhance opportunities for species migration (for example, in the face of climate change), increasing the area for

ecosystem processes to operate and to sustain biodiversity through more natural mechanisms" (UK Biodiversity Group, 2001, p. 65).

However, whilst the importance of a connected landscape is argued as being important to maintaining ecological integrity (Forman, 1995; Selman, 2001), these documents still place significant emphasis upon the use of designated sites for conserving non-human nature:

> "Each agency has statutory responsibilities in respect of the selection, designation and management of special sites of national and international importance the vast majority of which remain in private ownership" (UK BAP, 1994).

> "However, only a small part of the UK's land surface needs to be fully protected to conserve these rare habitats and the important, often unique, species they hold" (Wynne et al, 1997, p. 20).

In fact many BAP targets and target objectives were devised to be reached through management and conservation within designated sites (Langslow, 1997; UK BAP, 1994). This said, all of the documents identify the importance of a wider countryside framework that works beyond designated sites and takes account of the landscape both within and outside of sites. Bioregional frameworks assert that to maintain the ecological and cultural integrity of an area naturally defined boundaries should be used to divide the landscape, as opposed to administrative or political boundaries (Berg and Dasmann, 1977; Sale, 1985). The UK BAP places emphasis on the Natural Area framework and its potential for future conservation of the wider countryside:

> "Natural Areas can provide an effective way to integrate local and national objectives for enriching biodiversity" (UK BAP, 1994, p. 76).

These documents show the shifting realities within nature conservation in recognising the importance of linkage and working across human-dictated boundaries. Both the UK BAP and the Biodiversity Steering Group Report (1995), highlight the importance of Natural Areas in addressing the conservation of non-human nature within the UK. The Biodiversity Steering Group state that:

> "One of the objectives of *Biodiversity: The UK Action Plan* is the conservation, and where possible, the enhancement of habitats and species characteristic of local areas. In considering local characteristics, priority should be placed on the historical and

> natural context. In England the Natural Areas programme will assist this programme, as will biogeographical zones in Scotland" (1995, p. 89).

Whilst still recognising the importance of landscape connection and working within the wider landscape, the wider countryside repertoire within the UK Biodiversity Group (2001) report does not include reference to specific frameworks such as Natural Areas. This may be due to the fact that the Natural Areas approach had a decline in momentum following the publication of the Joint Character Map of England (1992) and this momentum has only begun to increase in the past few years again with the redefinition of Natural Areas as Joint Character Areas (JCAs) (Porter, 2004). However, the wider countryside repertoire in all of the documents does promote the use of an ecosystem approach to working with non-human nature, one that is not constrained by administrative or site boundaries. One of the consistent arguments within these documents is the need to work beyond boundaries:

> "Habitat types and species do not recognise administrative boundaries" (UK Biodiversity Group, 2001, p. 25).

> "National boundaries are irrelevant to wildlife" (UK Biodiversity Group, 1994, p. 51).

The documents only briefly discuss alternatives to the existing process. All of the documents discuss in-depth the protection of priority species and habitats within designated sites. These documents illustrate the limitations of designated areas presented within the literature review, including the fragmentation of habitats (Pressy, 1996), negative impacts of land uses outside designated areas (James and Boothby, 2001) and the isolation of species and habitats (Pullin, 2002), identifying that the focus of UK governments is still primarily on these sites despite these limitations. The introduction of bioregional frameworks, whilst only a small component of these documents, is important to the subsequent introduction, development and uptake of bioregional frameworks within the UK (Bishop and Phillips, 2004).

6.1.5: Sense of Place within Policy Documents

This research considers the way in which people relate to bioregions that act to facilitate a sense of place (Thayer, 2003). Three of the documents (the UK BAP, the Biodiversity Steering Group Report and the UK Biodiversity Group Report) identify, albeit only briefly, the importance of a sense of place. However, the coding process identified that a sense of place is not a major theme within these documents. The place repertoire included factors such as local distinctiveness,

sense of belonging and local identity, factors that have all been identified as being facets of this sense of place (Arefi, 1999; Blunt, 2003; Relph, 1976; Tuan, 1977). The UK BAP discusses the value of recognising local wildlife to developing a sense of pride and encouraging the conservation of non-human nature:

> "Many people value their local wildlife because it represents an essential part of their surroundings, giving both aesthetic pleasure and spiritual refreshment. When they know that this wildlife contains species which are different from those found elsewhere, they have an added reason for pride as well as extra justification for demanding that this wildlife be conserved" (UK BAP, 1994, p. 26).

The UK BAP also identifies the Natural Area framework as being based upon a sense of place:

> "They are based on a sense of place and are not constrained by administrative boundaries" (1994, p. 76).

However, nowhere within this document is the meaning of this concept made clear, although its role within the Natural Area framework is acknowledged, supporting the view of bioregionalists that bioregions facilitate a sense of place (Sale, 1985). Within the place repertoire, the Biodiversity Steering Group Report (1995), whilst discussing a sense of belonging, does not expand upon this concept. Yet does state that the way in which peoples feelings about non-human nature will influence their attitudes towards conservation (Biodiversity Steering Group, 1995). The UK Biodiversity Group Report (2001) also recognises the role that people's values have to the potential conservation of non-human nature, identifying one of the key functions of biodiversity being:

> "To identify targets for species and habitats appropriate to the local area, and reflecting the values of people locally" (UK Biodiversity Group, 2001, p.60).

However, discussion of the concept of a sense of place is not expanded beyond this. The *Biodiversity Challenge* does not give any mention to a sense of place specifically or any of the facets that contribute to this sense of place. This may be due to the purpose of the document: which is primarily to guide conservation action for a number of NGOs. Nevertheless in not considering a sense of place the document fails to recognise a factor that may encourage the conservation of non-human nature by the wider public.

None of the documents place a significant emphasis upon the place repertoire. However, there was some evidence of a place repertoire within the three documents produced by the government or government advisory bodies indicating some recognition of the concept. It should be recognised that these documents were produced to identify the UK's response to the Earth Summit and therefore highlight the positive actions the UK has taken towards non-human nature. However, although there was a wide consultation process involved in the production of the three primary government advisory group documents, they are still primarily agency-informed. Although government policies are important, it is not the government *per se* that delivers the objectives of these policies and it is not the government or their agencies that deal with the lived realities of these policies.

6.1.6: Summary

By analysing these four documents I identified the extent to which people, place and non-human nature are viewed as interdependent and the extent to which a sense of place is viewed as important. Within all of these documents the interconnection of people and non-human nature was portrayed from what I will call the 'gain' perspective – what people can gain from non-human nature. I suggest that this 'gain' perspective emphasises the culture/nature dualism and reinforces the idea that people are superior to nature. Within the documents interconnectedness is recognised but this is only conceptually, and although a sense of place is acknowledged it is given little emphasis.

6.2: Natural Area/Joint Character Area Documents

Eight documents were analysed: two that considered the Natural Area process in general terms and, the remainder that were specifically related to the case study site of the Chiltern Hills Natural Area. This enabled specific consideration of the way in which documents presented the relationship between people, place and non-human nature within a given area. The documents considered are listed in table (6.2).

Table 6.2: Natural Area Documents

- English Nature, 1998. *Natural Areas: Nature Conservation in Context, CD ROM,* English Nature, Peterborough
- English Nature, 1997. *Chilterns Natural Area Profile,* English Nature, Peterborough
- Lee, J.T., Bailey, N., Bayliss, J.L., and Thompson, S., 2001a. *Development of a Biodiversity and Landscape Map for the Chilterns Using a GIS based Model Phase I: Production of Land Use Map for the Chilterns Natural Area, Contract Number TC/12/00,* The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford
- Lee, J., Griffiths, G., Warnock, S., Bailey, N., Bayliss, J., Vogiatzakis, I., and Thompson, S., 2001b. *Development of a Biodiversity and Landscape Map for the Chilterns using a GIS Based Model: Phase II: Habitat Model: Formulation, Operation and Results, Contract Number TC/17/00,* The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford
- Edworthy, M., 2002. *Chilterns GIS Project: Summary,* English Nature, Oxfordshire
- English Nature and ADAS, 2002. Pilot Agri-environment Scheme Targeting in the Chilterns: Farmer Questionnaire Analysis, English Nature and ADAS, Oxfordshire
- Jones, P., Mortimer, S., Park, J., Parker, G., Stabler, M., Ansell, D., and Griffiths, G., 2001. *A Socio-economic Profile of the Chilterns Natural Area: Costing Biodiversity Targets and Linking Biodiversity to Socio-economic Drivers, Contract Number TC/18/01,* School of Agriculture, Policy and Development, University of Reading
- Griffiths, G., Porter, S., Simmons, E., and Warnock, S., 2004. *The Living Landscapes Project: Landscape Character and Biodiversity Final Report, English Nature Research Reports Number 475,* English Nature, Peterborough

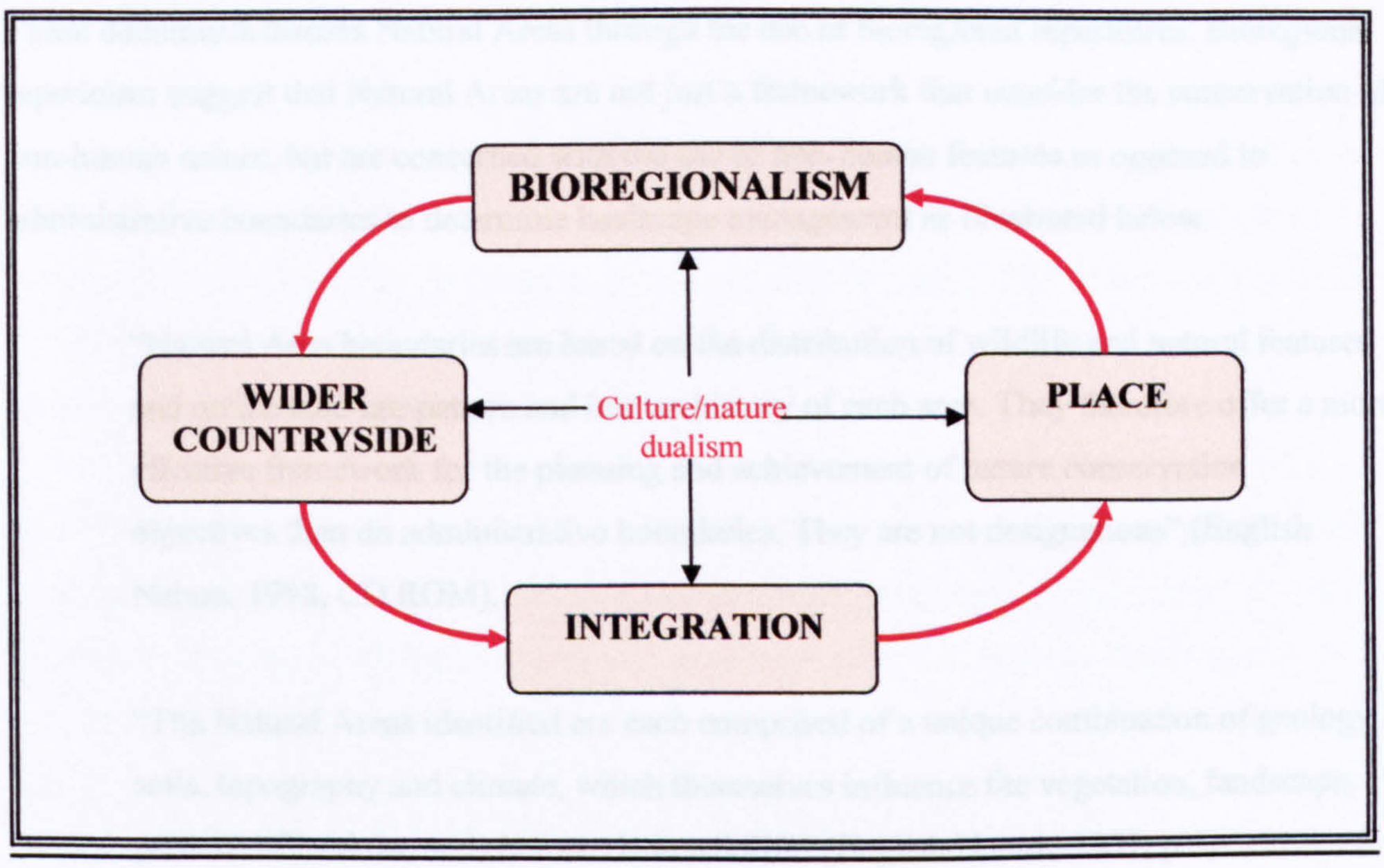
There are many other available documents that identify the way in which Biodiversity Action Plan (BAP) targets were divided up nationally using the Natural Area framework (English Nature1997; 1998; Porter and Preston, 2001a). I chose not to analyse these documents as they only provided an illustration of the initial stages of identifying particular BAP habitats and species that were characteristic to each Natural area. The documents did not provide evidence of the practical use of the Natural Area framework aside from its role in dividing up national habitat and species targets, and, as other documents illustrate, there was more to the Natural Area process than this (Porter, 2004). As Natural Areas were a key framework within this research I chose to analyse the primary document to their development, the Natural Area CD ROM. I also analysed the document produced as part of the Living Landscapes Project as this discusses changes within the structure of the Natural Area approach and more generally the landscape approach, in the past five years. All of the other six documents pertained specifically to the way in which the Chiltern Hills Natural Area had been used practically to consider the integration of people and non-human nature. As the Chiltern Hills is one of my chosen case study sites it was important to analyse documents relating to this area.

Natural Areas were presented as a biogeographical framework that allowed non-human nature and people to be considered as integrated, Natural Areas enabling the recognition of a deep seated sense of place among the people that live and work in the areas (Countryside Commission and English Nature, 1996).

6.2.1: Natural Areas and the Wider Countryside Approach

Within this section I identify a series of interconnected interpretative repertoires and these are the wider countryside repertoire, integration repertoire and place repertoire. I suggest that these are interconnected in such a way that they all fall within the overarching repertoire of bioregionalism. However, at the centre of this interconnection the culture/nature dualism is still being reinforced. This interconnection is presented in figure 6.1.

Figure 6.1: Interconnected Interpretative Repertoires of the Natural Area Documents



All of the documents indicated Natural Areas as a wider countryside or landscape based framework. The wider countryside approach (in this context) referred to the consideration of not only designated sites but also the recognition that land use outside of designated sites had implications for non-human nature (English Nature, 1998). However, the analysis also reveals a view of non-human nature that is, primarily, priority habitats and species. This immediately suggests there is a hierarchy of importance built into the framework, with priority being given to those species and habitats perceived to be most at risk or of more value. The Natural Area framework was driven by the BAP process which was by its very nature concerned with the conservation of priority habitats and species (Biodiversity Steering Group, 1995). The CD ROM published by Countryside Commission and English Nature (1996) reveals that BAP targets were important to the development of the Natural Area framework:

"This compact disk contains profiles for each of our 120 Natural Areas, together with specific Biodiversity Action Plan targets for each" (English Nature, 1998, CD ROM).

"Natural Areas provide a context within which the Local Biodiversity Action Plan process can operate. They provide an obvious starting point for the development of a Local Biodiversity Action Plan as they represent a thorough analysis of the wildlife resource, providing a basis from which local priorities can be set and targets drawn. These plans will then better address the conservation needs of both rare and characteristic wildlife in the area covered" (English Nature, 1998, CD ROM).

These documents discuss Natural Areas through the use of bioregional repertoires. Bioregional repertoires suggest that Natural Areas are not just a framework that consider the conservation of non-human nature, but are concerned with the use of non-human features as opposed to administrative boundaries to determine landscape management as illustrated below.

> "Natural Area boundaries are based on the distribution of wildlife and natural features and on the land use pattern and human history of each area. They therefore offer a more effective framework for the planning and achievement of nature conservation objectives than do administrative boundaries. They are not designations" (English Nature, 1998, CD ROM).

> "The Natural Areas identified are each comprised of a unique combination of geology, soils, topography and climate, which themselves influence the vegetation, landscape, patterns of land use and characteristic wildlife" (English Nature, 1997, p.5).

Although promoted as being designed to move beyond administrative constraints, the frameworks are still promoted as having to work with priority species and habitats as their main aim (English Nature, 1998). Jones et al state that "biodiversity targets for Natural Areas have been developed from the UK-BAP through top down processes of division and allocation" (2001, p.8). The framework emphasises the importance of non-human nature and accentuates the use of boundaries delimited by non-human features, yet the process is still one that comes from above. English Nature, as government advisors for nature conservation, are directly responsible for meeting the objectives of the UK BAP and their activities are dictated by government targets therefore reducing the effectiveness of the framework. No matter what the perceived aims of Natural Areas, Natural Areas can only be driven by what the targets of the moment are. This again presents a culture/nature dualism. The conservation of non-human nature often falls beneath education, health and crime as social priority (Harvey, 1997). Whilst

the Natural Area framework is being presented as driven by non-human nature it is human priorities that are driving conservation activities through the use of specific targets.

At this point the bioregional repertoire breaks down. The concept of bioregionalism is a bottom up process, and it is influenced by an integration of people, non-human nature and place and is not driven by government targets (Alexander, 1990; Berg, 1976; Thayer, 2003). However, it would be impossible for any framework conceived by people, be it a bioregional framework or not, to be truly biocentric.

6.2.2: The Integration of People and Non-Human Nature

All of the documents supported the view of Natural Areas as a framework for integrated action. However, this integration repertoire was different to that portrayed within the policy documents. There was not just an indication of the use of the framework to integrate non-human nature within policy and procedure, but there was clear evidence to suggest that non-human nature and people were intertwined and interdependent. Five documents that were the product of the Chiltern Hills *Lifescapes* project were analysed.

Defra in the *Rural White Paper* (2000) identifies the *Lifescapes* project as a project which will approach the conservation of non-human nature in a more integrated manner. Edworthy (2002) suggests in relation to Lifescapes that "it will develop a number of projects that demonstrate how integrated decision making based on ecological, socio-economic and landscape factors, can deliver Natural Area scale sustainable, wildlife and community benefits" (p.1). I therefore felt that the documents produced within the context of the Chilterns Lifescapes project provided an opportunity to investigate the use of Natural Areas, in practice, integrating people and non-human nature. All of the *Lifescapes* documents acknowledge the interconnection between people and non-human nature that is resulting in many so called 'traditional' landscapes being lost as a result of declining management regimes:

> "Unimproved or semi-natural chalk (or calcareous) grassland is a long established feature of the British landscape and is the result of traditional grazing practice on shallow, nutrient poor soils" (Lee et al, 2001a, p. 5).

> "Lack of grazing is one of the key threats to the remaining fragments of grassland" (Jones et al, 2001, p. 2).

> "The charm of much of the Chilterns today is in the intimate mix of agricultural land and woodland. Changing farming practices have resulted in much of the old grassland being agriculturally improved, neglected, lost to scrub or plantation" (English Nature, 1997, p. 9).

The promotion of Agri-Environment Schemes (AES) emphasises the role people have in conserving certain aspects of non-human nature, primarily semi-natural habitats such as grassland, downland and heather moorland (MacFarlane, 2001). All of the documents stress the importance of AES to promoting the conservation of non-human nature and although this would suggest the integration of people and non-human nature, it is portrayed primarily in economic terms, re-emphasising the culture/nature dualism. The *Lifescapes* documents provide a series of investigations that consider the integration of people and non-human nature in socio-economic terms to benefit conservation targets (Jones et al, 2001). However, these are primarily concerned with priority species and habitats and also characteristic species and habitats. No reference is given to so-called 'common' species and habitats and the threats they face due to the growing technological advancements.

Whilst the exercises reported within Edworthy (2002) and Lee et al (2001a; 2001b) entailed the mapping of the whole of the Natural Area, subsequent use of this data concentrated on only small areas within it, so failing to acknowledge integration of people and non-human nature over the entire area. This may be related to the large scale of Natural Areas and the practicalities of working in them. Yet they were presented by English Nature as being the most ecologically integral manner of working with non-human nature (English Nature, 1997; 1998).

> "Natural Areas provide a way for all local interests to determine priorities for nature conservation based on areas with ecological and landscape integrity, and to set objectives which reflect these priorities" (English Nature, 1998, CD ROM).

The *Socio-economic Profile* produced by Jones et al (2001) recognises the importance of considering socio-economic, ecological, cultural and historical factors within the landscape when making decisions regarding the land use of an area (Porter and Preston, 2001). This document therefore considers the socio-economic drivers within the Chilterns Natural Area identifying the realities of delivering BAP targets not just within a Natural Area but within a cultural landscape. However, the important facet here again is the concern with BAP targets. Although English Nature is proposing a bioregional framework for the integration of social, ecological and cultural facets within the landscape, this framework is driven by government targets and reinforces the culture/nature divide. English Nature is governed by BAP and Public

Service Agreement (PSA) targets that will dictate what has priority and this is still concerned with designated sites, although there is a specific PSA for farmland birds (English Nature, 2004). However, what these documents do identify is awareness of the interconnection of people, place and non-human nature, and the *Lifescapes* project aims to consider ways in which this interaction can be utilised for the benefit of non-human nature. This is the primary aim of the *Socio-economic Profile.*

The purpose of Natural Areas was to provide a 'natural' framework for considering non-human nature, one that does not dissect ecosystems and where boundaries are viewed as transition areas and not as barriers beyond which action ceases (Countryside Commission and English Nature, 1996). Unless account is taken of all of the interrelating features within a landscape, which are social as well as 'natural', the maintenance, enhancement and conservation of non-human nature will be based upon unrealistic perceptions. If bioregionalism as a concept were to be adopted in the UK then all of these interrelated facets would need to be investigated and this is what the *Lifescapes* documents have done. However, the *Socio-economic Profile* was more descriptive than prescriptive and does not emphasise a practical means of using this profile.

Positive socio-economic drivers are identified in the *Socio-economic Profile* that included agricultural funding, positive demographic changes, economic benefits of CAP reform, consumer pressure and financial competitiveness. Whilst considering socio-economic factors within the Chilterns Natural Area and their significance for the conservation of non-human nature, the document is concerned with costing non-human nature, putting an economic figure upon conservation. However, the document recognised the interconnection between people and non-human nature, as did the English Nature and Agricultural Development Advisory Service (ADAS) (2002) document on the targeting of AES within the Chilterns Natural Area. At the heart of the latter document is the repertoire of integration. It is presented in a number of ways, through the description of AES which involves farmers working the landscape in such a way as to conserve the ecological integrity, the partnership between agencies and landowners to achieve this integration and the shift in attitudes of farmers to want to conserve non-human nature (English Nature and ADAS, 2002). However, this study involved work with only sixteen farmers within four county boundaries (English Nature, 1997). Thus, despite the fact that these documents are presenting a repertoire of integration, this is not put into practice.

6.2.3: Local Distinctiveness and Non-Human Nature

I have argued that local distinctiveness significantly contributes to the relationship between people and place and this is revealed within the documents related to the Natural Area

framework. One of the characteristic features of all of the documents is the emphasis placed upon locally characteristic species and habitats and their importance within Natural Area conservation. All of the documents specifically identify the value of these in maintaining the character of the area. The distinctiveness repertoire was found in these documents, in relation to the importance of conservation and with reference to local people and the way they may relate to non-human nature within a specific area. I have argued that local distinctiveness is a contributing factor to a sense of place and this is also argued within these documents. However, nowhere within these documents is there a detailed description or explanation regarding what constitutes local distinctiveness, it is a taken for granted term, presented as related to the ecological composition of non-human nature in relation to local conditions such as soil type, geology, climate and land management.

English Nature recognises that distinctiveness is the result of the interaction between people, place and non-human nature and state:

> "Each Natural Area has a unique identity resulting from the interaction of wildlife, landforms, geology, land use and human impact" (English Nature, 1998, CD ROM).

> "Rarely in the context of the Natural Areas framework is there a more distinct and easily defined boundary to a Natural Area than the Chilterns escarpment" (English Nature, 1997, p.6).

> "Chalk downland is a characteristic habitat of the Chilterns scarp and dry valleys. This has a very distinctive character and many associated plants and animals that are uncommon elsewhere on the chalk grassland of southern England" (Jones et al, 2001, p.9).

The work carried out within the Chiltern Hills Natural Areas echoes the view that people, place and non-human nature are intertwined. However, what is not clear within the documents is what makes a 'characteristic' habitat or species.

I also analysed the *Living Landscapes Project Report* (Griffiths et al, 2004) and this is the only document to firstly consider the shift from Natural Areas to the JCA framework, and secondly, to identify the importance of spatial scale when considering landscape character or landscape distinctiveness. As with the other documents, the report has a series of ways of discussing local distinctiveness; however, unlike in the other documents, distinctiveness is not taken as given,

the complexity that exists between people, place and non-human nature is recognised. The report identifies the intricate relationship between people and non-human nature stating:

> "Landscape character is defined as a distinct, recognisable and consistent pattern of elements in the landscape. Habitats and species are important elements of landscape character, and it is increasingly realised that the patterns of biodiversity are an integral part of our cultural heritage" (Griffiths et al, 2004, p. 13).

This document accepts the importance of people in relation to non-human nature and is also the only document analysed which discusses the need to work with all landscapes not just those that are viewed as special or distinct (Griffiths et al, 2004). It is through this document that the JCA framework begins to be identified as truly integrative and based upon local characteristics, within the different scales of a spatial hierarchy from JCA to Landscape Description Units (LDUs) (Porter and Preston, 2001).

All of the documents are primarily concerned with the maintenance, enhancement and conservation of semi-natural habitats that are distinctive to a particular area: in the case of the Chilterns this includes chalk grassland and beech woodland. However, the documents also identify that the composition of the 'distinctive' landscape of today is the by-product of human action and is far from a natural occurrence (English Nature, 1997; Jones et al, 2001; Lee et al, 2001a). For example "before man exerted a strong influence over the composition of the Chiltern woodlands, the wooded plateau would have supported a great deal of oak with other species tolerant of acid conditions such as hazel, aspen, birch, hornbeam, rowan, yew and holly" (English Nature, 1997, p.11). They state that "today, this natural distribution of tree and shrub species has been confused and masked by the blanket planting of beech and some areas of conifer, but can still be discerned in places" (English Nature, 1997, p. 12).

One of the repertoires within these documents is that of ecological coercion and incentives. All of the documents either make direct reference to AES or are specifically designed to enable more ecologically sound targeting of AES (Lee et al, 2001a; 2001b). I argue that this is coercion as AES are driven by financial incentives. Traditional management is not a natural occurrence, and trends in recent years have been the loss of semi-natural habitats and landscape distinctiveness as the result of human interference and technological advancements (Hamilton and Selman, 2005a; Harvey, 1997; Sheail, 1995). Through the acknowledgement of the importance of AES to the survival of semi-natural habitats within the UK there is the acceptance that distinctiveness is the product of the interaction between people and non-human nature. English Nature and ADAS (2002) identify this relationship between farming and the

maintenance of distinctiveness and, with reference to the restrictions placed upon planning within the Chilterns AONB, state:

> "There may be a dichotomy between encouraging farm diversification in recognition of the critical contribution that farming plays to maintaining the distinctive character of the area and the actual restrictions imposed through the designation" (p.11).

The development of mapping techniques to allow for more ecologically coherent targeting of AES to help maintain so called 'characteristic' semi-natural habitats within the Chilterns (Edworthy, 2002; Lee et al, 2001a; 2001b) is emphasised within these documents. However, farmers are not encouraged to allow their land to revert back to its natural state (Roberts, 1998), through the use of AES which would be mixed deciduous woodland, but are encouraged to continue interaction with the landscape to produce distinctive features. However, these documents clearly recognise is the importance of the integration of people and non-human nature in maintaining distinctiveness within the landscape and this distinctiveness is distinguished at a range of spatial scales (Griffiths et al, 2004; Porter, 2004).

6.2.4: A Sense of Place: The Relationship between People, Place and Non-Human Nature as Portrayed within the Natural Areas Documents

People, place and non-human nature are intricately interconnected and this is recognised within the repertoire of distinctiveness, although the maintenance of this connection is often dependent upon coercion and financial incentives. I have identified both a distinctiveness repertoire and a place repertoire, yet they could be combined and are used interchangeably within some of these documents. Within the documents they are often referred to together, the CD ROM produced by English Nature suggests that through considering cultural and social factors in relation to non-human nature, a sense of place is developed:

> "Thus we have incorporated a sense of place into these area and their descriptions" (English Nature, 1998, CD ROM).

However, a sense of place exists beyond the vision of English Nature, in creating these Natural Areas, English Nature did not suddenly create a sense of place. In describing a sense of place in this manner English Nature are using sense of place as a concept fluidly and not specifically emphasising the meaning behind the term.

Only three documents discuss a sense of place directly, the English Nature CD ROM, the *Socio-economic profile* (Jones et al, 2001) and the *Living Landscapes Project Report* (Griffiths et al, 2004). Jones et al (2001) identifies the existence of a sense of place within the Chilterns due to the distinctiveness of the non-human landscape and the role this has in attracting people to the area:

> "By way of example, it is generally acknowledged that the quality and distinctiveness of the Chilterns landscape and the strong sense of place that this imparts, are powerful drivers of in-migration to the region by both people and businesses" (p.68).

Griffiths et al (2004) identify the role of Landscape Character Assessment in recognising a sense of place stating that "**Landscape Character Assessment** is a tool for identifying the features that give a locality its 'sense of place' and pinpointing what makes it different from its neighbouring areas" (p.27). Again there is a relationship between sense of place and difference, suggesting that this sense of place or sense of belonging results from distinctiveness. English Nature (1998) suggest that a sense of place facilitates positive conservation action and therefore Natural Areas need to promote a recognisable distinctiveness to engage people in positive conservation activity.

Nowhere in any of these documents is a sense of place defined or made explicit, this concurs with my earlier contention that a sense of place is often used as a throw away term, a concept that is recognised as being important but not fully understood. The English Nature CD ROM identifies sense of place as an important component within the relationship between people and non-human nature. The analysis of the Natural Area documents showed that the occurrence of a place repertoire, was only a small part of the documents. Although sense of place is important in that it has resulted in this research investigating the concept more fully, these documents do not give a clear indication of what a sense of place means within the context of Natural Areas.

6.2.5: Summary

These documents have shown that important to the Natural Area framework is the repertoire of integration, this integration is referred to in a range of different manners including as a wider countryside approach, through local distinctiveness, coercion and incentives and through a sense of place. Nevertheless, the documents implicitly emphasise the culture/nature dualism. These documents were designed for a specific purpose, some to advertise the potential of the Natural Area programme and others to consider different facets of integration in greater depth. Therefore there is only a partial perspective of the realities of the Natural Area framework and,

there was limited discussion with people that live and work in the areas before these documents were produced, making them a 'top-down' production. It was important to this research to find that the Natural Area framework did recognise the connection between people, place and non-human nature and also the existence of a sense of place. This finding has provided a starting point through which to consider this connection with people that live and work within the case study areas.

6.3: Catchment Documents

In the following sections I present an analysis of documents related to river catchments, specifically the Parrett Catchment. I have placed discussion in two separate sections. This section considers documents referring to the Environment Agency's approach to catchment management and the varying catchment strategies that have been introduced within the Parrett Catchment. These were chosen for analysis as they demonstrate the long established use of river catchments, rather than administrative boundaries, to consider water resources within the UK. This analysis therefore provides an opportunity to see the way in which the relationship between people, place and non-human nature has been considered and presented from an 'official' perspective within a catchment-based framework. The next section analyses documents produced specifically in response to the Parrett Catchment Project (PCP), a specific catchment-based project. The project emphasises the integration of people, place and non-human nature at a catchment scale, and so this provides a unique opportunity to investigate the way in which the PCP is presented and find out whether there is any difference in the way in which this integration is inferred on the ground by the people involved with it.

River catchments are the second type of bioregional framework that is being considered within this research. Documents related to catchments tend to be aimed at specific catchments, rather than being more general. Therefore I chose to analyse the documents pertaining to the case study area I was using. The documents within this first section are listed in table (6.3) below.

Table 6.3: Catchment Management Documents

- Environment Agency, 1997. *Local Environment Agency Plan: River Parrett Consultation Report,* Environment Agency, Exeter
- Environment Agency, 2001. *Local Environment Agency Plan: Third Annual Review,* Environment Agency, Bridgwater
- Environment Agency, 2002b. *The Parrett Catchment Water Management Strategy Action Plan Spring 2002,* Environment Agency, Somerset
- Environment Agency, 2003. *The Tone Catchment Abstraction Management Strategy Consultation Document,* Environment Agency, Exeter
- Lewin, Fryer and Partners Consulting Engineers, 2003. *Parrett Catchment Flood Management Plan Consultation Draft,* Lewin, Fryer and Partners, Somerset
- Turner, A., 1998. *Local Environment Agency Plan: River Parrett Action Plan,* Environment Agency, Bridgwater

6.3.1: Catchments as Frameworks for Integrated Management

The main theme within all of these documents is 'integrated management'. This integration repertoire is voiced in number of different ways, including the importance of a whole catchment approach to managing different aspects of the water environment, the consideration of human concerns and ecological considerations within decision making, incorporating catchments within planning documents, sustainable development, and recognising the multiple uses of river catchments. All but one of the documents are catchment plans or strategies that the Environment Agency has used to manage the water environment of all catchments within England and Wales. Within this research I have analysed the strategies that are specifically targeted at the Parrett Catchment or reaches of the catchment. Environment Agency documents tend to be based on specific locations therefore I chose the documents that were relevant to the Parrett Catchment.

All of the documents discussed in their opening pages their aims, strategies and plans to work with all aspects of the catchment including ecological features, as illustrated below:

> "The vision of the Tone Catchment Abstraction Management Strategy (CAMS) is to manage water resources in a consistent sustainable way, maximising availability and balancing the needs of the environment, public, agriculture and industry" (Environment Agency, 2003, p. 1).

> "LEAPS will help contribute to the principle of sustainable development through integrated environmental management and improvement" (Environment Agency, 2001, p.2).
>
> "Our aim as set out in the Environment Act 1995, is to protect or enhance the environment, taken as a whole in order to play our part in attaining the objective of sustainable development" (Environment Agency, 1997, p. 4).

Each of these documents uses the term sustainable development as a means of justifying the priorities of the Environment Agency and its various plans and strategies. However, there is no reference within any of the documents as to what sustainable development means to the Environment Agency, and the way in which this is being transferred into practice.

Although there is much discussion within the documents regarding the integration of human aspects and the ecological component of catchments, catchments are still primarily presented as water units whose primary functions are supply, quality and flood defence. All of the documents emphasise the importance of the conservation of non-human nature, as illustrated by the *River Parrett Action Plan* (1998), which states the Environment Agency's aims as being "to achieve significant and continuous improvement in the quality of air, land and water, actively encouraging the conservation of natural resources, flora and fauna" (p.1). This aim is one of eleven presented within the 1998 Parrett Local Environment Agency Plan (LEAP) and the only one that has direct relevance to the conservation of non-human nature, all other aims are primarily concerned with human benefits. However, factors such as waste control will have indirect benefits to non-human nature.

Although integration is a key theme throughout all of these documents, this is primarily in the sense of integrating catchment considerations into planning and development procedures, pollution control issues and flood control concerns:

> "Guidance has been published and will soon be updated for local planning authorities to encourage them to adopt policies that protect the water environment from the harmful effects of development. Where we can, the Environment Agency will reinforce these policies when we comment on planning matters or if we are making our own decisions" (Environment Agency, 1998, p. 2).

> "we can advise planning authorities on the **control** of development by offering formal and informal comments to planning authorities on planning applications and development guides" (Environment Agency, 1997, p. 64).
>
> "The Parrett CFMP also links to development plans prepared by the appropriate local authorities and a range of plans prepared by English Nature" (Lewin, Fryer and Partners, 2003, p. 4).

Important within the integration repertoire is the promotion of a whole catchment approach, which is important to bioregionalism (Sale, 2000). All but one of the documents identify the importance of working within a wider catchment framework which includes working across administrative boundaries, recognising the interconnected nature of catchments. This includes the recognition of factors such as catchment transfer, where activity in the upper catchment will have an impact upon the lower catchment (Knighton, 1998), as illustrated below:

> "Although there are no designated sites of international importance within the upper catchment, management of land and flooding in the upper catchment has a significant bearing on environmental conditions in the lower catchment particularly in relation to flooding and water quality" (Lewin, Fryer & Partners, 2003, p.17).

> "We know that the problem and the solution to controlled flooding lies in the management of the whole catchment" (Environment Agency, 2002, p. 1).
>
> "Better protection from floods and better drainage has improved our quality of life. However, unless properly managed, these benefits may result in other problems such as increased downstream flows and a legacy of expensive works for future generations" (Environment Agency, 1998, p. 26).

The problem of cross-boundary working is emphasised by the 1997 LEAP Consultation document:

> "The catchment boundary does not conform to the District Council boundaries so it is difficult to accurately quantify the amount of wastes arising within the catchment area" (Environment Agency, 1997, p. 84).

Bioregionalists contend that although catchment boundaries cross over traditional political or administrative boundaries, they provide a more ecologically coherent framework for working in

partnership with non-human nature (Berg and Dasmann, 1977). So far I have cited a number of statements from within official documents that fall within my interpretation of integration. However, whilst I contend and will explain more succinctly subsequently that these documents maintain the dualistic thinking of agencies that are charged within working with non-human nature, the documents do illustrate the hybrid nature of catchments.

6.3.2: Non-Human Nature and Catchments

The consideration of non-human nature, whilst discussed, is not as prominent as concerns regarding pollution, flooding and abstraction impacts upon people within these documents. The conservation of non-human nature only a minor concern of the documents and it is primarily priority habitats and species that are discussed. Although there is little discussion surrounding the benefits of non-human nature, positive management techniques such as AES and woodland grant schemes are viewed as necessary to the continued health of the Parrett Catchment (Environment Agency, 1997; 1998; 2001; Lewin, Fryer & Partners, 2002). However, this too is not a major component within any of the documents identifying the way in which non-human nature though presented as being fully incorporated within the Environment Agency's vision for catchment management frameworks (Environment Agency, 1998; 2001), it is not presented as fully integrated. I support Latour (1993) and suggest catchments are hybrids these documents present a view of catchments that supports the culture/nature dualism. Given these documents are meant to guide action this may prevent non-human nature from becoming a truly integrated part of catchment management.

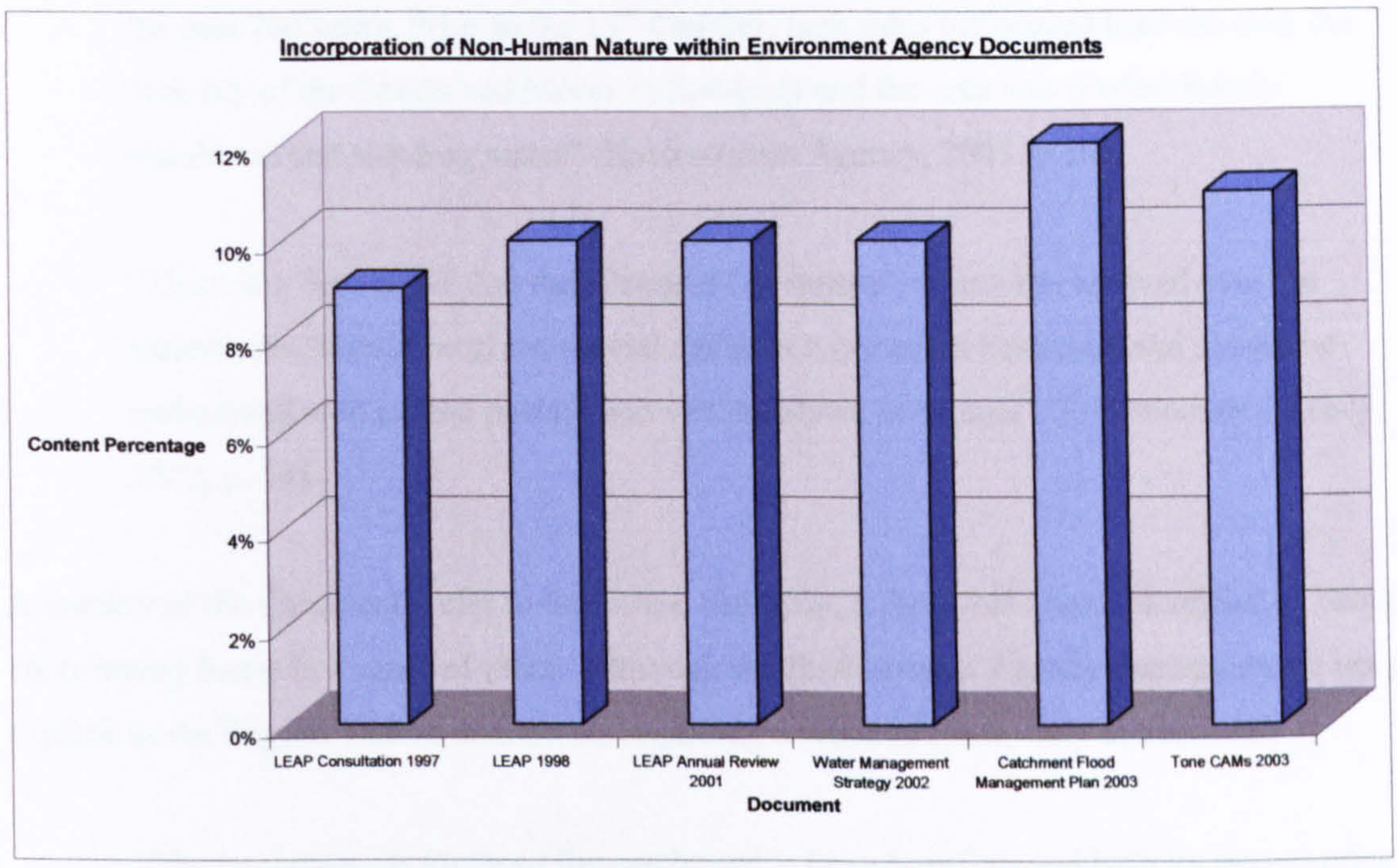
6.3.3: The Culture/Nature Divide in Catchment Management

All of the documents are concerned with the impact of catchments on human life. Included within this are flooding, pollution, water quality and availability. The conservation of non-human nature, is presented as a side issue. Although all of the documents discuss integration, the priorities for the Environment Agency are human uses of the water environment. For example within the LEAP consultation for the River Parrett (1997) was concerned primarily with water quality and regulation. Within the *Tone Catchment Abstraction Management Strategy* (CAMS) the sections that I coded as being related to sustainability and integration were primarily concerned with integrating abstraction concerns into other legislative plans such as development plans.

LEAPs have been presented as a whole catchment integrated management approach to river systems, incorporating ecological factors as well as human concerns (Environment Agency,

1997; RSPB, 1999). However, as my analysis shows, LEAPs and other management plans such as CAMS and Catchment Flood Management Plans, only give a small consideration to non-human nature. This said, the results suggest an increasing recognition that people and non-human nature are interdependent, especially within river catchments (Environment Agency, 2001; Lewin, Fryer & Partners, 2002). This increase is only slight, as shown within figure (6.2), indicating that other concerns are a priority for the Environment Agency.

Figure 6.2: The Percentage Content of the Parrett Catchment Strategies and Plans that refer to Non-human Nature



6.3.4: Cultural Landscapes and a Sense of Place

So far these documents have indicated that there is an acknowledgement of the relationship between people, place and non-human nature, in that the documents discuss the need to integrate activities, to consider a whole catchment approach and consider the ecological integrity of river catchments. However, this relationship has been portrayed primarily from the view point of human need. The physical structures of catchments is the by-product of the interaction of people, place and non-human nature (Arefi, 1999) yet the activities portrayed by the Environment Agency are primarily human driven and involve controlling different aspects of the catchment. Nevertheless, this may be through positive management techniques that have benefits for non-human nature as well as people, and over the past decade ecological approaches to flood control have been advocated (Petts and Calow, 1996). River catchments are diverse and

complex and all of the documents analysed had a series of repertoires that identified this complexity, alongside reinforcing the nature/culture dualism. This shows recognition of the diversity of the non-human features of the catchment whilst also appreciating the cultural influence upon these features:

> "Many of the rare plant and invertebrate species found in the catchment are dependent on wetland conditions and continued traditional agricultural management" (Environment Agency, 1997, p. 33).

> "The pattern of land management on the Somerset Levels and Moors dates back over the past 700 years. Prior to the 13th Century, high tides influenced land use over the majority of the Levels and Moors in Somerset and the area was predominantly marshland and standing water" (Environment Agency, 2001, p.19).

> "There is a firm belief that the 'Cultural Landscape', which has evolved over the generations, should be given special status as a protected landscape and should be maintained with grazed pasture and wet meadows as its core" (Environment Agency, 2002, p. 14).

A number of the documents refer to landscape character, a facet that I have identified as being a contributing factor to a sense of place. Although the Environment Agency documents are not as explicit as the English Nature documents regarding a sense of place, they do recognise it:

> "The landscape character of the catchment is heavily influenced both by the complex and distinctive geology and the activities of man" (Environment Agency, 1998, p. 3).

> "The Environment Agency believes that this strategy represents an important opportunity to safeguard the special character of the Somerset Moors" (Environment Agency, 1997, p. 202).

One of the targets within the Parrett Catchment Flood Management Plan is to "seek flood management solutions that retain the characteristic social fabric and cultural values of the catchment" (Lewin, Fryers & Partners, 2003, p. 34). This supports the view of catchments as hybrids and the intricate relationship between people, place and non-human nature. As the main aim of the documents is to guide management decisions, it is perhaps not surprising they do not fully adhere to this interaction.

None of the documents specifically discuss the concept of a sense of place, though there is reference to the unique character of parts of the Parrett Catchment, primarily the Somerset Levels and Moors. However, there is evidence that the Environment Agency and other contributing agencies are aware of the cultural nature of the landscape and the close interaction between people and non-human nature. The continued though sometimes misrepresented notion of integration indicates a shift towards management regimes that do include non-human nature. The Parrett Catchment Project (PCP) is a project designed to work holistically by integrating farming with ecologically driven management techniques in order to reduce flooding impact within the lower reaches of the catchment. I analysed a number of documents pertaining to this project and the results are discussed within the final section of this chapter.

6.4: The Parrett Catchment Project – Document Analysis

This segment provides a brief review of the analysis of documents regarding the PCP. Seven documents in total were analysed of which five were produced by the Farming and Wildlife Advisory Group (FWAG) who carried out much of the work with farmers in respect of agri-environment programmes available through the PCP. These documents were chosen as the PCP is a catchment based approach to integrating people and non-human nature within the case study area I have chosen. The PCP provides evidence of the attempt to use a bioregional framework in practice, for the guidance of management, planning and decision making and is therefore important to this study. The seven documents are listed in table (6.4).

Table 6.4: PCP Documents

- FWAG, 2001a. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (a) Temporary Retention of Floodwater in Floodplain Areas*, FWAG, Taunton
- FWAG, 2001b. *Parrett Catchment Project: Proposal for the Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (b) Small Reservoir Flood Storage by Interception in Mid Catchment*, FWAG, Somerset
- FWAG, 2001c. *Parrett Catchment Project: Proposal for Development of Pilot Project in Upper-Mid Catchment: Farming Water 1 © i: Arable Reversion to Woodland*, FWAG, Somerset
- FWAG, 2001d. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchments: Farming Water 1 © ii: Arable Reversion to Grassland*, FWAG, Somerset
- Land Use Consultants, 2001. *The Parrett Catchment Project: An Action Strategy for Integrated Catchment Management*, Land Use Consultants, Somerset
- Nisbet, T.R., and Broadmeadow, S., 2005. *Opportunity Mapping for Trees and Floods, Final Report to the Parrett Catchment Project Wet Woodlands*, Forest Research, Surrey
- PCP, 2001. *Parrett Catchment Project: Business Plan*, PCP, Taunton

6.4.1: The PCP a Integrated Approach to Catchment Management?

Within these documents the main emergent theme is that of whole catchment integrated management. All of the documents refer to the PCP and the varying projects within it as a whole catchment approach, their aim being to reduce flooding within the lower reaches of the River Parrett through integrated management within the upper and mid reaches (FWAG, 2001a; 2001b; Somper, 2005). This is explicitly stated at the beginning of each of the documents as:

> "The Parrett Catchment Project (PCP) Action Strategy for Integrated Catchment Management highlights a package of measures for taking present and future flood events that is in accord with the holistic view of catchment systems embodied in the Water Framework Directive" (FWAG, 2001b, p.2).

> "The project aims to achieve environmental enhancement; social cohesion, economic diversification, better town and country planning, and improved land use and water management within a single catchment" (Land Use Consultants, 2001, p.1).

Although these documents discuss an integrated whole catchment approach, the PCP itself only arose from the devastating impact of flooding in 2000 and 2001, on people within the lower catchment (Somper, 2005). Although all of the documents present the wider benefits of integrated catchment management as including ecological benefits, the primary justification for the project is the response to human exacerbated flooding:

> "One of the scheme components making a contribution to integrated flood management has been termed 'creative flood storage areas on upper and mid-catchment farms" (FWAG, 2001a, p.3).

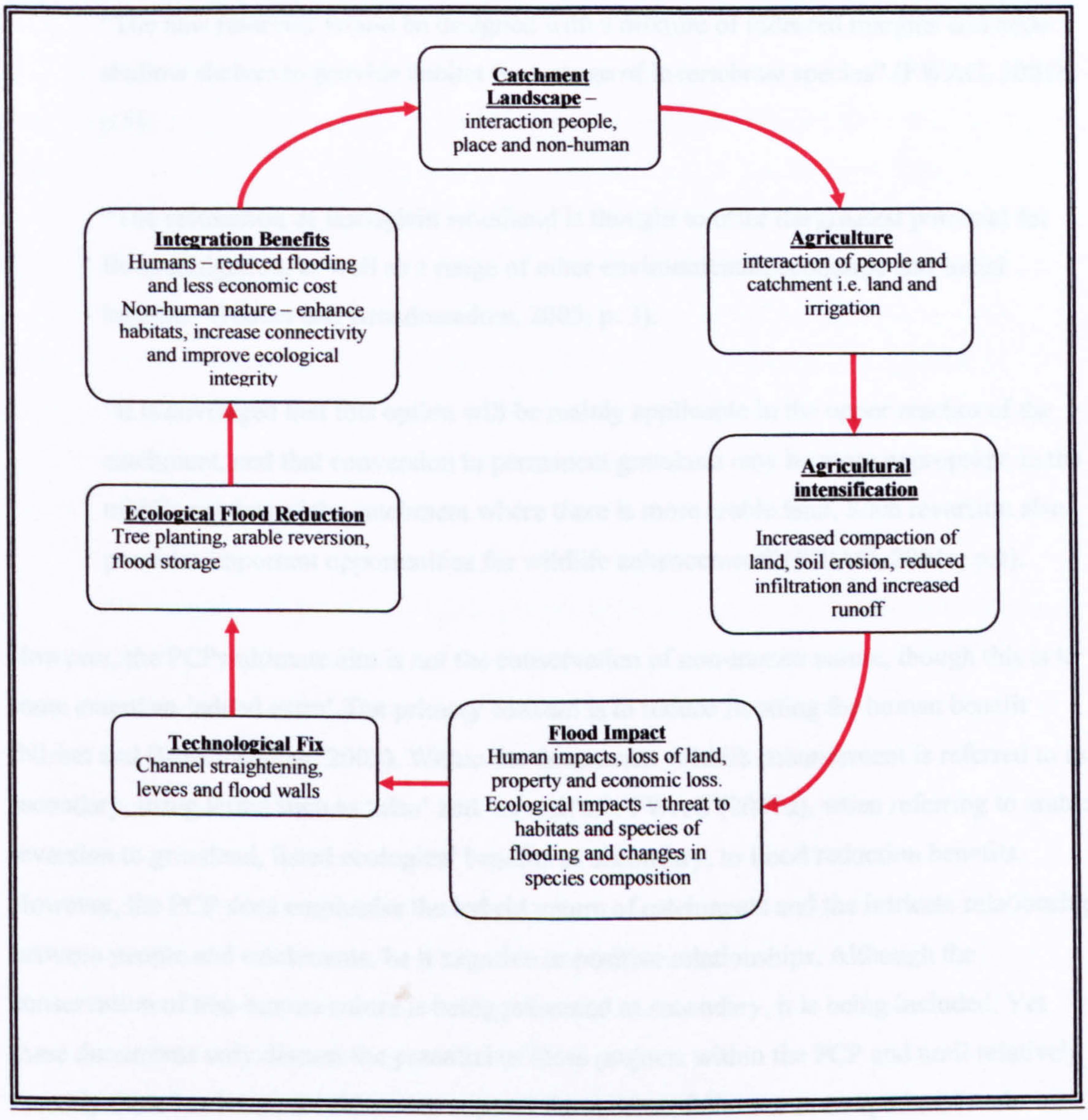
> "Somerset County Council, the Levels and Moors Partnership, the Environment Agency, English Nature, RSPB and others established the project in March 2000, as a direct response to widespread concern over the problems caused by recent floods" (Land Use Consultants, 2001, p. 1).

> "The River Parrett in Somerset, Southwest England, is one of a number of major river systems in the country that face a serious and recurrent flooding problem" (Nisbet and Broadmeadow, 2003, p. 4).

> "The current catchment projects address watercourse problems that often relate to agricultural intensification" (FWAG, 2001b, p.3).

The development, planning and initiation of the range of flood reduction programmes within the PCP including woodland planting (Nisbet and Broadmeadow, 2003), arable reversion (FWAG, 2001a; 2001c) and flood storage (FWAG, 2001b), indicate the close integration between people, place and non-human nature within a catchment setting. Each of these programmes identifies that flooding within the Parrett Catchment has been exacerbated by human interaction, whilst also acknowledging that further human interaction is required to begin to address the issues. However, flooding might not be considered an issue if it was not affecting people. So, although the PCP is working within a whole catchment framework and considering ecological factors within the catchment, if people had not been negatively impacted by floods at the outset, then flooding may not have become an issue. This is a common factor when dealing with such (Owen and Pickering, 1997). Flooding does emphasise the close relationship between people, place and non-human nature within a hybrid network, the catchment, as illustrated within figure (6.3).

Figure 6.3: An example of the Relationship between People, Place and Non-Human Nature within a Hybrid Catchment Network



The documents highlight the way in which people within the area utilise and interact with the landscape and this interaction can have positive and negative effect for them. They emphasise the negative effects of human activities such as farming, planning and development in the upper catchment. The PCP documents provide evidence that supports the use of catchments as an integrated framework for both people and non-human nature, although this is primarily from a human perspective. All of the documents discuss the ecological benefits of the projects that are being carried out within the catchments (FWAG, 2001a; 2001b; 2001c):

> "It is intended that the water will only be retained for short periods of up to 2 weeks long to limit the impact on the management of the land. Managing floodwater in this

way, or 'rewetting floodplains', also provides important opportunities for wildlife enhancement" (FWAG, 2001a, p.3).

"The new reservoir would be designed with a mixture of indented margins and wide shallow shelves to provide habitat for a range of invertebrate species" (FWAG, 2001b, p.5).

"The restoration of floodplain woodland is thought to offer the greatest potential for flood mitigation, as well as a range of other environmental, economic and social benefits" (Nisbet and Broadmeadow, 2003, p. 3).

"It is envisaged that this option will be mainly applicable in the upper reaches of the catchment, and that conversion to permanent grassland may be more appropriate in the middle reaches of the catchment where there is more arable land. Such reversion also provides important opportunities for wildlife enhancement" (FWAG, 2001c, p.4).

However, the PCPs ultimate aim is not the conservation of non-human nature, though this is to some extent an 'added extra' The primary concern is to reduce flooding for human benefit (Nisbet and Broadmeadow, 2003). Within the documents wildlife enhancement is referred to as secondary, using terms such as 'also' and 'as well as'. FWAG (2001d), when referring to arable reversion to grassland, listed ecological benefits as secondary, to flood reduction benefits. However, the PCP does emphasise the hybrid nature of catchments and the intricate relationship between people and catchments, be it negative or positive relationships. Although the conservation of non-human nature is being presented as secondary, it is being included. Yet these documents only discuss the potential of these projects within the PCP and until relatively recently there has been no evidence to support the success, failure or even uptake of such projects. Somper (2005) reports on the progress of programmes within the PCP and identifies that many projects have been hampered by funding issues, so although the project may be presenting an integrated approach its application in practice is limited. The documents do emphasise the way in which attitudes are changing towards catchment planning, with the recognition of the benefits of ecological programmes, as opposed to hard engineering, to tackle flooding problems (Nisbet and Broadmeadow, 1996; 2003; Somper, 2005). These documents also identify an awareness of catchments as interconnected systems, in that action by people in the upper reaches will impact the land downstream and therefore by working with the whole catchment, all interconnections can be considered. Bioregionalists recognised these integrated systems and emphasised the role of local knowledge in catchment awareness and the benefits people and non-human nature (Thayer, 2003).

6.4.2: Local Knowledge

Two of the documents explicitly illustrate the importance of local knowledge in achieving an integrated whole catchment approach to deal with flooding issues. This integrated approach is viewed as the consideration of social, economic, cultural and non-human nature within a flooding reduction programme (PCP, 2001). The *PCP Business Plan* and the *Action Strategy for Integrated Catchment Management* discuss the importance of interaction with local communities to achieve integrated action. The PCP is funded by LEADER Plus, and EU initiative that stipulates community involvement within projects to gain funding, therefore it could be that this is the only reason local communities are involved. Local input has been gathered through stakeholder involvement and this is incorporated within the knowledge repertoire. However, within the Business Plan local input is only considered as consulting local people on what the project is doing, although it is stated that the PCP tries to encourage local community participation.

> "The forum will provide an up-date to the local community on progress with schemes and initiatives across the catchment and will encourage participation and exchange of information and discussion of options for future activities. Invitees to the Forum will come from across the catchment and community representatives from the upper catchment will be encouraged to participate" (PCP, 2001, p.12).

This forum is presented as including local non-farm businesses as well as farmers, though, the extent of local involvement is not indicated. Whilst the Integrated Catchment Management strategy states "communities are also calling for greater communication and understanding of the flood management system and how it operates, utilising the knowledge of local people and landowners" (Land Use Consultants,, 2001, p.4), it does not explain the way in which this will be achieved. There is implicit evidence of knowledge repertoires, but little explicit indication of the way in which they will be utilised for the benefit of the catchment.

As with the Business Plan there are frequent references to involving local people within the decision-making process:

> "Developing new ways of co-operation between government organisations and involving local people in decision making" (Land Use Consultants, 2001, p.5).

> "The short-term programme will involve close consultation with landowners and farmers throughout the catchment to strengthen the level of support and enthusiasm that

has already been shown in the Parrett Catchment Project by the farming community" (Land Use Consultants, 2001, p.6).

Beyond discussing consultation, there is little discussion regarding local involvement aside from the fact that local farmers have to take part in the schemes to make them successful. From these two documents it may appear that the PCP is primarily a forum across which agencies and organisations can work in partnership rather, than for the involvement of local people. The Land Use Consultants (2001) report implies that there has been involvement by local people, yet its extent and form are not explained. It also identifies the need to maintain this involvement:

> "In order to ensure that wider community can endorse the long-term vision of the Parrett Catchment Project, it will be important to maintain the high quality of participation achieved over the past year. Further support will be provided for facilitated participation and effective and purposeful ongoing communication between stakeholders, using whichever media people find most accessible" (Land Use Consultants, 2001, p.13).

6.4.3: The Catchment as a Place

The primary repertoire identified within these documents is that of integration, yet this integration occurs within place, either the whole catchment or certain areas with the catchment. Only the Integrated Management Strategy discusses the role of local character and place distinctiveness within the Parrett Catchment and this is primarily in the context of human benefit. As discussed by both Relph (1967) and Tuan (1977) place is often used to attract tourists and the promotion of local products is fundamental to this process. The Integrated Management Strategy identifies the way in which interaction between the non-human and cultural environment can be utilised for economic purposes:

> "There are opportunities for promoting the Parrett Catchment as a tourist destination, with a strong emphasis on enjoying the ambience of unspoilt towns and villages and sampling local produce" (Land Use Consultants, 2001, p. 3).

Although the landscape is being utilised as a means to support the local economy the document does identify the close interaction between people, place and non-human nature across the catchment:

"Somerset has a wide range of distinctive landscapes some of which, like the Quantocks and Blackdown Hills, are designated as Areas of Outstanding Natural Beauty. On the floodplain, the Levels and Moors, is receiving increasing recognition as a Cultural Landscape, reflecting the importance of human endeavour in shaping it" (Land Use Consultants, 2001, p.3).

> "The history of human activity is represented by the landforms, settlements, drainage ditches, tracks and roads, which make up the Parrett Catchment" (Land Use Consultants, 2001, p.4).

The identification of the need for AES to manage the landscape both for the benefits of people and non-human nature is a clear identification of the recognition of the importance of this relationship. This therein questions to what extent people within the Parrett Catchment recognise this hybrid relationship this has to a sense of place.

6.5: Chapter Summary

The documents related to river catchments and the Parrett Catchment, in common with the policy and Natural Area documents recognise of the need to integrate people and non-human nature. However, this is primarily from the perspective of human need and there are no references to the intrinsic worth of non-human nature. Although integration is discussed, people and non-human nature are presented as separate. At first sight the PCP may appear to provide an opportunity for people, place and non-human nature to become more integrated and to be treated as different parts of a whole. However, since the development of the PCP there has only been one attempt at considering what impacts all of these schemes are having upon the flooding issue in the lower-catchment (Somper, 2005). This report does not provide detailed information regarding the success or failure of the land management schemes that have been put into practice. There is also a concern as to how long-lasting this project will be if there is little flooding in the catchment, flooding tends to encourage action but it is often short lived (Pickering and Owen, 1997). The PCP is based upon multiple schemes that incorporate a range of issues not just flooding including nature conservation, development control and water quality. The aim to produce an integrated management plan may result in "yet another plan" of which there already exist a wide array of plans for the whole of the Parrett none of which have achieved holistic and integrated catchment planning and management.

Throughout this chapter integration has been emphasised as important, yet the documents have been skewed towards human need. Although Natural Areas and river catchments are presented

as frameworks for integrated management of non-human nature, this has primarily meant the inclusion of non-human nature within policy documents. However, the analysis of policy documents has illustrated that this is not occurring at any great level in practice. At the heart of bioregionalism is the interrelationship and interdependence of people, place and non-human nature (Thayer, 2003). The results of this section suggest that in a UK context whilst this relationship is recognised, it is not considered in practice. This will be explored further within subsequent chapters that consider this relationship in a bioregional context from the perspectives of both organisations and people that live and work within the Chiltern Hills Natural Area and the Parrett Catchment.

Chapter Seven

Bioregional Awareness and the Interconnection of People and Non-Human Nature

Within this chapter and the two subsequent chapters I am going to present and discuss the results of the interviews and focus groups carried out in the Chiltern Hills Natural Area and the Parrett Catchment. In line with Haraway (1989; 1991), I contend that people can only present their own perspective on subjects and this perspective will be partial and situated in terms of their own individual circumstances. However, by carrying out a wide array of interviews within both case study sites I intend to present as wide a picture as possible of the integration between people, place and non-human nature within a bioregional framework. This chapter will consider if people are aware of the existence of bioregions, either *consciously* or *unconsciously* (the way in which this terminology is applied will be discussed in greater depth subsequently). Throughout this chapter and the subsequent chapters I will consider the ways in which the relationship between people, place and non-human nature are portrayed by the organisations that utilise these bioregional frameworks and more importantly the people who live and work within these bioregions.

7.1: People and Catchments

This section will consider participant's awareness of the Parrett Catchment. Catchment awareness is viewed as important within bioregionalism, with bioregions in the United States primarily being defined in relation to catchment areas. With this in mind and the increased emphasis being placed on river catchments in the UK following the Water Framework Directive (WFD), it is necessary to any study of bioregionalism to ascertain whether or not people associate with river catchments.

7.1.1: Catchment Awareness

Fifty-four interviews were carried out in total within the Parrett Catchment, including face-to-face interviews, telephone interviews and a series of focus groups. Using both Grounded Theory and Discourse Analysis I identified catchment awareness as an important component of the interview transcripts for all groups of participants. I identified both a *conscious awareness* of catchments and an *unconscious* or taken-for-granted catchment awareness that was clearly illustrated through a series of repertoires that I will call 'awareness repertoires'. I discuss throughout this chapter that catchment awareness and/or Natural Area awareness are an important foundation upon which to build a sense of place. I am not discussing whether or not

an individual has an awareness of the River Parrett in general, I am considering whether an individual is aware of the catchment as a whole that is composed of a series of interconnected rivers, tributaries, their surrounding landscapes and estuaries that demark the point at which the catchment reaches the sea (Strahler and Strahler, 1994).

Conscious catchment awareness describes those individuals that have a working knowledge of catchment terminology, and/or have been actively engaged in working within a catchment framework. All of the agencies and land-management organisations that were interviewed illustrated a working knowledge of the extent of the Parrett Catchment, as illustrated by Aaron's description below:

> "Well it's in two parts, well four really, the upper catchment and the floodplain mainly. The Parrett itself as you probably know splits into two, the river Tone is the other part. The river Tone runs from Taunton to Bridgwater and back to Langport and this is where a lot of the flooding is, it is tidal in that the land and there is the potential for high water levels and over topping" (Aaron).

Amy identifies a common misconception of the Parrett Catchment:

> "The Parrett catchment is composed of two thirds of the levels and moors, most people think it is the whole area but it is not" (Amy).

By contrast an *unconscious catchment awareness* describes those individuals who appeared to have no working knowledge of catchment terminology and did not on a day to day basis work at a catchment scale, yet were aware of the extent of the Parrett catchment and of the implications of development, and farming practices, within the upper catchment. It was this *unconscious awareness* of the catchment that was of most interest in relation to a sense of place. A sense of place is often related to intangible and unconscious views that are often not expressed clearly to enable their true significance to be gleaned. A number of participants discussed the link between the upper catchment and the lower catchment which illustrates an *unconscious catchment awareness*, as shown by Steven's and Duncan's quotes.

> "Projects had no restrictions to prevent runoff until now and that meant things were being built in urban areas higher up and creating runoff that made flooding worse (Steven).

> "If you look, those hills in the distance they are the Blackdown Hills and if you have rain there then you know it will be flooded here the next day, in the winter it is more so" (Duncan).

A third group of participants were those who had no awareness of the Parrett catchment as a whole, but did illustrate an awareness of the River Parrett itself. This was identified among people situated in the upper or mid catchment. For example, in direct response to my question as to whether or not he was situated within the Parrett catchment, a land user in the upper catchment stated:

> "We are not part of the Parrett here, there is the stream at the bottom but it doesn't join a river it just eventually flows into the sea, it does join a stream, as it comes through Kings Wood" (Bailey).

In fact, Bailey did fall within the catchment and the streams that he was discussing formed tributaries to the River Tone, which is the second major river that makes up the Parrett catchment. Table 7.1 details the different ranges of catchment awareness that were identified within the case study area. Participants within the focus groups were treated as separate within this table. However, it is recognised that the dynamics of group interaction can influence the way in which participants respond to questions and this was taken into consideration throughout the running of the focus groups and the subsequent analysis.

Table 7.1: Catchment Awareness within the Parrett Catchment

	Total Number of Participants	No Catchment Awareness	Conscious Awareness	Unconscious Awareness	River Awareness	Awareness of Catchment Transfer	Impacted by Flooding
Respondents in Upper Catchment	20	14	5	1	9	7	0
Respondents in Mid Catchment	14	11	1	2	13	6	1
Respondents in Lower Catchment	15	1	4	10	12	12	14
Agency Respondents	5	0	5	0	5	5	NA
Total	54	26	15	13	39	30	15

Table (7.1) shows twenty-eight participants either had a *conscious* or *unconscious awareness* of the Parrett catchment as a whole. Of these, twelve were either from a government agency or from the land management group, all of whom presented a *conscious awareness* of the Parrett catchment and a working knowledge of catchment frameworks and catchment terminology. This

is not surprising given that the Environment Agency has worked for a considerable number of years using catchment frameworks and often works in partnership or consultation with other land-management organisations, as required within its statutory and non-statutory plans (Jones, 1999; Slater et al, 1994; Trenam, 2000). Even though partnership and consultation has been illustrated as weak, this is not because other organisations are not aware of catchment frameworks but due to a range of different factors such as resource constraints (Trenam, 2000). This is exacerbated by the constraint that until relatively recently, with the implementation of the WFD, working within a catchment framework with catchment plans was not statutory for any organisation including the Environment Agency. Plans such as Local Environment Agency Plans (LEAPs) were only ever non-statutory with advice in place that they should be considered in relation to planning and development (Selman, 2006).

The remaining sixteen participants illustrated an *unconscious awareness* of the Parrett catchment and were either land managersor land users, the majority of whom resided within the lower catchment. This is important for a number of reasons, the first being that the flooding within the Parrett catchment occurs primarily within the lower reaches of the catchment which encompasses two thirds of the Somerset Levels and Moors (Somerset County Council, 2001; Somper, 2005). Occasionally flood waters will travel as far as Bridgwater which is also at risk from tidal surges (Environment Agency, 1999; Somerset County Council, 2001). It was in response to flood levels that nearly reached Bridgwater in 2000/2001 that the Parrett Catchment Project (PCP) was set up (Somerset County Council, 2001; Somper, 2005). Fourteen participants within the lower catchment were subject to annual flooding. This includes landowning organisations that have land which is vulnerable to flooding. A Pearson Correlation Test using all participant responses confirmed that there was a significant positive correlation (0.737) between 'catchment awareness' and 'flood impact'.

Given the development of the PCP in response to significant flood events and the low catchment awareness of participants that are not predisposed to the impacts of regular flooding, it could be contended that catchment awareness in general is low unless there is a risk of flooding or a person is directly impacted by flood events. One landowner suggested that this was the case for Somerset County Council:

"They talk about doing major things to prevent it (the flooding) when it is here, but since then it has evaporated, that's why I say it would do a lot of good if a gentle flood was to hit Taunton, where the voters are. They are not interested in a few farmers but if Taunton and the other urban areas were to be flooded it would affect a lot of voters and

would help focus the minds of government. They don't take much notice of farmers" (Steven, Group 2).

Figure (7.1) provides an illustrative flow chart of the relationship between point of residence within the catchment and catchment awareness among land managers and land users. The solid black lines illustrate a direct relationship and the dashed red lines show relationships that are only important for some of the participants.

Figure 7.1: The Relationship between Catchment Awareness and Flood Issues within the Parrett Catchment

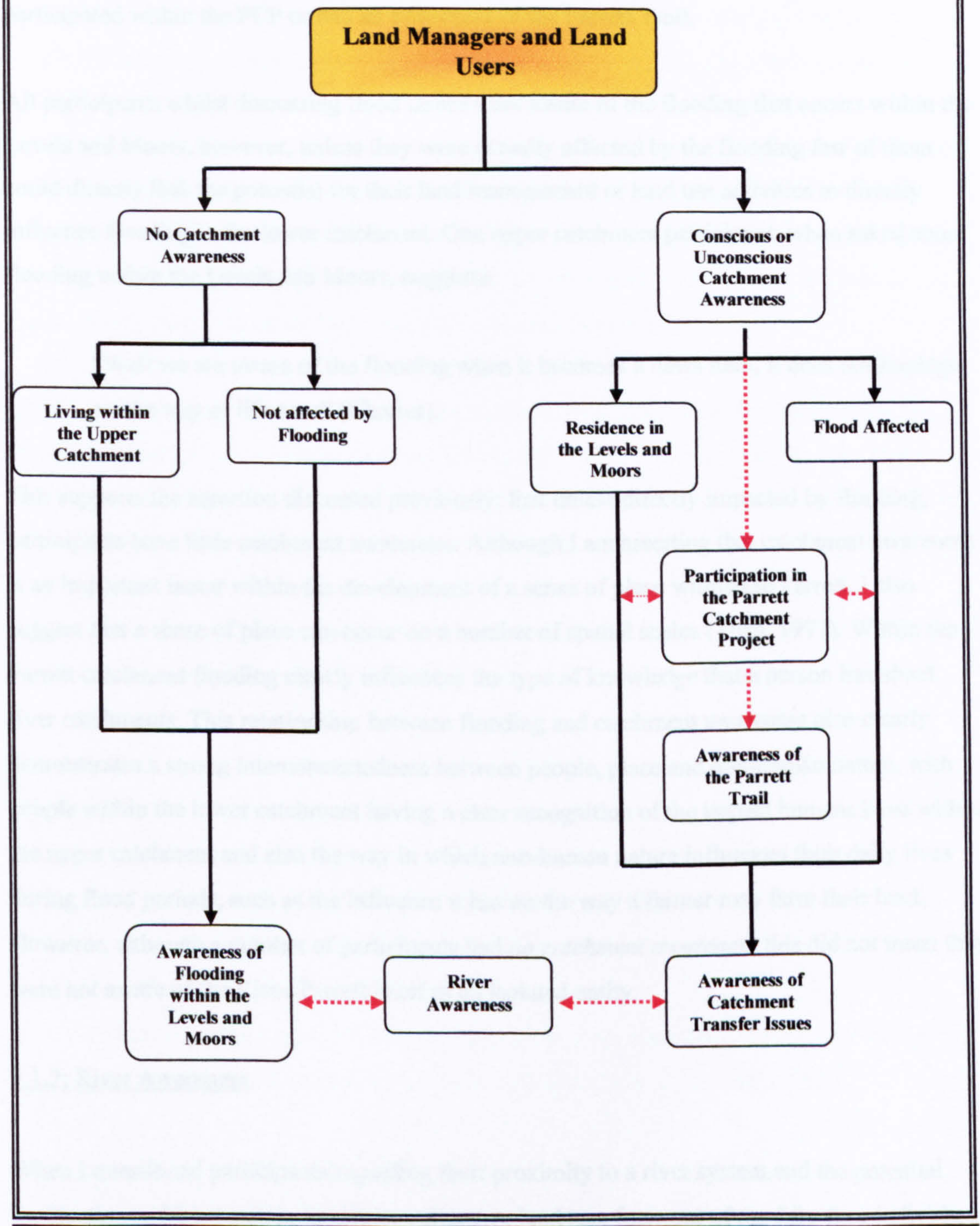


Figure (7.1) shows that those participants that had no catchment awareness either lived within the upper catchment or were not impacted by flooding. However, all of these participants were aware of the flooding within the Somerset Levels and Moors that falls within the lower reaches

of the Parrett Catchment. Also a small minority of these participants did have an awareness of both the existence of the River Parrett and of catchment transfer issues. On the other hand those participants that had a *conscious* or *unconscious* awareness of the Parrett Catchment were either living within the Somerset Levels and Moors or were directly impacted by flooding. All of these participants had an understanding and awareness of catchment transfer issues, though not all participated within the PCP or had an awareness of the Parrett Trail.

All participants whilst discussing flood issues were aware of the flooding that occurs within the Levels and Moors, however, unless they were actually affected by the flooding few of them could directly link the potential for their land management or land use activities to directly influence flooding in the lower catchment. One upper catchment participant, when asked about flooding within the Levels and Moors, suggests:

> "Well we are aware of the flooding when it becomes a news item, it does not impinge on the way of life here" (Charles).

This supports the assertion discussed previously, that unless directly impacted by flooding, participants have little catchment awareness. Although I am asserting that catchment awareness is an important factor within the development of a sense of place within the Parrett, I also suggest that a sense of place can occur on a number of spatial scales (Tuan, 1977). Within the Parrett catchment flooding clearly influences the type of knowledge that a person has about river catchments. This relationship between flooding and catchment awareness also clearly demonstrates a strong interconnectedness between people, place and non-human nature, with people within the lower catchment having a clear recognition of the impact humans have within the upper catchment and also the way in which non-human nature influences their daily lives during flood periods, such as the influence it has on the way a farmer may farm their land. However, although a number of participants had *no catchment awareness* this did not mean they were not aware of the River Parrett itself as an isolated entity.

7.1.2: River Awareness

When I questioned participants regarding their proximity to a river system and the potential implications of this for their land management or land use, forty out of the fifty-four individuals had a clear awareness of the river system to which they were adjacent. Thirty-seven participants identified rivers that interconnect to form the Parrett catchment, with twenty of them naming the Parrett itself. As illustrated previously bioregionalists have contended that bioregions occur at a variety of spatial scales (Sale, 2000; Thayer, 2003) and it may be more practical in relation to

bioregional living to divide the catchment into subcatchments such as the upper catchment and lower catchment (Berg, 1977). This research has identified that although a large proportion of participants living within the lower catchment were *consciously* aware of the Parrett catchment, a significant number of participants (twenty-six in total) had no awareness of the Parrett catchment as a whole, yet many of these respondents were aware of the river to which they lived closest. This suggests that people relate to the area more local to them, unless a significant event such as flooding raises their awareness of the wider catchment. I have equated an awareness of the wider Parrett catchment to a facet of a sense of place. However, river awareness illustrates that this sense of place may be more local than a catchment scale. This has implications for the success of catchment based schemes such as the Parrett Catchment Project (PCP) and the delivery of the Water Framework Directive (WFD) through River Basin Districts (RBDS) (Barth and Farwell, 2001), that work on a whole at a catchment level, because it suggests that this scale may be too large for land managers and land users to relate to.

The three remaining participants showed awareness of river systems such as the River Culm. The Culm is the catchment adjacent to the Parrett Catchment (Environment Agency, 1997). Only one of these three participants recognised the Culm as a catchment in its entirety: a farmer whose farm falls between the Parrett and the Culm catchments stated:

> "No, we are on the wrong side of the catchment area. The river Otter is this way and the Culm comes this way and the rain only comes from the east" (Gerrald).

With seventy-four per cent of the participants identifying an awareness of single river systems compared to only fifty-four percent that had a catchment awareness, this may suggest that the catchment scale is too large for people to identify with and relate to, in terms of land management and use. When discussing the PCP, Paula identified the impracticality of being able to cover such a large area:

> "Well they can't feasibly be able to cover the whole area and I guess they concentrate on more populated areas, they probably wouldn't find us anyway" (Paula).

Although agencies and land-management organisations within the Parrett catchment presented a *conscious awareness* of river systems and the wider context of the catchment, they tended to work at a smaller, site-based level, while claiming to consider the *implications* for the wider catchment. The respondents identified that it is difficult to work beyond their own sites, due to time and resource constraints. Also, a lot of their work is driven externally by government targets such as Public Service Agreement (PSA) targets, which tends to restrict work in a wider

context, even though there was a recognition that this wider approach is beneficial to conservation. Matt identified a growing awareness of the need to consider a wider context as well as the constraints that prevent this, in his case.

> "It is something that the National Trust are recognising that this is a need to get involved beyond sites. If someone asked for advice then yes I would probably give it, but we don't go out to do that, offer advice beyond boundary. It is down to resources really, I am the only warden here and then there are legal things like insurance and stuff like that" (Matt).

So although the Environment Agency and the PCP are promoting a wider 'integrated' catchment approach to working with non-human nature and recognising the interaction between people and non-human nature (Environment Agency, 1997; Somerset County Council, 2001; Somper, 2005), within these results the catchment is practically too large for landowning organisations and agencies to work at, given their resource constraints and commitment to government targets. The wider land owning and land user populations also appear more familiar with the small scale, as opposed to the larger scale, recognising single river systems as opposed to whole catchments.

7.1.3: Catchment Transfer

Related to the awareness of catchments is an awareness of *catchment transfer processes*. Transfer repertoires identified an awareness of the interconnectedness of river systems, primarily in terms of the whole catchment, but also in relation to single river systems and the links between the upper and lower reaches. Catchment transfer corresponds to the interrelated nature of a catchment system, emphasising that land use, management or maintenance within the upper catchment can have implications for the lower catchment, such as flooding, erosion and siltation (Gerrard, 1990; Strahler and Strahler, 1994). Thirty of the participants interviewed gave indications of being aware of *catchment transfer issues*. By this I mean they had a conscious awareness that activities in the upper reaches of a river system can have implications for the lower reaches, and/or that their activities (be those in terms of land management or impact through usage) can also have implications for a river system as a whole.

An awareness of catchment transfer processes was just one of the factors that I used to determine if an individual was consciously or unconsciously aware of the Parrett catchment. However, it was still possible for respondents with only an awareness of single river systems, rather than catchments, to exhibit an awareness of these processes. Of the thirty participants that

identified a knowledge of transfer processes all participants from government agencies and the land management organisations were included. This was not unexpected given that all of the agencies and the land management organisations are involved with the PCP that places emphasis on the interconnected nature of catchments as fundamental to the work being carried out within this partnership (Somper, 2005). Additionally the Environment Agency itself promotes a catchment approach within all of the work that it carries out (Environment Agency, 2003). The catchment approach in the form of Local Environment Agency Plans (LEAPS) although non-statutory, was meant to be integrated within the statutory planning process (Slater et al, 1994) suggesting that organisations that are involved within the planning process should be aware of catchment processes. However, the limitations of this system have been discussed in depth within the literature (Selman, 2006; Slater et al, 1994; Trenam, 2000). The WFD has begun to enforce on a statutory basis the importance of catchments or RBDs (Barth and Farwell, 2001) and therefore organisations that may not have had catchment awareness or an awareness of the interconnectedness within and between river catchments in the past will in the future place increased emphasis upon this scale of working. However, WFD implementation is still in its early stages of implementation and therefore may be viewed as being of low concern for organisations other than the Environment Agency.

Eighteen land managers or land users were aware of catchment transfer processes and the way in which the interactions between their land use and adjacent catchments had implications for catchment transfer processes.

> *Carl:* "When we first moved here the cows that are further up in the land in the summer, churning up the water, it caused a problem. The Environment Agency spoke to the farmer and got a grant for them to give the cows proper drinking facilities and to fence off the area. We are dependent on the water quality so we are dependent on all up stream, but quite a way it is the Forestry Commission, but we don't get a problem".
> *Interviewer:* "Do you consider your impacts downstream?"
> *Carl:* "Only through care and attention downstream" (Carl).

Unusually Carl is directly dependent upon water quality for his trout farm. Otherwise, as with *unconscious catchment awareness*, the majority of participants with an awareness of transfer processes are residents within the Levels and Moors and are directly impacted by flooding. Steven and George highlight the impact of development in the upper catchment on their land that floods in the lower catchment:

George: "the water has started to come down quicker now than it used to, before when we had heavy rain it was three to four days until the water came down to us, but now it's a day if that, it's much quicker".
Steven: "It's the new developments in the urban areas above, until recently there was no consideration of runoff within the plans and no consideration to flooding in the area, now there is" (Group, 3).

There is a clear identification of the links between activity within the upper catchment and impacts in the lower catchment in relation to the speed at which runoff reaches the land within the lower catchment. It is primarily land managers within the lower catchment that are aware of catchment transfer processes, suggesting that flooding and the negative implications this has for land use, property damage and the economic implications of not being able to farm the land, have acted to heighten people's awareness of the interconnectedness of catchments. However, as can be seen within George and Steven's discussion above, this awareness again appears to have originally been an unconscious awareness, illustrated by the way in which George discusses the changing timeframe from rain within the upper catchment to runoff in the lower catchment. He is identifying that this has increased in recent years, suggesting that the awareness of catchment transfer processes has been existent for sometime and is not just the product of the promotion of the issue by the PCP. Nevertheless the PCP, by raising awareness of catchment transfer processes, may have given farmers in the lower catchment an arena through which to discuss changes observed over the long term within the catchment, which may not have been consciously realised before this.

7.1.4: Summary

This section has discussed a number of ways in which participants identified an awareness of the Parrett Catchment, this awareness was either *conscious, unconscious* or there was no awareness at all. An awareness of the Parrett catchment is just one factor that I suggest contributes to a sense of place. However, what these results show is that while all agencies and land-management organisations have a *conscious awareness* of the Parrett Catchment, many of the land managers or land users had either an *unconscious awareness* of the Parrett Catchment or no awareness at all. This awareness is fundamental to working within a bioregional framework. If the people that are living within a bioregion are not aware of it then this will make any collaborative work between agencies and organisations and local people difficult.

Those participants that did present an *unconscious awareness* of the Parrett Catchment, which was identified through a clear knowledge of the different parts of the catchment and the way in

which these interconnect, tended to be those affected by flooding within the lower catchment, primarily the Somerset Levels and Moors. This led me to question whether or not these participants would have catchment awareness if they were not directly impacted by flooding. This is a issue that I will come back to as the discussion develops. However, it is important to note at this stage that although many of the participants did not show an awareness of the Parrett Catchment as a whole, many of them were aware of their local river system suggesting that the catchment as a framework may be too large for people to associate with, and smaller sub-catchments or river systems may be more appropriate. This has implications for the instigation of the WFD and the proposed RBD framework that concentrates upon using whole catchments as frameworks for land use decision making and the subsequent conservation of non-human nature. The pilot project for the delivery of the WFD within the UK has found that the Ribble Catchment, in the Northwest of England is too large for people to associate with on purely a management level and there is a need to break this down into sub-catchments (Ribble Project, 2004). This project tested public participation mechanisms within the Ribble Catchment, clearly identifying that spatial scale is important for engaging the general public within projects. The aim of RBDS is to act as an integrated framework that includes non-human nature, social, cultural and economic conditions within the catchment to achieve 'sustainable' river management and development (Balls, 2003). This theory aligns itself with bioregional discussions surrounding sustainable watershed or catchment management that is concerned with working within a more 'realistic' framework through which to integrate people and non-human nature (Berg and Dasman, 1976).

This research is also concerned with the interconnection between people, place and non-human nature. The awareness of *catchment transfer processes* identified by the participants is a clear indication that on some level there is an awareness of this interaction and as demonstrated by some of the quotes used, an awareness that human action is not always positive within a catchment. However, as these results have indicated catchment awareness is correlated with the impact of flooding and it is difficult to ascertain whether participants would recognise the interrelationship between people, place and non-human nature if they were not being impacted by flooding.

7.2: Introduction: People and Natural Areas

This section will discuss the awareness repertoires associated with Natural Areas by participants located within the Chilterns Hills Natural Area. As with the previous section I considered the awareness repertoires in relation to the existence of Natural Areas and suggest that this awareness is a contributing factor to a sense of place and to whether or not a sense of place can

be delimited by a bioregional framework. When interviewing participants I used the term Natural Area as opposed to Joint Character Area (JCA). This was because JCA is a relatively new term and has only recently been utilised by English Nature and the Countryside Agency (Porter, 2004). Therefore I felt that it may confuse participants by using terminology that could be unfamiliar to them. A number of respondents did identify the fact that the Natural Area framework was now the JCA framework, though these participants were in the minority.

Thirty-four interviews were carried out within the Chiltern Hills Natural Area, four of which were focus group-based interviews. One of the focus groups was carried out in Luton with the aim to include participants that lived within the urban areas that contribute to the Natural Area and make the interviews as varied as possible. In total there were fifty-five participants within the Chiltern Hills case study area. The Chiltern Hills was an interesting case study area in terms of people's awareness of the Natural Area because the boundary of the Natural Area is almost congruent with that of the Area of Outstanding Natural Beauty (AONB) (English Nature, 1997a). The primary difference is that the Natural Area includes urban areas whereas the AONB excludes these areas in an attempt to only encompass "the most scenically attractive parts of the chalk escarpment, its rolling foothills and the heavily wooded south-east facing dipslope" (Chilterns AONB Management Plan, 2002, p. 3). Therefore urban areas such as Hemel Hempstead and Luton are excluded from the AONB designation but are included within the Natural Area boundary, because this is defined primarily by the geology of the area and its corresponding habitats and species (English Nature, 1997a). Bioregionalists do not exclude any part of the landscape as they believe in working within a whole bioregion not just selective areas (Berg and Dasmann, 1976; Thayer, 2003), such as those promoted by the designated area system within the UK.

As with catchment awareness in the Parrett catchment, coding revealed repertoires of both a *conscious awareness* and an *unconscious* or taken for granted awareness of the Natural Area. However, there were also respondents who had no awareness of the Natural Area at all and identified the Chilterns entirely in relation to the AONB designation. Unlike within the Parrett Catchment there were no participants that had no awareness of the Chilterns at all. Table (7.2) shows the different forms of awareness within the Chilterns Natural Area.

Table 7.2: Natural Area Awareness in the Chiltern Hills Natural Area

Total Number of Participants	Conscious Awareness	Unconscious Awareness	AONB Awareness
55	21	26	8

7.2.1: Conscious Natural Area Awareness

As with the results for the Parrett Catchment I found that all agencies and the land management organisations had a *conscious awareness* of the Natural Area framework in general and a more specific knowledge of the Chiltern Hills Natural Area due to their situation within the Natural Area itself. As Daryl suggests in response to a question directly asking if he has heard of the Natural Area framework:

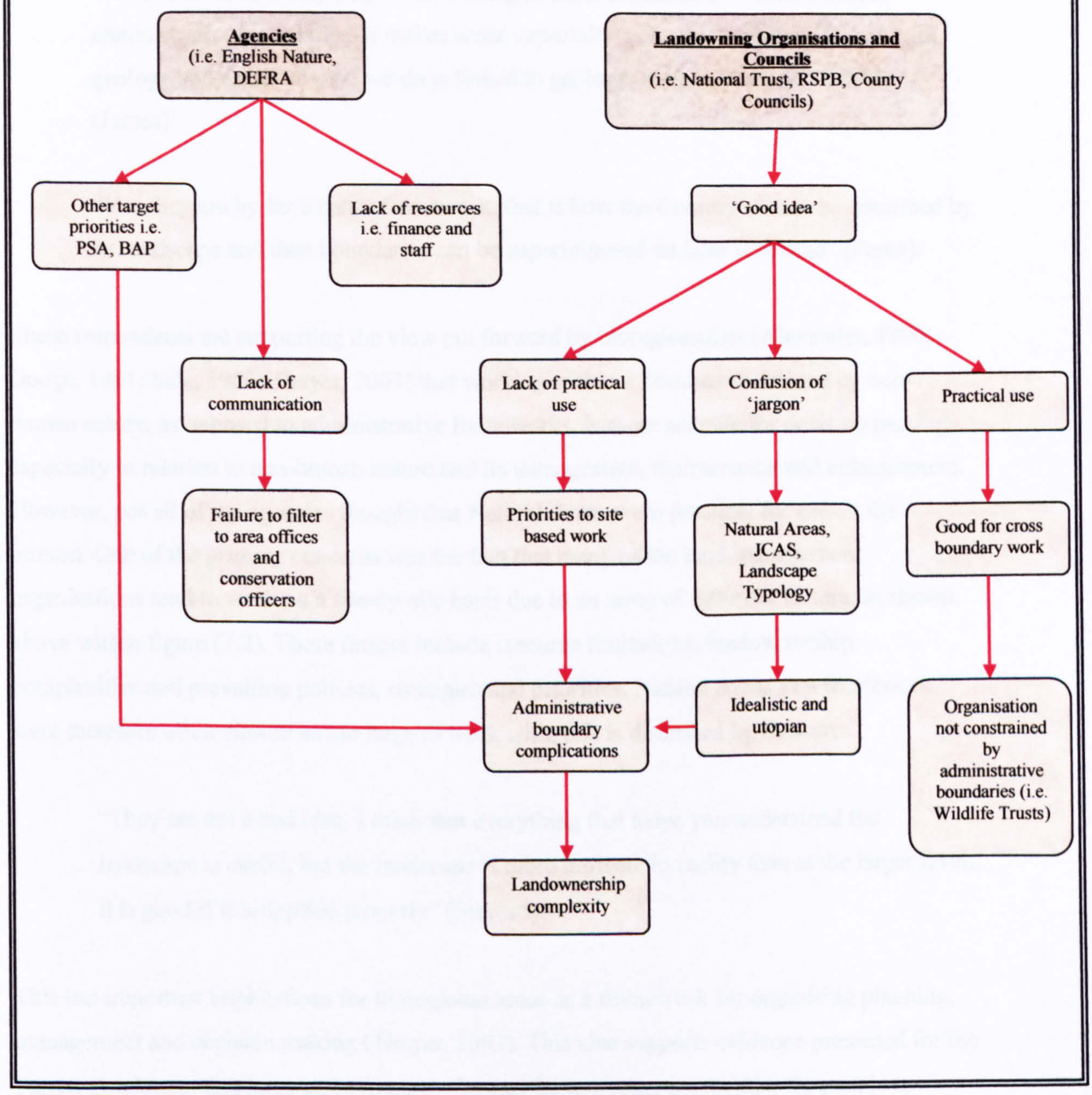
> "Yes I have heard of the Natural Areas. There is not a lot in the Chilterns Natural Area really, less than ten percent" (Daryl).

In response to the same question Sophie says:

> "Yes we have, all my English Nature stuff is over there (pointing to the desk) it is a working document" (Sophie).

This awareness was somewhat surprising given Porter's (2004) assertion that the Natural Area framework until relatively recently was not well received or acknowledged among conservation organisations. However, their practical use of the framework was varied and dependent on a number of different issues as shown within figure (7.2).

Figure 7.2: Factors influencing the Practical Use of the Natural Area Framework



Although all of the agencies and the land-management organisations had a *conscious awareness* of Natural Areas there was a mixed response as to how conceptually useful they found the framework, and whether or not they utilised the framework within their day to day practice. However, all of the agencies and the land-management organisations thought the theory behind the framework was a 'good idea', as the following comments exemplify:

"I used to work with a local authority and they were preoccupied with the boundaries, if a site crossed the boundary they would stop at the boundary. Natural Areas were giving recognition to the diversity of the land in the UK" (Karen).

"Natural Areas are very helpful for talking to other organisations it helps across administrative boundaries. It makes sense especially as Natural areas are linked with geology and much of what we do is linked to geology, such as chalk downland" (James).

"Yes they are by far a better framework, that is how the Country should be described by its landscape and then boundaries can be superimposed on later if needed" (Percy).

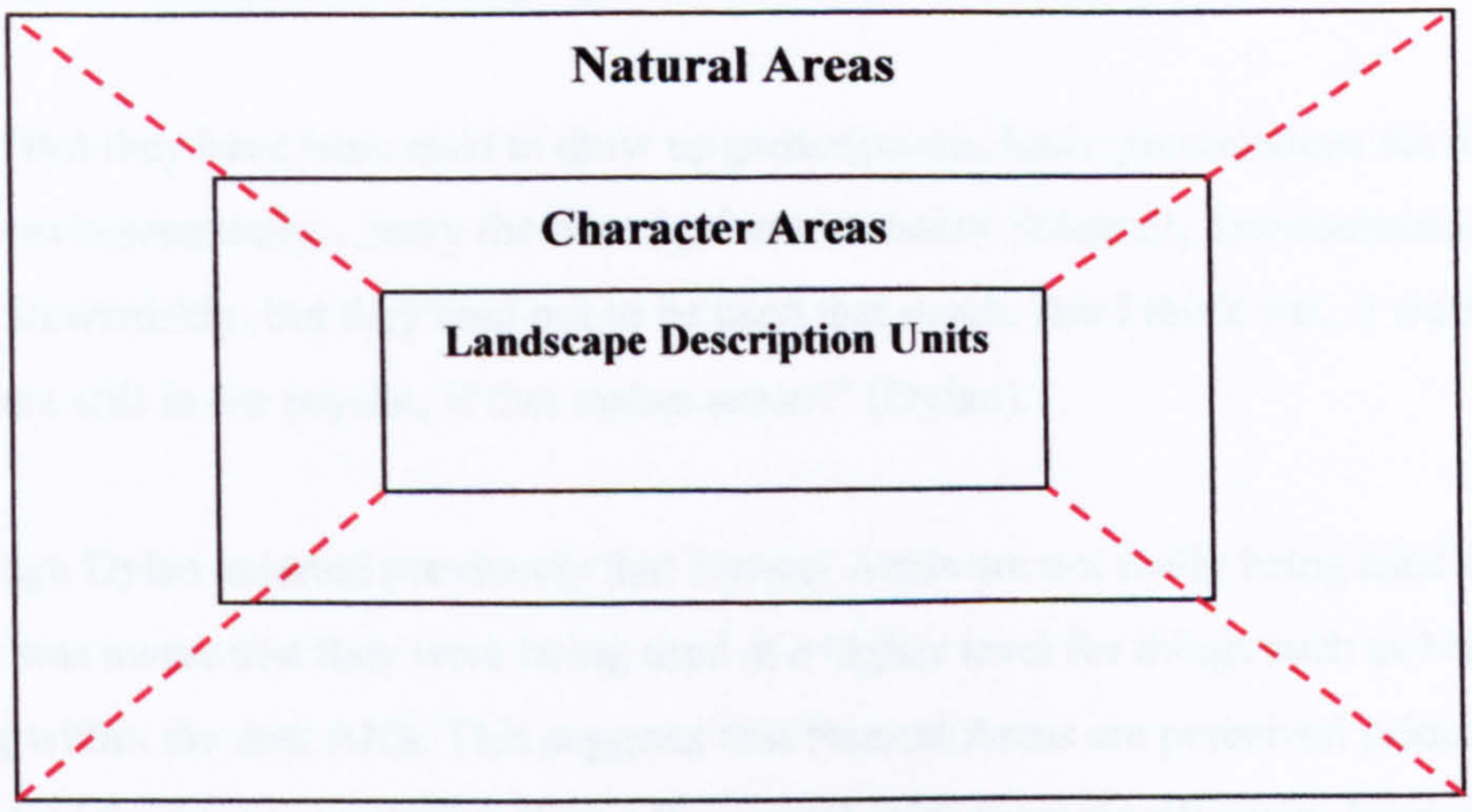
These respondents are supporting the view put forward by bioregionalists (Alexander, 1990; Dodge, 1981; Sale, 1980; Thayer, 2003) that working within a framework defined by non-human nature, as opposed to administrative frameworks, is more suitable for decision making especially in relation to non-human nature and its management, maintenance and enhancement. However, not all of the agencies thought that Natural Areas were practical for use on the ground. One of the primary concerns was the fact that many of the land-management organisations tend to work on a site-by-site basis due to an array of different factors, as shown above within figure (7.2). These factors include resource limitations, landownership complexities and prevailing policies, strategies and priorities. Natural Areas as a framework were therefore often viewed as too large to work with, this is discussed by Stewart:

"They are not a bad idea, I think that everything that helps you understand the landscape is useful, but the landscape is more intricate in reality than at the larger level, it is good if it is applied properly" (Stewart).

This has important implications for bioregional areas as a framework for organising planning, management and decision making (Thayer, 2003). This also supports evidence presented for the Parrett Catchment that large scale frameworks may be too large, practically, for people to associate with or to work within. A number of writers have presented the need to view Natural Areas as the largest part of a nested hierarchy of spatial divisions utilised to work within the landscape, with Landscape Description Units (LDUs) being the smallest unit as illustrated within figure (7.3) (Griffiths et al, 2004; Porter and Preston, 2001; Preston, 2002). The actual utilisation of Natural Areas in practice is an important component of a *conscious awareness* as

this is direct evidence that Natural Areas as a framework or as a concept is understood, if not accepted.

Figure 7.3: A Nested Hierarchy of Spatial Divisions used within the Landscape Approach



(Adapted from Preston, 2001)

7.2.2: Natural Areas as a Practical Framework or a Concept

Natural Areas can be viewed in two distinct ways, as either a concept or as an actual framework or tool. Many of the respondents from within agencies or land-management organisations identified Natural Areas as useful concept but practically difficult to use, given a range of different constraints (figure 7.2), and as highlighted by Karen and echoed by Max:

> "They have not impacted a lot. They are useful in looking at the landscape as a tool, but as a big landowner it hasn't really had that much impact" (Karen).

> "We don't actually deal with Natural Areas as such. We know they exist, things like that, but we don't deal with them" (Max).

Even staff in English Nature offices indicated that they did not utilise the Natural Area framework practically, as revealed by answers to questions regarding their use in local offices:

Interviewer: "Are Natural Areas actually used?"

Dylan: "Not that much, I mean I think they are still used particularly by headquarters in a sort of strategic sense, but I wouldn't say that we really used them very much" (Dylan).

However, Dylan does go on to discuss that Natural Areas have been used as a tool for targeting the new Environmental Stewardship Agri-environment Scheme (AES):

"But they have been used to draw up prescriptions, basic prescriptions for different environmentally…sorry the new Agri-environment Schemes, Environmental Stewardship, but they tend not to be used that much. But I think we…I would say they are still in our psyche, if that makes sense?" (Dylan).

So although Dylan asserted previously that Natural Areas are not really being used at the local level, he was aware that they were being used at a higher level for things such as National targeting within the new AES. This suggests that Natural Areas are perceived primarily as a national tool for agency use rather than a framework with local significance. Jason also highlights that the uptake of the Natural Area framework, whilst still very *ad hoc,* is beginning to be accepted.

"I think it is getting through, I think erm the inherent logic of this and when we spoke to our staff they accept it, they may be a bit sceptical and you can get bogged down with the detail of how we've got to produce these things, er…which we tend to avoid or tended to avoid. So there's an inherent acceptance there, so it is…and it is being used a good deal more" (Jason).

These comments illustrate that local offices and national offices may have different views on what they perceive Natural Areas to be used for. It could also be a contradiction in that Dylan whilst acknowledging the national and strategic use of Natural Areas does not feel that they are used at a local level practically. However, Jason accepts that the Natural Area framework and concept has been disseminated and utilised in a rather *ad hoc* manner, being met with scepticism. Nevertheless he suggests Natural Areas are increasingly being accepted and utilised. Whilst Dylan indicates Natural Areas as being a useful tool to strategically target national agendas such as the new AES, and as a useful and common sense concept, on a local level he feels the framework is little more than just that - an accepted concept. With Government targets such as Biodiversity Action Plan (BAP) and Public Service Agreement (PSA), which state among other targets, that ninety-five per cent of Sites of Special Scientific Interest (SSSIs) are

required to be in favourable condition by 2010 (Defra, 2005), it is difficult for organisations to move beyond a site based approach. Targets such as this can act as a strong disincentive to working with Natural Areas. This conflict is especially true of the SSSI PSA target that all participants from agencies and the land-management organisations revealed to be a priority for them.

There are many external policies that may force an agency to work at a smaller 'site' scale, as opposed to a wider countryside or landscape scale. Much of these bodies' time is taken up by trying to reach policy targets that restrict the amount of wider countryside work that they have the resources or time to take part in. This is compounded by staffing constraints that inevitably dictate how much work can be carried out and where. However, whilst there is little evidence of the use of the Natural Area framework and the Chiltern Hills Natural Area boundary specifically as a structure through which to plan and manage landscape activities for people or non-human nature, there is some evidence to support other uses. One participant from a landowning organisation suggest that they used the Natural Area framework within the organisation for a wide range of purposes, including presenting their sites in a wider context and subsequently managing the habitats of those sites within the wider context of the Natural Area. As Luke emphasises:

> "Natural Ares are a very useful scale, as a three county trust we work across administrative boundaries anyway and was initially set up with the vision to work across boundaries" (Luke).

This response was an exception rather than a rule, because this particular organisation is a three-county organisation and its three counties form the majority of the Chilterns Natural Area. Thus the Natural Area can act as a unifying concept for its particular locus of activity. However, the majority of participants from landowning organisations and councils viewed Natural Areas as a useful wider countryside concept, a concept that is widely accepted in much the same way that the ideal of bioregionalism is accepted.

7.2.3: Just another Boundary on the Map of England?

One of the concerns of participants from agencies and the land-management organisations regarding the Natural Area framework is that far from creating a integrated framework that moves beyond a concern for purely designated sites, it adds just another boundary to the plethora of statutory and non-statutory boundaries that exist within the UK. This boundary may

be defined by landscape distinctiveness, but it does not deal sufficiently well with those areas that have little distinctiveness.

It was acknowledged by a number of respondents that although Natural Areas as a concept are viewed in a positive light, this may not be so positive for areas other than the Chiltern Hills, which may not have such an obvious distinctive landscape, as emphasised by Brian:

> "Yes I think that they are a good idea because they highlight the importance of local specialities. The map is very complicated though, I have seen it, it is dependent on geology. The Chilterns is very clear but I think there are some that are only very small. But I do think it is a good idea" (Brian).

Although Brian is primarily talking about Natural Areas in terms of an idea he identifies the complexity of the Natural Areas map. Because it reflects non-human nature, it is inevitable that the Natural Areas map is complex as non-human nature is complex. The concept of bioregionalism promotes the acknowledgement and acceptance of the complexity of non-human nature and the relationship between non-human nature and people (Berg and Dasmann, 1976). If the Natural Areas map was not complex it may not present a realistic view of non-human nature and would therefore defeat the purpose of working within a framework that is aligned with ecological integrity. It was suggested by Daryl that the Chilterns did not need to be defined as a Natural Area to be recognised as a distinct entity:

> "I can see the reason behind it but I am not hugely convinced that they hold anything, I mean we knew the Chilterns were the Chilterns before English Nature drew a line on a map" (Daryl).

Whilst reflecting a criticism of the Natural Area process, this quotation goes some way to identify the existence of an intuitive, larger scale awareness of the landscape, as claimed by the proponents of bioregionalism (Dodge, 1981; Sale, 1980). However, the concern for Natural Areas just being another boundary was not only discussed by Daryl but was discussed by participants within a number of interviews. For example, Max identifies Natural Areas as a boundary that will eventually be changed if another agency decides on a 'better' framework:

> "I think the trouble is with everything there's always different organisations or different points of view bring out different boundaries" (Max).

This illustrates the point that was made by several respondents, of much confusion with continually changing terminology in relation to Natural Areas (that are now known as Joint Character Areas) and competing frameworks and scales for landscape-based approaches such as Landscape Character Areas, landscape typology and Landscape Description Units (see: Griffiths et al, 2004; Swanwick, 2004). A range of organisations discussed this:

> "I'm not sure what the difference is between Character and Natural Areas...its gets really confusing. It's difficult for us to keep up with the changes you know, it must mean absolutely nothing to the general public" (Julie).

> "I can't keep up with them and all that...really it gets confusing" (Rosie).

This confusion over jargon can lead to a loss of the meaning and purpose of Natural Areas. However, respondents also contended that this confusion occurs within the organisation that conceived the framework, as illustrated by Bill:

> "We've gradually slipped into using the phrase 'Joint Character Area' and even the staff within this building that are doing an enormous amount of work using the framework were unclear about the relationship between the Joint Character map and the Countryside Character Area map without realising they were one in the same, the same boundaries. There has been no subsequent work in redefining boundaries since 1996" (Bill).

This confusion of 'jargon', as reported by the participants from agencies and the land-management organisations, has implications for whether or not there is a *conscious awareness* of either the concept of Natural Areas or the physical framework, in this case the map. If there is confusion then it will potentially reduce the amount of *conscious awareness* and the subsequent practical use of such a framework. The use of this framework is constrained anyway by a long seated tradition of working within administrative units. The country is divided by administrative units including counties and districts (Rydin, 1996). Thus it can be argued to be unrealistic and idealistic to expect a shift to bioregionalism in the short term (Meadowcroft, 2002). However, I am contending that people are dependent upon non-human nature for survival and therefore there is a need to consider across administrative units when working with non-human nature. Although people are constrained within these administrative units due to the delivery of services and policies such as health, education and welfare (Rydin, 1993), the cultural nature of the landscape suggests that people and non-human nature are inseparable (Head, 2000) and should be treated as such.

7.2.4: Administrative Unit Constraints

Land-management organisations identified the complications of working across administrative boundaries whilst discussing the limiting factors to utilising the Natural Area framework practically. This is one of the primary reasons why bioregionalists suggest working within a more naturally 'coherent' framework (Berg, 1977; Berg and Dasmann, 1977; Dodge, 1981; Thayer, 2003) and was one of the driving forces for the development of the Natural Area framework (Countryside Commission and English Nature, 1996; Porter, 2004). A range of limitations were identified by the participants as to why working within and across administrative boundaries caused problems, including a lack of consistency in how different administrative units such as counties work, lack of habitat or landscape congruence, the difficulty of working and communicating with such a wide range of people and time constraints. These mean it is difficult, if not impossible, to work beyond an administrative unit in some circumstances. This was the views of individuals from a range of different organisations:

> "The government regions can be quite a pain because you'll be dealing with the south east talking about the promotion for agri-environment schemes and you also have to talk to the eastern region about the same thing, erm…it just means there's a lot of work involved in getting co-operation of different people" (Julie).

> "No they don't work well across administrative boundaries a lot of administrative boundaries have done their own thing there is no consistency" (Percy).

> "Trying to get information for datasets and things like that you know you quite often have a little bit of a problem trying to get information out of them…it depends…they eventually come through usually, but it's different counties are slower than others" (Max).

Even when there is co-operation within and across boundaries it is presented as somewhat negative in that it is seen as being determined by whether individuals or organisations are going to gain anything from communicating across boundaries:

> "I think it does make a difference as to whether the local authorities are really going…feel they are going to get anything out of engaging with us" (Dylan).

Dylan is suggesting that if there is nothing in it for themselves then potentially local authorities will not get involved with collaborative work. Local authorities are constrained as with all levels

of government, by budgets, this will influence the practicalities of working across boundaries. Collaborative work will be difficult both in terms of staffing and budgeting. Whilst Natural Areas on a conceptual level are viewed positively, the realities of restructuring administrative duties are potentially unrealistic.

7.2.5: Summary

In this section I have illustrated that all agencies and landowning organisations or councils have a *conscious awareness* of Natural Areas that I am contending is fundamental to recognising the interaction between people, place and non-human nature. Participants have identified their *conscious awareness* on two levels, an awareness of the conceptual proponents of Natural Areas and an awareness of and utilisation of the Natural Area framework as a practical tool to guide land management. However, all but one land manager identified with the conceptual proponents of Natural Areas and did not view them as a practical framework, for example for working beyond designated sites or maintaining ecological integrity within the decision making process. The one land manager that apparently worked using the Natural Area framework and the information provided within the *Natural Area Profile* did so because it already worked across three county boundaries.

According to participants, the actual utilisation of the framework was limited to the strategic targeting of AES and was not utilised by other land-management organisations. Organisations may be aware of frameworks such as Natural Areas; however, government targets, policy drivers and financial and staffing resources will determine the priority given to any framework or new initiative. Currently it seems that organisations are guided by PSA targets and limited by resource constraints. Nevertheless there does exist a *conscious awareness* of Natural Areas and this represents a recognition that people and non-human nature are interconnected and need to be treated as such within a framework that is concerned with the ecological integrity, as well as the human activity, within a landscape.

7.3: An Unconscious Awareness of Natural Areas

As illustrated within table (7.2) twenty-six individuals that participated within my research had an *unconscious awareness* of the Chiltern Hills Natural Area. I determined this through the analysis of how the participants described the area in which they were situated. Only after participants identified the area as the Chilterns themselves did I proceed to probe further as to what participants felt the Chilterns to be, what the most important aspects of the Chilterns were and a direct explanation of where they felt the Chilterns were. From this I was also able to

ascertain whether or not the participants were referring to the Chilterns AONB as opposed to the wider area of the Chilterns Natural Area, which will be discussed in subsequent sub-sections.

7.3.1: Non-human Nature and the Delimitation of Natural Areas

All of the participants with an *unconscious awareness* of the Natural Area were either land managers or land users. Participants that demonstrated an *unconscious awareness* of the Chilterns Natural Area were participants who had no existing knowledge of the Natural Area framework and when asked to describe the area, identified it in terms of the landscape, habitats and geology of the Natural Area. This clearly shows that the participants associated the Chilterns with non-human nature, supporting bioregionalists who suggest that people associate with units delimited by non-human features (Dodge, 1981; Metzner, 2003).

When asked for a description of the area, all twenty-six gave descriptions that were based upon the non-human landscape and habitats within that landscape that are identified as being part of the 'character' of the Chiltern Hills (Countryside Commission, 1992; English Nature, 1997). Whilst alone these do not indicate the awareness of an area wider than the AONB, they do show that when describing the area in which they live, people chose to use a non-human landscape description as illustrated in the subsequent quotations. This adds support to the contention by bioregionalists that people identify with more 'natural' features as opposed to administrative areas (Sale, 1985; 2000; Thayer, 2003).

> "Much of the Chilterns is woodland and this is special, we don't just farm 400 acres we have a further 350 acres of woodland. The woodlands are traditionally beech although we are fighting a losing battle with the grey squirrels with the beech" (Barry).

> "My friend described it as a soft landscape because of all the trees and the green. It's not a hard, harsh landscape it's a soft landscape with all the trees" (Olivia).

> "A lot of it is beech woods they are part of the structure, people that haven't been here before are impressed by them" (Pamela).

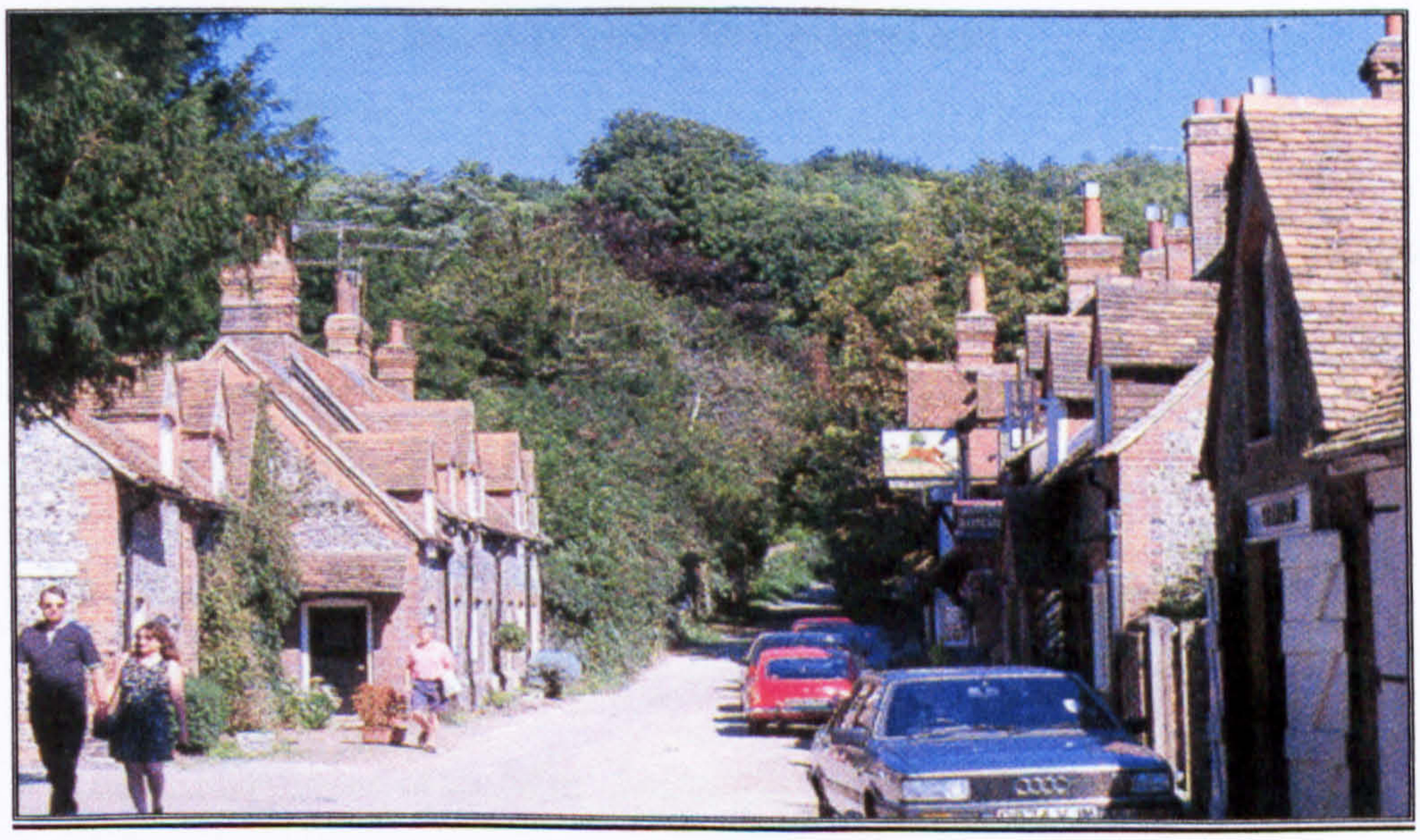
> "The landscape I think, that rolling landscape with the wooded area and the architecture there is a very distinctive architecture" (Karen).

> "The views and the architecture, I love old architecture, we live in a listed building" (Stephanie).

The participants are particularly aware of the Chiltern woodlands, which were an important aspect of the furniture trade within the Chilterns in the nineteenth century (Hepple and Doggett, 1994). The woodlands are inevitably cultural and represent the hybrid relationship between people and non-human nature within the Chiltern Hills. Woodlands are also large habitats and aesthetically significant within any landscape (Peterken, 1996). However, I contended earlier that the relationship between people and non-human nature is an important component of the development of a sense of place. By identifying the Chilterns in terms of its non-human landscape participants are, on some level, associating with non-human nature.

As illustrated in the above quotations, participants also considered cultural aspects of the landscape within their description of the area, primarily in relation to architecture. The specific examples of Chilterns architecture being discussed are the 'traditional' flint and brick cottages, (as illustrated within figure 7.4) that make up many of the villages interspersed throughout the Chiltern Hills (Chiltern Hills AONB, 2002; Countryside Commission, 1992; The Chilterns Conference, 2002).

Figure 7.4: Traditional Flint and Brick Houses within the Chiltern Hills



(Chilterns AONB Management Plan, 2002, p.13 – reproduced with permission from the Chilterns AONB Team)

The connection that participants made between the architecture and the Chiltern Hills suggests the importance to the participants of human as well as non-human elements within the landscape. This further supports the notion of Natural Areas as hybrid systems. Hybrids are

composed of both human elements and elements of non-human nature (Whatmore, 2002). Bioregionalists suggest that bioregions will not only have distinctive and characteristic non-human elements but also associated characteristic cultural elements (Thayer, 2003), again emphasising the hybrid nature of bioregions. This supports English Nature's view of the balance between people and nature within the Natural Area framework (English Nature, 1993; 1997).

The primary factor that distinguishes the Chilterns Natural Area from the AONB is the inclusion of urban areas. The AONB excludes all of the major urban settlements that are included within the Natural Area boundary. When asked to identify where they felt the Chilterns to be situated a number of participants included the urban areas that fall within the Chiltern Natural Area such as Hemel Hempstead, High Wycombe and Luton. This clearly indicated that participants did not only associate the Chiltern Hills with the AONB designation but had an *unconscious awareness* of the Natural Area as a whole. Even among the participants that resided within urban areas, they still considered these to be part of the Chilterns, despite being officially excluded from the AONB boundary. Quotations below show these points.

> *Interviewer:* So do you think the Chilterns include places like Luton and Reading then?
> *Stephanie:* Luton and Reading, well they are in the hills…its difficult…but yes…they do go into the Chilterns.

> *Interviewer:* So where do you think the Chilterns are?
> *Kim:* It's the hills…
> *Simon:* Yeah the hills.
> *Interviewer:* Do you think that includes here where you are all living (Luton group)?
> *Kim:* I think…its not very…erm…
> *Melissa:* Yes…but there are more houses.
> *Simon:* Some of it is…I think it is part of it (Group 4).

> "Well Luton does nestle in the gap in the hills so I suppose it is part of it…" (Daryl).

> "Luton is on the end of the hills…but they start again so it is part of it" (Bret).

When participants were directly asked about whether or not they felt the larger urban areas were part of the Chilterns a number of them clearly suggested that they did. However, as the interviews had evolved over the research period, not every participant had been asked specifically about the urban areas, and it may be that other participants interviewed earlier on

would have disagreed. All but two of the participants in the above discussions lived in urban areas within the Chilterns.

7.3.2: The Chilterns as an Area of Outstanding Natural Beauty

Given that the Chiltern Hills Natural Area is nearly congruent with the boundary of the Chiltern Hills AONB it was important within my research to determine what exactly participants considered to be the Chiltern Hills, whether as the Natural Area or the AONB (Chilterns AONB Management Plan, 2002; Jones et al, 2001a). This is necessary to any argument that advocates the use of non-human defined boundaries as opposed to defined boundaries and supports a wider countryside approach to working in an integrated manner as opposed to a site based approach. To ascertain the importance of the Natural Area framework to participants either *consciously* or *unconsciously* it was necessary to determine if participants were identifying either with the wider Chilterns Natural Area or the AONB (Chilterns AONB, 2002).

Eight participants identified the Chilterns in terms of the AONB designation. Whilst describing the area in relation to landscape features, that adds a certain amount of credence to the bioregional debate that people associate with the non-human landscape (Sale, 1985), these participants only saw the Chilterns in terms of the designation and felt that it only included rural areas. Sandra lives in Thame, a town that falls within the Chiltern Hills Natural Area, but when asked whether she considered the town part of the Chilterns she only identified a loose relationship:

> "Yes we have loose connections with the Chilterns, but not a great deal" (Sandra).

Again when discussing his proximity to the Chilterns, Rory, who resides within Weston Turville, suggested that he and his family live on the boundary of the Chilterns:

> "We are on the edge of it though, Wendover woods aren't far away, they are the only bit near I think" (Rory).

Alan, a land user in Hemel Hempstead, identifies half of Hemel belonging to the Chilterns as part of the AONB and his desire for the rest of it to fall into the Chilterns area. Like Weston Turville and Thame, Hemel Hempstead as a whole is part of the Chilterns Natural Area.

> "One of the things that is said is that Hemel Hempstead is the largest town in the borough and that includes part of the Area of Outstanding Natural Beauty. If part of the

> function of the borough is to reflect the character of the Chilterns, it would be good to see it as part of the Chilterns" (Alan).

This reluctance to class urban areas as part of the Chilterns could primarily have been produced in response to the emphasis placed upon the Chilterns as an AONB. Both the literature and discussions within the interviews revealed just how well known the Chilterns AONB was countrywide, and the emphasis placed upon the Chilterns AONB as a place for recreation and conservation within the South East. However, Alan goes on to identify that there are many 'natural' features within Hemel Hempstead that are characteristic of the Chilterns, although the Chilterns are still referred to as separate:

> "We do have things from the Chilterns we have two chalk streams that run through the town and the Red Kites fly over from the Chilterns if that means we are part of the Chilterns?" (Alan).

Alan further says that even though previously viewing the Chilterns as separate from Hemel Hempstead, there was a growing trend to class the area as the Chilterns. This could be related to the 'Chilterns' characteristics identified above or a growing *unconscious awareness* of the Chilterns as a much larger area than the AONB. What is clear from all this is whether or not participants are viewing the Chilterns in terms of its larger meaning or as the AONB, there is an importance placed on the distinctiveness of the Chilterns as being different from the surrounding areas. This distinctiveness repertoire will be discussed within the next chapter in greater detail.

7.3.3: Summary

This section has discussed the *unconscious awareness* of the Chiltern Hills Natural Area presented within the interviews and figures. Through the consideration of the way in which participants described the area in which they lived I was able to determine that, although a large number of participants had no working knowledge of the Natural Area framework, their discussion surrounding the area in which they lived or worked suggested an awareness of the Chilterns in terms of its bioregional delimitation rather than that of the AONB. Many of the participants primarily discussed the Chilterns in terms of non-human features, which is suggested by bioregionalists to be fundamental in the identification of bioregions (Berg, 2000; Sale, 1985; Thayer, 2003). Many of these descriptions included an acceptance of urban areas as part of the Chilterns, which are specifically excluded from the AONB designation (Chiltern Hills AONB, 2002).

Only eight participants specifically identified the Chilterns as the area delimited by the AONB boundary and this was based primarily on the view of the Chilterns as 'rural' and exclusive of urban areas. However, only two participants viewed the Chilterns (whether it be the wider AONB or the Natural Area), from the perspective of administrative boundaries. I suggest that this occurred as the result of these participants being intricately involved within the administrative duties of parish and town councils.

This section identifies that participants within the Chiltern Hills case study site have a clear understanding that this relationship between people, place and non-human nature exists and I contend that this is an important foundation upon which to consider the concept of a sense of place. Within the next section I will discuss the role of Natural Areas within the Parrett Catchment, as an alternative to the catchment framework, for the facilitation of a sense of place and the consideration of the relationship between people, place and non-human nature.

7.4: Natural Areas within the Parrett Catchment

As I have previously discussed, within the Parrett Catchment, catchment awareness (both *conscious* and *unconscious*), was limited to government agencies, the land-management organisations and those that were regularly at risk from flooding within the lower catchment. There was a slightly increased awareness of single rivers within the area, but little to support bioregionalist's claim that people associate with river basins or catchments (Berg, 1977; Sale, 1985; Thayer, 2003). However, what was revealed within the interview process and analysis was that participants discussed the area in terms of landscape features and these corresponded to English Nature's defined Natural Areas. Table 7.3 represents the landscape areas identified by the respondents within the interviews and Table 7.4 highlights the Natural Areas that are found within the Parrett Catchment as identified on the Joint Character Map for England. As can be seen from comparing these two tables there is a significant amount of correspondence, showing participants awareness of landscape features within the Parrett Catchment. This awareness of landscape features though not on a catchment scale, still corresponds with the view of bioregionalists that people associate with non-human landscape features (Sale, 1985) and is the first step in supporting my suggestion that an awareness of non-human nature is necessary to the development of a sense of place and the integration of people, place and non-human nature.

Table 7.3: Landscape Descriptions

Landscape Description
The Quantock Hills
Somerset Levels and Moors
Blackdown Hills
Exmoor

Table 7.4: Natural Areas within the Parrett Catchment

Natural Areas
Exmoor and the Quantocks
Vale of Taunton and the Quantock Fringes
The Blackdowns
Somerset Levels and Moors

As can be seen from comparing tables (7.3) and (7.4) there is some discrepancy between the names given to the specific landscape areas. However, what is interesting to my research is that the participants within the research, when talking about the area, talked in terms of landscape units that closely corresponded to Natural Areas. As with the Chiltern Hills repertoires, both a *conscious* and *unconscious awareness* of Natural Areas were apparent within the analysis.

7.4.1: Conscious Awareness of Natural Areas within the Parrett Catchment

All of the government agencies and land-management organisations presented a clear *conscious awareness* of the Natural Area framework. This was revealed through an evident familiarity with concepts such as Landscape Character Assessments, landscape types and specifically Natural Areas themselves. Unlike the English Nature local offices within the Chiltern Hills Natural Area, the offices within the Parrett Catchment identified a significant practical use of the Natural Area framework within their daily work. The Environment Agency also identified the use of a landscape approach within the Somerset Levels and Moors as opposed to a catchment based approach.

This potentially adds support to the use of landscape based frameworks within the UK as opposed to river basins or catchments. However, the Environment Agency's dealing with Natural Areas was limited to the Somerset Levels and Moors, and is delimited primarily by the wetland habitat. If this was not the case I suggest it is unlikely that the Environment Agency would make practical use of the Natural Area framework especially given the historical emphasis placed upon the used of catchment based approaches and the recent pre-eminence

being placed upon the development of a Integrated River Basin framework in response to the WFD. However, when questioned regarding the meaning of the 'landscape approach' to him and his work within the Levels and Moors, Edward suggested it as corresponding with a catchment or habitat based area in relation to the wet grasslands of the Levels and Moors, as illustrated below:

Interviewer: You mentioned previously that you work to a landscape scale, how would you define that?

Edward: I would say on a catchment or on a moor by moor basis rather than on a field by field, ditch by ditch or even ten metres ditch. Yeah… we are talking about a thousand hectares plus at a time.

Byron identifies the priority of the Natural Area framework to the local English Nature offices within the Parrett Catchment:

> "We work on what we would call a Natural Area profile, a Natural Area structure erm…if you are familiar with those again that's explained on the English Nature website and that's obviously the Somerset Levels and Moors Natural Area" (Byron).

However, he subsequently goes on to identify that most work is at a smaller site based scale due to priorities within designated sites whilst taking account of some wider catchment issues:

> "Well mainly the work is actually site based…so there isn't a conflict there really. The thing I would say about the site based though, I mean the SSSI's can't be protected just on…just on the site, the catchment is important to do that particularly for things like diffuse pollution and water quality issues" (Byron).

There is a clear indication here both of the importance of viewing designated sites within a wider context such as a river catchment, but at the same time an admission that work is primarily site based, supporting the view I presented earlier that agencies are often governed by external targets that act to restrict wider countryside work. However, these two quotations identify a *conscious awareness* of Natural Areas and of the Parrett Catchment, which is fundamental for working within a wider context.

Whilst working within a site based setting was a common feature of the land-management organisations, another common feeling was that there is a need to look at a wider countryside approach and this includes the Natural Area approach. Whilst not illustrating a *conscious*

awareness of Natural Areas directly, the recognition of a wider countryside approach is clearly demonstrating an appreciation of consideration of the wider landscape beyond designated sites. Even whilst identifying a less than positive view of the Natural Area and Character Area frameworks, Aaron identifies the potential benefits of working within the wider landscape and the positive implications this has for non-human nature.

> *Interviewer:* Do you make use of the Character or Natural Area frameworks for landscape scale work?
>
> *Aaron:* No not really it's not that useful. I mean its an exercise that needs doing but I'm more interested in the nuts and bolts of the landscape, the landscape components such as the hedgerows, the woodlands, habitats etc. I feel we should be trying to look after all of them, not just some of them, not just what is special and we are not doing nearly enough at all. We are only now making a start of it, looking at whole areas. I think English Nature and the rest target special areas more and too much in my opinion it's all the area that is important not just bits of it (Aaron).

Although Aaron states that he does not utilise the Natural Area framework, this view of considering the area as a whole and everything in it is fundamental to the Natural Areas framework and the concept of bioregionalism.

7.4.2: Unconscious Awareness of Natural Areas within the Parrett Catchment

Although all of the participants from the land-management organisations and agencies had an awareness of the existence of Natural Areas, none of them credited them as more than an academic exercise. However, all but one of the land managers and land users identified an *unconscious awareness* of Natural Areas, and discussed the areas in which they lived in terms of the landscape and the key towns and villages that make up those landscape areas.

The Quantock Hills, Somerset Levels and Moors and the Blackdown Hills form distinct parts of the Parrett Catchment and are Natural Areas. Both the Quantock Hills and the Blackdown Hills are also established AONBs that have been promoted over a number of years, therefore there is always the potential that the presence of the AONB and its advertisement has influenced the participant's awareness of the landscape within these areas. Both of the AONBs are nearly congruent with English Nature's Natural Areas. The Somerset Levels and Moors however, is not an AONB but has a number of SSSIs and is an Environmentally Sensitive Area (ESA).

Despite claiming not to know about frameworks such as Natural Areas and Landscape Character, a number of land managers and land users discussed areas in relation to aspects of landscape character evidencing the importance of these facets within the landscape among the people that live and work within the landscape. Brian describes the Blackdown Hills in comparison to different landscape units that surround it as illustrated bellow:

> *Interviewer:* Do you think that this area is distinctive from surrounding areas?
> *Brian:* Yes the Blackdowns are very distinctive from the Quantocks and the Levels and Moors. The Quantocks are really more well known, if you are in Taunton and you think you want to go on a Sunday afternoon walk then you will go to the Quantocks. The Blackdowns are made up of really tiny farms, narrow roads and things (Brian).

Not only is Brian illustrating a *unconscious awareness* of bioregions within the Parrett Catchment, but also identifying facets that make different areas distinctive from each other. It is not relevant as to whether or not land users and land managers are influenced by AONB advertising. What is significant here is the fact that they are identifying the importance of the landscape clearly by discussing different factors that distinguish one area from another. Gerrald a landowner within the Blackdown Hills area of the Parrett Catchment and also part of the local parish council, talks of the Blackdowns more specifically in terms of its landscape character, although he claims never to have heard of Natural Areas or Character Areas.

> "The Blackdowns distinguishes it by the character of the landscape which is a factor in the definition of an AONB. It is mainly landscape character. If you talk of the Somerset Levels and Moors they are broad. Every area has its own landscape value" (Gerrald).

The Natural Areas and AONB designations in the Parrett are practically congruent, unlike within the Chilterns, especially as much of the Parrett Catchment itself is rural and therefore there are few towns that are excluded from the AONB designations (Quantock Hills Management Plan, 2002). Only seven individuals that participated within the research had no knowledge of the presence of designated areas within the landscapes and all respondents that lived within the Blackdown Hills and the Quantock Hills were aware of the AONB designation and the reasons for their designation. However, respondents still discussed the differences between *landscape* units as opposed to *administrative* or *water-based* units, as demonstrated by Michael, who is a land user located within the Mid-Quantock Hills:

> "It is the contrast, there is the magnificent ruggedness of the Quantocks and the undulating hills of the Brendons that sweep over to Exmoor" (Michael).

Michael clearly identifies the Quantocks, Brendons and Exmoor as distinct landscapes. Even when describing factors that they liked most about an area, participants tended to talk in terms of landscape units. However, there was a recognition that landscape units, whilst referred to in terms of a large area, are in fact heterogeneous in nature, as discussed by Bailey who is a land user resident within the Quantock Hills:

> "Well it is nice the way it is un-crowded you know what I mean? It is a super walking area, it is for a certain kind of walking it is the best in the country for it. There are more paths on the Quantocks compared with Exmoor. It is more varied than people think it is as well, this side is different from the other side. Most people think that if they have done one walk on the Quantocks then they have done the Quantocks" (Bailey).

All bioregions are heterogeneous and this heterogeneity is an important concept within bioregionalism, with the contention that the ecological crisis that has driven the development of bioregionalism is resulting in an increasingly homogeneous landscape (Plant, 1990b; Thayer, 2003). The recognition that landscape units are heterogeneous supports further the view that people are more aware either *consciously* or *unconsciously* of the landscape than has been discussed by academics and policy makers. The identification of heterogeneity within the Quantocks is a clear recognition of the whole of the Quantocks and not just part of it, giving support to the view I am presenting that people are *unconsciously* if not *consciously* aware of bioregional units. Michael, a land user in the Mid-Quantocks also emphasises the heterogeneity of the landscape and specifically the Quantock Hills bioregional unit:

> "It's the location really, this side of the Quantocks, not the Bridgewater side, not that there is anything wrong with Bridgewater but the south of the Quantocks in West Somerset...I can't say it is unique but it is one of the most unexploited diverse areas in rural England" (Michael).

Keith who resides within the lower reaches of the Parrett Catchment describes the levels and moors primarily in relation to their landscape units, but additionally passes comment that he does not like the fact that there are urban tracts within this. The acknowledgement of these urban tracts does demonstrates an awareness of bioregional units that include urban areas and are not just based upon tracts of high quality landscape as would be the case for designated AONBs or ESAs.

> "I am very fond of the moors and the levels and the gently rolling English countryside I think you would call it...but it is too urban for my liking" (Keith).

Keith is clearly though indirectly, discussing the impact people have had upon the landscape. Bioregionalists recognise the importance of the relationship between people and non-human nature within a bioregion and do not determine a bioregion based upon areas that are devoid of human contact (Metzner, 2003). By including a comment regarding urban areas, albeit a negative comment, Keith was identifying the combination of urban and rural which interrelate to form a bioregion. Few other participants discussed urban areas except in relation to potential flooding.

7.4.3; Landscape Awareness

I have contended that an awareness of the landscape is fundamental to the development of a sense of place within a bioregional framework. As illustrated within the Chiltern Hills Natural Area and the wider Parrett Catchment participants primarily described the area in which they lived or worked in terms of landscape features. If the people that utilise the landscape are not aware of its distinct characteristics then it would be unrealistic to expect them to become further involved with its conservation, which is being suggested by conservation organisations (Jones et al, 2001; Wynne et al, 1997). Although the use of landscape descriptors in discussing the area in which they live does not directly indicate either a catchment or Natural Area awareness, it does show that non-human nature is fundamental to the way in which people see the area in which they live. A section from a focus group below illustrates the different ways in which participants describe the area in which they reside and, as can be seen, this is primarily determined by landscape features.

> *Interviewer:* Could you describe the area to me please?
> *Ben:* Multi...hills.
> *Charlie:* Some of its hilly.
> *Beth:* Some of it is very flat...the levels.
> *Mitchell:* Very mixed.
> *Ben:* Undulating, beautiful.
> *Jess:* It both moor and heath.
> *Johnathan:* Wetlands.
> *Jess:* Yes wetlands (Group 1, Parrett Catchment).

What is also clear from these descriptions is the diversity of the landscape and the recognition of this diversity. When subsequently asked about their favourite places within the Somerset area as a whole, the group again talked in terms of landscape units, with the exception of one participant that talked of a nearby town. The group were all from different areas within the Parrett Catchment and tended to describe their favourite places in terms of Natural Areas, reaffirming the *unconscious awareness* of Natural Areas that participants had presented.

> *Interviewer:* What is your favourite place within Somerset?
>
> *Jess:* Glastonbury, I really love Glastonbury.
>
> *Beth:* The Quantock Hills.
>
> *Sarah:* And Exmoor.
>
> *Jess:* Part of it is beautiful.
>
> *Interviewer:* Why do you like those areas?
>
> *Jess:* I always feel at peace when I'm there.
>
> *Beth:* The Quantocks are rounded hills and they have the deer, red deer that you can try...and its nice just to go up there and walk down trying to see (Group 1, Parrett).

Only one of the participants within the Parrett Catchment identified the area in which he was resident in relation to administrative boundaries. He is a member of the Parish Council and once worked within wider government, so this may have influenced his awareness of administrative units, (which was also a factor identified within the Chiltern Hills Natural Area). The following quote illustrates how Charles describes the area in which he lives:

> "It straddles the Devon and Somerset border and is 232 square miles" (Charles).

Charles is referring to the Blackdown Hills, having already identified that he lived within this landscape unit. Until Charles referred to the Blackdown Hills as an important part of his locality I did not refer to them within the interview process. And even though Charles used an administrative description of the location of the area where he felt he was situated, when asked for a description of the area he referred to both the physical landscape and the interrelationship between the landscape and people:

> "It's a managed landscape, there's a lot of farmland and ex farmland. Also it is the rolling hills and areas of woodland" (Charles).

The interaction between people and non-human nature will be discussed in greater depth within subsequent sections. The importance here is the identification that bioregions, in this case the

Blackdown hills, have at the heart of their character an interrelationship between people, place and non-human nature.

7.4.4: Summary

In overview, in the Parrett there is little catchment awareness beyond the land-management organisations and land users that are affected by flooding. Even though this is the case, there is still an awareness of the catchment and this is fundamental if catchment based projects are to work. However, when participants discussed the area they talked in terms of landscape units that are represented by Natural Areas such as the Quantock Hills, Blackdown Hills and Somerset Levels and Moors. This suggests that people are more familiar with the landscape than they are with the presence of the wider river catchment, although all participants were aware of rivers that were in close proximity to their own land or land they used. This suggests that the catchment scale may be too large a scale for people to relate to but the single river system or the landscape unit may be more suitable. However, it was impossible to determine to what extent the influence of designated sites such as the AONBs within the Parrett Catchment influenced the awareness of the landscape unit, because unlike the Chilterns there are few urban areas that are excluded from the designations. However, I feel there is a more intuitive response to the landscape within both areas. This perception is supported by the landscape descriptors used to describe the area in which participants lived and worked.

However, despite the clear identification of both a *conscious* and *unconscious awareness* of both Natural Areas and river catchments, this is only one component that contributes to the recognition of the interrelationship between people, place and non-human nature and the existence of a sense of place. The next chapter will consider the relative importance of the interconnectedness of humans and non-human nature within these bioregional frameworks and the way in which these interact to form a sense of place.

Chapter Eight

Place Based Identity and Dualism

This chapter considers further the extent to which the Chiltern Hills Natural Area and the Parrett Catchment were perceived to have their own distinct identities and whether this produced a sense of place or sense of attachment between the bioregion and the people that live and work within these areas. The previous chapter illustrated that participants within this research were either *consciously* or *unconsciously aware* of the bioregion in which they lived or worked. There was also a clear identification that bioregions based upon the Natural Area frameworks could be identified by their distinctive landscapes, something of which participants were clearly aware. As part of this awareness related to bioregions and place based awareness, I have argued that people, place and non-human nature are intricately interconnected and this will be discussed in greater depth within this chapter.

8.1: Place: The Relationship between People and Non-Human Nature

I have suggested that a sense of place may occur at a range of different spatial scales and may have many different facets that contribute to this concept including a sense of identity, attachment, character, distinctiveness and community. I suggest in this chapter that place based identity exists to varying degrees and it has positive implications for both area based work and conservation decision-making. After discussing the different aspects of place and the importance of this to participants within this research, I will finally examine the nature/culture dualism that is present throughout all of the interviews and the implications this has for place based identity, conservation work and approaches to future, wider landscape work. Within the interview data it is evident at times that there is a clear distinction between the views of agencies, land-management organisations and that of land managers and land users and where appropriate these differences will be emphasised.

8.1.1: Sense of Place as a Concept

When interviewed all of the participants from agencies and land-management organisations were aware of the concept of 'a sense of place', however, the meaning attributed to, and the usage of, this concept varied within the organisations as illustrated below:

> *Luke:* A sense of place, oh yes we've heard of it. I think the perception of it changes...

James: Depending upon where you are from, for example people from urban areas will have a much different sense of place than those that live within a small country village. Urban people may not associate with the countryside or their area at all (Group 2, Chilterns).

"I've not applied it...I see...it's something the Countryside Agency...they haven't done that but they've got their quality of life, erm the documents there it's quality of life capital, managing environmental, social and economic benefits, it's that it falls within that kind of umbrella stuff, you know what's it about, let's get it right? Let's work on what we've got and design it better, produce a good end result, that sort of stuff. I must admit I've heard of it, but as a concept rather than a tool" (David).

"It's a while since I've dealt with it but it's something like, something like the feelings and the associations you have connected with a given place" (Robbie).

"Well we actually had a whole project on sense of place and it's actually erm, we've been, we've now changed it slightly and it's called...well now we have statements of significance" (Tim).

Although participants from within agencies and land-management organisations confirmed that they had heard of the concept of a sense of place, it was viewed as a concept to be mentioned in design and management plans but which appeared to have little influence practically. Max, who suggests it is a government term:

> "Yeah...it's...some of it's in here actually (the forestry design strategy), yeah it's a government concept you know trying to get people to look after their own areas and if they want the trees planting there they will look after them rather than somebody coming along and planting them there that sort of thing. So yeah..." (Max).

However, although participants from agencies and land-management organisations revealed that they did not directly make use of the concept of a sense of place except maybe as a section within a plan, a number of participants suggested that they felt a sense of place did exist for people, including themselves. Participants identified the importance of different places and suggested that the importance attached to certain places by people was part of this sense of place, and this could occur at a variety of spatial scales:

"Yes I think they do people feel very passionately about the area and if we go back to the 1983 burning of effigies which in itself is a remarkable one-off event that shouldn't be considered the norm, but I mean that clearly shows that people were very passionate about their place and intrusion from outsiders i.e. government organisations was not welcomed" (Byron).

"I think, I remember going, one of the first questions I asked about natural areas in the north, the Yorkshire Dales, I was told if you live in the Yorkshire Dales, you don't recognise that entire area, you live in Wensleydale or whatever. But the point I made was ok you've got all these different dales where people recognise where they live, but when you look at the features in each of those dales they are the same and by drawing a line around it like that you are capturing all those types of grassland, woodland, fen, or whatever it is, so therefore there is a coherence there, but we do recognise that there is this local sense of place. That relates farmland to local communities, also in valleys" (Jason).

"A few years ago I was in the Chilterns and talking to people involved in a local community project and they were saying that actually this was in a village and they were saying that people that were most actively engaged in the project didn't live in the village but they were children that grew up in the village that live somewhere else and you know, you've got that sort of you know, you've got all of that that comes in. Particularly when you get to the Chilterns, you know half the population is only there at weekends if you talk...you know...even that frequently, second homes and all that. So once you get into that it gets quite complicated really, once you start looking at local communities and what people feel about places and all of that" (Dylon).

As also revealed within the literature and by participants within land-management organisations and agencies, a sense of place had no accepted definition within management documents and is presented as fluid in terms of the scale at which it is applied and is adapted to suit the purpose of the document. As shown below whilst participants from agencies and land-management organisations in both case study areas accepted the existence of a sense of place, there was no clear view of what the concept means.

"Yes I mean...well if it's a...if you just take it to mean how does a person feel about a place of course it exists. You are constantly re-evaluating that all the time, its part of existing really, its part of survival" (Robbie).

"Something could be really very local is that sense of place? Well it is to some people I think. Compared with…even a dale there will be parts within the dale that can get very parochial I suppose, it has meaning" (Bill).

"It's all these things, like walking the dog, so these are all the things that's special and so sense of place is trying to show what is special and what's unique. And what it means to different people, it can often be very different you know from one person to another" (Tim).

Interviewer: So you are aware of a sense of place?

Byron: I'm vaguely aware of it, I don't have a great feeling for it but yes, I am aware of it certainly.

The above discussions show the variety of different ways in which participants from land-management organisations and agencies discuss a sense of place. This supports the evidence from the document analysis, that there is no consistent view by organisations and agencies as to what a sense of place is or how it applies to the work that they carry out on a day to day basis. However, there is the acknowledgement that a sense of place exists but it is difficult to define as demonstrated by comments such as being "vaguely aware" of a sense of place as Byron suggests.

8.1.2: Cultural Landscapes

All of the participants within this research recognised the role that people have had in shaping the landscape of the UK. There is the potential to use this recognition to work positively with non-human nature in a more sustainable manner:

"I think the beech trees are special, they came with the furniture industry and they give a soft feel to the countryside" (Bob).

"The farming environment is of vital importance that is why the Chilterns are the way they look like now" (Thomas).

"Historically, the area was composed of more chalk downland and the beech was only planted for the furniture industry that is no longer large scale within the Chilterns" (Luke, Group 2, Chilterns).

"Farming had a role in the production in that landscape. It started since the iron age due to the forts on the hills and then there were the enclosures of the eighteen hundreds on the tops of the hills" (Gerald).

"In years gone by, the landscape was shaped by the people that lived on it and worked with the constraints of the flooding and things and that is not true now, most people work in Taunton. There are only three dairy farms here now and there were fourteen in Wood Hill alone in years gone by and the Withys, because of competition with Poland and things are declining, there is no call for it. The Willows and Wetlands Centre keep going because of the charcoal. But the things that have shaped the land have gone" (Stella).

"Here it is a fully managed landscape and people like it like that and it has been that way for the past few hundred years" (Aaron).

"Everything you see there is made by farmers and without the farming it would be marshes, like in France there are huge areas of marsh that are not accessible. It is the product of agriculture I mean that is what the countryside is. Before the enclosures of sixteen or seventeen something there were no hedges, there were woods, but there were clearings in them which were fields" (Mel).

These quotations show a clear recognition of the role that humans have had in shaping the landscape within both case study areas and identify the close interrelationship between people and non-human nature in the UK. As is clear from Stella's comment "working within the constraints of flooding" non-human nature places constraints on the influence that humans can have on the landscape. This is evident within the lower reaches of the Parrett Catchment where flooding influences farming activities:

Interviewer: The flooding is a problem here then?
Steven: Yes we were very badly affected by the floods...
George: If you can imagine maize being under water and we were unable to leave the farm (Group 1, Parrett).

"Well we do yes...it floods in the winter, as long as it is the winter months it doesn't really matter, well it does to the habitats. But if there are floods in the summer it can be devastating especially with the cattle and things. Though we have just had two seasons where there have been no floods at all...it has been very dry" (Lloyd).

It is not just flooding that impacts upon farming. There are many other facets of the non-human environment that have implications for the way in which the land is utilised including soil, altitude, climate and topography:

> "We have good farmland here so we can do better out of farming it...the land is good around Cannington. If we had poor land like maybe in the levels and moors or further in the Quantocks then I would put the whole lot in the Higher Level (scheme), but it is good farming here and we don't need to" (Mel).

> "But...most of the area is not accessible due to the land itself it is difficult to do anything and there is nothing that we can do about that, so therefore there is only a certain amount of land accessible" (Anna).

> "We have light land so it is a problem if we have a drought, we are stuffed, it is a risk though when the rain comes" (Lee).

> "Yes they have quite a long range (the Chiltern Hills), they have a big effect on the weather up here, we go up two hundred feet and it differs from the Vale of Aylesbury, if it is wet there it is dry here and vice versa" (Sandra).

> "So yeah...so why worry about it...well not worry about...research and all that tell us how much it is going to warm in the next fifty years and tell us how much the sea level will rise, but I'm sure nature will decide what species are going to survive"(Max).

These discussions show that there is awareness among the participants that the non-human landscape and humans are intricately intertwined and interdependent. This relationship is important to a sense of place and the way in which people relate to an area.

8.1.3: Distinctiveness and Sense of Place

Distinctiveness is one of the components that I have suggested in chapter three contributes to the development of a sense of place, i.e. if an area has something that is distinctive, that sets it apart from other areas, this gives people something to identify with. In this subsection I will explore the complex notion of distinctiveness in relation to the Chiltern Hills Natural Area and the Parrett Catchment. When talking to participants from land-management organisations and agencies I asked them to give personal opinions rather than what the organisations portray

within their literature. However, it is difficult to determine to what extent organisational rhetoric influences personal opinions and therefore the responses of participants.

During the interviews in the Chilterns, when asked what made the area special to them or distinctive, all but three participants discussed the Chilterns as a whole, supporting evidence presented in chapter seven that the Chilterns itself is viewed as a discrete entity or bioregion by participants. Characteristic of responses was the emphasis placed upon non-human aspects of the landscape, highlighting a awareness by participants of the importance of non-human nature within the area in which they live and work.

All of the participants identified the beech woodlands as making the Chilterns distinct or special in someway:

> "I think it is the trees in the Chilterns that set it apart" (Olivia).
>
> "I think the beech trees are special, they came with the furniture industry and they give a soft feel to the countryside" (Bob).
>
> "A lot of it is the beech woods they are part of the structure, people that haven't been here before are impressed by them" (Sandra).
>
> "Oo…the trees cos I used to live in Liverpool and it's very flat and very treeless up there and when I first came down I was absolutely amazed by the trees, beautiful trees" (Chelsea).

Interviewer:	So what makes the area outstanding then?
Sebastian:	The hillside I think makes it outstanding and the woods, they are all over here.
Caroline:	Yes the Beech woods, Primroses and there are some trees that are not common.
Dana:	Yes…the colours in the autumn they change so much it is beautiful.
Caroline:	The colours change daily really.
Sebastian:	The wildflowers…the Bluebells…
Shelly:	And of course the Red Kites (Group 1, Chilterns).

Even though the participants discussed non-human nature-in this case the beech trees, several participants were clearly aware of human influence. Bob identifies the influence of the furniture

industry upon the beech. Beech woods would not have been part of the habitats of the Chiltern Hills if people had not introduced them for the furniture industry (Countryside Commission, 1992). Participants are indirectly emphasising the uniqueness of the Chilterns and the non-human components that distinguish it from other areas.

Beech woodlands are identified by many of the participants as distinctive although they were originally introduced in plantations within this area and are a product of the human driven furniture trade (Countryside Commission, 1992). In both case study areas most participants, including land managers and land users, described the area in terms of its landscape although these participants subsequently went on to discuss specific habitat features within that landscape.

> "The Chilterns of course is a range of hills so that goes right up to Bedfordshire and right down up to the top of Oxfordshire...Thame I think" (Chelsea).

> "The Blackdowns are very distinctive from the Quantocks and the Levels and Moors. The Quantocks really are more well known, if you are in Taunton and you think you want to go on a Sunday afternoon walk then you will go to the Quantocks" (Matthew).

> "Yes very distinctive it is the whole topography and the land use because of it has been very different" (Rosie).

> "It is a hilly area, with a high level of woodland, traditionally agriculture was small farms and small fields for livestock" (Carl).

> "It's the hills definitely, but also it is more undulating here. In the Levels and Moors it is flat, you have the biodiversity as they call it, but it gets boring really" (Mel).

> "Also it is the rolling hills and areas of woodland" (Charles, land user).

> "I think that there are two parts again. The floodplains that are flat (the levels and moors), settlement tends to be on the higher land here. All of the moors are surrounded by hills which you can see from the flat land very clearly and these moors tend to be flooded more" (Aaron).

> "The landscape is what makes it distinctive, the biodiversity and the heritage" (Pam).

Aaron and Carl clearly identify the links between people and the landscape and the way in which people have adapted to the characteristics of non-human nature. Three participants from the Chiltern Hills case study area identify both non-human features and human features as making the area distinctive:

> "Well...essentially it is the varying small landscapes that build it up. There is a certain building style that is used here, flint and slate. I would say it is a wooded clad" (Sophie).
>
> "It must be the views and the trees and the architecture, I love old architecture, we live in a listed building" (Stephanie).
>
> "The flint buildings as well they are distinct to this area, there are a lot of flint buildings, there are flint buildings elsewhere, but not this type with the redbrick" (Shelly, Group 2).

This shows the way in which buildings can add character to an area and can complement the non-human nature that they are embedded within: flint and brick are both traditional materials within the Chiltern Hills and as suggested by bioregionalists traditional materials should be utilised when building to maintain the 'special character' of the area and the interrelationship between people and non-human nature. Participants within the Parrett Catchment also identified the contribution of people to the distinctiveness and the development of the landscape character of each area. This relationship was primarily emphasised within the Blackdown Hills:

> "The Blackdowns are made up of really tiny farms, narrow roads and things. I mean over the past five years I have heard people saying how nice they are, but they have not been commercialised you don't get tea rooms or gift shops, no large car parks to beauty spots, there is limited caravan and camping facilities, enough I think but not a lot" (Matthew).
>
> "The field pattern is distinctive it has not changed a lot, though they may be bigger. The people in the area they have quite a sense of being in the Blackdowns rather than Devon" (Carl).
>
> "When you get into the deepest part of the Blackdowns there is a sense of isolation, there are very narrow lanes, lanes that go on forever and you have to drive so slowly,

it's very rural. I am used to rural areas that are open moors, it is different, it is a worked landscape, there are very isolated parts" (Pam).

Two participants did not see the Chilterns as being distinctive and aligned the landscape of the Chilterns to the South Downs:

Rory: I'm not sure whether the Chilterns is distinctive, it is similar to the Downs in Kent.
Interviewer: Do you think the villages and the built up areas are distinctive?
Olivia: I think some villages have their own identity, some have been ruined. In the Chilterns the conservation is not the same as in the Cotswolds, there are not distinctive buildings or anything, I mean they are not the same type of buildings. You have some nice thatches around...some of the villages Henley way are nice.

One participant, a landscape consultant, suggested that every landscape or landscape unit is distinctive from another:

"I suppose character assessment is identifying those things that are distinctive of a landscape, that make one landscape different from another and those are the things you particularly want to focus on erm to stop everywhere from becoming the same because that's what character is so it is looking at the soils, the drainage, the climate, all the constraining factors, there might be some cultural pattern, somebody might own something some big whatever, those are your constraints its about trying to work within those, by saying right saying that thing, hedgerows, medium sized fields are no longer viable they are not needed in modern farming but what could we focus resources on to maintain, something else to maintain structure that is not medium sized fields, perhaps a bigger scale structure primary hedge lines, farm boundaries, natural features like streams let's focus on those, it will be a bigger pattern but we will still have a pattern moving to something different in the future rather than take things away which is what has happened over the past fifty, sixty years things have just been taken away" (Frank).

Only two participants within the research considered distinctiveness in terms of administrative boundaries, one in relation to the parish in which he lived and the other in relation to the town, both were from the Chilterns case study area:

"Penn parish is different it is a bit of an oasis we look at ourselves as rural and we tend to see Amersham and things as urban parishes" (Winston).

"Thame does have some unique features we have burbage plots, a long Street, it has a long history Thame does" (Sandra).

Although both participants were classed as either a land manager or land user, Winston was also a Parish Councillor and Sandra a Town Clerk, so there is the possibility that this influenced the way in which they viewed the area as an administrative unit given this is the framework they would be accustomed to their work. Although discussing administrative units, both Winston and Sandra also highlight facets of each area that make it distinctive emphasising factors that contribute to a sense of place, not based upon a bioregional view but based upon existing administrative units.

Within the Parrett Catchment, although participants discussed the area in terms of landscape units, there was also a clear recognition of the diversity of the landscape that existed throughout the Parrett Catchment. This illustrates recognition of the catchment and that there are different landscape units that sit within that catchment.

"I think most people passing through it do not appreciate the contrasts, the different geology it produces different flora and fauna" (Chris).

Ben: How about the diversity? Up there over the flat lands...the levels...completely different.
Jess: Well within many of the walks that we have done around the Quantocks or the Mendips or...we've had quite contrasting landscapes haven't we.
Sarah: Within the day, within the day's walk yes (Group 2, Parrett).

A factor that was identified within both the Chiltern Hills and the Parrett Catchment's Natural Areas as setting the landscape apart from other areas and contributing to distinctiveness was the perceived unchanging character of the landscape. Participants interpreted the landscape as being unspoilt, as illustrated below for the Blackdown Hills and the Quantocks:

"The Blackdown Hills are becoming more well known, they are unspoilt and peaceful and that is what people like" (Matthew).

"The landscape has not changed it has been static it has not been affected by tourism or by major road building like elsewhere. The last thing that was put up was the tele-mast in the 1960s" (Gerald)

"The Quantocks have not changed much there are one or two conservation projects, but there has been no major development on top of the hills, the sheep and horses still roam so the nature of farming hasn't changed" (Carl).

"Much of it is unchanged over a hundred years" (Michael).

This unspoilt nature was only identified by one participant within the Chiltern Hills:

"Erm...I think one of the things that makes the Chilterns distinctive is it's a very old landscape and it's escaped, it's escaped a lot of the changes that have happened around the Chilterns and have occurred through legislation, i.e., planned landscapes, you haven't had as much enclosure here, enclosure was late, it wasn't as significant here as it was in the Vale of Aylesbury, which you know is like the flat plain" (Julie).

The same participants go on to identify changes that are occurring in the landscape that have significant implications for the changing character or distinctiveness of an area:

"Yes the area has changed I would say. The farms have changed when I was a kid people were making a living off sixty acres of land, but you couldn't now. A lot have amalgamated, they are only viable over two hundred acres" (Matthew).

"Yes the area has changed some the field sizes are bigger now. During the seventies the field sizes were around eight acres and now they are twenty five acres also we have lost the elm trees to Dutch Elm disease, it used to be like living in a forest before, but now it is not" (Keith).

Given the evolving nature of any landscape there must be some change in response to the interaction of people, place and non-human nature, which in turn will have implications for place and the way in which it is perceived.

8.1.4: Summary

This section has considered the way in which agencies and land-management organisations view a sense of place as a concept only, rather than anything upon which to base conservation action. This supports the evidence provided from the document analysis that identified a sense of place as a taken for granted term. However, all participants within these sectors indicated that they felt a sense of place was a real sense of attachment between people and place.

This section has highlighted that the majority of participants identified the importance of landscape distinctiveness within an area. In the Chiltern Hills Natural Area all but two participants talked in terms of the Chilterns as a wider landscape. Whilst there was an acknowledgement that the catchment was composed of diverse landscape features and ecological components the Parrett Catchment participants did not consider the catchment as a whole but as distinct landscape units. Participants identify primarily with non-human features within an area in which they live or work, whilst a number of them identify the importance of human features such as building design.

8.2: Local Identity and Knowing One's Place

Identity and distinctiveness are often used interchangeably. Within this research I have considered identity and distinctiveness as two discrete components of place. Identity is viewed as the way in which a person relates to place, whilst distinctiveness emphasises the differences between places. Within this section I will consider the different ways in which participants viewed the identity of the areas in which they live and work and the different ways in which it was presented by participants within a range of *identity repertoires*.

8.2.1: Identity as Consumable

Identity was discussed at a variety of different spatial scales by different participants. All of the participants thought that their areas had an identity, although this identity was represented in different ways by different participants. Land managers that had diversified away from farming and had developed bed and breakfast businesses considered local identity as a consumable or a promotional tool. This was also true of land users that owned bed and breakfast or guest houses. Identity was viewed as something that could be used to attract people to an area as illustrated by the quotes below that came from participants within the Parrett Catchment:

"The Blackdown Hills are good for local interest and we use them. It will go far, like selling produce locally we would use it to sell produce" (Gerald).

"We use the Quantocks as an advertising tool, but the Quantocks are so small and Exmoor is such a large area and we are not identified as good for access to Exmoor as we are not central to Exmoor, but we are only three miles from the Quantocks and people don't know the bit in between the Brendons" (Bailey).

"Yes I do use Quantocks and Exmoor to promote the guest house. The National Park and AONB people do advertise in the area to promote it" (Michael).

"Yes the tourists are drawn here because of the levels and moors, I think we are catching more now" (Keith).

The use of identity as a commodity has close affiliations to Relph's (1976) view of the way in which landscapes are commodified to attract tourists. Although Relph is primarily discussing large scale commodification such as Disneyfication, parallels can be identified as people are still using identity as the source of promotion. However, in contrast to Disneyfication, places such as the Quantock Hills and the Somerset Levels and Moors are 'real' landscapes, ones that have evolved over time through the interrelationship between people and non-human nature, rather than being created for a particular purpose. As illustrated above participants suggest that they are making use of an existing attraction within the area: the landscape. However, although participants are citing landscape identity as a means by which tourists are attracted to the area, it is clearly implied that tourists would come to the area whether or not there are bed and breakfasts for them to stay in, as it is the landscape that attracts them.

In the Chilterns references to the landscape commodified as a tourist promotional tool were less significant. All of the landowners and land users that had accommodation facilities identified that although some visitors came to the Chilterns because of the landscape, it was the proximity to London that was the primary attraction:

"We get mainly corporate people not tourists. The bread and butter is the business and weekends we get people that are going to weddings, parties and things like that. A few tourists come but not many, some come that are on their way to the south coast, but most have a link to the district" (Stephanie).

"Yes the summer is busy, we are open all year round, we have a lot of business people, we do lots of weddings, birthdays and we get lots of walkers" (Mary).

"I do get people on holiday but they don't come for a long time, they have three or four days. The business people they may come for a long quite a long time and go home at the weekends" (Pamela).

"Yes it is across the board, there are lots of business around here. There is the A41 and you can get to London in forty minutes. It is a good train connection to Euston and in Chesham you can go straight through on the tube, I used to commute here" (Mary).

"I mean people coming for pleasure come because of the Chilterns, but then we have a lot of our business due to business people staying here for easy commute to London and things. There is a lot of business in and around the Aylesbury area. It is easily accessible, I mean we are not that far off a main road. The motorways the M1, M40 and M25 they are all close by. People come in from London due to the train it is good the Chilterns line" (Rory).

One participant suggested that the Chilterns is not a tourist attraction at all and does not have enough of a sense of identity to become one:

"We never get anyone to stay because it is the Chilterns, but the tourist board...they can't seem to get their head around it. I don't know what they are thinking. The guests are not interested. I've got loads of leaflets they keep sending me from the Tourist Board, the National Trust properties and things. But no-one ever looks at these" (Stephanie).

"I think even if the Chilterns were promoted you wouldn't get the tourists we are not chocolate box enough really like in the Cotswolds" (Stephanie).

The attraction of the Chilterns because of its close proximity to large urban centres was clear within a number of interviews. However, as illustrated by Sam the Chilterns was classed by people visiting as somewhere to come on holiday because it was countryside, showing a clear link between the Chilterns and a landscape identity:

Cassie: Yes we are starting to get more people that are living here and are not just sleeping here...

Sebastian: No I think a lot are still just sleeping here.

Cassie: Do you think? I thought it was changing...

Sebastian: You will always get people just sleeping here. When the building first started about thirty-six years ago they were the first cheap places to buy out of London, but then people would make their money in London and move back to London.

Shelly: Well some moved up...sold and bought larger houses in the area.

Sebastian: The motorway that led to more people coming here, the motorway made it more accessible.

Cassie: Yes the motorway is why we came, my husband was working in London at the time and it was said why don't you look at this house in Oxfordshire, well Oxfordshire is large and we thought that we would be in the back of beyond, but with the M40 its not that far.

Sam: Yes we have family in London and we will go down and visit and stay the day or a few hours, they come here and stay a weekend it is like a holiday because it is in the country.

Caroline: Yes it is the countryside to them...

Sam: Yes like a holiday or something but we just go for the day.

Sebastian: It is the work patterns as well. I would say ninety-six percent of people work outside of the village, but they work out all around not just London, there's Birmingham, Oxford, Biscester... (Group 2, Chilterns).

"A good proportion of the population don't work here they tend to commute. It is an odd community, people don't stay here a long time the average stay is five to seven years and that says a lot. It is really suburbia here. It represents the biggest community in the area" (Joel).

"So most of the attraction is, is for people wanting to live here. It's accessible to London, it's accessible to Oxford and Reading, Aylesbury, Milton Keynes, Luton, Dunstable places like that, there are lots of places you can get to easily really in today's terms. So, erm...they'll come and they'll live and they'll commute to somewhere else, it is a particular problem but it does happen so they do do it. We've got railway lines that have got good services to London and Birmingham for example" (David).

Ten of the participants within the Chiltern Hills were people that had moved to the area and had commuted to larger urban areas such as Luton and London for business. Nevertheless the proximity to urban areas may not be the only reason for them moving to the area.
Despite few participants viewing the Chilterns in terms as having a *tourist identity* all of the participants felt that the Chilterns did have an identity of its own and that was based upon the Chilterns as a landscape, this was also true in relation to landscape areas within the Parrett Catchment.

8.2.2: The Chilterns Identity

Within the Chiltern Hills Natural Area there was a clear acknowledgement by participants that there existed a 'Chilterns identity', although participants did find it difficult to articulate what they felt this to be. All of the participants interviewed within the Chilterns Natural Area felt that they were part of the Chilterns and that the Chilterns had an existing identity in a wider context and not just in terms of the different villages or parishes, illustrated by the comments below:

Interviewer: you would say that there is a Chilterns identity then separate from that of the village?
Carla: Yes I would agree there is a Chilterns identity, I do identify the flint buildings with the Chilterns. The bluebell woods as well, it is an identity of rolling hills. I have got very attached to it (Carla).

"In the Chilterns I think people view it as a broader area but they don't know all of it, they only know small areas within it" (Zoe, Group 1).

"I would have a tendency to say that people would see themselves as part of the Chilterns, especially people that have lived here a long time" (Joel).

"The Chilterns already had quite a good identity anyway" (Julie).

Within the interviews I did not directly refer to the Chilterns by name until participants mentioned the Chiltern Hills within their responses, my initial questioning was based around the area, for example, 'how would you describe the area you live in?' Participants clearly identify with the Chiltern Hills as a wider landscape bioregion and this was further supported when participants described the Chilterns in terms of the non-human landscape as shown below:

"The Chilterns of course is a range of hills so that goes right up to Bedfordshire and right down up to the top of Oxfordshire, Thame I think. So it depends whether you are talking about the government area or the land area" (Chelsea).

"The hills with the chalk grassland, bits of wood divided by valleys and also there are lots of small villages that have been there a long time, it is like a halo outside of London" (Daryl).

"I would think of the Chiltern Hills, erm...which I think go from somewhere near Luton to about the Thames and I think of those hills and all the woodland and forests surrounding" (Robbie).

"We do have things from the Chilterns we have two chalk streams that run through the town and the Red Kites fly over from the Chilterns if that means we are part of the Chilterns" (Alan).

> *Shelly:* And we get the Red Kites as well, that's good, in fact we use them as a bit of an emblem for the area.
> *Sebastian:* Yes we've got the area office for the Red Kites here and the AONB (Group 2, Chilterns).

Participants clearly view the area in which they live in relation to non-human nature and attachment to non-human nature also includes what I term *species identity* as shown by Shelly and Alan. Alan suggests that having Red Kites (*Milvus milvus*) within Hemel Hempstead it potentially makes the area part of the Chilterns. These quotes do demonstrate a link between the Red Kite and the Chilterns and within Chapter Seven a link between beech (*Fagus sylvatica*) and the Chilterns was discussed, showing a *habitat identity*. Many participants suggested that the village or parish in which they lived had an identity in itself that was separate. Nevertheless all participants still felt they were part of the Chilterns, highlighting multiple layers with regard to identity and place:

> "I think some villages have their own identity, some have been ruined. In the Chilterns the conservation is not the same as in the Cotswolds, there are not distinctive buildings or anything, I mean they are not the same type of buildings" (Olivia).

Interviewer: So do you think that Chinnor has an identity of its own outside of the Chilterns or does it get lumped with the Chilterns?

Caroline: Yes it does…

Shelly: Oh yes…

Sebastian: The simple answer is yes, Chinnor definitely has its own identity apart from the Chilterns. It's odd really…it is the size of a town and feels like a village. It is a large area, this is because of the cement works.

Caroline: There are several…

Sebastian: The facilities of the village are very little, they are not sufficient. We feel neglected actually by the District and the County a little bit, especially by Oxfordshire, we kind of border the county and we don't really get included. We are not really considered…it is not part of the structure of the village the AONB, it is an addition. We have woods and a lake and the cement works…

Caroline: Yes I was told when I moved that we were called the ugliest village in the Chilterns but I don't think it is…

Justin: Because of the cement works…

Caroline: Yes.

Sam: There are two parts of the village visually, the old part and the new part.

Sebastian: Yes there is still the feeling of the originals, the older and the newer people (Group 2, Chilterns).

"I think Amersham people that live here would say so, I feel it is two places the old town down the hill and the new town up the hill. Several efforts have been made to make it one identity, I'm not sure it does have an identity though" (Carla).

"Wycombe town has its own identity from other towns it is different" (Stewart).

"The Old Town gives it an identity but many people are not aware of it, they don't come here to shop because all of the main shops are in the new town, though even the centre is struggling with economics with all these out of town shopping centres they are all suffering" (Alan).

As discussed within Chapter Three a sense of place is fluid and can be multiple existing at a range of different spatial scales congruently. This sub-section shows this factor clearly. However, not all participants identified multiple versions of identity, a number of participants felt that their village town or parish was losing its identity as a result of loss of services or the

threat of developments. Some participants felt that their village or town had multiple identities that co-existed:

> "The village apart from the pub has got no heart, we lost the Post Office and the local shop, it is a sprawled out village as well along Main Street. The pub has changed hands a number of times, we like the pub though our guests can walk to it. There is the church where people will meet" (Mary).

> "There is a different feel south to the north of the place. The Old Village, if you go up the unmade road you will see what was the village that is all that remains" (Joel).

> "There were three identities. I do think that identity is a problem for Hemel Hempstead before it was a new town there was a centre. There was Appsley the John Dickinson paper place. Then there is Boxmoor village with the station. St Albans a rural district. The Level Stock Green area see themselves as a village and Hemel Hempstead is seen as separate, it is not really a village but they call it that, St Albans is called a village as well. People got very angry when they changed the name of Boxmoor station to Hemel Hempstead they were not happy. There is still resentment towards the new town, I think so anyway, I meet people here that feel that way that do not like the new town at all" (Alan).

> "Though we don't liaise with the churches down the hill, mainly because they are in the Old Town, they work together down there" (Carla).

These comments show a clear split between older areas and new areas showing that identity differences can exist within areas as well as between areas. This supports results shown in section 8.1.4 that suggests that people associate more strongly with older and perceived more static landscapes.

8.2.3: The Parrett Catchment Identity

As within the Chilterns there are a range of *identity repertoires* presented by the participants within the Parrett Catchment. In line with Chiltern Hills Natural results, within the Parrett Catchment local identity was identified by number of participants to be based upon the landscape and this identity was discussed at a range of spatial scales, and none in terms of the wider context of the catchment itself. I suggest that this is because the Parrett Catchment covers a wide area which includes a range of distinctive landscape features:

"We do use the area to promote our ice cream, they promote local food. We are part of food link, there is one for the Somerset Levels and Moors and one for the Quantocks, but we fall in between so we use both" (Mel).

"It is the hills, I mean I know the Quantocks are hills but these are different" (speaking of the Blackdown hills) (Jorja).

"I am very fond of the moors and levels and the gently rolling English countryside I think you would call it, but it is too urban and suburban for my liking, but I was born and bred here so there is not a lot I can do about that" (Keith).

"Also it is the rolling hills and areas of woodland" (Charles).

Participants show that they associate with the distinctive landscape features and this is one of the facets that English Nature promote within their Natural Area Profiles and relate to a sense of place (English Nature, 1997b; Porter, 2004). However, in contrast to the Chiltern Hills Natural Area participants, no-one discussed identity in terms of the village in which they live, although there was a lot of discussion regarding the sense of 'community' within the villages. When asked if they had to explain to people where they were located the majority of land managers identified the different landscape units that exist within the Parrett Catchment, showing that they identify with their place through the non-human components of the landscape:

"The Blackdowns definitely, or sometimes I will say that I am between the two coastlines and central to...right in the centre of five market towns that are within eight miles of here" (Matthew).

"I say we are in the foot hills of the Quantocks, I mean you can see the Quantocks from here, but because the levels and moors are so flat you can't really see them from here" (Mel).

"We would say we are close to Exmoor we don't say that we are in Exmoor because you need to be right on the edge to say that really. It is the same with the Quantocks and the Blackdowns although I think the countryside here is as pretty as the Blackdowns" (Paula).

Two participants discussed the existence of a separate 'hunt' identity specifically within the Quantock Hills, an identity which they felt was under threat because of the recent hunt ban. This presented a link between an activity based identity and a specific place, the Quantock Hills:

> "There is hunting in the Quantocks. I mean we have hunting here but the Quantocks it is very much stag hunting country and things" (Jorja).

This type of identity was difficult to explore in depth as not many land managers involved in the hunt were interviewed and those that were discussed hunting in the Quantocks primarily from a political viewpoint and the impact that this would have on local farmers:

> "When you take the hunt away you take away the rationale for deer to be tolerated, farmers put up with the deer so long as they can do their sport but the damage the deer do is unacceptable especially if you are not allowed to hunt them. The tolerance of farmers is only constrained by the fact that they can go hunting, but this ban has caused the deer to decline in huge amounts. Hunting is perceived to be for only rich toffs but it is wrong all types of people hunt even the poor and they will sacrifice to be able to hunt" (Michael).

Although the Chilterns Hills have a number of large hunting estates (Countryside Agency, 1992), hunting was only mentioned briefly by one of the participants who owned one of these estates and this was not in relation to identity but rather conservation of non-human nature within the landscape. A hunt identity may exist but it cannot be investigated here.

Unlike the Chiltern Hills in different areas of the Parrett Catchment local produce schemes were identified and these evidently linked place to product. As Mel revealed below in terms of promoting his ice cream, he uses both the Quantocks and the Somerset Levels and Moors as promotional tools, linking place and product. A number of participants discussed local produce and its importance:

> "Yes I think local produce is what identifies us individually" (Lisa).

> "You see the Blackdown Hills is split: we have Leader Plus funding, which is European funding and they each have a co-ordinator. The aim of the Leader Plus is to add value to local products and there are four of them: food and drink, woodland and forestry, tourism and recreation and arts and crafts" (Pam).

"We do use the area to promote our ice cream, they promote local food. We are part of food link, there is one for the Somerset Levels and Moors and one for the Quantocks, but we fall in between so we use both" (Mel).

"The Blackdown Hills are good for local interest and we use them. It will go far, like selling produce locally we would use it to sell produce" (Gerald).

"As a brand it is being developed and if you give it a few years it will be important" (talking about the Blackdown Hills) (Carl).

Within the Parrett Catchment there were fewer large towns and no cities, the largest urban area being Taunton. Therefore non-human nature is considered to be one of the aspects of the area that attracts tourists:

> "Well tourism is important and one of the most important things for that is due to nature. Equestrianism is very important as well so people are going to be wanting to ride in nice circumstances so nature is important" (Carl).

> "Although there is quite a...in a good flood, in a big flood there's quite a industry in sort of...well not a industry, quite a flood tourism people go out there to look at it, it is...particularly for...if there's a flood and it stops raining and there's a few days nice weather you will get quite a few people actually coming to look at it because it's a bit of a spectacle in its own right" (Byron).

> "Yes the tourists are drawn here because of the levels and moors, I think we are catching more now. We used to be just a stop off on the way to Cornwall, but now people are stopping. But people don't walk right" (Keith).

Byron suggests that flooding actually attracts people to the area, identifying the importance of the catchment for tourism. However, again the interaction of people, place and non-human nature are clear, with evidence to support the dependence of people upon non-human nature to support the economic functioning of the area. If people are attracted to the area because of its distinctive landscape this is going to bring with it economic benefits, though also concerns regarding the encroachment of people into vulnerable habitats and the threats that this may pose to non-human nature which can include soil compaction, littering and removal of vegetation (Pullin, 2002). The non-human landscape is obviously important to people and an attachment to an area could be utilised to increase concern regarding the conservation of non-human nature

that gives an area both its identity and distinctiveness. This association with the distinctiveness of landscapes and the draw of non-human nature to tourists clearly shows an interrelationship and interdependence that is far deeper than merely the physical need of people to survive.

8.2.4: Aesthetics within the Landscape

Landscapes are often described in terms of their aesthetics, the way in which they appear and there is little discussion regarding the experiential nature of landscapes. However, within both of the case study areas participants identified the beauty of the landscape as being one of the things that makes an area special that sets it apart from other areas. In other words landscape beauty contributes to distinctiveness and therefore identity within a place. Place-based attachment is based upon people identifying with specific areas and this may be due to the beauty of non-human nature within that area. When discussing what makes their area special participants within both case study areas discussed the beauty of the landscape:

"Yes they are special, I mean we live in a bit of a rat race now, it is beautiful on a summer's day it looks cool and then they have the frost in the winter and that is beautiful as well. I think they are special" (Lee).

Interviewer: What do you think makes the area special?
Rory: Not sure really…
Olivia: It's just a beautiful area.
Rory: There is a variety of scenery that is beautiful (Olivia and Rory).

"Erm…it's the environment, it's the landscape, it's the reason for the AONB. It's that…it is beautiful landscape and that's what people want and it's what people want to see, that's what they want to get out into" (David).

"It is such a beautiful area, there is so much going on. Tourism, equine tourism. It is every level" (Pam).

"I like it because it is a beautiful area, the small fields and the wildlife, because of the lack of tourists (laughing) that's not good coming from a self catering point of view really, but it is…" (Matthew).

> "The tranquillity here you wouldn't get living elsewhere. The scenery as well there are lovely views. Though the ground is not good, it is only Grade three or Grade four, it is difficult to farm and I like the neighbours" (Darren).

As the quotations show, participants associate beauty with non-human nature and this was a common theme within all of the interviews. This 'beauty' is a contributing factor to distinctiveness. What is clear however, is that different people describe different aspects of non-human nature as being beautiful, including the small field pattern and the wildlife within the landscape. Nevertheless, it is non-human nature that is driving these viewpoints and informing the way in which people perceive their place.

8.2.5: Summary

This section revealed an array of different *identity repertoires* that exist and sometimes overlap. These include a Natural Area identity, a local landscape identity, and a species identity whereby people associated specific species with an area. Finally there was a village, town or parish identity. Many of the participants have suggested that there is a local identity that exists within the area in which they live or work and this is based in part upon the distinctiveness of the non-human landscape. In both case study areas participants described identity and distinctiveness in relation to non-human nature including aesthetics. Non-human nature was also viewed as a product, a feature that drew tourists to an area and this has both positive and negative implications for place. Additionally a hunt identity has emerged from the data showing the link between an activity and a specific landscape area the Quantock Hills. There is a clear attachment to non-human nature shown within this section, this attachment is occurring on a variety of spatial scales and this tends not to include the whole catchment area of the Parrett. A sense of place and attachment to an area is fluid, however, I am also suggesting it is driven and strongly influenced by non-human nature and this can be utilised to encourage the conservation of non-human nature and therefore the maintenance of the identity and distinctiveness of the area.

8.3: Sense of Place, Attachment and Belonging

A sense of place has been described as parallel to being at home, being attached to a place and having a sense of belonging within an area (Armstrong, 2004; Kern, 2005; Tuan, 1977). I have maintained throughout this research that a sense of place results from an interaction of a number of different facets that can act both independently or interdependently. These facets include area distinctiveness which discriminates one area from another and a sense of identity that allows

people to associate with an area and this can be because of area's distinctiveness but also as a result of other factors that are less tangible and more personal. Key to a sense of place is the interrelationship between people and non-human nature. Within this section I will discuss a sense of place and identify the extent to which this exists for bioregions.

8.3.1: A Sense of being at home in the Chiltern Hills Natural Area

A number of participants within both case study areas identified a sense of being at home within a specific Natural Area, yet no participants identified a sense of attachment or a sense of being at home within the wider Parrett Catchment. When considering such fluid and intangible concepts as place, identity and distinctiveness it is important not just to consider what is being said but how it is being said and in what context. Within this research I considered not only what was being said but how it was being said, whilst remaining aware that everyone's view are situated within their own circumstances and influenced by many different factors some of which may be only known to the participant.

One participant discusses the Chilterns in terms of a feeling, suggesting that a sense of place is not just based on the tangible but also the intangible:

> "We are in the last part of the Chilterns and once you get into St Albans it doesn't feel as if you are in the Chilterns and if you go as far as Watford that definitely doesn't feel part of the Chilterns" (Alan).

A number of participants identified a sense of attachment or sense of being at home, in the Chilterns:

> *Olivia:* I wouldn't want to live anywhere else.
> *Rory:* The motorway is just that far away you know, far enough.
> *Olivia:* I mean it is a lot of new people but there are still people in the village that have always lived here (Olivia and Rory).

> *Sam:* Yes but when you are coming back from anywhere and you see the hills you know you are coming home.
> *Caroline:* Yes that cut in the hills around by Aston Clinton for the motorway, you know you are home when you see that.
> *Sebastian:* Because there is a population of a small town and this often reinforces the village activities.

Shelly: Yes it does.

Sebastian: Yes I know people that have left for the coast when they have retired...

Shelly: They have moved back (laughing)...

Sebastian: Yes they have moved back (Group 2).

> "I would have a tendency to say that people would see themselves as part of the Chilterns, especially people that have lived here a long time" (Stewart).
>
> "Yes I would agree there is a Chilterns identity I do identify the flint buildings with the Chilterns. The bluebell woods as well, it is an identity of rolling hills. I have got very attached to it" (Carla).

Olivia and Rory reveal their attachment to place through their comment "I wouldn't want to live anywhere else". In the case of Olivia and Rory their sense of place was based around the village in which they lived rather than the Chilterns in the wider context and was based upon the familiarity with the people that lived within the area. However, the other three discussions reveal an attachment to the Chilterns as a whole and this is viewed as largely based upon different aspects of non-human nature including the hills themselves, the bluebell woods and the 'characteristic' flint and brick buildings. Two of the discussions reflect on the interrelationships between people and non-human nature in citing the flint and brick buildings and the reflection by Caroline about the cut in the hills due to the motorway which she associates with coming home. This is identifying a cultural landscape as part of being at home.

8.3.2: A Sense of being at home in the Parrett Catchment

Within the Parrett Catchment no participant identified a sense of belonging, attachment or place to the wider catchment area, although many identified an attachment to a specific landscape unit such as the Somerset Levels and Moors. However, common both within the Chilterns and the Parrett Catchment was the tendency for attachment to be very localised relating to a farmer's own land, a specific village, a specific part of the wider area such as a moor.

A sense of place was apparent when participants talked about their local area, the way in which farmers discuss the responsibility they have to 'their' land and to 'future generations', the communities that exist and the different aspects of the landscape that are important to them as discussed by Mel:

"I mean years and years ago my mother and father were looking for another farm, they went away for a week looking all over the country and they came back early evening the cows were in the field and they had not found anywhere better and it's not like it was for the house, because it has only been in the last ten and twenty years that houses have been sought after" (Mel).

Keith and Paula below show an attachment to the area in which they live:

Keith: There isn't really, I wouldn't want to live anywhere else.
Interviewer: It is a beautiful part of the country…
Keith: Yes it is pretty…we are very lucky (Keith).

"There is nothing that we dislike about the area, I love the area" (Paula).

Other participants are discussing the wider landscape when they talk about where they live and what they feel about the landscape as shown below. Carl identifies a sense of being in the Blackdown, which suggests that people do relate to non-human frameworks such as Natural Areas.

"The people in the area have quite a sense of being in the Blackdowns rather than Devon" (Carl).

"We are very privileged to be able to live here, to be able to look after the land for future generations" (Lisa).

"I just like the area itself, the whole environment down here and it's warmer than in Staffordshire and Derbyshire (laughing) (Steven, Group, 1).

A number of participants discussed the landscape in terms of ownership. One participant in particular discusses the Somerset Levels and Moors in relation to his "moors" as illustrated below, identifying the varying spatial scales in which it can be manifest. This relationship is being portrayed in relation to land users gaining access to land for rambling, a topic that has historically divided landowners and land users (Shoard, 1997). The discussion surrounding access and landownership was something that George instigated himself clearly identifying the strong sense of ownership he felt for his land as illustrated below:

> "The right to roam thing has brought people that think that they have the right to run everywhere, we have that old guy he keeps that in order, they need to learn about walking dogs and things and they can't just walk anywhere. Just recently they wanted a bridle-way right through one of our moors out here and they weren't concerned about anything else but the bridleway, but we have stopped that, it went to appeal and it was stopped, they don't think about we have to work" (George).

A sense of place or a sense of belonging is a concept that has been taken by many organisations and used as a promotional tool. This is especially true within the Somerset Levels and Moors where the Levels and Moors Project (LAMP) uses the concept of place to promote the relationship between people, place and non-human nature (Levels and Moors Partnership, 2006). LAMP also associates a sense of place with a specific landscape unit, the Levels and Moors, suggesting that people already associate with both non-human nature and specifically this bioregion or Natural Area. Edward, a land manager based within the Levels and Moors, highlights this:

> "Certainly LAMP have worked quite hard to promote a sense of local existence" (Edward).

However, LAMP has proved rather controversial with the participants interviewed. Whilst identifying the Levels and Moors as important, participants suggest that this area is not appreciated beyond the people that live there and LAMP are failing to improve the wider awareness of this area as illustrated in discussions below:

> "We have had LAMP and the like but it's not done much good. There are a lot of people on committees and things for stuff like that and they get some money from Europe some of them as well...but it doesn't work" (Lloyd).

> "It is mainly people that live within Somerset that know the Levels and Moors, unless the person is a keen bird watcher" (Stella).

> *Interviewer:* So do you think that LAMP have done much to raise the profile of the Levels and Moors?
> *Stella:* I sat on one of their forums for a year and then my patience ran out with it, it was a waste of time...a lot of public money is being wasted on projects like these. things. They are looking for recognition as a biosphere now, it's ridiculous (Stella).

When asked what the area meant to them, group three gave a variety of responses, but primarily the beauty, diversity and its distinctiveness gives the landscape meaning as shown below:

Interviewer: What does the area mean to you?
Jess: A place to live (laughing)...
Mitchell: And to enjoy as well.
Jess: And to enjoy...I love Somerset.
Charlie: We are very fortunate, because we...
Ben: Yes we are. It's the diversity as we've said.
Charlie: We live and work in such a beautiful place.
Jess: And get paid to drive around it (laughing) (Group 3, Parrett).

This shows a linkage between the way people feel about where they live and non-human nature: the visual beauty and diversity of the landscape which is important to these participants.

8.3.3: Length of Residence and Sense of Place

I identified within the results that the length of residence within an area had important implications for a person's sense of place. Two participants within the Parrett Catchment identified a preference for their 'home' area, the place where they grew up and identified a sense of attachment to this area as opposed to the area in which they are presently residing:

> "Well I like the people as much as anything...in terms of the scenery I prefer Wiltshire where I grew up. I wish I was nearer Wiltshire. Every time I go home I have to drive an hour and three quarters up the motorway I wish we could just pick up the farm and move it there" (Stella).

> "So I prefer Exmoor because it is so much wilder than the lower parts of Somerset...and I guess that's very similar to the sorts of area I come from really, Derbyshire, which is also open moorland to a large extent" (Hazel, Group 3).

It was difficult to establish whether this was a common theme because the majority of participants interviewed within the Parrett Catchment had lived within the area all of their lives. Only six had not been resident for their whole life and of these only two had been living in the area less than twenty years. However, there is a view by participants that have lived within the area either all of their lives, or for a considerable chunk of their lives, that incomers into the area

are changing the structure of the community and this may change the way in which people within these areas perceive place.

Joel, a land user in the Chilterns, suggests that there is a relationship between the way people feel about an area and the length of time that someone has been living in an area:

> "It does have a sense to itself, the older people that have been here for years would say it does anyway" (Joel).

This was the only participant within the Chilterns to draw this connection, however, there were fewer participants within this area that had lived there for their entire lives or a significant proportion of their lives. Many of the participants had moved to the area to enable them to commute to London or Reading. Unlike the Parrett Catchment however, there was less apparent underlying tension existing between people known as 'incomers' that had recently moved to the area or only had second homes in the area and people that had lived within the area for most of their lives. I suggest this is because the Chilterns is clearly a commuter area that has attracted people primarily because of its proximity to London (Jones et al, 2001), so therefore people are used to this way of living, whereas within the Parrett Catchment a significant proportion of the participants had been resident there for their entire lives.

Participants within the Parrett Catchment described people moving into the area as 'incomers'[1]. An increase in incomers within both areas has caused tension and has had impacts on things such as housing prices, schools and service provision. Participants in both areas indicated that as incomers are moving into the area they are not using local services and schools and therefore these are being lost, changing the structure of the community. A sense of community as will be discussed influences the way in which participants feel about the areas in which they live. Therefore changes in the structure of the area and the people that live within the area influences the attachment participants had to the place in which they lived and work. This shows that a sense of place though primarily influenced by non-human nature can also be affected by changes in social and cultural factors within the landscape. This changing community structure was clearly noted by participants within the Chilterns as they discuss increasing urban areas and loss of services.

> "Yes it has, when I was a kid and you went into the pub you would get a dozen pairs that you would know. Now we have about six hundred people on the voting register

[1] A term that was brought into the interviews by participants not one that I introduced within the interviews.

and they come and they have their dinner parties probably only a few times a year they come at Christmas and a few other times, but you rarely see people you know anymore" (Bob).

"But if you go down to a village like Penn then there is a nub of community, there is a greater sense there, it has a village green and there is less a feel of commuter" (Joel).

"A few years ago I was in the Chilterns and talking to people involved in a local community project and they were saying that actually this was in a village and they were saying that people that were most actively engaged in the project didn't live in the village but they were children that grew up in the village that live somewhere else and you know, you've got that sort of you know, you've got all of that that comes in. Particularly when you get to the Chilterns, you know half the population is only there at weekends if you talk...you know...even that frequently, second homes and all that" (Dylon).

"I think the greater the urban density the less of a sense of community exists. There is a sense of community in most of Brindle Lane for example, but it is not everybody by any means" (Winston).

Winston (above) puts succinctly what underlies many of the comments made by participants in rural areas and this is an emphasis placed upon the rural/urban dualism, rural areas being idealised and urban areas demonised. However, participants in both case study areas that live within urban areas have identified a sense of community and a related sense of place. This is shown in discussions below from participants that live in areas such as Luton, Hemel Hempstead, High Wycombe, Taunton and Bridgewater.

"I have a bit of a sense of belonging in Hemel Hempstead. There will always be some things that determine place it used to be schools but now people are more mobile that is not the case" (Alan).

"I grew up in Reading, I did not consider it as the Chilterns but I thought I was part of a particular estate. Though I would say people in Wycombe do, it is the town at the heart of the Chilterns" (Stewart).

"Yes there is definitely a sense of community. A lot of people have been here for a long time and new people do fit in very quickly, very easily. It is dependent on whether people want to be involved in the community if they do it is very easy" (Carla).

Interviewer: So do you like living in Luton?
Kim: It's home innit...Luton I mean...
Dwaine: Yeah...I lived in Reading but its better here...the people are...its better.
Simon: It depends where you live...different places.
Dwaine: Yeah...but that's the same everywhere.
Melissa: Its where I'm from, its bad like...y'know.
Interviewer: Bad?
Melissa: Good y'know (laughing) (Group 4).

These discussions show that a sense of place and community exists within both urban areas as well as rural areas. However, this sense of place differs from that identified by people living within rural areas, as will be discussed subsequently. Alan suggests that increased mobility is reducing the relationship between people and the things that define place within Hemel Hempstead such as schools, linking with the arguments presented by Relph (1976) surrounding increasing mobility contributing to placelessness.

A number of Chiltern participants suggested that the large proportion of commuters reduces the sense of community. Participants viewed community as working together for the good of the village or the area and included in this were references to knowing and connecting with people that lived in the same area or village. They felt that this community existence, that was part of the past, had been lost:

> "I mean this is just a disparate group of people that you know work in different places and come and live in the same place at night. There's no interaction, community is about interaction, working together, that's what we had in the past, we certainly don't have it now" (David).

> "A good proportion of the population don't work here they tend to commute. It is an odd community, people don't stay here a long time the average stay is five to seven years...and that says a lot" (Joel).

Only a few participants had lived within the Chiltern Hills all of their lives and although they indicated that there had been a change in the social structure of villages in particular, this tended

to be in terms of physical changes such as increasing development and loss of services. It is difficult to ascertain whether the view of community presented is idealised.

Unlike in the Chiltern Hills, within the Parrett Catchment there was a definite emphasis on the presence of a community, as a local feeling rather than in terms of the whole catchment. This sense of community also is seen to vary in scale: farmers primarily view themselves as part of the 'farming' community and often separated from the 'village' community. This suggests that community also is the relationship between like-minded people and in this case, like minded people who work with the landscape.

> "Yes there is a sense of community, especially among the farmers and the village. When we first moved here our sheep were attacked by dogs and the farmers came around and gave support, they were very good. We've been through a lot, foot and mouth and things..." (Jorja).

> "This area has a few incomers but there is still a lot of the old farms and there is an enormous sense of community, I mean when George was taken ill they were calling and seeing what they could do if the dogs needed looking after, they were wonderful" (Paula).

> "There is a definite sense of community among the farming families" (Lisa).

> "What I like here is that everybody helps everyone else. But then there are three dairy farms that have gone recently" (Lisa).

> "A lot move into the area but farming families stay for years, even hundreds of years" (Gerald).

As shown by Paula's comments, participants perceive a link between a sense of community and the length of time in which people live within an area. However, participants that had lived within an area for a long time suggest that incomers want the landscape to remain static, while, participants that have lived within the area for long periods of time are more accepting of change.

> "No there is no new development, the incomers won't let them, we don't have an issue" (Paula).

"Someone wanted to start a cattery recently, the incomers did not want it and they fought it and they managed to get it stopped, that wouldn't have been the case here people would have minded their own business and let you get on with it" (Paula).

Interviewer: Do you think the landscape is important then?
Carl: Yes I do think it is important, it is the reason why people come here and it is no good putting in concrete. People want it unspoilt and that's a big selling point here.

Two focus groups within the Parrett Catchment were composed primarily of incomers and both of these groups emphasised a need to not only leave areas as they are but to increase the number of 'green' areas and stop the development as illustrated below:

> *Ray:* Well because we live in an area we have to protect it really. If we didn't then it would end up like some big industrial estate or something. There are too many housing estates they are putting them everywhere and they are too large.
> *Paul:* They are like lego houses they are all the same (laughing).
> *Sarah:* Yes they are all the same and so small.
> *Paula:* They knock down one house and then build a load of new houses that are all the same.
> *Sarah:* It is very peaceful here. We need to protect it a lot of it is endangered and we are losing it (Group, 2, Parrett).

Amanda: No there are no planning restrictions that I know of with the buildings they seem to put anything up.
Zack: They have built on all the fields.
Amanda: They do not blend in if they want to build it they build it.
Zack: They are starting to build on the fields (Group 3, Parrett).

"Yes because it is pretty and accessible, it is the commuter belt and that makes people quite opinionated around here, you know those that come home on a Friday night would not like to find anything has happened to their woodland, they would play all merry hell up. That's why I said earlier I'm not concerned about the protection of the woodland people around here want and highly value them" (Sophie).

"Because we should want to preserve what is lovely and if someone doesn't take care there is such a demand now...these are wonderful areas you wouldn't get them back again if you developed them" (Mary).

The discussions in the Parrett Catchment suggest that although locals show a in-depth understanding of their area and an awareness of the benefits of some development, however, incomers that do not understand or accept the need for development appear to have more influence. Sophie a local within the area, suggested incomers are effectively ensuring the protection of non-human nature. Discussions presented, by groups two and three, suggest that incomers are concerned about development, and locals feel their own views are less influential:

"In a way, there has been a lot of development, infilling and things. In Silkmills there has been a bridge built over the railway and of course they have built the road network. They are going to start building houses, eight thousand of them. We need four to five thousand more houses. The population of Taunton has doubled" (Chris).

"New housing is an issue but the villages need new families, they have to find a place for new homes without spoiling it, we don't have many affordable homes in the area, especially for people who are just trying to get on the property ladder" (Tony).

"Well the council make inappropriate decisions they have a lack of ability to balance housing and there is a need and they don't realise the young peoples need, they can't afford to buy houses in the area and they need to be built" (Michael).

Particularly within the Parrett Catchment participants identify a difference of opinion between the people that had lived within the areas for their entire lives or a significant part of their lives and those termed incomers. So-called incomers were perceived to hold the view that an area should maintain its distinctiveness and remain static, whilst 'locals' suggest that the area should evolve to support changing circumstances. This split between so-called 'incomers' and 'locals' was primarily identified by locals, although some incomers did illustrate that there was a tension that existed between 'locals' and 'incomers', as shown in the quotes of some locals:

"It can be a bit...the village, well Stokeland more so, they were more so. There are bell ringers in Stokeland, they were more the old village families and I was interested in joining and they were not keen, I don't think they thought I had been there long enough. They don't want people coming in and telling them what to do, you have to get invited onto these things, not anyone coming in, it is good though, people coming in" (Melissa).

"Stokeland is differently inclined and it can be a kind of them and us thing, the old families and the new" (Melissa).

"Yes the incomers have changed the structure we don't have the same...some of them are lively but they are more territorial now, before there used to be four houses, the shop, the ridding school, but no-one interfered, there was an old lady and we all used to pop in a check on her to see if she needed anything. Now there is a policeman living there and he doesn't speak to the people next door" (Paula).

"The newcomers are reluctant to get involved in community activities" (Stella).

I found that although there was certainly a 'perception' by locals that incomers wanted the area to remain the same, this was not evident within the interviews I carried out with incomers. However, as these results are based on a relatively small sample this concern regarding incomers not wanting to allow change may be accurate.

8.3.4: Placelessness

The concept of placelessness is in opposition to sense of place (Relf, 1976). Therefore it is important to explore it in relation to my research as this may identify concerns participants have regarding their sense of place. There were a number of references made throughout the interviews relating to factors that contribute to placelessness such as increased transport links, loss of services and changes within community structures. Although participants did not have a knowledge of the concept of placelessness, they did recognise that there are changes such as loss of services and increased transport links that are impacting upon their way of life and community structure. I have suggested that community is an important facet of place and part of the interface of people and non-human nature. These factors may (in the future if they are not already), act to de-stabilise people's sense of place. However, within the Chiltern Hills Natural Area participants identified the changing structure of communities as a result of increasing patterns of dormitory living and tourism. Examples of changing communities are given by participants in both case study areas as shown below:

"We have lost two petrol stations recently in the past twelve months, both of them. We have got a pub, a shop that is just hanging on and a school" (Lisa).

"But then they all shop at the supermarket, it is dormitory living really" (Matthew).

Sarah: The public transport you can't get anywhere and it's so expensive.

Paula: Any improvement that happens to the area is only for the tourists.

Paul: They don't do it for the locals…we need more bins.

Sarah: They put the plants in the spring and they only use annuals and then in October they throw them away. It's a waste…I feel sorry for the plants (laughing)…why can't they put flowering shrubs in?

Ray: It is very expensive around here they put the prices up for the tourists (Group 4, Parrett).

"Public transport as well it is so bad that you wouldn't survive without a car, it isn't a problem for me as I have a car but…it is a catch twenty two really it is so bad no-one uses it so it gets worse" (Pamela).

"You really need your own transport here though, the bus service is dire, it stops running about six o'clock, so finishing work in Aylesbury you have to walk or have your own transport" (Olivia).

Sebastian: It is the work patterns as well. I would say ninety-six percent of people work outside of the village, but they work all around not just London, there's Birmingham, Oxford, Bicester.

Sam: Yes it is more common with people driving now. I think that cars are more common than they were…I mean it is more likely that people will have a car…

Sebastian: Yes two cars…

Sam: People will have three cars or at least two and that makes it more common now.

Jake: The M25 has made it easy…

Cassie: It's not all that easy according to the radio it is always jammed up (Group 2, Chilterns).

Sebastian: The motorway that led to more people coming here, the motorway made it more accessible.

Cassie: Yes the motorway is why we came…my husband was working in London at the time and it was said why don't you look at this house in Oxfordshire, well Oxfordshire is large and we thought that we would be in the back of beyond, but with the M40 it's not that far (Group 2, Chilterns).

Extracts of transcripts below show the way some participants resent changes within places, suggesting that they are primarily for the benefit of tourists. Within the Chilterns there was a

high proportion of the population who were commuters, who chose to live in the Chilterns primarily because better transport links allowed them to commute into London, as shown in section 8.2.1. This is a growing trend across the UK and has in many rural areas resulted in increased housing prices, increasing people moving into an area, changes in traditional communities such as away from farming towards commuter areas and decreasing local amenities (Jones et al, 2001). These changes result in areas losing some of the human factors that make places different from one another and have the potential of separating people, place and non-human nature. This was less apparent within the Parrett Catchment, although a number of participants did make reference to increases in people moving to the area as commuter routes make it more accessible, a raise in house prices and changing community structures.

Whilst these discussions emphasise changes that are occurring within these areas as a result of many external influences, this does not mean that place-based connections have been lost. As shown above by Cassie these factors influence a person's ability to live within a place and therefore does not suggest placelessness. Whether this is influenced by the so called rural idyll (Valentine, 1997), is difficult to tell. Yet all of the participants were clear that whilst they liked living within the areas they were also aware of the problems that existed within the areas. All participants were able to discuss both areas in terms of their distinctiveness, which suggests that neither area has become a non-place or succumbed to placelessness.

8.3.5: Summary

As I have shown throughout this sub-section although a sense of place may appear to be intangible, participants clearly have a sense of place for the areas in which they live or work. This sense of place occurs at a range of spatial scales, however, the participants discuss an attachment to landscape based bioregions such as Natural Areas rather than a much larger river catchment. Within the Parrett Catchment participants clearly have an attachment to Natural Areas as distinct units as opposed to the river catchment, which supports the evidence presented within the previous chapter.

Although the length of time a person lives within an area influences sense of place what is clear within this research is that long term residents as well as incomers to the area all have a sense of attachment and recognise their own and other people's place based identity within the areas where they lived. Although it is possible that there are aspects of the 'rural idyll' occurring this does not diminish the sense of attachment participants felt to the non-human landscape, as shown by discussions by both incomers and locals in section 8.3.4. However, there is increasing development in both areas that could create homogeneity and reduce the distinctiveness and

diversity that makes these areas special to the people that live within them, as will be shown in Chapter Nine. This risk of placelessness is ever present, nevertheless in the next section I will show the commitment of participants to non-human nature.

8.4: Dualism and Biocentric Thinking within Place

This final section considers some of the dualisms that became evident within the interviews carried out and the implications this has for working within bioregions. Bioregionalists, ecofeminists and a number of other biocentric approaches to conservation suggest *Homo sapiens* is a species just like any other co-existing upon the Earth (Dodge, 1981; Merchant, 1980; 1990; Plant, 1990a; Sale, 1985). Part of the underlying philosophy for working at a bioregional scale is that natural boundaries as opposed to administrative boundaries are considered a more suitable framework through which humans can live sustainably with the non-human environment (Sale, 2000). However, there is little evidence to suggest within the UK that there is a shared understanding and process of achieving sustainable development (Kambites, 2004). Primarily bioregionalists view humans and non-human nature as equal and that people have a responsibility to 'look after' or protect non-human nature as we could not survive without it. Place is a hybrid and dependent upon the relationship between people and non-human nature, the way in which people perceive non-human nature is therefore important to the continued existence of place.

8.4.1: Land Managers, Stewardship and Non-human Nature

Within previous sections I have discussed the sense of identity and attachment land managers often have with their land or place and the wider landscape. Land managers are fundamental to sustaining the landscape and the ecological integrity of a bioregion. Many of the land managers interviewed identified the responsibility they felt with regard to ensuring the conservation of the landscape for future generations. This responsibility illustrates a commitment to place on a local scale. It was presented through a series of *stewardship repertoires* that consider factors such as sustainability, custodianship and responsibility:

> "I feel I am a steward and custodian for the next generation, not here gone tomorrow like maybe tenants. I mean I have an inherent interest in conservation and most in the area are committed to conservation and most of those are long term owner occupiers, tenants are different" (Keith).

"It is the duty of all of us to manage what you have and we are aware the day will come when we won't live here, we are only a tenant for a life time at the most and I like to feel that we have left it in a better state than we found it, so it should be maintained in a way that has empathy with the area, like stone walls in Gloucestershire, they wouldn't fit here they would be out of place" (Michael).

"I love the farm and the projects and also to get them together for future generations, that's one thing...so that these things are here for the future. I have planted a wood as well" (Lisa).

"I mean we have always worked with the farm and conservation anyway, to get the wild and the pretty...running in nature...you know keeping the birds and the bees. If it is pleasing to the eye...putting something back into nature" (Lee).

A number of participants show a sense of responsibility towards conserving the landscape for future generations. These land managers are clearly identifying a sense of duty or stewardship to the landscape, which is at the heart of bioregionalism. These comments suggest that land managers are aware of their potential impact upon the landscape and the importance of conservation if they are to maintain and enhance the landscape for future generations.

A number of participants from both case study areas identify the interdependence of people and non-human nature and the impact people are having upon non-human nature.

"I do think nature is important. I think that if you look after the environment then it will look after us" (Matthew).

"Nature conservation and farming go hand in hand, like with companion planting in gardens, one helps the other if you do it right" (Gerald).

"It is nice to keep it as it is, put back. My old man said that you always need to leave some to put a bit back. It helps to put back" (Bob).

"I think human beings are ruining the planet. It is important for people that have got land to look after it" (Sandra).

The recognition of this within these case study areas indicates a commitment by land managers to their land and the wider non-human environment. Recognising the importance of non-human

nature is the first step to ensuring that place base identity continues to exist and evolve based upon the diversity and the distinctiveness of the landscape. As contended by both conservationists and bioregionalists, it is on the local level that the conservation of non-human nature will be achieved (Thayer, 2003; UK Biodiversity Steering Group, 1995; Wynne et al, 1997).

Throughout the literature review I have indicated that very often people and non-human nature are separated, in policies and procedures. However, in contrast to views portrayed within academic literature about farmers and the way in which policy has developed, the interviews show that people 'on the ground', working and living within these bioregions, are aware of their dependence on non-human nature.

There is a clear indication that many of the land managers in both case study areas feel a sense of stewardship and responsibility to their land, identifying the need to 'put back'. This responsibility towards the landscape is another facet to place based identity and a number of participants illustrated that the way they feel about their land does influence whether or not they are involved in conservation schemes and the way in which they treat their land:

> "Yes...erm...yeah...I think that...the more positive people feel about where they live the more likely they are to get involved in such things, but you could have the opposite situation where people feel quite negative and actually want to do something about it. I mean...I mean it might not just be...it might be sense of place and not just in terms of the physical place, it might be sense of place in terms of the other people that live there, so there can be a sort of social dynamic causing them to become involved or not" (Robbie).

> "Oh yes it does influence what I do. We have open days for the fields so people can see the fields, in fact we just had one last weekend. We use the fields and the beauty of the land to promote the land" (Gerald).

> We have always farmed the Levels and Moors so have an interest, the environment has always been a passion of ours" (Lloyd).

> "Yes how we feel about the area does influence how we manage the land, we manage the land to augment the way it is. To do something inappropriate in an area like this...like the Forestry Commission and their conifers (shaking head)..." (Michael).

> "I think it is more people wanting to look after their local…the area immediately surrounding where they live" (Julie).

However, this feeling of responsibility is limited to a land manager's own land with little evident co-operation between landowners in either case study area:

> "But I do feel that we are being used as a bit of a scape-goat, you see if someone is farming the wrong way then we are sent to tell the neighbouring farm like if there are too many cattle or something, but it doesn't bother me really it is their land" (Lloyd).

> "No none at all, there is very little cooperation between farmers at all, they all make their own decisions. We know about it what they are doing but there is very little we can do about it" (George, Group 1, Parrett).

> "No not really there is no need to work together really we just have neighbouring fields that butt each other with margins on the edge. Although we all do know what each other are doing, we do talk" (Darren).

> *Interviewer:* So do you work with neighbouring farmers in terms of farming and or conservation?
> *Lee:* No not really with the farmers next door. I don't really socialise with them, I mean I don't go out with them…I try not to. I mean I was trying to get them together to have some kind of uprising…you know all these things they bring in, but then with that everyone will have to back each other and that doesn't happen.

It is evident from the above quotes that land managers view themselves as isolated from neighbouring farms and although they feel a responsibility to their own land they are not in a position to work with neighbouring farmers in terms of conservation. Farming is time consuming and from discussions with land managers within both areas it was clear that work on their own land took all of their time and they had little available for working with adjacent farmers. This was not to suggest that land managers were not aware of what their neighbours were doing on the land, but they had no time or incentives to work together. Despite discussion surrounding the existence of a 'farming' community previously this did not extend to work on the land. This suggests that although a land manager may be aware of the wider bioregion and associate with non-human nature within the wider area, commitment to the conservation of non-human nature is difficult to ascertain beyond the scale of a land managers own land due to a number of factors including financial constraints, lack of time and manpower.

8.4.2: Nature/Culture Dualism

It has been suggested that one of the reasons for the decline in non-human nature across the world is the existence of a nature/culture dualism (Haraway, 1989; Plumwood, 1993). The result of this is that non-human nature has been used for the benefit of humans and there has been little acknowledgement in which non-human nature has 'intrinsic' worth other than its importance to people (Plant, 1990; Starhawk, 1990; 2000). Although all of the participants felt that the conservation of non-human nature was important, there was a clear divide between participants regarding the priority of non-human nature and the priority of people. A number of participants felt that social problems should take priority over conserving non-human nature:

> "I think it is important to conserve, but I think they should let things evolve as well, it should not be snapshot because they find a plant somewhere, if birds want to go elsewhere to nest then they should. I don't think plants are important, there are more important things such as people dying and things" (Stephanie).

> *Interviewer:* So do you think nature conservation can be taken too far?
> *Olivia:* Oh yes, it can be taken too far sometimes, especially when they want to look after things like the greater spotted whatever found in one ditch and only a few people know about it they are weird.
> *Rory:* Yes I mean we do need roads and the birds will find some place to go, I mean it has proved it with the Red Kite, it comes into towns and things.
> *Olivia:* We have to move with the times I think, you can take it too far.

> "It depends where you are in the town, there are three distinct neighbourhoods within Hemel Hempstead and they are some of the most socially disadvantaged in the country so making ends meet will be the preoccupation of most people, just surviving" (Alan, land user).

> *Mitchell:* I've always said get rid of the people and all the animals will look after themselves very well.
> *Sarah:* Well that's how they started.
> *Ben:* Now that's not true, they are not more important than people.
> *Charlie:* I would disagree. At the end of the day people are the most important. But having said that, people have a responsibility and our responsibility is to conserve and maintain the land so that it is ok for all the wildlife and the flowers (Group 2, Parrett).

> "Well it is a threat but people have got to live somewhere. I was a strong advocate for development in Norton, it had a narrow road and it needed a bypass. Norton is occasionally affected by flooding, there was a scheme to build a dam but it was only funded if they built a certain number of houses as well and they have got the go ahead for half and they will get the other half as well but it will be on Greenfield sites though" (Chris).

As Alan suggests there are many different social issues that affect people and their daily lives, the conservation of non-human nature may be viewed as a minor issue in comparison. However, as contended by bioregionalists, people are dependent upon non-human nature for their survival, people and non-human nature are enmeshed within a hybrid relationship on which people are dependent. Embedded within this relationship is a sense of place, place is the by-product of this relationship. A sense of attachment to a place may have implications for tackling social issues, although it is beyond the scope of this research to investigate this.

A smaller number of participants felt that non-human nature was just as important as people, suggesting that non-human nature could not just survive but thrive without human interference:

> *Paula:* It's disgusting what they do with the sea-gull eggs, they take them and kill them.
>
> *Sarah:* Do they? That's terrible if they ever tried to take eggs from here....
>
> *Claire:* How would they like it if their babies were taken away?
>
> *Paul:* Because they have lives as well.
>
> *Sarah:* They enrich our lives, all wildlife does.
>
> *Paula:* It is they are endangered because of us.
>
> *Claire:* The wildlife was here before we were so it should be left as it is to get on with it.
>
> *Paula:* Nature should be left to do what nature does best (Group 3, Parrett).

This discussion shows to some extent an idealised view that non-human nature should be just left alone. Given the interdependent relationship between people and non-human nature this would be difficult as every action taken by people impacts on non-human nature in some way. Every person within an area has the potential of having very different perspectives about that place and the way in which they relate to non-human nature. However, the participants that put non-human nature above social needs were in the minority and this suggests that as shown in the literature, non-human nature falls on the subordinate side of the nature/culture dualism.

8.4.3: Summary

Although the literature suggests that nature and people are often treated as two separate entities, participants have illustrated a series of *stewardship repertoires* that have illustrated the responsibility they feel towards the landscape. It is clear that participants identify the importance of non-human nature and the close relationship between people and non-human nature. Nevertheless a number of participants also identify the importance of social issues over issues that affect non-human nature. However, participants are more aware of the interrelationship between people, place and non-human nature than the document analysis in Chapter Six would suggest. The attachment to non-human nature illustrated within these sections shows the importance of a sense of place not only to the conservation of non-human nature, but also to the well being of people.

Chapter Nine

A Sense of Place in Practice

This chapter will consider the way in which a sense of place and the facets that contribute to place influence the way in which participants interact with the landscape in a practical way. Within this first section I will discuss the importance of this ecological integrity to people, as well as its benefits to non-human nature itself. Much of the literature supports the view of the need for increased connectivity between habitats and a shift to a wider countryside approach for the survival of non-human nature (Forman, 1995; Selman, 2006; Zonneveld, 1988). I take this a step further and contend that because a sense of place is in part influenced by non-human nature, any reduction in species and habitats, will tend to make places become homogeneous and this could weaken place-based attachment.

9.1: Landscape Ecology – Ecological Integrity

Within the first sub-section I discuss the importance placed upon landscape ecological theory by agencies and land-management organisations and the awareness, if somewhat unconsciously, by land managers and land users of the different facets of landscape ecology. I then discuss awareness of cultural diversity and of cultural landscapes, which I contend is fundamental to of a sense of place. Throughout the analysis of the interviews a number of landscape ecological repertoires were identified, for which I identify a series of headings: landscape fragmentation; ecological connectivity; heterogeneity and landscape mosaics. These different facets contribute to much the work written by landscape ecologists (Forman, 1995; Selman, 2000; Zonneveld, 1994). The arguments are primarily concerned with increasing ecological connectivity to allow for species migration, habitat expansion and to reduce the impacts of habitat isolation such as local extinction, inbreeding and habitat reduction (Pullin, 2002). Additionally landscape ecological theory argues that a heterogeneous landscape will support a wider range of habitats and species at varying stages of their life-cycles, than a homogeneous landscape (Forman and Godron, 1986). Forman (1995) suggests that to maintain ecological integrity and prevent habitat degradation and species extinction landscapes should be mosaics of different habitats. An awareness of these different concepts was found among all of the different participant groups.

9.1.1: People's Influence and Landscape Fragmentation

Throughout the interviews a common theme was the increasing threat to the landscape from 'perceived' negative interference in the form of development, increasing transport links, the

failures of the planning system and the loss of 'countryside'. Whilst discussing these views I explore further some of the participants underlying concerns that are often based on personal preferences (at least in part) for their living environment, rather than concerns towards non-human nature.

All of the agencies and land-management organisations identified as a concern the continuing fragmentation of the landscape within the Chiltern Hills Natural Area and the Parrett Catchment, identifying the importance of working within a wider context. The literature reviewed earlier suggests that this may reflect the changing philosophy of many conservation organisations (Bishop and Phillips, 2004; Pullin, 2002; Porter, 2004; Selman, 2006). Three participants identified the fragmented nature of the Chilterns and the way in which this dominates their management of the landscape:

> "I think it is so fragmented and there is nowhere to get away from the noise" (Sophie).

> "As I say our main concerns are water quality and of course the underpinning issues of habitat fragmentation" (Luke).

> "The scrub in the Chilterns though is good for migrating birds. The chalk grassland is at the top though it has become increasingly fragmented, which then of course increases its importance" (Brian).

This physical fragmentation is compounded by what I will term ownership fragmentation. The British 'countryside' is divided between hundreds of land managers, all with different perspectives of the landscape and purposes for utilising and managing the landscape (Harvey, 1997). This adds to the complexity of working within large areas and is one of the factors that contribute to agencies and land-management organisations, remaining primarily site based in their approach to conservation:

> "Also on the levels and moors ownership is quite distributed, they don't own...the farm is not one cohesive block on the levels and moors, which I think is going to add to the complexities of writing a single farm plan" (Edward).

> "I mean people like the Wildlife Trust have of course an interest in the whole area as do English Nature but they don't actually in anyway control that, it's down to millions of different farmers and private landowners" (Tim).

"A large number of...one of the characteristics of our areas is that quite a large number of SSSIs aren't actually owned and managed by people you would call farmers, they are all sorts of people, all sorts of...you know, we've got a really...very diverse group of site owners and its not necessarily that agriculturally biased" (Dylon).

"There are others where private landownership exists and we can't manage the whole sites. For example in Coombe there is a bit of the SSSI owned by the National Trust, a bit by the County Council and the bit in between us by a private landowner and the landowner is the stumbling block" (Karen).

This can be complicated further by fragmented land management regimes when land is part owned and tenanted by a land-management organisation and part owned by a farmer:

> "We do not work with the farm as a whole we only look at the bit that we own, only if the farmer asked would we give advice on the whole" (Matt).
>
> "It is predominantly farmers in the Blackdown Hills, there are over a 1000 and more and more people are buying houses with small buts of land attached to them. There is also commons land, but that is shrinking and it is part of our job to stop it dropping off the nature map" (Pam).
>
> "People like the Wildlife Trust have of course an interest in the whole area, as do English Nature, but they don't actually in anyway control that, its down to millions of different farmers and private landowners" (Tim).

Achieving collaboration across these landowning boundaries is difficult and policies and targeting have encouraged a very site based approach to the landscape. Fragmented landownership will reduce the consistency of land management and there is the possibility that conflicting management decisions will be made, as a result the potential for the *physical fragmentation* of the landscape is increased and this, I suggest, can have implications for the way in which a person views a place. This action can present different senses of place, a site-based or farm-based sense of place, as opposed to a whole-area sense of place. If this is the case this may act as a stumbling block for working within a wider area context. If people are attached to the landscape in relation to their own specific plot then there is the potential for resistance against any land use decisions that may alter this sense of ownership.

Participants perceived 'negative' land management systems as compounding the problem of multiple landowners. Within the Parrett catchment the primary threat to the connectedness of the landscape is identified by landowning organisations or councils and agencies as being intensive agriculture, a factor which both bioregionalists and landscape ecologists identify as having a profound impact upon landscapes across the world (Forman, 1995; James and Boothby, 2002; Sale, 2000; Thayer, 2003).

> "Inappropriate farming practices are a big threat, so intensive agriculture, either intensive arable or intensive farming" (Byron).

> "Yes there are threats to the landscape, the pig farm, the intensive farm" (Gerald).

Within the Somerset Levels and Moors in the lower reaches of the Parrett Catchment one of the primary threats to the connectivity of the landscape is that of drainage. A large proportion of the Somerset Levels and Moors have been drained over many decades to improve grassland productivity and arable cropping systems (English Nature, 1996). As a result there has been large scale fragmentation of wetland habitats (Green and Robins, 1993). Although this has reduced in recent years it is still viewed as a concern within the area:

> "The main threat is because it has been drained for thirty years and the site dropping in height about half a metre which is a lot" (Mark).

However, within the Chilterns so called 'negative' agricultural practices were not viewed by landowning organisations, councils or agencies, as the primary threat to landscape coherence, it was identified that other land uses, specifically equestrian use, now had a greater impact on the landscape than did agriculture, although agriculture is identified by both English Nature (1997) and the Countryside Commission (1992) as having a historically deep seated impact and influence upon shaping the landscape. This has changed in recent years:

> "You've got a field that is taken and divided up in ten of fifteen paddocks each with fence and with a water trough, each with a shed or you know lots of electric fence which really does ruin the landscape or you know jumps or...you know it really does impact on the landscape a lot. Although it does tend to be quite localised around settlements...you just get this whole bittiness, pretty un-natural suburban feel to the landscape, what you wouldn't maybe have fifty years ago even thirty years ago" (Julie).

Julie identifies the shift towards an equestrian land use as being 'un-natural' however, it is impossible to identify what is a 'natural' landscape (Adams, 1996a). The UK is composed of cultural landscapes and an equestrian landscape is yet another example of a cultural landscape that has resulted from the relationship between people, place and non-human nature. However, as will become more evident many participants felt that there were 'good' interactions with the landscape and 'bad' interactions, with equestrian use being viewed as bad.

Agencies and land-management organisations identified that development within the landscape was also responsible for a large amount of fragmentation. The participants within this research primarily identify development in terms of buildings and the expansion of urban areas, reaffirming the rural/urban dualism presented within the literature:

> "Planning applications you know...you know, you quite often wonder what are the planners thinking about when they say you know you can do this, that or the other" (Max).

> "Now the other big issue that has arisen in a sense is the SPA is highly urbanised and there's big pressure on it for development and development planning, not on the sites themselves but in and around the sites which has an effect on the sites" (Dylon).

Dylon's view that development outside of a designated site will have primarily negative implications for designated sites is congruent with recent arguments for a shift towards a landscape approach to the protection of non-human nature (James and Boothby, 2002). However, it is accepted by government (Affordable Rural Housing Commission, 2006) within the UK that there is a shortage of affordable housing for people from the poorest backgrounds. If this is taken into account, then rather than taking an oppositional stance bioregionalism would contend that there is a need to work with the character of the landscape to enable the 'built' environment to fit with the non-human landscape in a sustainable manner. Within the Chiltern Hills, the Chilterns Building Design Code guides the appearance of new developments within the AONB (Chilterns Conference, 1999). Although this does not cover the whole of the Natural Area and is based upon a designation, it is still a large scale designation that covers much of the Chilterns Natural Area.

Land managers and land users were primarily concerned with the threat of people to the landscape, with all of the participants within this group identifying development and planning as a fundamental cause of landscape fragmentation in both of the case study areas. The reduction

of undeveloped land areas and increasing urbanisation of the 'rural' landscape at the expense of habitats are identified as being indicative of development by participants:

> *Interviewer:* So what do you think the main threat to the area is?
> *Carla:* The threat of development, everything is infilled, in the village I live in we even have people send us letters to see whether people want to sell their gardens for development.
> *Interviewer:* Really?
> *Carla:* Oh yes...I have had a few and my garden is not that big you couldn't really live comfortably like that.

> "There is too much building especially in Berkhamstead, the parking and cars is just horrendous" (Mary).

> "Property development, the government is eroding the green belt and I don't know it must be pollution as well, the farmers want one thing...the woods are disappearing as well" (Stephanie).

> *Hazel:* I think central government needs convincing that we don't want more housing on areas like Exmoor and Dartmoor and places like that. I think since they have allowed housing to be built on the greenbelt sites...and we've done a lot to spoil the countryside and I think a lot more needs to be done to encourage them to build on brown sites rather than green belt sites.
> *Jonathan:* We've got that problem where we live, because we live in a village just outside Wellington, Rockwell Green and there is a green belt between Rockwell Green and they are talking about expanding, it's been in the local paper...
> *Hazel:* And they will...
> *Jonathan:* And the conservation would be leaving it as green belt (Group 2, Parrett Catchment).

> *Ray:* We have hedgehogs, foxes, herons, bats, owls and sparrow hawks.
> *Sarah:* Yes but we are losing it because of all the new houses, they are just building them everywhere.
> *Paula:* We used to have lots of bats next door yes...until they knocked down the house and built a new one (Group 3, Parrett Catchment).

Stephanie gives direct acknowledgement to the declining habitats within the area by identifying "the woods are disappearing as well". A number of participants perceived this link between development and habitat and/or species loss. All of the participants portray non-human nature as being important to them and development as a clear threat to non-human nature. Many of the responses represented *preservationist repertoires*, in that an area should be left without developments, such as green belts, houses with important species within them and protected landscapes such as Exmoor and Dartmoor.

9.1.2: Development that Maintains Diversity

Preservationist repertoires give little room for alternatives. However, I suggest that development can be 'in keeping' with the character of an area, contributing to area distinctiveness rather than resulting in landscape homogeneity, with distinctiveness being a key contributing factor to a sense of place. As illustrated by the Chilterns Conference (1999) this can be guided by the use of materials that are native to an area such as the brick and flint buildings in the Chilterns. By identifying the role of cultural as well as 'natural' diversity, participants are identifying the importance of both people and non-human nature within a landscape and the importance of maintaining distinctive places. In Chapter Eight participants did identify buildings as a contributing factor to distinctiveness.

A number of participants identified the importance of working with both cultural diversity and the diversity of non-human nature, this was revealed through a series of sustainability repertoires which were used to express the means by which fragmentation and/or loss could be reduced and distinctiveness maintained. These participants, from both case stud areas, identified the importance of development that fits in with the landscape and surrounding areas, that maintains the distinctiveness of an area:

> "I think they should let it evolve (the landscape), I don't think it should be concreted over. I think planning architecture...things should be in keeping but you should be able to put up structures but if they ruin the place...I like some of these modern places as well but if they really don't fit in why would you put them in a place like this? It is a shame to lose the beauty" (Stephanie).

> "It is the duty of all of us to manage what you have and we are aware the day will come when we won't live here, we are only a tenant for a life time at the most and I like to feel that we have left it in a better state than we found it...so it should be maintained in

a way that has empathy with the area…like stone walls in Gloucestershire, they wouldn't fit in here they would be out of place" (Michael).

"I mean I know someone who has a listed building and they have to do things that were on the building when it was listed, so they wanted a nice grey tile on the roof, but it was red tiles when it was listed so that's what had to be done and it really doesn't fit in" (Bailey).

> "There is a lot of building conservation, like these barns and that is important to maintain the historic buildings, it is just as important. I think new development should be sympathetic to the character" (Gerrald).

These quotations indicate that the participants view the areas in which they live as being distinctive, distinctive enough to warrant development to 'fit' in with the existing character of the landscape. This is further emphasised by Lee a farmer in the Chiltern Hills Natural Area who identifies the way in which farming should fit in with the landscape and therefore be complementary to the character and distinctiveness of an area.

> "About ten years ago the National Trust wanted to create a medieval park…stupid idea…well they've only just started doing something. I just went along with them to keep them onside, I left three fields wild and now they have put fences down it, not wooden gates and things but metal. The nice thing about the valley is the rolling hills and the openness and they are just going to destroy the valley if they keep going on the way they are" (Lee).

Although participants are showing an understanding of distinctiveness and a need for both farming and planning developments to 'fit' in with an area, people view character differently. Chapter Three argues that it is difficult to ascertain what is 'traditional'. This is true of habitat creation also: it raises questions such as how far back do we go? What is a 'traditional' landscape? It is impossible to unpick these questions in their entirety within this thesis. However, what this discussion shows that participants recognise distinctiveness within the landscape both the human facets of the landscape, in relation to planning and building and the non-human aspects in relation to farming. What is also clear specifically from Lee's comments is that not everyone's view of what the landscape should be is the same and all factors that contribute to a place based identity are subjective and vary.

9.1.3: Designation and Distinctiveness

Both the Chiltern Hills Natural Area and the Parrett Catchment had Area of Outstanding Natural Beauty (AONB) designations within their boundaries. The AONB designation is important within this study as it considers wildlife, culture and architecture as adding to the natural beauty of an area and there is an attempt to maintain the 'character' of the area through increased planning restrictions (Blackdown Hills Management Plan, 2002; Chiltern Hills Management Plan, 2002). This designation clearly emphasises the importance placed upon landscape character by government. However, as previously discussed these designations do not include major urban areas and are based upon a purely 'rural' character (Jones, 2002). The Chiltern Hills AONB Planning Team have developed design guides on the type of materials that will 'fit' with the character of the area, therefore ensuring the continuation of that character and this was recognised by participants from within both the land-management organisations group and the land managers and land users groups. In contrast, the Quantock Hills AONB and Blackdown Hills AONB still restrict the type of development that occurs within these areas to try and maintain the 'character' of the area. The quotations below suggest that participants within both case study sites were aware of the restrictions for development, although not all participants view this as acceptable.

> "It's down to materials and design and things like that, erm…so we need to be more involved to try and protect the landscape…and that is there at the moment…from intrusive forms of development" (David).

> "When we wanted planning permission because we were keen to build on here they did not like the design (the AONB team), they were happy with us extending as they thought that there were not enough B&Bs in the area, but they did not like our designs. They wanted it to fit in with the rest of the area and be in keeping with the rest of the building and they were exactly right and I am so glad they said that" (Mary).

> "We have challenged the planners here, we had problems getting planning permission we have an old cow shed and we wanted to convert it for a holiday home and they refused and we had to reapply with changes and now we can only get fifty percent of what we wanted in the building, they said the outside needs to look like a cow shed, it's because it's the AONB" (Melissa).

> "There is restriction on development in the AONB and then we have two AONBs in this area" (Charles).

Although the same participants believe that AONB designation deters large scale development, the AONB board is only a statutory consultee on planning within the AONB boundary and can only put forward its views. As revealed by participants within the Chilterns AONB this is not always successful:

> *Interviewer*: You don't get a say in what can't happen, you just input?
> *David*: We try to! And aren't always successful it must be said.

AONBs like Natural Areas and River Catchments can cross many different administrative boundaries that all have to be considered. However, although AONBs are meant to be considered as 'whole' areas for planning concerns to achieve the maintenance of the natural beauty of the area (English Nature, 1996), neither the Chiltern Hills Natural Area nor the Parrett Catchment are considered, in terms of their bioregional boundary, for planning. So although participants within the two areas refer to distinctiveness, this distinctiveness will become reduced if areas are not considered as a whole and there is no increased co-operation across administrative lines. Even though the Natural Area programme was designed in part to provide a framework for cross administrative co-operation (Porter, 2004) this is not occurring in practice.

9.1.4: Summary

This section illustrates the way in which participants view development both in terms of its threat to the non-human landscape and in relation to its contribution to the distinctiveness of the landscape. Although all participants discussed the existence of both 'good' and 'bad' development, nearly all identified the need for development to 'fit' in with an area and add to its distinctiveness rather than detract from it. Given the array of administrative boundaries that make up each of the case study sites there is little consistency in planning procedure and delivery. Therefore character or distinctiveness may be lost within certain areas of the wider bioregion. Although the use of a bioregional framework may allow for planning to fit with the wider distinctiveness of a bioregion in practice this is currently not occurring within these case study sites.

Participants also identified a number of different landscape ecological repertoires demonstrating an awareness, if not consciously, of some landscape ecological theory. Participants from all of

the groups identified the threat of landscape fragmentation and isolation and the importance of landscape heterogeneity, distinctiveness and diversity. This supports Forman's (1995) suggestion that to maintain ecological integrity and diversity landscapes should be composed of mosaics. This was especially significant in relation to the land managers and land users who may not have had a working knowledge of landscape ecological theory.

9.2: Constraints to Landscape Connectivity

Landscape connectivity helps to maintain ecological and cultural coherence within bioregions (Thayer, 2003). The previous section illustrated the way in which fragmentation is resulting in the fracturing of habitats and landscape features and the loss of distinctiveness of both the human and non-human landscape. As distinctiveness is one of the key aspects contributing to a sense of place, anything that dilutes this distinctiveness has the potential to weaken place based attachment.

Landscape connectivity is important within any discussion surrounding bioregional frameworks and the relationship between people, place and non-human nature. Without a connected landscape non-human nature is at risk of fragmentation, isolation and extinction and people are dependent upon a relationship with non-human nature for their survival. Landscape distinctiveness is the by-product of the relationship between people and non-human nature; and if ecological coherence is lost then this relationship becomes weaker and will inevitably have detrimental impacts on both people and non-human nature as people are dependent on non-human nature for their survival. Increased ecological connectivity acts in a number of ways within the landscape. Primarily, with an increase in connectivity comes a decrease in habitat isolation, as connectivity allows for species movement and dispersal. Landscapes are heterogeneous composed of varying ecological patches which form a mosaic across the landscape (Forman and Godron, 1986; Forman, 1995). In recent years this mosaic has become increasingly fragmented due to anthropogenic impacts such as agriculture, transport links, industrialisation and urban expansion (Pullin, 2002; Spellerberg, 1996; Thayer, 2003).

Within the interviews carried out I considered the different ways in which bioregional frameworks had been utilised to increase connectivity and the extent to which people recognise the need for connectivity in practice.

9.2.1: Habitat Expansion due to Acquisition

Agencies and land-management organisations are often in a position to increase the connectivity of the landscape through land acquisition. Due to resource constraints and landownership complexities in the UK whereby there are vast numbers of private landowners that own small areas of land reducing the ability for habitat connection, few of the land-management organisations interviewed increase the land they own on a regular basis. However, when they do have an opportunity to expand they do so by looking to expand existing sites and/or linking two or more sites together, considering habitats in the context of the wider landscape. This role was identified within both case study areas for land owned by land-management organisations or agencies. As all habitats within the UK are semi-natural, then linking habitats together is also dependent upon certain management regimes and the maintenance of the balance between people and non-human nature. All agencies and land-management organisations within both case study areas discussed land acquisition for the purpose of conserving non-human nature:

> "We do try to purchase sites to link habitats where possible, but there is only Five Head that is linked with meadow. We tend to listen out for potential land and acquire it as we can. It started in 1979 with about five fields and now we have I don't know how many…it has grown lots" (Anna).

> "We try to link properties…it is very important and we'd have a much better chance of going through…and if you look at the map behind you, you can see obvious gaps like on the coast here, so these areas would often be real targets to try to link properties. So erm obviously for nature conservation, but more generally to protect those areas because often these places are seriously threatened by things like development and inappropriate farming management that may damage wildlife sites that type of thing. So that would be quite high priority" (Tim).

> "The key is the chalk downland the main fragments being in Aston Rowant and looking at ways to link those up. The main way is to expand out from fragments" (James).

> "Yes and no, but basically yes…one of the main things we try to do is what we call defragmentation yeah. So yes linking woodlands together, but also buffering woodlands from agricultural practices and another one where you know…it is obviously quite useful and sometimes rather than linking small thin pieces it may be much better to sort of plant" (Max).

> "Yes we do look to link up habitats, that is what happened with Ivinghoe and Pitstone Hill that I was talking about earlier, it is all to do with land acquisition and we will try to do this as much as possible" (Brian).

These quotations show land acquisition is seen by land-management organisations as one means by which to provide more linkage between habitats. It is often more idealistic than realistic and working beyond site boundaries can create additional problems.

> *Interviewer:* So do you work to connect habitats then?
> *Sophie:* Yes, but it is not as successful as we would like, we have concentrated on our own sites in the past but now we are looking beyond the boundaries and we are liaising with our neighbours. It's the ideal at the end of the day, we talk about it but it doesn't happen. People go away and go back to their own thing. For example Burnt Wood, we are the major land owner there, we own most of it, but we are stick in the middle a bit being the largest land owner...we want someone else to take the lead and steer working together, we are happy to be involved but we can't take the lead on this one and it just isn't moving forward. The will is there but it just doesn't happen, it gets forgotten with other priorities".

Land-management organisations are often constrained to work within their own sites and working within a wider context is often wrought with complications. Land acquisition often is the primary means by which land-management organisations can act to expand, link and reduce fragmentation of specific habitats. A number of factors can act together to prevent an organisation looking beyond its own sites even in terms of land acquisition. This has implications for bioregional work; if land-management organisations are constrained from working beyond site boundaries then wider countryside work will be difficult, potentially implying that the practical use of bioregional frameworks by land-management organisations is unrealistic. When asked about the linkage of sites and or habitats Dylon identifies the role of policy and landownership complications and the way in which these influence what can be done on the ground.

> "Not really...we might do in specific areas, it's not a major policy thrust, mainly because we have got very little control over what happens outside of SSSIs" (Dylon).

Land acquisition is just one option forgetting 'joined-up' protection and management, however, many of the participants from land-management organisations viewed the acquisition itself as the end point and only secure option. This is perhaps unfortunate: habitat and site expansion is

not enough alone, and bioregionalists contend that management should be integrated within a bioregional framework which means that in practice, land-management organisation, agencies, land managers and land users should all work together within a area. As discussed earlier land managers tend to be preoccupied with their own land and unable to work beyond that.

9.2.2: Barriers to the Expansion and/or Linkage of Habitats and Sites

Habitat or site expansion and/or linkage can also be constrained by the physical characteristics of the landscape. Even though there is an evident need to reduce the effects of fragmentation, linkage and expansion may not always be possible due to the landscape itself. If there are constraints on expansion due to the physical characteristics of the landscape this may suggest that the habitat being expanded may not be suitable to the area. However, it has often been the case in the UK that conservation efforts have been targeted at species and habitats that are viewed as 'priority' and these may or may not be 'native' to an area (Wynne et al, 1997) such as beech *(Fagus sylvatica)* woodlands in the Chilterns that are plantations (Countryside Commission, 1992).

If the physical landscape constrains habitat expansion then there may be a need to rethink what is suitable for that area and consider whether the area has been changed through human interaction significantly enough so that so called 'non-traditional' habitats are more suitable for the area (Adams, 1996a). Land-management organisations also have to work within the constraints of existing land use and as Matt reveals below this can be difficult:

> "Well it's complicated with the heathland and the woodland that I just mentioned there is a problem due to the geography of the area. You see the habitat sticks up in the middle of farmland and on either side there are main roads so it is difficult. The nearest habitat that is similar is Exmoor and that is separated from the Quantocks by roads and farmland and a lot of that land is out of our ownership so we have to rely on other landowners" (Matt).

Matt reveals three problems associated with expanding contiguous land management within the upper Parrett Catchment: 1) impermeable barriers such as roads; 2) the surrounding agricultural land which prevents expansion as the land is in production and; 3) complex landownership issues. Unfortunately these elements are often a necessity for people. Nevertheless, there are means by which landscape elements can form a mosaic across the landscape providing more connectivity such as conduits beneath roads for the passage of wildlife, hedgerows across agricultural land and green infrastructure within urban areas (Selman, 1996). The Life Econet

International Conference and Exhibition (2003) illustrated a number of ways in which different forms of ecological connections have been utilised and integrated with other landscape use across Europe. By improving connectivity within the landscape for non-human nature, there is an emphasis being placed upon the close interrelationship and interdependence that exists between people, place and non-human nature. I suggest that this is also related to sense of place, as any form of land management is dependent upon the specifics of place such as its physical characteristics and social factors.

There was evidence provided by one participant that the Parrett Catchment as a whole was taken account of when considering the expansion and linkage. Edward identifies the use of rivers as linear features through which to link different landscape elements within a catchment.

> "Yes…particularly with our operational work being rivers and linear features, they are corridors that can link between sites. One particularly might be the River Huntsville which is a large site and that provides a link, a corridor between the Severn Estuary and Bridgwater Bay and the northern parts of the Levels and Moors. We've restored what was originally a Second World War water reservoir into a National Nature Reserve, re-profiled the channel, we've got some extensive reed beds now, open water…introduced come species rich…some species diversity to the grassland with wild flower mixes. Which perhaps you couldn't have done on a pure SSSI site, but on this particular site it has allowed us to do this, as I say it is designated a National Nature Reserve and it's this corridor running here (pointing to the map) so we've done some good work there" (Edward).

This is the way in which bioregionalists would view working with the physical characteristics of a bioregional unit (Thayer, 2003). A significant body of research exists that illustrates both the negative and positive implications of rivers as linear connections within the wider landscape (Aspinal and Pearson, 2000; Edwards and Dennis, 2000) and river catchments as part of a larger landscape mosaic that links riparian and terrestrial habitats (Fallenmark, 2004).

This linkage is still based on ownership. All of the land-management organisations are aware of the wider context in which their land is situated but there are practical constraints that prevent them from acting within this context. This is true of the councils which are constrained by administrative boundaries such as County, District and Town Councils. Agri-environment schemes are becoming increasingly important for improving ecological connectivity across the wider landscape and this will be discussed in subsequent sections.

9.2.3: Administrative Constraints and Administrative Alternatives to Bioregions

There were a total of six participants interviewed from different County, District and Town councils across both case study areas, with other land managers and land users being members of Parish Councils. All of these participants identified the constraint placed upon them by administrative boundaries and identified that although aware of the wider context of Natural Areas and Catchments, the largest context in which these participants worked practically was that of the County or the District and not beyond. This would complicate any attempt to work within a bioregional framework; however, the awareness of this bioregional framework may imply that a broader approach may filter through in time to come. Administrative units have been present in the UK for centuries and the aim of moving to a bioregional framework for all work is according to Meadowcroft (2002) unrealistic. This said I found through interviews that administrative constraints were less of an issue within the Parrett Catchment as the majority of the catchment falls with Somerset, with only a small minority falling into Devon and Dorset (Environment Agency, 1996), but in the Chilterns this further compounds the problems of fragmentation and isolation. If this sense of place could be harnessed there is the potential that these frameworks could be utilised as a means of not only maintaining a more sustainable relationship between people, place and non-human nature, but also to promote a positive view of the maintenance, enhancement and restoration of non-human nature. If a sense of place was viewed as central within conservation plans it may potentially encourage a wider approach to be taken, given that most participants identified an association with the wider area.

The Oxfordshire Wildlife and Landscape Study (OWLS) is identified as one of the means by which the landscape is considered in terms of a wider context of a County as opposed to the site perspective. The OWLS project, though based within a County framework, did utilise the Countryside Commissions Character Areas, which within English Nature's hierarchical scale are the next scale down from Natural Areas (Preston, 2001).

> "Again OWLS is being used to target work with RDS for landowners within the North Wessex site to link and expand some of the habitat and the same for the neutral grassland. We are taking a more holistic approach, which means we don't only look at biodiversity but we also look at landscape character and archaeology as well and that strengthens what we do" (Percy).

In fact all but one of the County Councils that participated within this research identified the potential role of Character Areas rather than Natural Areas in working in a more integrated manner that includes linking habitats and sites:

"I think the Character Area scale is a better scale than the Natural Area, I had to learn what all these landscape terms were...the character area raised a lot of questions, the whole situation is very confused...I have come to the view here because it will be ground truthed and because it is going to be subject to consultation I feel people will recognise it has greater strength rather than it being entirely academic" (Daryl).

> "We will mostly look more at the landscape character areas it is more in context with the work that we do, the Natural Area is quite big" (Stewart).

Even the Parrett Catchment Project (PCP) that is by its very nature a whole catchment project, targets sites for woodland planting in relation to where the soil type or land use has made the area more vulnerable to erosion and increased runoff, as opposed to considering sites that may provide linkage across the landscape.

> "We identified sites with soil that had more compaction, maybe due to soil type and/or intensive agriculture. The slope location was important in the catchment, whether the area was at the bottom of a valley" (Aaron).

It could be argued that any increase in landscape elements such as woodland that can provide a habitat or refuge for an array of species is beneficial, however, if these elements occur completely isolated they may just be another site where isolation and fragmentation issues arise. In Aaron's example, by considering at what point the soil on a slope is vulnerable, human land use could be adapted to avoid further damage to the land by for example planting trees to reduce erosion. Although the woodland would be isolated it would have wider implications to the landscape in that it would offer protection to soil structures.

There are many factors that act to constrain the improvement of ecological integrity across the landscape including administrative constraints, landownership complexities, hard infrastructure and land use on adjacent patches of land. All agencies and land-management organisations revealed a tendency to work at the habitat rather than the species level to improve the ecological integrity of their land. By identifying constraints to site and/or habitat expansion it is also possible to identify aspects of practice and procedure which limit the realisation of interdependence between people, place and non-human nature on a practical level.

9.2.4: Summary

In this section I have discussed the different ways in which land-management organisations attempt to increase the connectedness of the landscape. The connectedness of the landscape is important for non-human nature and therefore inevitably the interdependence of people and non-human nature. Building development, urban areas and agriculture all act to fragment landscapes. Administrative boundaries act as another mechanism through which landscapes become fragmented as councils tend to work within an administrative framework. However, land-management organisations and agencies are aware of the practical benefits of working in the wider context and the close interrelationship that exists between people, place and non-human nature. If place becomes central to conservation at all levels this may begin to shift people's attention away from small areas and towards the wider area. Significant political changes in the way in which conservation is viewed would have to take place first.

9.3: Ecological Connectivity: Landowners and Land Users

Agencies and land-management organisations only 'control' a small proportion of the British landscape. A large majority of the landscape is within private landownership and the influence of private landowners upon the landscape is significant. Agriculture is viewed as one of the biggest threats to non-human nature within the UK (Harvey, 1997) and therefore collaboration with farmers regarding more sustainable and 'environmentally' friendly farming methods is considered a priority throughout the UK (Defra, 2006). As a result Agri-environment Schemes (AES) and other environmental grant schemes such as the Woodland Grant Scheme (WGS) have been promoted and encouraged with varying degrees of success (Morris and Potter, 1995). I recognise that the uptake of such schemes illustrates a commitment (whether that be one of necessity or a genuine concern for the environment), to the enhancement, maintenance and restoration of non-human nature and place. Within my interviews I was able to identify the importance of non-human nature to the farmers involved and the extent to which they were aware of the influence of this uptake within a 'bioregional' context. I also considered the extent to which land managers were aware of the interdependence of people and non-human nature and whether this influenced their decision to become involved within an AES. Finally I considered the way in which the physical characteristics of place influenced the type of AES uptake, and I found that this was an important part of a sense of place to land managers.

9.3.1: Land Managers and Land Users and the Conservation of Non-Human Nature

Both case study areas are predominantly composed of agricultural land (Chilterns AONB, 2002; English Nature, 2000; Environment Agency, 1997). Therefore agricultural land use, both historically and in the present day, has had an important role to play in shaping the landscape and influencing the ecological integrity of both areas. However, in both areas there are thousands of different landowners, all owning and managing different amounts of land. Some have small areas, some large, some for intensive agriculture, some for game and some for extensive agriculture, and then a plethora of other land uses that make up the remaining areas such as urban areas, industry and transport links. As discussed in Chapter Four, AES and other land-based environmental schemes have been progressively introduced into farming since the late 1980s and have been viewed as providing an opportunity through which to tackle problems of habitat fragmentation and isolation in the wider countryside (Tilzey, 2000). Improving ecological coherence also involves reducing homogeneity and increasing the diversity of the landscape which I have argued contributes to a person's sense of place.

All but three of the land managers and land users interviewed areas identified an interest in the conservation of non-human nature and identified the importance of this to the wider landscape. It could be contended that participants with an interest in conservation might have been the only people that agreed to be interviewed, but given that three of the interviewees clearly identified that they had no interest in conservation:

> "Yes I have an interest in nature conservation. I've got quite a lot of birds and that is one of the things the Higher Scheme is interested in, they want to know about bird populations" (Pamela).

> *Olivia:* Yes nature conservation is important. We like the Red Kites don't we?
> *Rory:* Yes we do.
> *Olivia:* And near Chinnor there is a great variety of wild flowers. I like the trees. We have a dog and we walk a lot, well I walk a lot, Rory can't walk far. In the garden we gets lots of wildlife we get a lot of birds (Group 3, Chilterns).

> *Interviewer:* So you think nature conservation is important then?
> *All:* Yes.
> *Interviewer:* Why?

Ray: Well because we live in an area we have to protect it really. If we didn't then it would end up like some big industrial estate or something. There are too many housing estates they are putting them everywhere and they are too large.
Paul: They are like Lego houses they are all the same.
Pamela: It is very peaceful here. We need to protect it a lot of it is endangered and we are losing it (Group, 3, Parrett).

> "I am interested in nature conservation. I am especially interested with how it can fit with farming. Nature conservation and farming go hand in hand, like with companion planting in gardens, one helps the other if you do it right, for example the hedgerows stop runoff and erosion, and stops pests" (Gerald).

A general interest in the conservation of non-human nature is present within the interview transcripts of land managers however, more interestingly, there are specific references to the interrelationship between people and non-human nature and the importance of place. The discussion presented by Group 3 shows a commitment to the local area in relation to conserving non-human nature. It is not clear from this short extract at what scale this sense of place and commitment to conservation is perceived. Gerald also discusses the close interrelationship between farming and conservation, and is identifying a certain amount of responsibility to maintaining the landscape that bioregionalism discusses in relation to rehabitation (Sale, 1985), although in this case Gerald is identifying with his own land and not the wider context in which his land is found. Nevertheless an interest in the conservation of non-human nature is of significant importance for the survival of non-human nature and the continuing relationship between people, place and non-human nature.

9.3.2: Conservation and AES

One way in which this relationship is emphasised is through the uptake of AES, though it should be mentioned that although AES uptake indicates the relationship between people and non-human nature, it does not necessarily mean a farmer has conservation as one of his or her priorities. Ten landowners interviewed in the Parrett Catchment and four in the Chiltern Hills Natural Area had existing AES agreements or other environmental land based scheme agreements. An additional three landowners, one in the Chilterns and two in the Parrett Catchment were considering taking up the new Environmental Stewardship Scheme. In the Chilterns there were fewer farmers interviewed than in the Parrett Catchment. Interviews in both areas also included land managers that although not farmers were eligible for AES uptake such as land managers that managed large areas for game keeping or equestrian sports. Additionally,

all of the land-management organisations and agencies within both areas either encouraged AES uptake or had tenants that had AES on their land. Land managers and land-management organisations participated in a range of AES and other environmental land based schemes as illustrated below, including Countryside Stewardship Scheme (CSS), Environmentally Sensitve Area (ESA), Woodland Grant Scheme (WGS), Organic Farm Scheme, and hedgerow schemes. The CSS and ESA specifically encouraged so called 'traditional' management techniques to enhance semi-natural habitats within the area.

> *Melissa:* For nature conservation we are part of what are they? The old Ministry...?
> *Interviewer:* Defra?
> *Melissa:* Yes Defra, we have a mar pit you see and we also have hedgerows and wildflowers and they pay a low grant for them. We had the hedge there laid and it was left for five years for the trees to grow and things, but there were no trees.

"We are part of the ESA it fits in well with the organic farming. It's been really helpful, we have done a lot with the money, it pays for planting hedges and putting up fences" (Jorja).

"We are involved in Countryside Stewardship and the Farm Woodland Scheme" (Keith).

"I'm in the Countryside Stewardship and Entry Level Stewardship now and that's it really" (Lee).

> "We have forty acres of stewardship" (Barry).

> "On a more personal level I get involved with conservation I am involved with the wildflower hay meadow within the Countryside Stewardship...that is no longer" (Winston).

If AES and other environmental land-based schemes are to have a long term impact on the ecological integrity of the landscape then it is important to identify why land managers are choosing to take on these schemes, whether it is financial incentive, a conservation interest or wanting to put something back. If the first of these, given the instability of farming in general and farming policy, the benefits gained from conservation within the wider countryside could be lost if farmland is sold or if grants are reduced, diminishing ecological connectivity and diversity and having implications for a sense of place.

Predominantly, land managers and land-management organisations identified that their participation within these schemes was financially driven, with the conservation of non-human nature being viewed as a secondary consideration. Twenty-one participants stated that financial considerations were the primary reason for uptake compared to only twelve who identified conservation as being the their reason for uptake. Some extensive farmers also identified that by taking up AES and other schemes they were in effect being paid to do very little as they were already farming extensively to begin with. The quotations below, from participants in both areas, provide evidence of a number of the reasons behind AES uptake:

> "Well mainly because of the money and because we were low input it would have little effect. We haven't used fertilisers for forty years and we have low nitrate input" (Brian).

> "Well we were in it and then came out and went into it four years ago. We signed up due to the nature of the business it has always been extensive, it gives us a chance to do things like do up the old barns" (Gerald).

> "The rewards for production are very little now and so we get involved in schemes as it has allowed us to farm. We are lucky because of the location we are eligible for many schemes in the area" (Lloyd).

> "I have a general inherent interest in conservation and also for financial reasons as well" (Keith).

As Lloyd reveals, AES have allowed him to continue to farm by providing conservation-based subsidies, as production-based incentives are no longer being offered. AES and similar schemes maintain not only more so-called 'traditional' farming mechanisms, but also seek to ensure the survival of non-human nature and the diversity of the landscape, which are important to place identity and a sense of place. In one case schemes were taken up because the farm was already making a profit and the farmer felt he could afford to take some land out of production and introduce less intensive farming methods:

> "I had a conservation interest to begin with. But I found that I was making a significant profit from the Christmas trees and I could afford to put money somewhere, so instead of going for twenty pounds or so you get for set aside, I wanted to do something really

worthwhile, something that was genuinely contributing to the environment, so we went into stewardship" (Barry).

Barry identifies a clear interest in the conservation of non-human nature and this interest is of significant importance if the diversity of the landscape is to be maintained and the semi-natural habitats that have now come to characterise the British landscape are to be maintained.

Land-management organisations also identified that AES were useful tools for funding conservation and given funding limitations within many organisations, AES and other environmental schemes are one of the means by which the conservation of non-human nature can be continued despite funding issues. The conservation of non-human nature is both expensive and time-consuming (Pullin, 2002) and AES provide more income to do this.

"There is a lot of our land in stewardship, all of the chalk grassland is in stewardship and all of the woodland is in the Woodland Grant Scheme or one of the woodland schemes. It's because we don't...we don't have a large budget and management is expensive" (Rosie).

Land-management organisations in the Chiltern Hills also use AES to consciously link habitats or sites within the wider countryside, therefore increasing the ecological integrity of the landscape and ensuring an improved opportunity for the survival of non-human nature.

"We are staring to consider linking habitats...habitat creation is happening in Chimney Meadows...though that is outside of the Chilterns and this is through arable reversion. Reserve acquisition is the easier option though we are starting to work with landowners" (James).

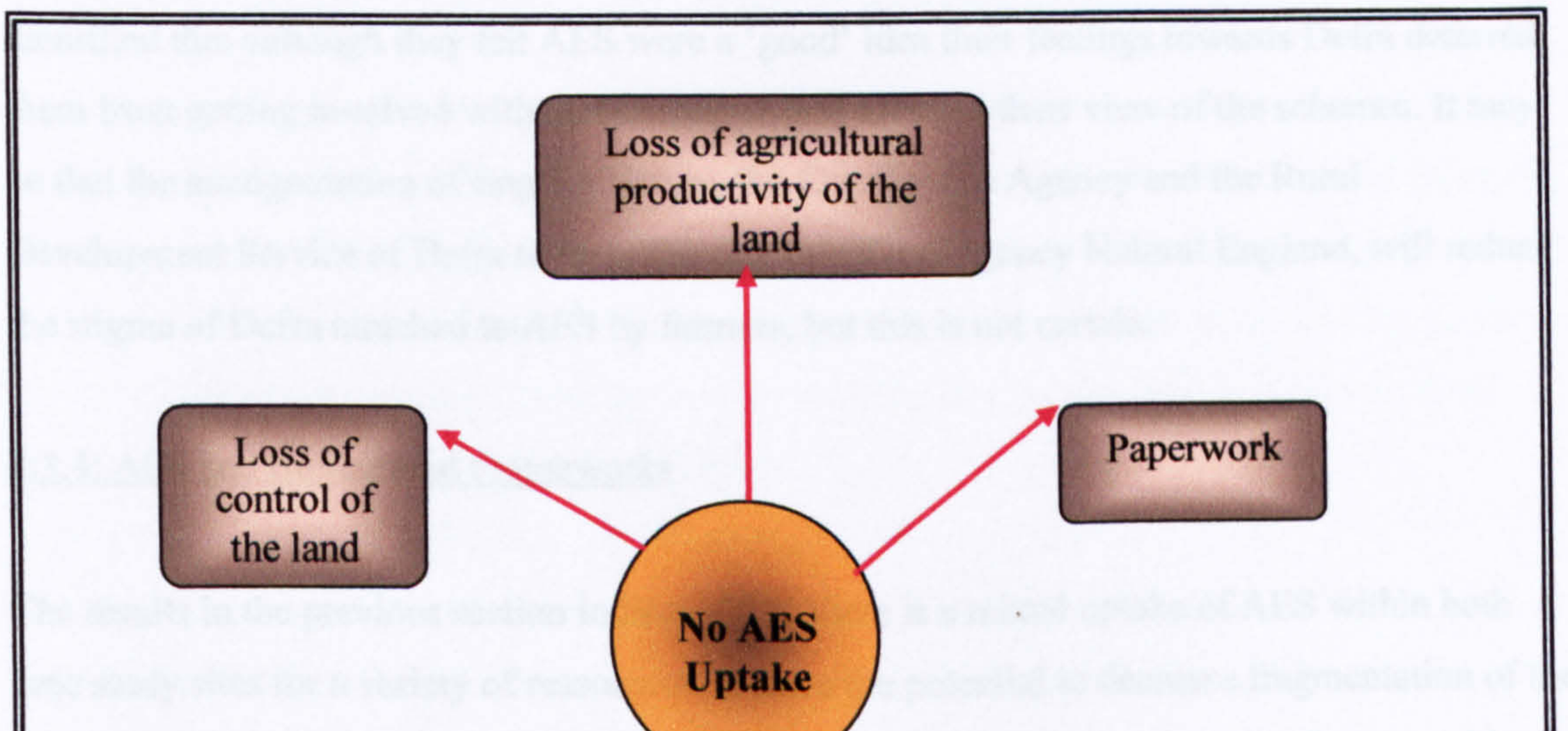
"The farmer that is the tenant has put quite a lot into the stewardship scheme and has headlands and things but this area he has put it as grassland under the stewardship to stop the barrier between two sites that existed with the arable land. The idea is to have a link between Ivinghoe and Pitstone using the Agri-environment Scheme to get it permanent. The aim is to do this using whatever Agri-environment Schemes available to make it permanent. We have removed the fence between the field and Ivinghoe to allow the sheep to roam and hopefully they will transfer some seeds down with them, it will take time though" (Brian).

In the quotations above, whilst land-management organisations use AES where possible to extend or improve ecological connectivity, it is clear that this is still dependent upon co-operation with farmers, and these relationships do not always run smoothly. There is often a conflict between landlord (land-management organisation) and tenant regarding what needs to be done on the land. This conflict often presents itself as disagreement regarding who knows what is best for the land.

9.3.3: AES Deterrents

Participants presented a number of reasons for reluctance to engage in AES or other environmental schemes as shown within figure (9.1). If AES are to be used realistically to enhance the ecological integrity and connectivity of the British landscape they need to be considered within future schemes.

Figure 9.1: Reasons for not engaging with AES



There were two factors that were most often cited as influencing the likelihood of AES uptake and these were paperwork and bureaucracy, it was felt that there was too much paperwork and red tape involved in AES. This is similar to evidence from past studies reviewed within the literature (Morris and Potter, 1995; Whitby et al, 1994) and shown within figure 4.2 on page eighty-one. Paula discusses these issues and the additional issue of low payments below:

> "We did consider the Countryside Stewardship but they were just coming to the end of the scheme and we have just put in some form for the single farm payment...but you need a week for the forms. With some of these schemes you look at the returns and then what you have to do just in terms of paperwork and it is just not financially worth it" (Paula).

Conflict repertoires were identified within the interview transcripts, where participants identified a conflict or disagreement regarding management, with another group of individuals. This was primarily related to disagreements between farmers and conservationists regarding land management. One conflict repertoire identified was a mistrust of Defra. Three participants identified that although they felt AES were a 'good' idea their feelings towards Defra deterred them from getting involved with these schemes and affected their view of the schemes. It may be that the amalgamation of English Nature, the Countryside Agency and the Rural Development Service of Defra to form the new integrated agency Natural England, will reduce the stigma of Defra attached to AES by farmers, but this is not certain.

9.3.4: AES and Bioregional Frameworks

The results in the previous section indicated that there is a mixed uptake of AES within both case study sites for a variety of reasons. AES have the potential to decrease fragmentation of the landscape, but it is not clear that land managers and land-management organisations consider the wider context of the catchment or the Natural Area when considering involvement with AES. As shown in the previous chapter all land-management organisations and agencies had a *conscious awareness* of bioregions, however, with few exceptions there was little practical use of these types of bioregions. The results were similar in reference to increasing ecological connectivity based on the wider area. Whilst all land-management organisations and agencies were aware of the need to expand, enhance and link habitats and sites, the majority were restricted by resources and landownership complexities. AES has aided some forms of linkage within the landscape, however, this uptake is not coherent across the case study areas therefore whilst some may act to provide increased connectivity others may be little more than another isolated fragment. Nevertheless, Godron and Forman (1986) identify that isolation is not

necessarily negative: an isolated fragment can act as a stepping stone for dispersal, colonisation and migration, depending on the amount of inhospitable land use separating it from other areas.

English Nature and Defra have based the targeting of the new Environmental Stewardship Schemes on the now Joint Character Areas (JCAs). This targeting is based on the specific characteristics of the wider area, so therefore there will be some attempt at working within the wider bioregion. Prior to this, targeting was on a county basis. Jason and Bill, participants from within agencies, both identify the importance of landscape ecological theory to the JCA framework:

> "The key thing there is again something that we are still just developing...there is a general, academic theoretical assertion that what we need to do in the wider environment is corridors, which is the South West's map. We are the...our philosophy is that connectivity is what corridors are about is an awful lot more than just connections. It's about the quality and diversity and the structure of the land in between" (Jason).

> "The landscape is a landscape of mosaics and increasingly, you know, there's a very good rationale that says expand those core areas if you like because they will be more robust, resilient to climate change etc...but then what do you do if you are expanding woodland into wet meadows or vice versa? I think there's a lot more work to do, but I think the more semi-natural habitat we have the more supportive it's going to be of those various different habitats" (Bill).

The JCA framework for AES targeting allows for the complexity of each area to be considered, when undertaking land management in the form of farmland conservation. As the words of Patrick from a land-management organisation show, the use of JCAs makes targeting more relevant to farmers as it is not based on different counties but within the wider area that they farm in.

> *Patrick:* Well originally it was run on counties wasn't it?
> *Interviewer:* Yes.
> *Patrick:* With big gaps where the ESAs used to be, so it was sort of counties minus ESA bits. So it was never really one hundred percent coverage so we needed something. I think...I just...I guess there was a system out there that people...well some people understood...Joint Character Areas and that was the one to do rather than...I guess for the farmer he doesn't want to know what the targets are for his

county cos he's only concerned with what's around him, therefore you have to divide it somehow and that was the best way to do it.

"It's a bit different now with the new scheme there…its not done on a county basis it's done on a Joint Character Area basis which is more sensible…like so the Chilterns will be a target area, whereas before you would have had a targeted statement from Buckinghamshire and it would have included a bit of the Chilterns, a bit of the Aylesbury Vale…" (Julie).

However, as Patrick suggests, only some people understand the JCA framework and as most participants identified, farmers are unlikely to understand it, let alone be aware of the way in which the new scheme is being targeted given the continued changing terminology associated with those frameworks.

"The Joint Character Area process I have to say would be meaningless to 99.9% of farmers it's very much a bureaucratic creation and really only means anything to bureaucrats" (Tony).

However, as revealed within the previous chapter the majority of land managers and land users were *unconsciously aware* of Natural Areas. Despite this within the Chilterns Natural Area only one farmer considered the wider landscape in how he farmed the land, suggesting that landowners interviewed within this research are concerned primarily with the very local level, in this case their own land. As I have contended previously this may not be due to a lack of awareness of the wider area, in fact results in Chapter Seven suggest otherwise. However, it would be difficult in practice for a land manager to work beyond their own land due to the lack of policy structures and mechanisms, including resources and finance, to facilitate this.

"Yes with the farming and conservation I do try to fit in with the local landscape, but sometimes they can go too far…" (Lee).

Land managers in both case study areas were in general concerned with their own land when discussing AES in both case study sites, participants were keen to use what they saw as 'native' species within their conservation, showing at least some awareness of the wider context. However, some of the schemes that landowners were involved with did require the use of 'native' species and therefore this was not entirely the landowner's own choice.

"I have seven acres and six acres is a restoration of traditional hay meadow which is all native species and then there is one acre of new plantation that is also native species and I have two hundred metres of hedgerow" (Winston).

"I have used species that are local to the area, we have Pay Hemery Apple tree...yes we have an apple tree...there is a massive choice, so where I could I used native species" (Lisa).

In the Parrett Catchment, the only scheme that encourages AES uptake based upon catchment targeting is the Parrett Catchment Project (PCP) and this has targeted schemes such as woodland planting, flood water storage and pond creation in the upper and mid catchment to try to slow and alleviate some of the flooding within the lower Parrett Catchment (Somerset County Council, 2001). Representatives from the PCP identify that in the future there is an aim to begin to create wetland habitat throughout the catchment, however, this is not a current project. Nevertheless, there has been a lot of interest in existing PCP projects such as the woodland planting and pond creation.

> "Well I think the...certainly the pilot ponds that we've built there were more farmers wanting to get involved than we were able to accommodate" (Tony).

Although all land-management organisations and some of land managers (in the lower Parrett Catchment) were aware of the PCP, only one of the land manager was positive about involvement in the PCP. All other land managers within the lower catchment felt that the PCP had had little impact on the ground and was more political than practical:

> "The Parrett Catchment Project is an absolute waste of time, it has not achieved anything, it is basically bigwigs sitting in meetings sitting around talking and being paid a lot" (Darren).

> "I've seen some of the projects that they have done and ...they are a waste of money and haven't really done anything. It's all political. So some people have got some glory out of it, but it's not done anything" (Lloyd).

> "I have been involved with it, well we were directly involved in it but it came to no fruition, they were going to do a project in the Isle Valley but it didn't work out in the end, they didn't have the money" (Keith).

This view shows that although there is a scheme in place that considers targeting conservation schemes at the catchment level, the practical successes of this project appear to be minimal. So even if farmers are aware of the wider catchment, in practice there is little effort to work with non-human nature at that level via AES.

As the new Environmental Stewardship Scheme is concerned primarily with the management, enhancement and restoration of habitats and species that are characteristic of a specific Natural Area (Defra, 2006), land managers may in the future be working in a wider context than they realise. As argued within Chapters Seven and Eight nearly all of participants within this research were aware of the wider landscape area or catchment and therefore just because landowners are primarily concerned with their own land does not imply that they are not aware of the wider area or do not have a sense of attachment to the wider area. The results of this research have indicated the opposite. However, land managers do have to make a living and therefore it is not surprising that their primary concern is first and foremost their own land.

There are many different factors that may encourage land managers to look beyond their own land towards a wider countryside view of their actions. However, although land managers identified a clear awareness of the distinctiveness of areas in terms of their landscape in the reality of their feelings for an area are influenced by very local issues and often confined to their own land. Figure (9.2) and Figure (9.3) shows a summary of the points made by land managers within the interviews for both the Parrett Catchment and Chiltern Hills respectively.

Figure 9.2: Factors that Influence a Land Managers Sense of Place or Attachment within the Parrett Catchment

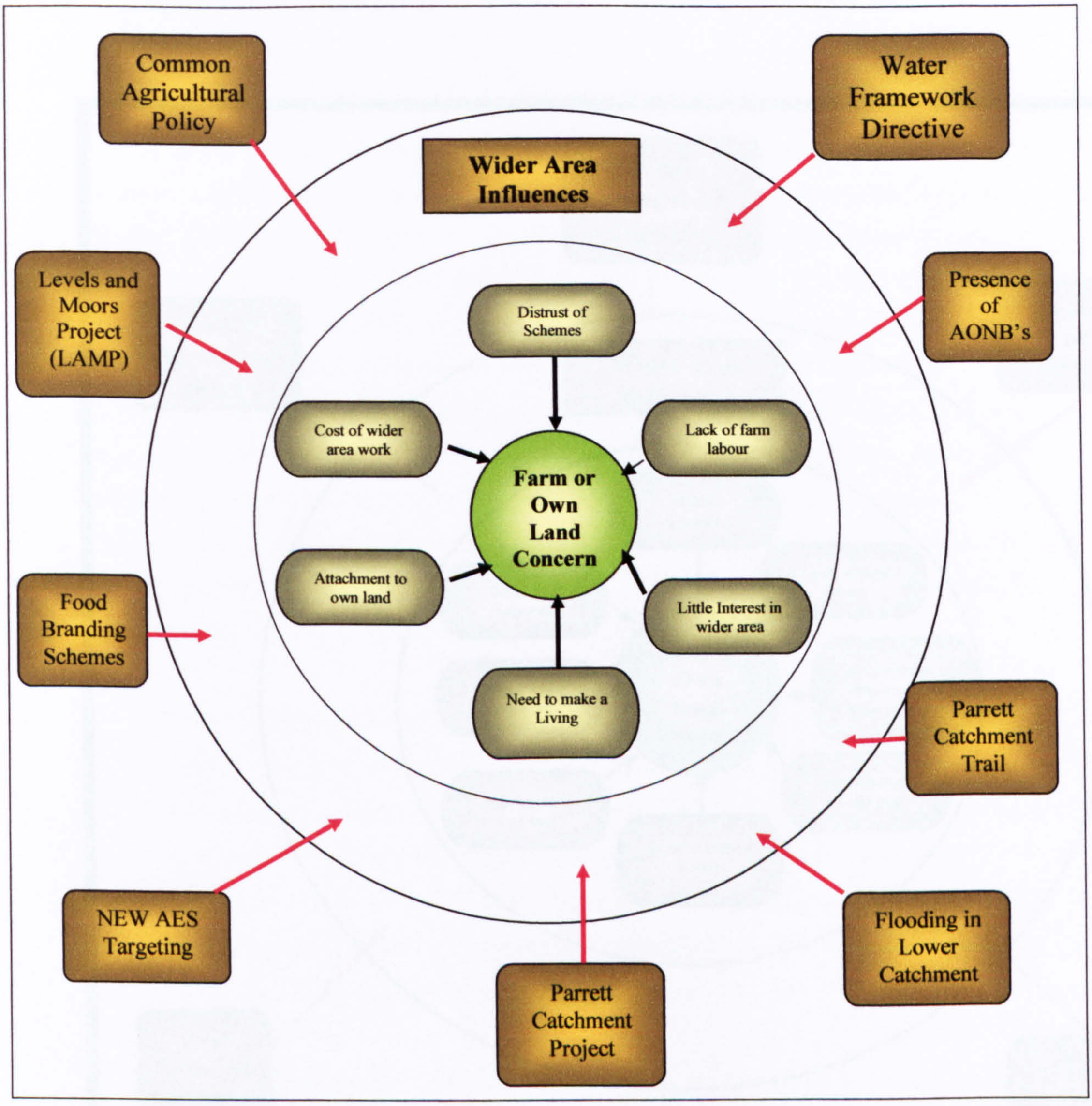
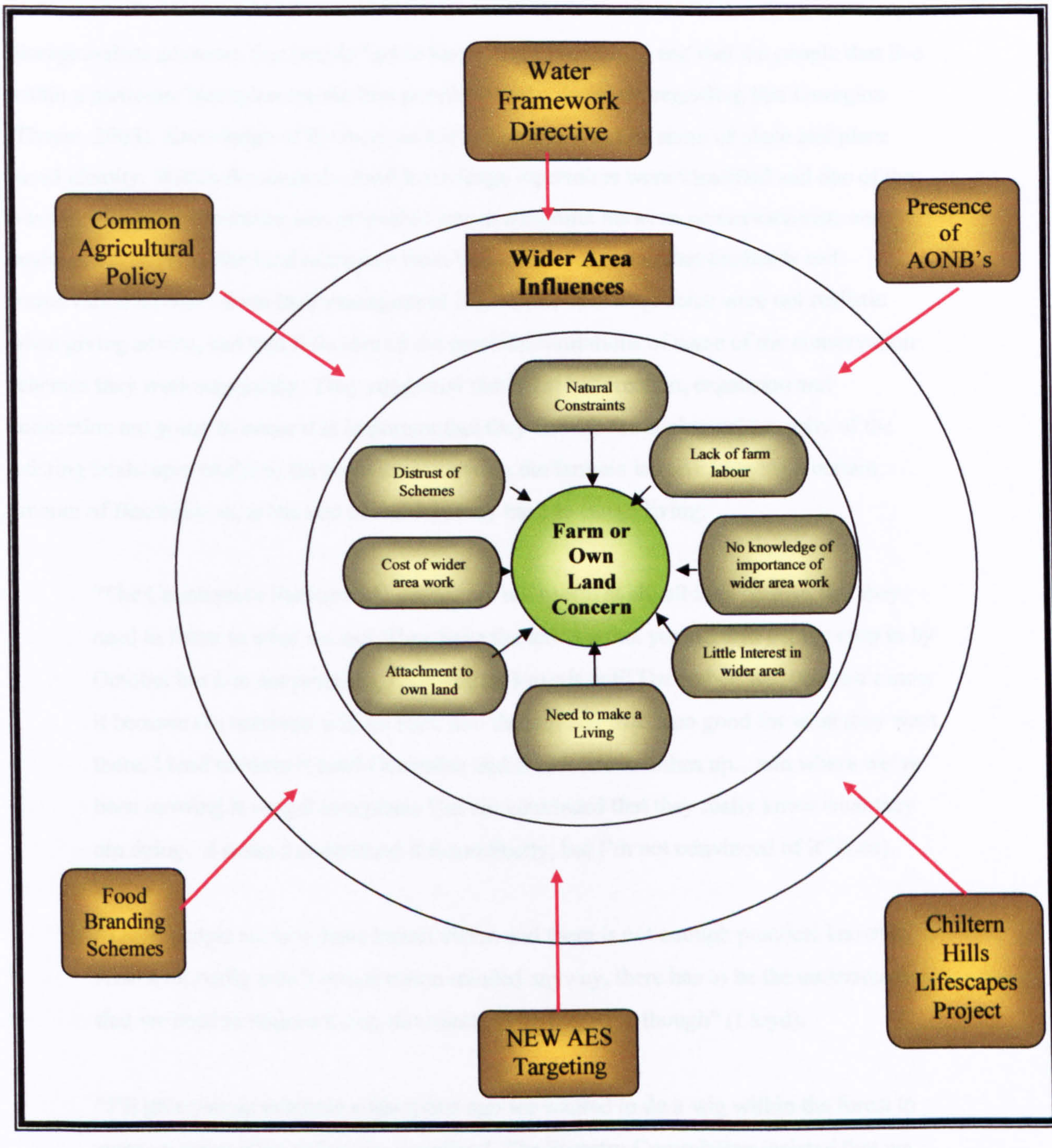


Figure 9.3: Factors that Influence a Land Managers Sense of Place or Attachment within the Chiltern Hills Natural Area



Land managers are very often influenced by an array of different external policies and projects and additionally their own personal circumstances. Therefore although land managers may be aware of the wider context in which their land falls they may not be aware of their impact within

the landscape and the interdependence between people and non-human nature. This illustrates the fluidity of scale of a 'sense of place'.

9.3.5: Conflict – What is best for the Land?

Bioregionalists advocate that people 'get to know' their bioregions and that the people that live within a particular bioregion are the best people to make decisions regarding that bioregion (Thayer, 2003). Knowledge of the local area is yet another facet of sense of place and place based identity. Within the analysis, local knowledge repertoires were identified and one of the ways in which this repertoire was presented was as a conflict between conservationists and landowners. Many of the land managers from both areas, suggested that landlords and conservation advisors from land-management organisations and agencies were not realistic when giving advice, and had little idea of the practical limitations of some of the conservation schemes they were suggesting. They suggested that if habitat creation, expansion and connection are going to occur it is important that they fit with the ecological integrity of the existing landscape, whilst at the same time allowing the farmers involved having a certain amount of flexibility as, at the end of the day, they have to earn a living:

> "The Countryside Stewardship people are not useful at all, all they do is moan, they need to listen to what we say. They have the attitude that you need to get the crop in by October but it is not practical, I sometimes leave it until December. See you can't mow it because the nutrients will go back into the soil and that is no good for what they want there. I tend to leave it until December and then it just smashes up...and where we've been mowing it we get rare plants I'm not convinced that they really know what they are doing...I mean I understand it theoretically, but I'm not convinced of it" (Lee).

> "These people seem to have tunnel vision and there is not enough practical knowledge. Also a lot really aren't conservation minded anyway, there has to be the understanding that we need to make a living this seems to be forgotten though" (Lloyd).

> "I'll give you an example a few years ago we wanted to do a wig within the forest to open up some rides within the woodland. The Forestry Commission insisted that we used a JCB to do it, but I knew that it would ruin the land and dig it all up, I was against it. To get it sorted out I had to go to someone really high up in the regional office to deal with it, I knew the JCB would cause a problem a lot of damage, I know the land" (Barry).

"I don't think their schemes always suit the area. If you go back and see the beech tree line, the National Trust is going to move them, it will be a problem…its stupid. I don't know why they keep going back to the past, I mean with some of the houses they get, they will pull out an eighteenth century foundation if it doesn't fit…and there is a blue factory behind the trees and you will be able to see it when the trees are moved" (Lee).

> "What happened recently really shocked me. English Nature and the RSPB…we have an area here that is a SSSI and it is unique it is an old flood meadow and English Nature and the RSPB were indicating that they wanted to provide hard access to it. But if they do it they will destroy it. I've stopped it, talked to them, but I can't believe that they think that no-one would want to go there and there would be hard access and only English Nature and the RSPB would go there…I can't believe it" (Lloyd).

These participants are claiming that they know their land better than the landowning organisations or the conservationists. They discuss how little 'practical' knowledge conservationists appear to have and the potential problems this could have for the landscape. This shows the way in which a landowner's knowledge can be used to conserve non-human nature. Bioregionalists suggest that all people should have this knowledge of their bioregion, however, what this is showing is that land managers know their land, not necessarily the whole of the bioregion. It may be that land managers, whilst having an awareness of the bioregion as a whole, may have a more in-depth awareness of their own landscape.

The conservation of non-human nature, especially in the case of restoration or enhancement will take time. Non-human nature has evolved over thousands of years through interaction with people (Roberts, 1998) thus any form of conservation effort will take time. A number of participants suggest that government targeting does not take into account the actual reality of work on the ground suggest there is little consideration regarding the practicalities of achieving targets in a set time-frame. This was discussed by participants in both areas in relation to AES and Public Service Agreement (PSA) targets:

> "The Countryside Stewardship people come and say that you have not got the plants to make this acceptable, but then it's going to take time, some of the land has not been in long. We've got bits of the farm that have been left for thirty-five years and they have loads of rare plants and stuff, though I'm not very good on species and things…we don't get paid for that either it is stuff we have just done on our own, we will maybe get something with the new Environmental Stewardship but I don't know much about that really yet" (Lee).

> "Also there is the new criteria for favourable condition so we try to include more standing dead wood and lying dead wood, but this is a long term goal…it can't happen over-night…dead wood takes a long time to get that way" (Anna).

Lee shows that he has carried out much conservation without any AES funding highlighting a dedication to the conservation of non-human nature that is not dependent upon financial considerations, but a commitment to the landscape. This type of relationship between people and non-human nature is fundamental to a sense of place, identifying the importance of non-human nature in its own right and not as a result of financial incentive.

A number of land managers and land users discussed their reluctance to take up AES or other conservation schemes, yet they were still involved in some form of conservation and this presented itself as the third local knowledge repertoire.

9.3.6: Conservation with no Financial Incentive

Many of the participants within both case study areas stated that although they did not want to be involved with AES they carried out conservation work on their land without financial incentives. All of the participants quoted and discussed within this section are land managers or land users and although some of them did apply for different grants to carry out conservation work, the failure to obtain these grants did not prevent them from carrying out projects that would benefit non-human nature. This shows that for a number of participants in both areas, there is an inherent interest in the conservation of non-human nature.

> "We also applied for funding for the South West Wildlife Trust to convert a pond here, and we got the grant but it wasn't enough so we funded it ourselves and there were too many strings attached to the grant so we did it ourselves. We also do a lot with the local schools in Ottery St Mary they come and count dormice, they have a mink trap and things" (Lisa).

> "We have conservation here, we have streams and woodlands and we let the trees grow up. If you go back to the sixties and seventies there were none, the hedges were cut tight back…but if you look around its not industrial farming here, not like other places, we have trees and hedges, yes there are a lot less than one hundred years ago, but it is still pretty enclosed here" (Mel).

"We do a lot, the game cover strips end up helping with conservation and some of the planting gives nest sites and through the winter it gives food" (Bob).

"We are always doing conservation, all of the work that we do for the pheasants and the partridges make it right for all the other tweets. Some of the cover crops are good, we get a lot of big and little tweets in those, some of them rare, some rare to the area don't we? We've got small areas of cover and things and that draws them in because there is a variety of feed. We do a fair whack of nature conservation but we don't get any credit for it" (Kevin).

Kevin and Bob both identified the conservation of non-human nature being a side product of their land management activities, clearly illustrating the close interrelationship and interdependence of people and non-human nature. Both participants work within large hunting estates and without non-human nature hunting would not be possible, but without land management the diversity of the landscape could be potentially much reduced.

9.3.7: Summary

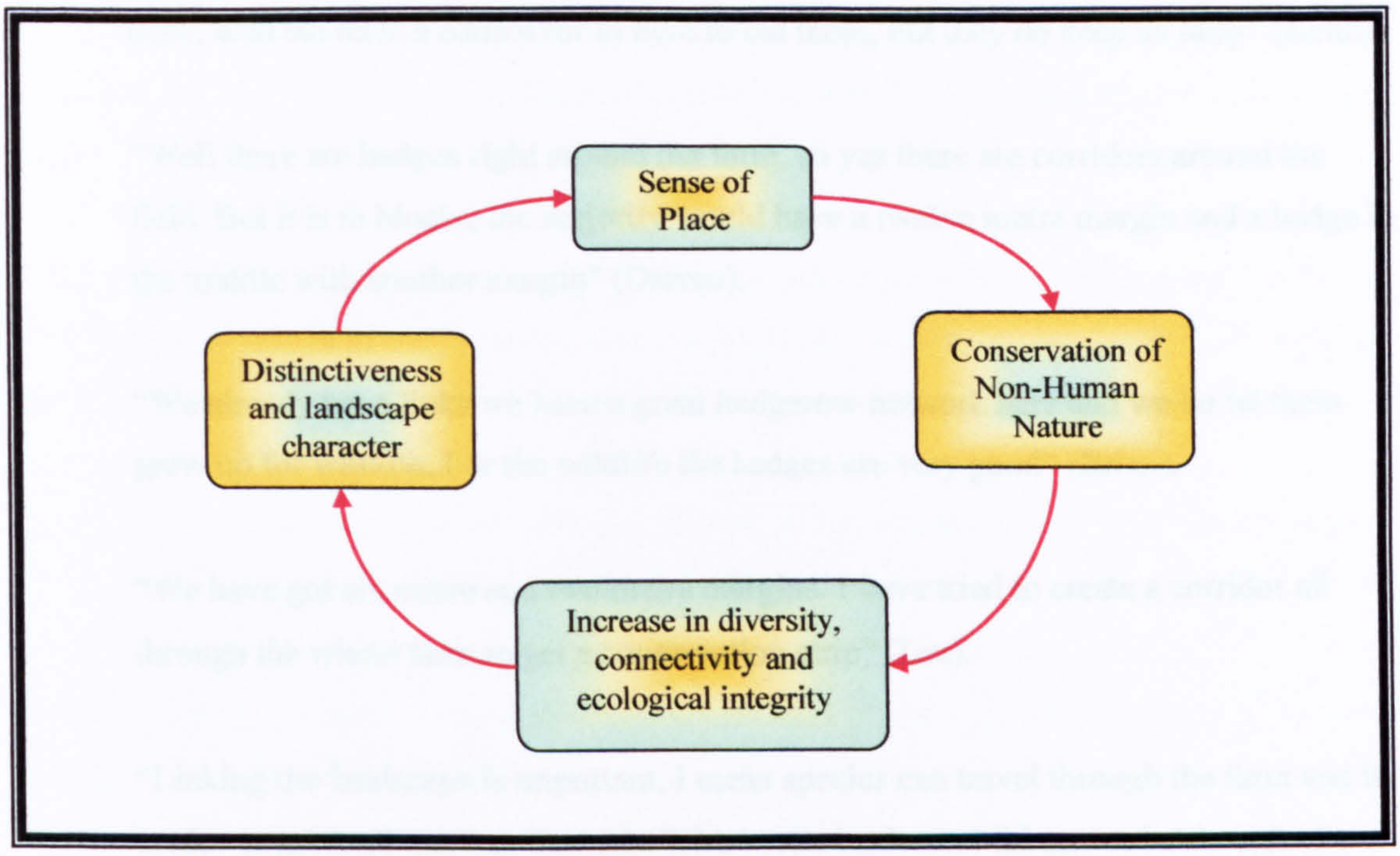
This section has discussed ecological connectivity from the viewpoint of land managers and land users, recognising that many participants are aware of the interconnectedness between people and non-human nature and are actively involved in conservation activities. I have contended that if landscape diversity and therefore character is to be maintained then there is a need to understand the extent to which participants have an interest in the conservation of non-human nature. A factor that proved important to this question was that local knowledge and *conflict repertoires* highlighted the conflict that often exists between conservationists' knowledge of management techniques and landowners' awareness of the conditions within the local area and what management would suit those conditions. This conflict regarding the type of conservation suitable for a particular landscape, highlights the close relationship that exists between land managers specifically and the landscape. This is an important factor of bioregionalism that suggests place based knowledge is a key facet of a sense of place (Thayer, 2003). Many of the participants were dependent upon the land for their financial, social and cultural survival. All but two land managers were generational farmers, farmers whose families had farmed that land for many decades and in some cases centuries and thus their whole life is linked to this delicate relationship between people and non-human nature within place, with the need for financial survival ever-present.

Participants also identified the importance of AES and other conservation schemes not only to their survival as farmers but also their contribution to the conservation of non-human nature. A large majority of participants identified a genuine interest in conservation as one of the reasons for the uptake of AES however; this was often secondary to financial incentives. However, there were a number of farmers that did not participate within AES mainly due to the paperwork and bureaucracy involved in engaging with these schemes. Nevertheless this did not prevent them from getting involved with conservation schemes and all participants that did not get involved with AES did engage in some conservation activity. I am suggesting that a sense of place is dependent upon landscape distinctiveness and this in turn is the by-product of the ongoing relationship between people and non-human nature. AES are one way in which this can be maintained, but they are not the only way and landowners that conserve non-human nature without AES or other conservation schemes are providing a more secure future and longstanding relationship for people and non-human nature.

9.4: Landscape Connectivity: Species and Habitat Work

Although the results have illustrated that there is a general failure to work beyond the farm gate or site due to a variety of reasons, in both areas, all participants had a high awareness of the importance of connectivity in the landscape. For example, a large number of participants discussed corridors and conduits within the landscape as beneficial to non-human nature, not least because of the future threat of climate change. This section will consider landscape integrity in more depth from the view points of all participants. If non-human nature is to survive and as a result, places are to maintain their distinctiveness, non-human nature needs to be-able to move across the wider countryside to maintain different aspects of life-cycles (Pullin, 2002). I suggest that a sense of place is dependent upon the survival of non-human nature and also that place-based relationships are a strong driving force for encouraging people to get involved with conservation. This somewhat circular relationship is shown in figure (9.4) to illustrate the link between sense of place, conservation, diversity and distinctiveness, which is at the heart of bioregional theory. Bioregionalists suggest that it is in the wider context of the bioregion in which this enhanced sense of place and subsequent conservation should occur.

Figure 9.4: The Circular Relationship between People, Place and Non-human Nature



9.4.1: Corridors and Conduits

Landscape ecologists have mixed views on the benefits of conduits and corridors within the landscape to increase connectivity (Forman, 1995; Zonneveld, 1994). It has been suggested that corridors have a range of negative impacts including providing for the spread of 'invasive' species, a conduit for predators to hunt and as being unsuitable for core habitat species (Spellerberg, 1996; Pullin, 2002). However, Godron and Forman (1986) did identify many benefits of different types of corridors within a landscape which are seen to provide heterogeneity, a means for migration, movement, dispersal, a food source and a habitat in itself. As previously discussed land-management organisations within both case study areas tended to try to expand or link different habitats either with AES uptake or through land acquisition. Land managers and land users also considered corridors and conduits as means of increasing connectivity:

> "The woodlands have been used to connect things together, they have all become corridors, also we have the six metre margins around all of the arable fields and things so they are corridors as well" (Lloyd).

"We do try to connect habitats, we do have isolated pockets of ancient woodland and we do try and link them up. We have thirty two miles of hedgerow...it keeps us very busy, well we have a contractor in here to cut them, but they do keep us busy" (Keith).

"Well there are hedges right around the farm, so yes there are corridors around the field. But it is in blocks, the majority would have a twelve metre margin and a hedge in the middle with another margin" (Darren).

"We already have links we have a great hedgerow network here and we do let them grow up for wildlife. For the wildlife the hedges are very good" (Brian).

"We have got six metre and two metre margins. I have tried to create a corridor all through the whole farm to get a conservation strip" (Lee).

"Linking the landscape is important, I mean species can travel through the farm and it is nice to get it all the way through. With beetle banks and things...a lot though of course depends on the like of the land, not everyone can do it. It is looking at what to do physically, creating things, looking at the way it looks" (Lee).

Much of the connectivity is identified by participants as margins and hedgerows, which is also strongly supported in the literature (Godron and Forman, 1986; Pollard et al, 1974). However, it is also identified that the benefits of hedgerows are often dependent upon what they are connecting, what species they are composed of and how they were formed; be it naturally through seed dispersal by wildlife or created by people, and finally, how they are managed (Forman and Godron, 1986). Bioregionalism contends that a heterogeneous landscape that allows movement between landscape patches is important for the survival of non-human nature (Berg, 1977; Sale, 2000) and hedgerows act to connect semi-natural habitats and provide a heterogeneous element within often homogeneous agricultural land. Although land managers did not consider corridors in relation to the wider context of the bioregions in which they were situated, the fact that they were all *unconsciously aware* of wider landscape may offer the potential to enhance this awareness using the new AES as a mechanism, given that targeting is occurring at the JCA level.

Within both areas hedgerows are features that are characteristic to the area and the identification by land managers of the importance of these is an encouraging step towards improving connectivity and heterogeneity of the landscape. Hedgerows are perceived as part of the quintessential British countryside however, after large declines in hedgerows in recent years

land managers have been encouraged to plant and maintain hedgerows (Countryside Agency, 2001). By adding to this character by increasing hedgerows, land managers are not only enhancing the ecological integrity of the landscape for non-human nature, but also adding to the heterogeneity and character of that landscape, which in turn will influence a person's sense of place.

Tuan (1977) contends that places and distinctiveness can be created, but attempting to create habitats that cannot fit in with an area creates a risk that ecological integrity will be destroyed. This was something that some of the land managers and land users recognised:

> "I think we have a huge respect for the balance of nature and how it all slots together and if you mess with one part then you can mess the lot up" (Paula).

As Paula, from the Parrett Catchment, suggests non-human nature is intricately linked, as are people and non-human nature, however, the fragility of this relationship can lead to detrimental impacts upon non-human nature that will eventually result in problems for people. This is clear when considering the impact climate change is having on the non-human environment and the need for increased connectivity across the landscape to aid the evolution and movement of non-human nature, in response to this change.

9.4.2: Climate Change

One of the growing concerns within the ecological literature is that of climate change and how we manage the landscape in response to that potential change (Wynne et al, 1997). Within this research landscape connectivity and reduced fragmentation have been identified both as a means by which species can migrate across the landscape and also as a means of increasing landscape distinctiveness and aid the development of a sense of place. By viewing habitats within the wider context of the Natural Area or the Catchment Area it may be possible to begin to consider issues like climate change. Climate change will inevitably not just influence non-human nature but will also influence the way in which people relate to non-human nature and places themselves. Everyone interviewed in both case study areas including land managers and land users had a certain awareness of climate change to some extent:

> "Yes I know about climate change, but I think people are overly pessimistic mid you…if there are a couple of dry summers on the run like we have had this past few years then this will put any tree at risk…I guess it could put it at risk…especially if we have dry summers and dry winters" (Barry).

"We have looked at woodland in terms of climate change especially looking at reducing carbon dioxide emissions, this can be achieved through woodland planting and to me it is beneficial and important" (Aaron).

"We know its happening its absolutely clear, there are examples all over the place from phenology through to species moving around" (Tim).

Only a small minority of these participants felt that the improvement of ecological connectivity within the areas could benefit species and habitats in response to changing climates and all of these participants were from land-management organisations:

> "We try to plan for the movement of species we are trying to do that in coastal areas. We are now seeing that we don't want to have defences we should let nature take its course whilst allowing for things like salt marshes to migrate. We will try to facilitate that and land acquisition is also based on linking areas for this purpose as well" (Karen).

> "We consider our acquisitions with regards to climate change, we've turned down a couple recently because we know that in time these things are going to be lost anyway to sea level rise for instance" (Tim).

Both of the above participants work within large regional offices and are not involved on the ground in the practical side of conservation. Many participants suggested that it is difficult to consider climate change due to the uncertainty of climate change models. Some participants also suggested that non-human nature should be left to its own devices.

> "It's too difficult to tell grassland communities change annually and the changes in local climate are too small to detect" (Edward).

> "None of the climate scenarios as of yet are accurate, even those coming from the Hagley centre, they vary so much, we can't do much until we are sure and just recently haven't they suggested the raising of temperatures by another 20°C? We do have someone taking a year out to sit in on the climate change scenario testing and we shall wait and see what is found there" (Luke).

"I reckon you should let nature take its course at the end of the day, unfortunately I am inclined that way to be very pragmatic you might get knocked down by a bus tomorrow and some say that the climate change might cause an ice age anyway don't they if the Gulf stream moves. So yeah...so why worry about it, well not worry about, research and all that and tell us how much it is going to warm in the next fifty years and tell us how much the sea level will rise, but I'm sure nature will decide what species are going to survive" (Max).

This uncertainty is also clear in the discussion by a focus group in the Parrett Catchment:

> *Jess:* Climate change...there was a programme on television of how the increase in temperature is actually affecting the wildlife in Africa, the dryer it gets and because a lot of wildlife actually doesn't have the tracts of land...it used to be able to migrate where the water is. They reckon a lot that you see in Africa now will be gone as the temperature increases, so you kind of relate that to where we are there's only so much we can do to actually so much we can do to actually protect things like beech up to the point that climate change will make all the difference no matter how much you did, don't you think? It will get colder here won't it?
> *Beth:* Drier.
> *Sarah:* It's all change, I mean things come and go don't they, its part of evolution is things move on...
> *Jess:* Oh yeah...
> *Sarah:* You can't...you know...and temperature change is one of the factors that change.

Although the principles of connectivity that could potentially aid the survival of non-human nature with the onset of climate change, these results indicate that this is rarely considered on the ground and certainly not in the context of catchments or Natural Areas. The document analysis did indicate that climate change was viewed as an important issue within the primary documents for the Parrett Catchment and Natural Areas more generally (Countryside Commission and English Nature, 1996; English Nature, 1997a; 1998; Environment Agency, 1997; 1998; 2001).

Climate change will influence the relationship between people, place and non-human nature. It is possible that changing climates will influence not only conservation efforts but also land use in terms of the type of agricultural use and the importance of AES. AES are an important tool through which to maintain an relationship between people, place and non-human nature. These

could potentially be utilised in response to changing climates which will impact initially upon species and habitats and subsequently the character of the landscape.

9.4.3: Heterogeneity and Landscape Mosaics

Landscapes are not simply homogeneous compartments linked by corridors, Forman (1995) suggests that there is a natural heterogeneity within the landscape that creates a mosaic of interconnecting habitats and it is this mosaic that creates landscape diversity, distinctiveness and ultimately character. Relph (1976) contends that increasing homogeneity or sameness results in the occurrence of placelessness. So not only will non-human nature be reduced, but people will begin to lose their sense of attachment to the area in which they live and work.

Within both case study areas participants referred to the diversity of the wider area in which they lived, recognising the 'natural' complexity of the habitats that surround them, supporting the view that people are aware and become attached to landscape diversity.

> "I think most people passing through it do not appreciate the contrasts, the different geology it produces different flora and fauna" (Chris).

> *Ben:* How about the diversity? Up there over the flat lands...the levels...completely different.
> *Jess:* Well within many of the walks that we have done around the Quantocks or the Mendips or...we've had quite contrasting landscapes haven't we?
> *Sarah:* Within the day...within the days walk yes (Group 2, Parrett).

> "It's the diversity of the landscape, I've been to other AONB's and they don't compare to the Blackdown Hills" (Charles).

> "We have downland, cattle, sheep and arable farmland and there is parkland adjacent to the Ashridge House, we don't own the house though. We have ponds, a little bit of river bank, some relict heathland with heather, some acid grassland, a real diverse mix" (Brian).

> "Five minutes down the road is the canal and that is a different walk as well" (Mary).

Participants, particularly the land users, identify how diverse the areas are and as Group two from the Parrett Catchment indicate above, this diversity is often related to specific landscape

units, such as the Quantocks. This indicates that people do associate with wider bioregions and are attracted to the diversity within them. As previously suggested participants are concerned about the fragmentation, habitat loss and the threat of development that makes an area increasingly homogeneous. It shows that they are not only attached to the diversity of the landscape but aware of the impacts that threats can have on this diversity and the character of an area.

Serena: They are building on it all...all of the flat areas...

Zack And they are all identical houses, they are all the same (Group 1, Parrett).

Ray: There are too many housing estates they are putting them everywhere and they are too large.

Paul: They are like Lego houses they are all the same.

Paula: Yes they are all the same and so small.

Sara: They knock down one house and they build a load of new houses that are all the same (Group 3, Parrett).

It was primarily land users within the Parrett catchment that were concerned about the creation of homogeneous housing estates, partially due to the fact that the vast majority of the Chilterns Hills Natural Area is designated AONB which provides some planning protection (Chilterns AONB, 2002). Although there are AONBs within the Parrett Catchment, they do not cover the entire extent or almost the entire extent of the area. However, it was noted by some of the landowning organisations within the Chilterns Hills Natural Area that there has been an increase in equestrian land use within the area and this has resulted in increasing homogeneity:

> "Err I also consider it in terms of chalk grassland, erm we've got significant pressure for equestrian use within the Chilterns, erm stables and manages, it's the manage that causes the problems because they have to be flat, level and the Chilterns invariably aren't level. There are flat bits in it, but most of the places people seem to want to go aren't flat, so to get their forty metre by twenty metre manage and post and rail fence, sand covering and all that that sort of stuff involves cutting into the hillside and depositing stuff, cutting in, depositing stuff, that ruins chalk grassland and erm I've made numerous representations about that to various planning applications so that there's key habitat there and of course chalk grassland is another key habitat that is impacted severely on by development" (David).

> "Yes much more than farming, although it's a much smaller area erm...you've got a field that is taken and divided up in ten or fifteen paddocks each with fence and each with a water trough, each with a shed, or you know lots of electric fence which really does ruin the landscape or you know, jumps or...you know it really does impact on the landscape a lot" (Julie).

All of the land-management organisations and agencies identified the importance of a heterogeneous landscape, English Nature in particular in relation to Natural Areas identified the importance of habitat mosaics within the landscape for the survival of different species and the diversity of the landscape.

> "The landscape, is a landscape of mosaics and increasingly, you know, there's a very good rationale that says expand those core areas if you like, because they will be more robust, resilient, climate change etc. But then what do you do if you are expanding woodland into wet meadow's or vice versa? I think there's a lot more work to do, but I think the more semi-natural habitat we have, the more supportive it's going to be of those various different habitats. But, it's not... that is a very difficult, erm mosaics, it's a very difficult concept to sell, where as corridors, you know, we've sold those too well almost on scientific basis" (Jason).

> "This is a problem particularly on a big site, there are areas where there is very little scrub. English Nature see scrub as bad, but the National Trust are taking the view of a mosaic, there are species that are reliant on scrub and we want a diverse mosaic" (Brian).

As Brian indicates the concept of landscape mosaics works on the assumption that different species require different habitats and often species are dependent upon a number of different interconnected habitats through which different parts of their lifecycle are maintained, such as foraging and reproduction (Dickinson, 1998; Hugget, 2000). The loss of any one of these factors could result in the local extinction of species. Whilst only the English Nature interviewee directly discussed landscape heterogeneity over the wider scale this is not to suggest that other landowning organisations are not aware of the wider catchment or Natural Area. As revealed in previous chapters this is not the case and resources, staffing and landownership issues often constrain this wider area work.

Although few land managers and land users used terms such as heterogeneity and mosaics, many of them were aware of, and wanted, diversity and connectivity within the landscape.

These factors I am contending all add to the concept of a sense of place and influence the way in which people relate to the landscape. A number of land managers and land users from both areas advocated the use of conduits within development to aid the movement of species and said that change needed to take account of the interconnectedness of non-human nature:

> "I think we have a huge respect for the balance of nature and how it all slots together and if you mess with one part then you can mess the lot up. When we first came here there were no birds at all, it had been an old cattle farm, but now it has surprised us how many are here. But that is not the primary source it would be the balance of nature for me" (Paula).

> "Yes and new roads can build in ditches and things for the animals so they can cross over safely and need never come onto the road" (Charles).

> "I do think people are becoming more aware of our interconnectedness more but I don't preach about it often" (Joel).

These quotations indicate the close interaction between people and non-human nature and an awareness that this interaction does not always have to be destructive.

9.4.4: Charismatic Species and Place

Land managers and land users did not present an interest in all aspects of non-human nature and primarily discussed charismatic species, although it was apparent that there was an awareness of more than just this group of species. This concern for charismatic species is one that has been revealed within the literature related to farmers and the uptake of AES (Morris and Potter, 1995; Morris and Winter, 2000). Identifying a concern for primarily charismatic species and an association between charismatic species and specific places is firstly suggesting that other species are not as important. Nevertheless it is linking species with place, which does emphasise the relationship between people, place and non-human nature if species are related to specific areas. All of the land users identified large charismatic species such as Red Kites (*Milvus milvus*), foxes (*Vulpes vulpes*), badgers (*Meles meles*) and owls as being the most important to the area and in need of protection.

Shelly: Well we have Muntjac Deer here as well.

Sebastian: The Gliss Gliss as well.

Cassie: The Gliss Gliss? Never heard of those...

Sebastian: Oh yes the edible dormouse, they live in peoples lofts and eat their electrical wires.

Shelly: They do look cute, they are all furry and things but can cause a lot of damage (Group 2, Chilterns).

"I have a lot of birds and I have more interest in that there are all sorts of woodland birds. We get Red Kites I think that a pair have nested, I have Tawny Owls as well you can here them carry on at night" (Sandra).

"I like the Muntjac, the Rabbits, the Foxes, I'm not into birds really except for the kites" (Stephanie).

"We have deer quite regularly as well we see them crossing the field. Then the foxes it is lovely to see them, although they have had two of my ducks, so it's good to see them as long as they leave my ducks alone" (Melissa).

"Yes hares and Grey Partridge. We have Barn Owls, they don't nest in the barns but they definitely do work the headlands. We get Skylarks. I have seen Otters this year and I am going to build an Otter holt as part of the countryside stewardship" (Darren).

Although the participants identify these charismatic species as important to them, there is a thin line between what is seen as good and what is viewed as threatening. Land managers in particular identify some aspects of non-human nature as threatening and therefore not to be conserved.

Darren: Yes badgers and the hay meadows are both protected and you can't do a lot and Badgers are protected.

Interviewer: So do you have a problem with Badgers here?

Darren: Yes we do have a problem with Badgers, it takes about three or four man days per year to fix the problems, it's a lot isn't it?

Interviewer: Hmm...

Darren: Then there is all the tractor fuel we have to use going up there. We have asked for a culling license, only because DEFRA wouldn't talk about it at all so we put in a license and it made them talk about it. They came up here and looked, counted the Badgers setts and things, but they

> never looked at the damage that was being done, they won't let us cull them, they counted the Badgers. We just want control on it (Darren).

"We have a big problem, I mean a major problem with Rabbits, that is the arable farm and Pigeons and that can be a big problem. On the conservation side we have problem with Foxes predating and I am pretty sure there is a problem with Badgers predating as well. But the Rabbits they are the main problems, I mean you are talking thousands of pounds worth of damage" (Keith).

"We have Buzzards, Foxes, they are vile and should be attacked. They broke into the house last night killed three chicks and ripped the throat out of the mother. We get all sorts of things, I'm not sure about conserving things. We have a few deer. We accept that they are there. We work with the local shoot they come once a year" (Lisa).

"We get the Red Kite brigade and they can be a pain, we get forty Kites and they feed them and then there are 60/70 and they say that they only take carrion, but they don't. I'm not sure how we can sustain that, it is all about a balance. It distracts from others, the Kites take more carrion so that the others like magpies and crows and things take more eggs" (Bob).

The views of land users and land managers are polarised with regard to species, the land users identify charismatic species as important, whereas the land managers identify the same species as a threat to their land. As revealed below with examples from the Chiltern Hills, this can lead to misunderstanding and conflict between these two groups, and adds another layer of complication to land management:

> "In some places the community are against it. The trouble is they are very cute and people feed them, it is the same with the Gliss and the deer we are getting some of the bigger deer species up on the hills as well, it is the same though until the deer start eating peoples gardens. We do get a significant number of complaints a lot of them are usually misunderstandings people rarely see the hoppers because they are well hidden. A couple of times during the year someone will call the police on the contractors because they think they are doing something wrong" (Rosie).

Interviewer: Does the need to control pest species cause problems then?
Barry: Yes it does, especially in the local community, it is ignorance really they do not realise the damage the grey squirrel causes. They will remove the poisoned hoppers, but

> when you explain to them why we do it that there will be no woodlands for their grandchildren to walk in, in the future they understand and take a different view.

This conflict can have implications for land management. Land managers although dependent upon the non-human landscape for their survival financially, socially and often culturally, are intolerant of species that may threaten their land although farmers have themselves potentially disturbed many species and habitats in managing the land the way they do. Bioregionalism suggests that there is a need to balance human activity and the survival of non-human nature as all are interdependent. However, when discussing non-human nature they are implying species and habitats that are 'native' to the area, not introduced or alien species (Thayer, 2003). It is these introduced species most significantly the Grey Squirrel (*Sciurus carolinensis*) that landowners suggest are pest species. Nevertheless it is not all introduced species that are viewed in this light, in fact some introduced species specifically within the Chiltern Hills Natural Area are viewed as being characteristic.

9.4.5: Introduced Species and a Sense of Place

Within the Chiltern Hills Natural Area all of the participants discussed the importance of the beech woodlands to the area and the way in which beech characterises the Chilterns. Not only do participants talk in terms of the wider Chilterns, showing a clear association between beech and the Natural Area, but also participants discuss beech as if it was a natural part of the landscape. Beech (*Fagus sylvatica*) plantations were introduced to the Chilterns a few hundred years ago as part of the furniture trade and were never 'native' to the Chilterns (Countryside Commission, 1992). However, interview evidence suggests they have become an important aspect of a sense of place within the Chilterns.

> "I think it is the trees in the Chilterns that set it apart" (Rory).

> *Sebastian:* The hillside I think makes it outstanding and the woods, they are all over here.
>
> *Caroline:* Yes the Beech woods, Primroses and there are some trees that are not common (Group 2, Chilterns).

> *Interviewer:* What do you think is important in the area?
>
> *Chelsea:* Oo…the trees, cos I used to live in Liverpool and its very flat and very treeless up there.

Interviewer: Yeah.

Chelsea: And when I first came down I was absolutely amazed by the trees, beautiful huge trees (Chelsea).

"The Beech woods are important and we also have seven ponds, but there is nothing special in Penn parish" (Winston).

If a landscape mosaic is to exist as Forman (1995) suggests, with increased connectivity across it, there is a need to work with both land managers and land users and recognise possible causes for conflict within the area. Many species have become naturalised within certain areas such as Beech (*Fagus sylvatica)* and the Grey Squirrel (*Sciurus caroliniensis)*, this can create quite divergent views within an area and raises questions regarding what people view as being nature or natural. As a consequence, what conservationists view as 'characteristic' and what has been used to inform the Natural Area profiles that guide management on a Natural Area scale, may not fit what landowners or land users perceive as being characteristic. Given that the new AES is based upon Natural Area or JCA targets which are devised around what species, habitats and management are characteristic within an area, this potential for conflict may subside as landowners increasingly take on the new scheme.

Forman (1995) when discussing the landscape as a mosaic identifies the role of change, both anthropogenic and natural change in the landscape, and the impact this can have for the species that exist within the landscape, the connectivity of the landscape and the different habitats that exist within patches of the landscape mosaic. The interviews and focus groups within the two case study areas revealed there is a general 'consensus' that 'native' species, which are "species that occur naturally in an area, and therefore one that has not been introduced by humans either accidentally or intentionally" (Allaby, 1998, p.274), should be used within conservation management, rather than non-native or introduced species that are seen as species introduced to an area intentionally or accidentally. However, it is important to highlight that species do influence the way in which people see place. Participants especially within the Chiltern Hills associate the area with specific species including Beech trees and the Red Kite. There is less evidence to support the identification of specific species with specific areas within the Parrett Catchment. Nevertheless the results show that participants do associate non-human nature and place. This re-emphasises the hybrid nature of place and the interdependent relationship that exists between people and non-human nature across place.

9.4.6: Summary

All land managers and land users presented a clear awareness of the threat of fragmentation within the landscape and a certain amount of knowledge regarding connectivity. However, connectivity tended to be viewed in terms of corridors such as 'hedgerows' rather than expanding larger patches of habitat. Whilst being aware of the diversity and heterogeneity of the landscape land managers tended to have specific views of what should be conserved and what they felt to be a threat to their land, whilst land users identified charismatic species as being important within the area and few identified the importance of habitats. Species connectivity, heterogeneity and diversity are all important aspects of place and interconnect to maintain the character of a place. These results indicate that participants not only associate with the wider landscape, but they do this through an association with a specific species or habitat, for example beech trees in the Chilterns. This relationship between specific species and place adds further support to my argument that a sense of place is intricately connected to non-human nature. Place is a complex concept; however, its existence is dependent upon the hybrid relationship between people and non-human nature.

Chapter 10

Conclusions

The primary aim of this research was to investigate the concept of bioregionalism and the interrelationship between people and non-human nature inter-facing with the cultural concept of place. Throughout this research I have argued that place is a hybrid the result of the interconnection and interdependence of non-human nature and people and I have investigated this from the standpoint of Situated Knowledges.

There were three primary objectives:

- To find out whether if there is a inherent conscious or unconscious awareness of bioregions and bioregional programmes within two case study areas of the UK, the Parrett Catchment Somerset and the Chiltern Hills Natural Area.
- To explore the relationship between place, non-human nature and people within a bioregional context.
- To investigate the practical implications of a sense of place and the extent to which this occurs on a bioregional scale.

This chapter will be divided into five sections, one section for each of the objectives, a section that reflects on this research and a final section that will consider the implications of this research for future research and the use of bioregional frameworks within UK landscape planning and management. I will discuss the conclusions found from document analysis and interview analysis and identify the differing perspectives of agencies, landowning organisations, councils, landowners and land users, illustrating potential contradictions and misconceptions of the concept a sense of place within a bioregional framework and the usefulness of such a concept.

10.1: Bioregional Awareness

Within Chapters Seven and Eight a series of repertoires were identified that illustrated an awareness of bioregional frameworks by agencies, land-management organisations, land managers and land users. The document analysis clearly presented what I termed *integrative repertoires* that discussed working in an integrated manner with all aspects of the landscape which include social, cultural, economic and non-human nature. The primary policy documents produced for the conservation of non-human nature treat these aspects as very separate, yet

promote the perspective of integration. Within these policy documents there was brief reference to the Natural Area framework and the benefits of working within the wider countryside as opposed to concentrating upon special sites. The discussion regarding this in the documents was minimal, indicating only an awareness of these frameworks and not a practical guide to their use. However, at the time of the publication of these documents the Natural Area framework was relatively new and therefore the awareness of the potential of this framework at this point may have been limited.

The interviews of participants within the Parrett Catchment and the Chiltern Hills Natural Area illustrated that all agencies had a *conscious awareness* of these bioregional frameworks and the majority of land managers and land users had an *unconscious awareness* of the bioregional frameworks in which they lived or worked, even though many participants had no awareness of the actual bioregional frameworks of Natural Areas or river catchments or the technical 'jargon' associated with these. However, within the Parrett Catchment this awareness was primarily based upon landscape units or Natural Areas and not upon the entire river catchment. Participants clearly identified an awareness of Natural Areas that were located within the Parrett Catchment: these included the Quantock Hills, Blackdown Hills, Exmoor and the Somerset Levels and Moors. This awareness was demonstrated through the way in which participants described the area in which they lived and this was primarily based upon either direct reference to a Natural Area or a landscape based description that encompassed one of these Natural Areas. Within the Chiltern Hills all participants clearly situated themselves within the Chiltern Hills Natural Area and whilst none of the land managers or land users had an awareness of the Natural Area framework the majority of the participants described the area in terms of the area covered by the Natural Area, and not the Chiltern Hills Area of Outstanding Natural Beauty that that excludes all built-up areas.

A minority of participants within the Parrett Catchment showed *unconscious awareness* of the whole catchment, however, this was directly related to whether or not they were impacted by flooding within the lower reaches of the catchment. Those that were impacted by flooding were aware of the catchment as a whole. This in part may have been influenced by the Parrett Catchment Project that is working with land managers to raise awareness of flooding and tackle the problems of flooding within the lower catchment. Nevertheless this catchment awareness should not be dismissed as it is important in tackling flood issues and is an important part of the daily lives of farmers within the lower Parrett Catchment. However, it is clear that land managers within the upper catchment have only a limited awareness of the way in which their land use can impact upon land managers downstream. This suggests that the PCP is not having a

significant impact on the catchment awareness of landowners and land users within the mid and upper catchment, despite a small number of successful flood management projects.

Bioregionalists have suggested that firstly people associate to a greater extent with units depicted by 'natural' boundaries rather than administrative units and secondly that watersheds are the primary unit through which people associate with non-human nature (Berg and Dasmann, 1977; Thayer, 2003). This research suggests that the participants within the Chiltern Hills Natural Area and the Parrett Catchment clearly associated and described the area in which they lived in terms of 'natural' or landscape features as opposed to administrative units. Only a small minority of participants discussed administrative units at all and these participants were those that were engaged with local government, for example parish councillors. Whether it was *consciously* or *unconsciously*, participants identified an awareness of bioregional units as opposed to administrative units that often act to divide these bioregional units (Alexander, 1990). However, participants within this research clearly identified primarily with landscape units, rather than river catchments, indicating that catchments for the majority of participants were not significant to the way in which people associate with place.

Despite the clear association by land managers and land users with landscape units, agencies and land-management organisations identified bioregional frameworks, primarily the Natural Area framework, as a 'good idea' but not practical. This lack of practical application is largely the result of lack resources including time, finance and staff, as well as government-driven targets taking priority and landownership complexities. Whilst all agencies and land-management organisations within the Parrett Catchment had a *conscious awareness* of the catchment as a whole there was little work carried out at this scale and when discussing wider countryside work, the Natural Area framework was discussed as opposed to river catchments. This has implications for the Water Framework Directive (WFD) that aims to designate River Basin Districts that in many cases are congruent with current catchment areas, and use these as a framework through which to achieve integrated action in relation to the water environment (Balls, 2003). 'Integrated' action from the perspective of the WFD is the consideration of all the different facets within a RBD. This is to be achieved through work with local people and if local people do not associate with river catchments, as suggested by this research, the extent of public participation may be limited.

In conclusion participants within both case study areas had an awareness of bioregional frameworks and this was primarily the Natural Area framework. This was presented through their discussion of the areas in which they live in terms of the non-human landscape and

specifically in relation to landscape units. There was some awareness of the Parrett Catchment, but primarily from participants who were frequently flooded.

Although throughout this research I have referred to the United Kingdom, both of the case study areas were located in England. River catchments are present across the whole of the UK, but Natural Areas are purely an English framework, despite similar frameworks existing within Scotland, Wales and Northern Ireland (Hamilton, 2003). The majority of the policies that impact upon the English landscape also affect the rest of the UK, such as the Common Agricultural Policy, the Water Framework Directive and the Convention on Biological Diversity. These policies have been key drivers in the development of bioregional approaches within the UK, yet are applied differently on a local level, in individual countries. Taking this into account, the extent to which the findings from English case studies can be applied to other parts of the UK may be limited. Despite both Wales and Scotland having developed frameworks similar to Natural Areas, known as LANDMAP and Natural Heritage Zones respectively, these frameworks are primarily based upon an administrative basis (Hamilton, 2003; Scott, 2002) and are not identified by using non-human features. It could therefore be difficult to apply policy suggestions based on English case study sites and the Natural Areas to either Wales or Scotland, because these countries are still utilising administrative boundaries for decision making across the landscape. it may be less of an issue in respect of river catchments, as the whole of the UK is required to identify River Basin Districts and consider a catchment approach under the WFD. The fact that this research has suggested that a catchment may not be the most appropriate level at which to identify a sense of place and consider the relationship that exists between people, place and non-human nature, could be more widely relevant within the UK. However, differences of cultural association and meaning would no doubt limit the relevance of my identification of participants' inherent appreciation of Natural Areas as an appropriate scale by which to operate.

10.2: The Relationship between People, Place and Non-human Nature

Place is a hybrid: the by-product of the interrelationship between people and non-human nature. Within the UK no part of the landscape remains untouched by people and the UK is thus composed of a series of cultural landscapes. These landscapes evolve through the continual interaction of people and non-human nature, within place. Whilst the policy documents analysed identified a close relationship between people and non-human nature they were still presented as very separate issues and the culture/nature dualism that I identified within Chapter Four was an ever-present issue. People and non-human nature, whilst on the surface being accepted as integrated in practice, were being treated very separately and this was portrayed in the way in

which non-human nature was still primarily isolated within designated sites which contribute to the fragmentation, isolation and loss of habitats and species. Although a wider countryside approach was advocated, participants from agencies and land-management organisations revealed that there were a wide number of constraints that were preventing this, not least a concern for government targeting both Biodiversity Action Plan (BAP) targets and Public Service Agreement (PSA) targets that are concerned with bringing Sites of Special Scientific Interest (SSSIs) into favourable condition. This immediately concentrates conservation effort into SSSIs and away from the wider countryside.

A sense of place was presented within all of the documents as a 'throw away' term, a concept that seemed to be important but there was no clear idea of why and how. Even within the documents regarding Natural Areas and river catchments, a sense of place was used as an add-on rather than an intricate part of the frameworks. However, bioregionalists have stated that people have an attachment to bioregions and this presents itself as a sense of place (Plant, 1990a; Thayer, 2003). This concept of a sense of place was also fundamental within the Natural Area framework with document analysis revealing place based repertoires based upon distinctiveness and identity (Porter, 2004), although there was no discussion surrounding the implications of this. I have suggested that place is the result of the interrelationship and interdependence of people and non-human nature and a sense of place is formed based upon a series of relationships with non-human nature including a sense of attachment, diversity, distinctiveness and identity. Although organisations do not emphasise this within the documents, when interviewed their staff clearly identified a personal sense of place that was related to their relationship with non-human nature. This emphasised a separation between the official 'rhetoric' regarding place within the documents and what the participants within these organisations felt.

Within the case study areas there was a clear relationship between people, place and non-human nature, both at the bioregional scale of the Natural Area and the very local scale. The diversity and distinctiveness of non-human nature within these areas were viewed as important to participants. This diversity and distinctiveness contribute to place based identity and help to distinguish one place from another and are based upon this interrelationship between people and non-human nature. Although the wider Parrett Catchment was not discussed by participants there was a clear recognition of the distinctiveness and diversity of the different landscape units or Natural Areas that made up the catchment such as the Quantock Hills or the Blackdown Hills. Distinctiveness was primarily discussed in relation to the non-human landscape and the habitats that are dependent on these landscapes, this shows the relationship between people, place and non-human nature. The Chiltern Hills especially was discussed in relation to its

rolling hills and Beech woodlands, showing that people associate distinctiveness with non-human nature. Distinctiveness can be determined by a number of factors one of them being building design and this is a point emphasised by the Chilterns AONB team, a number of participants discussed the distinctiveness of the Chiltern Hills in relation to the building type: the traditional brick and flint buildings that make up many of the villages within the Chilterns (Chilterns AONB, 2002). This further identified the relationship between people, place and non-human nature in the materials that were discussed as being distinctive.

Throughout the interviews it was clear that non-human nature was key to the way in which participants viewed the area in which they lived, and this influenced the way in which they related to place. Although landowners were often constrained by the need to make a living the conservation of non-human nature was a priority for them. Attachment, identity and a sense of belonging were all associated with non-human nature and place clearly suggesting that place based associations and non-human nature are intricately connected. However, within the literature and the documents analysed a sense of place tended to be presented as a 'fuzzy' concept with no clear indication of how to ascertain whether this existed. These relationships again were primarily identified as related to landscape features that related to a Natural Area framework and at a more local level, there was little discussion by participants regarding the Parrett Catchment as a whole. Participants especially within the Chilterns Hills identified a sense of attachment and belonging with the Natural Area unit. However, this sense of attachment and belonging was also felt at the more local level of a participant's own land. Land managers identified the relationship between land use and non-human nature, recognising the significance of their impact within the landscape. Whether at a Natural Area level or a local level this sense of attachment is predominantly expressed in relation to the landscape.

People, place and non-human nature are clearly interrelated and this is a factor evident throughout this research. Participants linked non-human nature with distinctiveness, diversity, identity, attachment and sense of place indicating that non-human nature is of fundamental importance to place and the factors that contribute to place. Participants from all groups recognised this connection and this clearly emphasised the interdependence of people and non-human nature and the hybrid nature of place. The composition of the non-human landscape is very much influenced by people, therefore making people and non-human nature inseparable, and this was strongly represented within this research. A number of participants (primarily land managers) identified to a greater extent with their own land, but given that this is how they make a living it was not totally unexpected. Furthermore this concern with their own landscape does not eliminate that they also presented an awareness of the wider landscape in terms of the

Natural Areas in which their land was located. This provides support for a nested hierarchy of landscape units within the wider landscape context.

The Parrett Catchment, remains something that was divided into landscape units as opposed to a whole catchment area. This suggests that in terms of a sense of place and sense of belonging participants within these areas associate strongly with landscape units or Natural Areas and river catchments were not viewed in the same way. This could be as river catchments are so large and as suggested by bioregionalists and within the Water Framework Directive (WFD) catchments could be divided into sub-catchments (Ribble Project, 2004; Thayer, 2003). However, participants did not discuss sub-catchments with regard to either distinctiveness, identity or place. There was some recognition that the Somerset Levels and Moors were associated with the lower Parrett Catchment, however, this was primarily in terms of flooding and when discussing identity and place, participants discussed the Somerset Levels and Moors as separate from the Quantocks or Blackdowns, showing that it was the landscape units that were important. This suggests that when working with people in relation to the conservation of non-human nature Natural Areas are potentially a more appropriate bioregion. Therefore from the perspective of the participants interviewed the non-human landscape was important to their sense of place and this was clearly the result of the integration of people, place and non-human nature. This supported my contention that place is a hybrid composed of people and non-human nature interacting together in an interdependent manner.

The results indicated that people that had lived within the areas for a long time and newcomers to an area both had a sense of place that related to the landscape and there was conflict between these two groups. This suggests that a sense of place is inherent within people, no matter the length of residence in an area. Newcomers to the areas within this research appeared often more likely to fight for its preservation. Long term residents argued that there is a need for a place to evolve with time and circumstance, whilst newcomers wanted the areas to remain static and argued for the protection of the 'special' distinctiveness of the landscape. This leads to questions surrounding the authenticity of place and the extent to which people create or maintain it with their ideals, as opposed to allowing the evolution of place. A sense of place is not a static concept and this may be being shown in the difference between the views of so called 'locals' and 'incomers' regarding place. However, the important fact is that a sense of place is recognised and important no matter the length of residence. The connection between people and non-human nature is stronger than length of residence to an area, people associate with non-human nature in place. This sense of place was also identified by both people that lived within rural and urban areas, showing that this concept is not just associated with participants that lived within rural areas. Participants discussed a sense of place in relation to

different spatial scales and this was the same within both rural and urban areas. This adds support to the view that people not only associate with bioregions but also associate a sense of place with non-human nature.

10.3: Place and its Influence in Practice

A sense of place was found to influence many aspects of place including ecological connectivity, integrity, development and the uptake of conservation schemes. Ecological connectivity is fundamental to the survival of non-human nature, without connectivity species and habitats become isolated, fragmented and degraded (Zonneveld, 1996). Bioregionalists suggest that bioregions delimited by natural boundaries are more suitable to achieving ecological integrity and connectedness (Plant, 1990b). This theory also has been applied to Natural Areas and river catchments (Denis and Edwards, 2001; Porter and Preston, 2001a). This research indicated that this was the perception of all agencies and land-management organisations however, this was constrained again by wider policy and resources. Whilst all organisations identified the need to improve ecological connectivity within the wider countryside there are limited ways in which this could be achieved. The primary means was through site acquisition and this was constrained by finances and landownership complexities. Even if land was acquired management was limited to within the sites and despite the recognition of its importance, little work was carried out across boundaries. AES are a means by which ecological integrity and landscape connectivity could be achieved but for land-management organisations their application was limited to designated sites. Whilst the importance of the wider countryside was clearly indicated current political, financial and resource limitations made this impossible to achieve.

Land managers and land users were equally aware of the importance of the ecological integrity and connectivity within the area, with landowners identifying the use of AES to link habitats together and provide funding to plant hedgerows that were viewed as increasing this connectivity. The UK landscape is cultural and land management that acts to increase ecological connectivity and integrity also maintains the cultural nature of the landscapes. Hedgerows, although composed of non-human nature, are a cultural product with people and non-human nature interrelated to form place. Despite suggestions within the literature regarding the financial incentives for AES uptake, whilst not denying that this was an important element of uptake, there was a genuine interest in the conservation of non-human nature that influenced participant's involvement within these schemes. In fact many of the participants involved in improving ecological integrity did so without the aid of AES, identifying the clear importance of non-human nature to these land managers.

Within bioregionalism the importance of local knowledge regarding non-human nature within the bioregion is emphasised as being of fundamental importance to working in a sustainable and integrated manner within a bioregional framework (Sale, 1985). Local knowledge was emphasised as being of importance both in terms of land managers knowing what was 'right' for their own land but also in terms of non-human nature within a wider context. Whilst it could be contended that landowners did not like external organisations interfering with the management of their land, many of them discussed the value of native species and becoming involved with conservation schemes that were in keeping with the area. AES frequently emphasis the importance of traditional management and the use of native species and this may be influencing the way in which landowners think about conservation. However, a number of land managers discussed participating in conservation on their land that was not at all related to official schemes. These participants carried out conservation work for no other reason than a genuine interest in conserving non-human nature. Much of this work was also carried out with consideration given to species and habitats that they view as being 'suited' to the area, which is what English Nature and the Countryside Agency are promoting with Joint Character Areas. Whatever the circumstance behind this thinking, it can only be a positive step. With land managers considering the importance of native species within an area then ecological integrity will have the potential of being improved.

Conflict repertoires indicated that land managers did not always agree with the way in which conservation was carried out, however, this conflict was not regarding the actual concept of conservation, more the potential threatening impact that the conservation measures organisations were putting in could have for non-human nature. Land managers were not disputing the need for conservation but the manner in which it was being carried out. The survival of non-human nature is largely dependent upon landowners and the way in which they manage the landscape (Harvey, 1997). However, they also work closely with non-human nature and potentially have more of an in-depth knowledge of their own land. Whilst the importance of large scale connectivity and integrity was accepted by participants the landscape is very diverse, habitats and species within any one bioregion vary greatly and a land manager's knowledge of her/his own land will be fundamental in recognising this diversity. It is this interconnection between people and non-human nature that maintains the hybrid nature of place. Whilst land managers clearly identified the importance of connectivity this did tend to be concentrated around the provision of hedgerow corridors.

Both land managers and land users tended to discuss the conservation of non-human nature in terms of charismatic species such as the Red Kites (*Milvus milvus*). Within the Chiltern Hills

there was the clear identification of the importance of Beech woodland (*Fagus sylvatica*) a species that has been introduced to the area and has naturalised (Countryside Commission, 1992). This is a view that has been highlighted within previous research (Morris and Winter, 2001). All of the participants discussed landscape distinctiveness in terms of habitats such as Beech woodlands and identified the importance of diversity to a sense of place. The by-product of maintaining diversity and distinctiveness is improved ecological connectivity. Participants were concerned with maintaining the distinctiveness of an area and discussed hedgerows in terms of their importance to landscape character or landscape identity. This is also again a link back to the cultural nature of the landscape, hedgerows are a cultural product that gives an area its distinctiveness, with people and non-human nature interacting to produce place.

Whilst ecological connectivity was identified as an important aspect of place in terms of maintaining distinctiveness, diversity and characteristic habitats such as hedgerows, this was primarily viewed on a smaller scale than the bioregion, although distinctiveness was primarily referred to in relation to the landscape scale. Again much of this distinctiveness was a by-product of human action on the landscape again emphasising the hybrid nature of place. Although there is an awareness that conservation within the land owned had implications to the wider landscape, landowners were primarily concerned with their own land and the implications it had for farming and the way in which they managed their land. No land manager worked outside the boundary of her/his land and considered the wider context. However, by the very nature of the new Environmental Stewardship Scheme there will be links with the wider Natural Area and the importance of character of the landscape filtering through to the work carried out on the ground, even if land managers are not aware of it. Therefore connectivity should be an implicit result of this scheme and could potentially be utilised to increase land managers conscious awareness of the wider landscape and the implications this has for their own land.

A sense of place does and can exist on many different spatial scales. Bioregionalists suggest that people associate strongly with bioregions and to a large extent this has been supported by evidence within this research. Participants involvement in AES and views of the threat of development to place clearly illustrates that place is an important facet within the decision making processes of land managers and land users. However, a sense of place has been viewed as being fluid and occurring at a range of spatial scales from the bioregion to the very local farm level. What is clear within this research is that people do associate with landscape based bioregional frameworks and to a lesser extent river catchments and this is primarily influenced by peoples perception of non-human nature and the importance of non-human nature to place.

Although the results clearly illustrated a sense of place linked to the relationship between people and non-human nature, this sense of place was primarily associated with Natural Areas or landscape units as opposed to catchment areas. All of the Natural Areas within this research are well defined due to the distinctiveness of their landscapes. The results may be different if the Natural Area under investigation were less distinctive, such as the Midland Plateau. The Midland Plateau corresponds with the urban areas of the West Midlands and it may be potentially difficult distinguishing where this area begins and where it ends. Even though participants within urban areas were interviewed within this research, a Natural Area such as the Midland Plateau would predominantly be composed of urban areas and there potentially could exist a different type of sense of place. Although urban areas were encompassed within the case study sites under investigation, the majority of the areas were composed of rural land use and this may influence the way in which people relate to their area and the interrelationship between people, place and non-human nature. The difference was not marked from the interviews carried out within urban areas in this research, but this may be dependent upon the ratio of urban to rural landscape. Whilst this research investigated a sense of place in just two case study areas, it again provides a foundation upon which future research can build to investigate sense of place in less apparently distinctive Natural Areas, such as those composed predominantly of urban areas that have obscured the landscape features of that area.

10.4: Reflections on this Research

As previous chapters have identified, there has been little previous research linking a sense of place and bioregional units within the UK; the research that does exist is largely based within the United States. Much of the work regarding bioregionalism has been developed from a concept or ideal of sustainable living and there has been little work carried out with people that live and work in these bioregions regarding the way in which they feel about the bioregions within which they live. Much of the bioregional literature has been produced by researchers that live within a bioregional community and from a personal perspective. There has been no work within the UK relating bioregional units such as river catchments and Natural Areas to a sense of place, although a sense of place is used within many policy documents related to these frameworks most notably local character areas. So, whilst this work regarding a sense of place has only managed to touch the surface of a much more in-depth concept it has produced a wealth of information regarding the relationship between people, place and non-human nature. Nonetheless, in my view it still only provides a foundation upon which more in-depth work can be carried out.

Reflecting upon the way in which this research was organised and undertaken, I identified a number of limitations in respect of the chosen approach. One possible limitation arose from the very varied nature of the groups identified and surveyed in the research. I felt it was important to capture a range of perspective, including those who were already explicitly working with bioregional concepts as well as those who might potentially work with them or contribute to them in a broader sense discussed by bioregionalists themselves (for example Sale, 2000; Thayer, 2003). This required me to talk to staff from agencies and other land-managing organisations as well as broader groups of land users and land managers, and thus my different 'groups' were identified. But the different character of each group meant that I had to use slightly different methods of inquiry, for example relying on individual interviews as a way of capturing views from some groups, while for others I used group discussions. This difference of approach was necessary because I wanted to ensure that individuals working for different organisations could talk freely about their own organisation's activities, but it also meant that the interview situation was rather more 'formal' than it would have been for land managers and users who were interviewed either at home or in groups (as discussed already in Chapter Five). Thus by interviewing officials in their workplaces, it was sometimes difficult to know the extent to which participants from agencies and land-management organisations were giving their own perspective or presenting the 'rhetoric' of the wider organisations. However, specific questions were directed at the individual's own perspective and this proved effective in the main at determining participant's personal views regarding sense of place. However, individuals may have presented guarded responses, nonetheless. It is difficult to determine the extent to which what are presented are their own views or what participants feel that you as the researcher want to hear or, in relation to official organisations, what they feel you 'should' hear. I tried to offset this risk by always giving assurances of anonymity for participants, but it is still a factor that may have influenced responses.

Within the research I utilised three different groupings for participants: 1) agencies; 2) land-management organisations and; 3) land managers and land users. The three groups were initially determined primarily for myself as the researcher to ensure that I made contact with participants who I expected were directly aware of River Catchments and Natural Areas in their daily working lives (such as officials from the agencies directly responsible for the approaches, as well as those working for organisations who manage large areas of land and are therefore also 'within the policy community' that recognises these frameworks) and those that may not be (the land managers and land users). These groupings were therefore primarily a guidance and analytical tool and only when necessary were used to compare the results. However, although the results were structured to identify the difference between participant groups where necessary, there were times when it was not necessary to do this, for example when considering

the concept of a sense of place. Despite participants coming from a variety of backgrounds I argue that all people have a sense of place and this sense of place is linked to the relationship between people and non-human nature. I felt therefore that within the body of the text that it was not necessary to state at all points which grouping the participant fell into as it did not add or take anything from the results gained.

Within the research I took a mixed method approach and worked with the theoretical underpinnings of Situated Knowledges (Haraway, 1991). The mixed method approach or document analysis, interviews and focus groups worked well and provided rich data sets. Although the application of the chosen methods within this research was successful, there are other methods, particularly utilised by feminists that may have provided a richer insight into a sense of place. As shown within this research a sense of place is a complex concept and it may therefore have been more appropriate to carry out fewer, more in-depth interviews, potentially interviews over a series of meetings. This type of unstructured, in-depth interviews often result in data sets that can be used to gain a more detailed understanding of both the participant and subject matter being investigated (Valentine, 1997). This could potentially have taken the form of the investigation of participants' lifestories (Robson, 2002). The process of concentrating on individuals' lifestories particularly in relation to place and feelings towards place, may have highlighted changes in a person's sense of place at different points in their lives and the extent to which non-human nature did or did not have a consistent presence in their relationship with place. This could have been gained through an ethnographical approach and/or participant observation approach (Marshall, 2002), by integrating myself into a community and directly observing the relationship between people, place and non-human nature within that community. However, there were practical constraints to my being able to participate in such a study such as family considerations, financial limitations and time constraints. Additionally the use of unstructured interviews and focus groups provided me with the opportunity to work with a wider number of people across the breadth of the case study sites, which were extremely large areas. The results therefore allowed for the comparison of two bioregional areas and institutional approaches, and were able to look beyond the smaller community approach that would have been the appropriate scale of an ethnographic study.

The analysis of the results again involved the use of two well utilised approaches, Grounded Theory and Discourse Analysis. Given the feminist approach that I took it may have been possible to use a different form of analysis such as the narrative approach. The narrative approach aims to consider the 'lived-experience' of the participants of a study (Robson, 2002). This, perhaps in combination with a more detailed lifestories approach to interviewing, may have provided a more in-depth view of a sense of place and the relationship between people,

place and non-human nature. But qualitative research rarely has an obvious 'how to do' guide as by its very nature, it is often subjective and entails a certain amount of interpretation (Crang, 1997). This research was about people and the way people relate to place, but set within the policy context of discussed attempts to devise alternative ways of managing landscapes so as to facilitate this sense of place (among other things). Thus I did not want the research to become dominated by developing a new methodological way of interpreting data, and I wanted to maintain the practical link with policy goals that had been my starting point for this thesis. As a trained environmental scientist, coming relatively new to qualitative research methods meant that I tended to favour established methods and a relatively standardised methodology so that I could concentrate my time and effort on what was for me the most important part of my research: the participants and their views. Having done this I still feel that the body of material that I have gathered from this research approach gives valuable insights into sense of place and what is means, in the context of these two case study areas. The results analysed and discussed gave some clear conclusions regarding the relationship between people, place and non-human nature and provide a foundation upon which future research, investigating bioregional frameworks and a sense of place, could be based.

10.5: Future Policy and Research Implications

Place is an important concept, yet a fluid concept. With the relatively recent introduction of bioregional frameworks to UK landscape planning and management it is fundamental to understand the way in which people who live and work within these frameworks actually relate to them. It is clear from the situated knowledges of participants within this research that landscape based bioregions, and not river catchments, have a strong sense of attachment associated to them. A sense of place is often used as a throw away term or as a term that can be perceived as important but there is little certainty of how it can be utilised. The data suggests that a proportion of people have an affiliation with the landscape and this does influence their view of conservation, this research suggests that a sense of place or attachment needs to be considered in greater depth. In relation to the Natural Area framework in England, this sense of place could be utilised to begin to work with the local population to enhance the distinctiveness of these areas. Natural Areas, whilst presented as a framework for all have not been heard of by the majority of landowners or land users. However, these same people are identifying an unconscious association with these areas. Therefore conservation schemes that are tailored towards landscape distinctiveness, highlighting the role that people can play in maintaining this distinctiveness, could potentially attract landowners to conservation schemes.

The new Environmental Stewardship Agri-Environment Scheme (AES) provides an ideal opportunity to utilise the clear association landowners have presented with the landscape and non-human nature to facilitate a greater connectivity across the Joint Character Areas (JCA) through which they are being delivered. Although targets for Environmental Stewardship have been determined using the JCA framework and the characteristics of specific JCAs to determine the most suitable forms of management within an area, this is not something that is clear to the landowners. The success of any voluntary scheme to conserve non-human nature is determined by the participation of landowners. These results indicate that landowners are aware of the bioregions in which they live and work and have a wealth of knowledge regarding them, which could be utilised for the benefit of non-human nature, the farmers themselves and the achievement of policy-based targets. As I found within this research it is difficult to get groups of farmers together as their primary concern, understandably, is their own land. Nevertheless the farmers that were interviewed identified a general willingness to work with adjacent landowners, given the right incentive. Agri-environment schemes based upon two or more adjacent farms that work with the farmer's knowledge of their own land, awareness of the wider area and genuine concern for non-human nature, could potentially provide an opportunity of achieving greater connectivity within the wider countryside and ensuring the continued presence of species and habitats that reinforce a sense of place. This would be challenging given the apparent isolation of landowners from other landowners, even where farmers identified a clear 'farming' community. The results also revealed a tension between landowners and landowning organisations and agencies that often prevented or hindered partnership work. Schemes based on bottom up work or partnerships between landowners, facilitated through the agri-environment scheme programme could provide a means by which successful partnerships could be formed.

It is clear that participants only tend to relate to river catchments if they are impacted by flood events. Even participants that were aware of the existence of the PCP did not always have an awareness of the potential impact of their land use on the wider catchment. Without input from local landowners and land users, wider area conservation schemes are not going to be successful. This research suggests that the catchment scale may not be the scale at which to aim such projects. With the WFD suggesting the use of RBDs as a framework for integrated management, catchment-based programs could be inevitable, but this does not mean that people will engage with them. The document analysis also indicated the sheer number of plans that exist for any one river catchment. If RBDs become the primary framework for working with the water environment then there is potential to reduce the number of separate plans and work within one integrated plan. Nevertheless, if people in these catchments do not associate with the catchment scale it will be difficult to maintain involvement within catchment-based projects.

There is a clear need to consider the way in which RBDs are presented to the public, and to get the scale right. Results from this research clearly suggest that RBDS or catchments mean very little to people unless they are directly impacted by flooding. It could be suggested that awareness raising exercises should be put in place, but with new schemes for agriculture being aimed at the JCA scale this could potentially add further confusion.

Within the Parrett catchment, participants clearly identified with landscape based units such as Natural Areas and this could be utilised to make the Parrett Catchment Project more successful. Again, through the use of the new Environmental Stewardship Scheme targets could be put in place that first allow farmers to manage their land in the wider context of the Natural Area; but secondly these schemes could be used for the benefit of the wider catchment without the emphasis being placed on the catchment, as this is something that landowners within the upper catchments certainly did not associate with. Whilst the Environment Agency will inevitably need to continue working at a catchment scale for strategic purposes, working with the public could potentially be based at the landscape unit scale. This is not to suggest that the JCA scale is always the most appropriate scale at which to engage the public, but it is a potentially valuable starting point. If the public are aware of the existence of landscape units then this provides the Environment Agency with an opportunity to engage landowners and land users at this scale, to participate in schemes that will inevitably benefit the wider catchment also.

This research identified that scale was an important facet of place, yet did not pursue this in greater depth. I have contended that there exists a nested hierarchy of place yet the primary aim of the research to consider bioregionalism meant that much of the research investigated this concept at the wider level. Further investigation could have taken place of the linkages between these different scales, and this may be again a potential area for future research into place and bioregional frameworks.

There is a clear integration between people, place and non-human nature and the importance of this is evident throughout the research. Documents have tended to treat people and non-human nature as separate concepts and although a wider countryside approach is discussed in reference to the conservation of non-human nature, it is often impractical to achieve due to the constraints placed upon landowning organisations and agencies. However, it is clear that participants within this research recognise the connection between people and non-human nature and therefore it is impractical to continue to separate them. People and non-human nature co-exist as hybrids ever changing and evolving world, it is impossible to treat non-human nature as static and non-changing, just as it is impossible to suggest that people should be separated from non-human nature in order to protect it. Through the use of a bioregional framework, land use and

management can be determined based upon what the non-human environment is better suited to, and this may mean changes from what has been traditionally found within a specific area. Factors such as climate change mean that landscapes cannot be preserved unchanged, as change is inevitable. What is important is the way in which people interact with non-human nature to facilitate that change.

Landowning organisations and councils separate people and non-human nature within policy and the way in which they work. Although these documents discussed the need to work in a more integrated manner with people and non-human nature, they seem to miss the fact that the two are inseparable, so whatever action is taken upon the landscape is going to have implications for people and non-human nature. Landowners and land users in this research recognise the relationship between people and non-human nature and identified that they could not be separated. There is still a tendency to concentrate on designated sites for the survival of rare species and habitats, which automatically suggests that people and nature are separate, despite human management being necessary for many of these habitats to survive. People and non-human nature are inseparable and place is a hybrid of this relationship, yet when discussed they are still discussed as separate and if non-human nature and inevitably people are to survive there is a need to break down this dualism within policy and potentially the practice will follow.

Instead of being used as a throw away term, people's attachment to place can be used to promote the conservation of the area in which they live. However, this needs to be done in a non-technical manner. Talking to landowners and land users about their 'sense of place' just acts to confuse, the language through which we as researchers talk to non-researchers is important. A sense of place is not just some academic concept it is a reality of people's everyday lives, it may not be viewed 'a sense of place' but as a series of different notions such as distinctiveness, diversity, attachment and home. By identifying the different facets of a sense of place, this research has provided an understanding of what people view as important within their landscape and indicated that it is not all that different to that which environmental organisations are trying to conserve. Future conservation needs to work with the way in which people see place and tackle issues from the 'bottom' up as opposed to the 'top' down. Although this 'bottom' up approach is often discussed by landowning organisations and agencies (Parrett Catchment Project, 2000; Ribble Project, 2000), this research clearly indicates that there exist many tensions between these bodies and landowners and land users. Landowners and land users have a wealth of knowledge regarding the areas in which they live, and landowning organisations and agencies are in a large part dependent upon these groups if wider countryside conservation is to be successful. Therefore, organisations and agencies need to find more effective ways to work with these groups. As I have found, getting groups of landowners

together is difficult. However, if they were to be at the steering wheel of a conservation effort that would benefit them as well as non-human nature, a potentially much more effective partnership could be formed. The early work of the PCP proved that landowners could come together and work from the bottom up for the wider 'good' of an area (FWAG, 2001a; 2001b; Somper, 2005). However, where the PCP has failed and lost farmers interest and interaction is where it became perceived to be a political and agency-based project that used farmers in a tokenistic manner to achieve wider political gains.

The Natural Area documentation discusses a sense of place and the relationship between this and landscape distinctiveness or character, but this is no more than a few sentences within a long document. If conservation is going to be successful, not only in the wider context but on a long term timeframe, an understanding of what makes a place important to the people that live within it is important. This sense of place is an important influencing factor in terms of conservation and people's involvement in conservation. As this research has demonstrated, participants within the Chiltern Hills and the Parrett Catchment associate with landscape units within these areas indicating the potential future role of the Natural Area framework in encouraging people to become involved in conservation. However, Natural Areas have been aimed at landowning organisations and councils and although English Nature discuss their relevance to local people, the reality is that the framework has not been presented to local people, at least not those within this research. As the Natural Area framework is now being used to target AES it is an ideal time to introduce the framework in a more accessible manner, rather than using technical language that even landowning organisation's staff have problems with. There is a need to simplify this framework and relate it to what people know, and this includes what makes the landscape special to them. Increasing academic research in this area could also provide an important source of information for conservation organisations. However, there would need to be an improvement in the way in which research is disseminated, as often academic research is considered only in the realm of academia and not on a more practical level.

Although this research concluded that a sense of place influenced the way in which participants got involved with the conservation of non-human nature, it did not explore in great detail the extent to which conservation may be acting to stabilise the landscape and not allow for evolution. With this in mind, could bioregional frameworks be utilised as a means through which to work with evolution and adaptation? Conservation schemes are primarily based on managing landscape traditionally. Future research may investigate the extent to which this is an unrealistic notion and, viewed in a wider context, how could change be more actively managed?

This research has provided a platform through which to explore the concept of place as a hybrid and the relationship between people and place. The research has illustrated that it is possible to investigate a sense of place and the implications that this has for the relationship between people and non-human nature. Within future research, a greater understanding of place could be ascertained through work with young people and children as this group are often underrepresented within work that considers the landscape. One important factor discussed within this research has been the concept of placelessness. It was beyond the scope of this research to consider this in great depth, but there is the potential to consider this further in relation to the changing landscape in response to technological advance.

Bioregionalism is under-researched. Given the increasing emphasis being placed upon bioregional frameworks within the UK there is a need to understand the way in which the people that live and work within them relate to them. Place is a complex notion and this research has only touched the surface. There is a need for more research that considers place and the interrelationship between people and non-human nature, as discussed by bioregionalists. Bioregions are not simply lines on maps and a greater understanding of the way in which people view bioregions needs to be gained. If this is not understood then there remains the risk that these frameworks simply impose another set of lines on the already over-crowded map of the UK.

Bibliography

Aberley, D. 1990. Building a bioregional, sustainable alternative. In: Andruss, V., Plant, C., Plant, J., and Mills, S. (Eds). *Home: A Bioregional Reader,* New Society Publishers, Gabriola Island, pp. 159-160

Aberley, D. 1999, Interpreting bioregionalism: a story from many voices. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 61-79

Adams, W.M., 1996a. Creative conservation, landscapes and loss, *Landscape Research,* 21, (3), 265-276

Adams, W.M., 1996b. *Future Nature,* Earthscan, London

Adams, W.M. 1997. Rationalisation and conservation: ecology and the management of nature in the United Kingdom, *Transactions of the Institute of British Geographers,* 22, 277-291

Adams, W.M. 2003. *Future Nature: A Vision for Conservation,* Revised Edition, Earthscan, London

Adams, W.M., Hodge, I.D., and Bourn, N.A.D. 1994. Nature conservation and the management of the wider countryside in Eastern England, *Journal of Rural Studies,* 10 (2), 147-157

Affordable Rural Housing Commission. 2006. *Affordable Rural Housing Commission Final Report,* Affordable Rural Housing Commission, London

Agnew, J. 2005. Space:place. In: Cloke, P., and Johnston, R. (Eds). *Spaces of Geographical Thought,* Sage Publications Ltd, London, pp. 81-96

Allaby, M. 1998. *Oxford Dictionary of Ecology,* Oxford University Press, Oxford

Alexander, D. 1990. Bioregionalism: science or sensibility? *Environmental Ethics,* 12 (2), 161-173

Alexander, D. 1996. Bioregionalism: the need for a firmer theoretical foundation, *The Trumpeter,* 13 (3)

Allan, D., Erickson, D., and Fay, J. 1997. The influence of catchment land use on stream integrity across multiple landscape scales, *Freshwater Biology,* 37 (1), 149

Allen, T. 1999. The management of the rural landscape: a sense of place. In: Grenville, J. (Ed), *Managing the Historic Rural Landscape,* Routledge, London, pp. 163-172

Anderson, M. 1990. Areas of Outstanding Natural Beauty and the 1949 National Parks Act, *Town Planning Review,* 61 (3), 311-339

Angold, P, Edwards, P.J and Gurnell, A.M. 1994. *A Context for Developing Methodologies for Optimising the Value of River Corridor Survey Data,* National Rivers Authority R&D Note 273, National Rivers Authority, Bristol

Antrop, M. 1997. The concept of traditional landscapes as a base for landscape evaluation and planning: The example of Flanders Region, *Landscape and Urban Planning,* 38, 105-117

Antrop, M. 2000. Background concepts for integrated landscape analysis, *Agriculture, Ecosystems and Environment,* 77, 17-28

Antrop, M. 2001. The language of landscape ecologists and planners: A comparative content analysis of concepts used in landscape ecology, *Landscape and Urban Planning,* 55, 163-173

Appleton, J. 1991. *The Funny Thing about Landscape,* The Book Guild, Lewes

Arefi, M. 1999. Non-place and placelessness as narrative of loss, rethinking the notion of place, *Journal of Urban Design,* 4 (2), 179-195

Armstrong, H. 2004. Making the unfamiliar familiar: research journeys towards understanding migration and place, *Landscape Research,* 29 (3), 237-260

Aspinall, R., and Pearson, D. 2000. Integrated geographical assessment of environmental condition in water catchments: linking landscape ecology, environmental modelling and GIS. *Journal of Environmental* Management 59, 299–319.

Atkins, P., Simmons, I., and Roberts, B. 1998. *People, Land and Time: An Historical Introduction to the Relations between Landscape, Culture and Environment,* Arnold, London

Ausden, M., and Hirons, G.J.M. 2002. Grassland nature reserves for breeding wading birds in England and the implications for the ESA agri-environment scheme, *Biological Conservation,* 106, 279-291

Bailey, J., Lewis, A., and Pimmer, F. 2004. Locating the 'country' in town and country planning: the urban bias in English planning, *International Federation of Planners,* March 2004, 2/20-20/20

Baker, S. 1995. Ecofeminism: Ecofeminism and its contribution to feminist theory, *http://scholar.google.com/scholar?hl=en&lr=&ie=UTF-8&q=cache:JmVZmyDrob0J:www.psa.ac.uk/cps/1995%255Cbake.pdf+susan+baker+-+ecofeminism:+ecofeminism+and+its+contribution+to+feminist+theory,* Last accessed June 2006

Baldon, E.K. 1992. How dams on the River Danube might have caused hybridization and influenced the appearance of a new cyprinid taxon, *Environmental Biology of Fishes,* 32 (1-4), 167-180

Baldwin, D.J., Weaver, K., Schnekenburger, F., and Perera, A.H. 2004. Sensitivity of landscape pattern indices to input data characteristics on real landscapes: implications for their use in natural disturbance emulation, *Landscape Ecology,* 19, 255-271

Balls, M. 2003. Case Study 1: Implementation of the WFD by England and Wales, http://hydrography:ims.plym.ac.uk/marine-policy/cap/ed3/case1.htm (Last Accessed September 2006)

Barnes, T.J. 2004. Placing ideas: genius loci, heterotopia and geography's quantitative revolution, *Progress in Human Geography,* 28 (5), 565-595

Barth, F., and Farwell, J. 2001. The Water Framework Directive and European water policy, *Ecotoxicology and Environmental Safety,* 50, 103-105

Battershill, M.R.J., and Gilg, A.W. 1997. Socio-economic constraints and environmentally friendly farming in the southwest of England, *Journal of Rural Studies,* 13 (2), 213-228

Begon, M., Harper, J.L., and Townsend, C.R. 1996. *Ecology, Individuals, Populations and Communities,* Third Edition, Blackwell Science, London

Beier, P., and Noss, R.F. 1998. Do habitat corridors provide connectivity? *Conservation Biology,* 12 (6), 1241-1252

Benson, J., and Roe, M. (Eds) 2000. *Landscape and Sustainability,* Spon Press, London

Bennett, J.D. 1975. *Frederick Jackson Turner,* Twayne Publishers, Boston

Bennett, R.M., and Jones, P.J. 1999. Modelling the impact of BSE policy on agriculture in England and Wales, *Land Use Policy,* 16 (1), 11-22

Bennett, R.M., Tranter, R.B., Harrison-Mayfield, L.E., Jones, P.J., and Little, G.P.J. 1999. Regional land use and employment impacts of bovine spongiform encephalopathy slaughter policy measures in England, *Geoforum,* 30, 159-169

Berg, P. 1976. Amble towards continent congress, *Planet Drum Bundle 4,* Planet Drum, San Francisco

Berg, P. 1978. Introduction. In: Berg, P. (Ed). *Reinhabiting a Separate Country: A Bioregional Anthology of Northern California,* Planet Drum Foundation, San Francisco, 1

Berg, P. 1983a. Bioregion and human location, *All Area 2,* Planet Drum Foundation, Talk at University of North Carolina

Berg, P. 1983b. More than just saving what is left, *Raise the Stakes,* Fall (8), 1-2

Berg, P. 1990a. Growing a life place politics. In: Andruss, V., Plant, C., Plant, J., and Mills, S. (Eds). *Home: A Bioregional Reader,* New Society Publishers, Gabriola Island, 137-144

Berg ,P. 1990b. *Discovering Your Life-Place: A First Bioregional Workbook,* Planet Drum Foundation, San Francisco

Berg, P. 1998. *A Metamorphosis for Cities: From Grey to Green,* Planet Drum Foundation, San Francisco

Berg, P. 2001. *The Post-Environmentalist Directions of Bioregionalism, Lecture at University of Montana Missoula,* Planet Drum Foundation

Berg, P., and Dasmann, R. 1977. Reinhabiting California, *The Ecologist,* 7 (10), 399-401

Berg, P., and Dasmann, R. 1978. Reinhabiting California: Afterword. In: Berg, P. (Ed). *Reinhabiting a Separate Country: A Bioregional Anthology of Northern California,* Planet Drum Foundation, San Francisco, pp. 217-220

Biehl, J. 1991. *Finding Our Way: Rethinking Ecofeminist Politics,* Black Rose Books, New York

Biodiversity Steering Group, 1994. *Biodiversity: The UK Action Plan,* HMSO, London

Biodiversity Steering Group, 1995. *Biodiversity the UK Steering Group Report Volume 1: The Rio Challenge,* HMSO, London

Birkeland, J. 1995. Disengendering ecofeminism, *The Trumpeter,* 12 (4)

Bishop, K., and Cowell, R. 2004. From Sandy to Rio: The development of Biodiversity Action Planning. In: Bishop, K., and Phillips, A. (Eds). *Countryside Planning: New Approaches to Management and Conservation,* Earthscan, London, pp. 19-36

Bishop, K., and Phillips, A. 2004. Then and now: planning for countryside conservation. In: Bishop, K., and Phillips, A. (Eds). *Countryside Planning: New Approaches to Management and Conservation,* Earthscan, London, pp. 1-15

Blackdown Hills Rural Partnership, 2004. *Blackdown Hills Plan 2004-2009,* Blackdown Hills Rural Partnership, Hemyock

Blouin, M.S. and Connor, E.F. 1985. Is there a best shape for nature reserves? *Biological Conservation,* 32, 277-288

Blumer, H. 1969. *Symbolic Interactionism: Perspective and Method,* Prentice-Hall, New Jersey

Blumer, H. 1986. *Symbolic Interactionism: Perspective and Method,* Second Edition, Prentice-Hall, New Jersey

Blunden, J., and Curry, N. 1990. *A Peoples Charter? Forty Years of the National Parks and Access to Countryside Act 1949,* Countryside Commission, London

Blunkett, D. 2000. Influence or irrelevance: Can social science improve government? *Research Intelligence,* 71, 1-15

Blunt, A. 2003. Home and identity: life stories in text and in person. In: Blunt, A., Gruffudd, P., May, J., Ogborn, M., and Pinder, D. (Eds). *Cultural Geography in Practice,* Edward Arnold Publishers, London, pp. 71-87

Boaz, A., Ashby, D., and Young, K. 2002. Systematic Reviews: What have they got to offer evidence based policy and practice? *ESRC UK Centre for Evidence Based Policy and Practice: Working Paper 2,* ESRC UK Centre for Evidence Based Policy and Practice, Queen Mary, University of London

Boecklen, W.J. 1986. Optimal design of nature reserves: consequences of genetic drift, *Biological Conservation,* 38, 323-338

Boecklen, W.J., and Gotelli, N.J. 1984. Island biogeographic theory and conservation practice: species-area or specious-area relationships, *Biological Conservation,* 29, 63-80

Bondi, L. 1990a. Progress in Geography and gender: Feminism and difference, *Progress in Human Geography,* 14, 438-446

Bondi, L. 1990b. Feminism, Postmodernism, and Geography: Space for women? *Antipode,* 22 (2), 156-166

Bondi, L. 1992. Gender and Dichotomy, *Progress in Human Geography,* 16 (1), 98-104

Bookchin, M. 1980. *Towards an Ecological Society,* Black Rose Books, Montreal

Boote, R.E. 2001. Impressions from an era. In: Smout, T.C. (Ed). *Nature, Landscape and People Since the Second World War,* Tuckwell Press, East Linton, pp. 13-24

Booth, A. 2000. Ways of knowing: acceptable understandings within bioregionalism, deep ecology, ecofeminism and native American culture, *The Trumpeter,* 16 (1), 1-11

Booth, A.L. 1999. Does the spirit move you? Environmental spirituality, *Environmental Values,* 8, 89-105

Booth, P. 1999. Discretion in Planning Versus Zoning. In: Cullingworth, B. (Ed). *British Planning: 50 Years of Urban and Regional Planning,* The Athlone Press, London, pp. 31-44

Booth, N., Briscoe, M., and Powell, R. 2000. Suicide in the farming community: methods used and contact with health services, *Occupational Environmental Medicine,* 57, 642-644

Boothby, J. 2000. An ecological focus for landscape planning, *Landscape Research,* 25 (3), 281-289

Boothby, J. 2004. Lines, boundaries and ontologies in planning: addressing wildlife and the landscape, *Planning, Practice & Research,* 19 (1), 67-80

Brookes, A. 1994. Recovery and restoration of some engineered British river channels. In: Boon, P.J, Calow, P and Petts, G.E. (Eds). *River Conservation and Management*, John Wiley & Sons, Chichester, pp 337-352

Brookes, A. 1995. River Channel Restoration: Theory and Practice. In: Gurnell, A and Petts, G. (Eds) *Changing River Channels*, John Wiley & Sons, London, pp.369-388.

Brookes, A. 1985. Downstream morphological consequences of river channelization in England and Wales, *Geographical Journal,* 151 (1), 57-62

Brookes, A. 1996. The importance of high flows for Riverine environments. In: Harper, D.M and Ferguson, A.J.D. (Eds). *The Ecological Basis for River Management*, John Wiley & Sons, Chichester, pp. 33-49

Brookes, A., Baker, J. and Redmond, C. 1996. Floodplain restoration and riparian zone management. In: Brookes, A and Shields, F.D (Eds). *River Channel Restoration, Guiding Principles for Sustainable Projects*, John Wiley & Sons Ltd, Chichester, pp. 201-229

Brown, J., and Mitchell, B. 2000. Landscape stewardship: new directions in conservation of nature and culture, *The George Wright Forum,* 17 (1), 70-79

Brown, J.B. 1999. The use of focus groups in clinical research. In: Crabtree, B.F., and Miller, W.L. (Eds), *Doing Qualitative Research,* Second Edition, Sage Publications, Thousand Oaks, pp. 109-125

Brunkskell, M. 1998. Feminist methodology. In: Seale, C., (ed). *Researching Society and Culture,* Sage Publications, London, 37-47

Bryan, B. 2005. Homesickness as a construct of the migrant experience, *Changing English,* 12 (1), 43-52

Buckingham, S. 2004. Ecofeminism in the twenty-first century, *The Geographical Journal,* 170 (2), 146-154

Buckingham-Hatfield, S. 2000. *Gender and Environment,* Routledge, London

Bunce, R.G.H., and Jongman, R.H.G. 1993. An introduction to landscape ecology. In: Bunce, R.G.H., Ryszkowski, L., and Paolettie, M.G. (Eds), *Landscape Ecology and Agroecosystems,* Lewis Publishers, Florida, pp. 3-10

Burges, D. 2004. European frameworks for nature conservation: the case of the Birds and Habitats Directive. In: Bishop, K., and Phillips, A. (Eds). *Countryside Planning: New Approaches to Management and Conservation,* Earthscan, London, pp. 37-48

Burgess, J., Clark, J., and Harrison, C.M. 2000. Knowledges in action: an actor network analysis of a wetland agri-environment scheme, *Ecological Economics,* 35, 119-132

Burgess, J., Harrison, C.M., and Limb, M. 1988. People, parks and the urban green: a study of popular meanings and values for open spaces in the city, *Urban Studies,* 25, 455-473

Burnside, N.G., Smith, R.F., and Waite, S. 2002. Habitat suitability modelling for calcareous grassland restoration on the South Downs, United Kingdom, *Journal of Environmental Management,* 65, 209-221

Burnett, T., and Mort, M. 2001. *Improving Access to Healthcare for Farming Communities: Report to NHS Executive (North West) of Project RDF/LSC990037,* Lancaster

Burt, T.P., and Johnes, P.J. 1997. Managing water quality in agricultural catchments, *Transactions of the Institute of British Geographers,* 22 (1), 61-68

Burt, T.P., and Pinay, G. 2005. Linking hydrology and biogeochemistry in complex landscapes, *Progress in Physical Geography,* 29 (3), 297-316

Cale, P.G. 2003. The influence of social behaviour, dispersal and landscape fragmentation on population structure in a sedentary bird, *Bird Conservation,* 109, 237-248

Callon, M. 1991. Techno-economic networks and irreversibility. In: Law, J. (Ed). *A Sociology of Monsters: Essays on Power, Technology and Domination,* Routledge, London, pp. 132-161

Carey, P.D., Short, C., Morris, C., Hunt, J., Priscott, A., Davis, M., Finch, C., Curry, N., Little, W., Winter, M., Parkin, A., and Firbank, L.G. 2003. The multi-disciplinary evaluation of a national agri-environment scheme, *Journal of Environmental Management,* 69, 71-91

Carlassare, G. 1999. Socialist and cultural ecofeminism: allies in resistance, *Ethics and the Environment,* 5 (1), 89-106

Carson, R. 1965. *The Silent Spring,* Paladin, London

Charmaz, K. 1995. Grounded Theory. In: Smith, J.A., Harré, R., and Van Langenhove, L. (Eds). *Rethinking Methods in Psychology,* Sage Publications, London, 27-49

Charmaz, K. 2000. Grounded Theory: objectivist and constructivist methods. In: Denzin, N.K., and Lincoln, Y.S. (Eds), *Handbook of Qualitative Research,* Second Edition, Sage Publications, Thousand Oaks, California, 509-535

Charmaz, K. 2002. Qualitative Interviewing and Grounded Theory Analysis. In: Gubrium, J.F., and Holstein, J.A., (eds). *Handbook of Interview Research, Context and Method,* Sage Publications, Thousand Oaks, California, 675-693

Chatterton, P., and Style, S. 2001. Putting sustainable development into practice? The role of local policy networks, *Local Environment,* 6 (4), 439-452

Cheney, J. 1989. Postmodern environmental ethics: ethics of bioregional narrative, *Environmental Ethics,* 11, 117-134

Cherry, G.E., and Rogers, A. 1996. *Rural Change and Planning: England and Wales in the Twentieth Century,* E & F N Spon, London

Chilterns Area of Outstanding Natural Beauty. 2002. *Chilterns Area of Outstanding Natural Beauty Management Plan: The Framework for Action 2002-2007,* Chilterns Area of Outstanding Natural Beauty, Princes Risborough

Chilterns Conference, 1999. *Chilterns Building Design Guide: A Countryside Design Summary,* The Chilterns AONB, Princes Risborough

Christ, C.P. 1990. Rethinking theology and nature. In: Diamond, I., and Orenstein, G.F. (Eds), *Reweaving the World: The Emergence of Ecofeminism,* The Sierra Club, San Francisco, pp. 58-69

Clarke, W.C., and Dickson, N.M. 2003. Sustainability science: The emerging research program, *PNAS,* 100 (14), 8059-8061

Clifford, S., and King, A. 1993. Loosing your place. In: Clifford, S., and King, A. (Eds). *Local Distinctiveness, Place, Particularity and Identity,* Common Ground, London, pp. 7-20

Cobb, D., Dolman, P., and O'Riordan, T. 1999. Interpretations of sustainable agriculture in the UK, *Progress in Human Geography,* 23 (2), 209-235

Colman, D. 1994. Comparative evaluation of environmental policies: ESA's in a policy context. In: Whitby, M. (Ed). *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas,* CAB International, Wallingford, pp. 219-251

Condlife, I. 2000. Agri-environment Schemes: taking the message to farmers, *Landscape Research,* 25 (3), 375-398

Conzen, M.R.G. 1966. Historical townscapes in Britain: a problem in applied geography. In: House, J.W. (Ed), *Northern Geographical Essays in Honour of G.H.J. Daysh,* Oriel Press, Newcastle Upon Tyne, pp. 56-78

Cook, E.A., and Van Lier, H.N. 1994. Landscape planning and ecological networks: a introduction. In: Cook, E.A., and Van Lier, H.N. (Eds), *Landscape Planning and Ecological Networks,* Elsevier, Amsterdam, pp. 1-11

Cook, H.F. 1998. *The Protection and Conservation of Water Resources: A British Perspective,* John Wiley & Sons, Chichester

Cooke, R.J. 1999. Nature conservation taking a wider view. In: Grenville, J. (Ed), *Managing the Historic Rural Landscape,* Routledge, London, pp. 125-136

Cope, M. 2002. Feminist epistemology in Geography. In: Moss, P., (ed), *Feminist Geography in Practice: Research and Methods,* Blackwell Publishers Ltd, Oxford, 43-56

Cosgrove, D., and Domosh, M. 1993. Author and authority: writing the new cultural geography. In: Duncan, J., and Ley, D. (Eds). *Place/Culture/Representation,* Routledge, London, pp. 25-38

Council for National Parks, 1999. The History of National Parks in the UK, www.cnp.org.uk/50th_anniversary.htm (last accessed March, 2006)

Council for National Parks, 2003. *Benefits Beyond Boundaries: Work in the UK's Protected Areas,* World Parks Congress, Durban, South Africa

Counsell, D. 1998. Sustainable development and Structure Plans in England and Wales: a review of current practice, *Journal of Environmental Planning and Management,* 41 (2), 177-194

Countryside Agency, 1998. *Barriers to Enjoying the Countryside Research Note CCRN11,* Countryside Agency, Cheltenham

Countryside Agency. 1999. *Countryside Character: Volume 5. West Midlands: The Character of England's Natural and Man-made Landscape,* Countryside Agency, Cheltenham

Countryside Agency. 2001. *Countryside Quality Counts: Tracking Change in the English Countryside,* Countryside Agency, Cheltenham

Countryside Agency and Scottish Natural Heritage, 2002a. *Making Sense of Place, Landscape Character Assessment: Summary Guidance for England and Scotland,* Countryside Agency and Scottish Natural Heritage, Cheltenham

Countryside Agency and Scottish Natural Heritage, 2002b, *Landscape Character Assessment: Guidance for England and Scotland,* Countryside Agency and Scottish Natural Heritage, Cheltenham

Countryside Commission, 1992. *The Chilterns Landscape: Landscape Assessment,* Countryside Commission, Cheltenham

Countryside Commission, 1993. *Landscape Assessment Guidance, CCP423,* Countryside Commission, Cheltenham

Countryside Commission and English Nature, 1996. *The Character of England: Landscape, Wildlife and Natural Features CD ROM,* Countryside Commission, Cheltenham

Countryside Council for Wales and Wales Landscape Partnership Group, 2001. *The LANDMAP Information System,* Countryside Council for Wales, Bangor

Cox, H. 1968. The restoration of a sense of place: a theological reflection on the visual environment, *Ekistics,* 25 (151), 422-424

Cox, G., Lowe, P., and Winter, M. 1987. Farmers and the state: a crisis for corporatism, *The Political Quarterly,* 58 (1), 73-81

Crabtree, A. 2000. Remarks on the social organisation of space and place, *Journal of Mundane Behaviour,* http://www.mundanebehavior.org/issues/v1n1/crabtree.htm

Crang, M. 1997. Analyzing qualitative methods. In: Flowerdew, R., and Martin, D. (Eds). *Methods in Human Geography: A Guide for Students doing a Research Project*, Addison Wesley Longman Limited, Edinburgh, pp. 183-196

Critchley, C.N.R., Burke, M.J.W., and Stevens, D.P. 2003. Conservation of lowland semi-natural grasslands in the UK: a review of botanical monitoring results from agri-environment schemes, *Biological Conservation,* 115, 263-278

Cronon, W. 1995. The trouble with wilderness, or getting back to the wrong nature. In: Cronon, W. (Ed), *Uncommon Ground: Toward Reinventing Nature,* W.W. Norton & Co,. New York, pp.69-90

Crozier, M. 2003. Simultanagnosia, sense of place and the garden of idea, *Thesis Eleven,* 74, 76-88

Cullingworth, B., and Nadin, V. 2002. *Town and Country Planning in the UK,* Thirteenth Edition, Routledge, London

Cunningham, J. 1997. CAP reform is essential says Jack Cunningham, *MAFF News Release 294/97,* MAFF, London

Curtis, L.F. 1991. Conservation and protection. In: Johnson, R.J., and Gardiner, V. (Eds). *The Changing Geography of the United Kingdom,* Second Edition, Routledge, London, pp. 449-472

Dakin, S. 2003. There's more to landscape that meets the eye: towards inclusive landscape assessment in resource and environmental management, *The Canadian Geographer,* 47 (2), 185-200

Daniels, S., and Cosgrove, D. 1993. Spectacle and text: landscape metaphors in cultural geography. In: Duncan, J., and Ley, D. (Eds). *Place/Culture/Representation,* Routledge, London

Dasmann, R.F. 1973. *A System for Defining and Classifying Natural Regions for the Purpose of Nature Conservation,* World Conservation Union, Morges, Switzerland

Dasmann, R.F. 1974. Conservation, Counter-Culture and Separate Realities. *Environmental Conservation 1,* 133- 137

Dasmann, R.F. 2002. *Called by the Wild: The Autobiography of a Conservationist,* The University of California Press, California

Davies, H., Nutley, S., and Smith, P. 2000. Introducing evidence-based policy and practice in public services. In: Davies, H.T.O., Nutley, S.M., and Smith, P.C., (eds). *What Works? Evidence-based Policy and Practice in Public Services,* The Policy Press, Bristol, 1-11

Davies, H.W.E. 1999. The planning system and the development plan. In: Cullingworth, B. (Ed). *British Planning: 50 Years of Urban and Regional Planning,* The Athlone Press, London, pp. 45-61

Davies, P. 2000a. The relevance of Systematic Reviews to educational policy and practice, *Oxford Review of Education,* 26 (304), 365-378

Davies, P. 2000b. Contributions from qualitative research. In: Davies, H.T.O., Nutley, S.M., and Smith, P.C., (eds). *What Works? Evidence-based Policy and Practice in Public Services,* The Policy Press, Bristol, 291-316

Davion, V. 1998. Is Ecofeminism Feminist? In: Warren, K.J. (Ed), *Ecological Feminism,* Routledge, New York, pp. 8-28

De Bres, K., and Davis, J. 2001. Celebrating group and place identity: a case study of a new regional festival, *Tourism Geographers,* 3 (3), 326-337

Defra, 2002a. Common Agricultural Policy (CAP): from creation to the present day, *www.Defra.gov.uk/farm/capreform/* (Last accessed March 2006)

Defra, 2002b. Biodiversity Action Plans, *www.Defra.gov.uk/wildlife-countryside/ewd/biostrat* (Last accessed February 2006)
Defra, 2003a. Introduction to sustainable development, *www.Defra.gov.uk/environment/sustainable/* (Last accessed March 2006)

Defra, 2003b. CIS work programme 2003-2004, *www.Defra.gov.uk/environment/water/wfd/wprkprog.htm* (Last Accessed March 2004)

Defra, 2003c. Integrated testing in pilot river basins, *www.Defra.gov.uk/environment/water/wfd/riverbasin.htm* (Last Accessed April 2006)

Defra, 2005. Environmental Stewardship, *www.Defra.gov.uk/erdp/schemes/es/default.htm* (Last accessed March, 2006)

Defra, 2006. England Rural Development Programme, www.Defra.gov.uk/erdp/default.htm

Department of Environment, 1990. *This Common Inheritance: Britain's Environmental Strategy,* HMSO, London

Demeritt, D. 1994. Ecology, objectivity and critique in writings on nature and human societies, *Journal of Historical Geography,* 20, 22-37

Demeritt, D. 1996. Social theory and the reconstruction of science and geography, *Transactions of the Institute of British Geographers,* 21 (3), 484-503

Desai, P. and Riddlestone, S. 2002. *Bioregional Solutions for Living on One Planet,* 8 Schumacher Briefings, Green Books Limited, Devon

Devall, B. 1985. *Deep Ecology.* Peregrine Smith Books, Layton

Diamond, D.R. 1995. Geography and planning in the information gap, *Transactions for the Institute for British Geographers,* 20, 131-138

Diamond, I., and Orenstein, G.F. 1990. Introduction. In: Diamond, I., and Orenstein, G.F. (Eds). *Reweaving the World: The Emergence of Ecofeminism,* Sierra Club Books, San Francisco, ix-xv

Dice, L.R. 1923. Life zones and mammalian distribution, *Journal of Mammalogy,* 4, 39-47

Dick, B., 2001. Resource Papers in Action Research; Grounded Theory: a thumbnail sketch, *www.scu.edu.au/schools/gcm/ar/arp/grounded.html*

Dickinson, G., and Murphy, K. 1998. *Ecosystems: A Functional Approach,* Routledge, London

Diehm, C. 2003. The self of stars and stone: ecofeminism, deep ecology and the ecological self, *The Trumpeter,* 19 (3), 31-45

Dijst, M., Elbersen, B., and Willis, K. 2005. The challenge of multi-functional land use in rural areas, *Journal of Environmental Planning and Management,* 48 (1), 3-6

Dinnerstein, D. 1989. Survival on earth: the meaning of feminism. In: Plant, J. (Ed). *Healing the Wounds: The Promise of Ecofeminism,* New Society Publishers, Philadelphia, pp. 192-200

Dixon, J. 1998. Nature conservation. In: Lowe, P., and Ward, S. (Eds). *British Environmental Policy and Europe: Politics and Policy in Transition,* Routledge, London

Dixon-Woods, M., and Fitzpatrick, R. 2001. Qualitative research in systematic reviews, *British Medical Journal,* 323, 765-766

Dobson, A. 1998. *Conservation and Biodiversity,* Scientific American Library, New York

Dodge. J. 1981. Living by life, some bioregional theory and practice, *Co-evolution Quarterly,* 32, 6-12

Dover, J.W. 2000. Human, environmental and wildlife aspects of corridors with specific reference to UK planning and practice, *Landscape Research,* 25 (3), 333-344

Drake, M., Clements, D., Eyre, M., Gibbs, D., and Kirby, P. 1998. *Invertebrats and their Habitats in Natural Areas: Volume 1 – Midland and Northern Areas: English Nature Research Reports Number 298,* English Nature, Peterborough

Ducros, C., and Watson, N. 2002. Integrated land and water management in the United Kingdom: narrowing the implementation gap, *Journal of Environmental Planning and Management,* 45 (3), 403-423

Duncan, J. 1995. Landscape geography, *Progress in Human Geography,* 19 (3), 414-422

Dunning, J.B., Danielson, B.J., and Pulliam, H.R. 1992. Ecological processes that affect populations in complex landscapes, *Oikos,* 65 (1), 169-175

Dwyer. J., and Hodge, I. 2001. The challenge of change: demands and expectations for farm land. In: Smout, T.C. (Ed). *Nature, Landscape and People Since the Second World War,* Tuckwell Press, East Linton, pp. 117-134

Eden, S. 2002. Faking it? The multiple meanings of environmental restoration near Twyford Down, *Cultural Geographies,* 9, 313-333

Eder, K. 1996. *The Social Construction of Nature,* Sage Publications, London

Edley, N., and Wetherell, M. 2001. Jekyll and Hyde: Men's constructions of feminism and feminists, *Feminism & Psychology,* 11 (4), 439-457

Edward-Jones, E.S. 1997. The River Valleys Project: a participatory approach to integrated catchment planning and management in Scotland, *Journal of Environmental Planning and Management,* 40 (1), 125-141

Edwards, A.C., and Dennis, P. 2000. The landscape ecology of water catchments: integrated approaches to planning and management, *Landscape Research,* 25 (3), 305-320

Edwards, E.W and Crisp, D.T. 1982. Ecological implications of river regulation in the United Kingdom. In: Hey, R.d, Bathurst, J.C and Thorne, C.R. (Eds) *Gravel-Bed Rivers, Fluvial Processes, Engineering and Management,* John Wiley & Sons, Chichester, pp. 843-865

Edwards, P.J., May, R.M, and Webb, N.R. (Eds) 1994. *Large Scale Ecology and Conservation Biology,* Blackwell Scientific Publications, London

Edworthy, M., 2002. *Chilterns GIS Project: Summary,* English Nature, Oxfordshire

Eff, E.A. 2004. Spatial, culturl and ecological autocorrelation in U.S. regional data, *Department of Economics and Finance Working Paper Series,* Middle Tennessee State University

Eisler, R. 1990. The Gaia tradition and the partnership future: an ecofeminist manifesto. In: Diamond, I., and Orenstein, G.F. (Eds). *Reweaving the World: The Emergence of Ecofeminism,* Sierra Club Books, San Francisco, pp. 23-34

Elton, C.S. 1958. *The Ecology of Invasion by Animals and Plants,* Methuen, London

Elworthy, S, 1994, *Farming for Drinking Water: Modifying Farming for Protection of Groundwater from Nitrate Pollution',* Avebury, Aldershot, Hampshire

Emel, J. 1995. Are you man enough, big and bad enough? Ecofeminism and wolf eradication in the USA, *Environment and Planning D: Society and Space,* 13, 707-734

England, K.V.L. 2002. Interviewing elites: cautionary tales about researching women managers in Canada's banking industry. In: Moss, P. (Ed), *Feminist Geography in Practice: Research and Methods,* Blackwell Publishers, Oxford, pp. 200-213

English Nature, 1996. *Mid Somerset Hills Natural Area Profile,* English Nature, Peterborough

English Nature, 1997a. *Chilterns Natural Area Profile,* English Nature, Peterborough

English Nature, 1997b. *Somerset Levels and Moors Natural Area Profile,* English Nature, Peterborough

English Nature, 1998a. *Natural Areas: Nature Conservation in Context, CD ROM,* English Nature, Peterborough

English Nature, 1998b. *Vale of Taunton and Quantock Fringes Natural Area Profile,* English Nature Profile, Peterborough

English Nature, 1999. *Natural Areas,* English Nature, Peterborough

English Nature, 2000. *National Nature Reserves: The Future: A Policy Statement,* English Nature, Peterborough

English Nature, 2001. *Natural Areas, Map,* English Nature, Peterborough

English Nature and ADAS, 2002. Pilot Agri-environment Scheme Targeting in the Chilterns: Farmer Questionnaire Analysis, English Nature and ADAS, Oxfordshire

Environment Agency, 1997. *Local Environment Agency Plan: River Parrett Consultation Report,* Environment Agency, Exeter

Environment Agency, 1998. *Local Environment Agency Plan: River Parrett, Action Plan,* Environment Agency, Bridgwater

Environment Agency, 1999. *Local Environment Agency Plan: Ribble Consultation Draft,* Environment Agency, Preston

Environment Agency, 2001. *Local Environment Agency Plan: Third Annual Review,* Environment Agency, Bridgwater

Environment Agency, 2002a. Making it happen, www.environment-agency.gov.org/aboutus/286233/353470/?version=1&lang=_e (Last accessed December 2005)

Environment Agency, 2002b. *Our Vision for the Environment: Making it Happen: The Environment Agency's Draft Corporate Strategy,* Environment Agency, Preston

Environment Agency, 2002c. *The Parrett Catchment Water Management Strategy Action Plan Spring 2002,* Environment Agency, Somerset

Environment Agency, 2003. *The Tone Catchment Abstraction Management Strategy Consultation Document,* Environment Agency, Exeter

Environment Agency, 2005. River basin characterisation, *www.environment-agency.gov.uk/business/444217/444663/955573/1001324/?version=1&lang=_e* (Last accessed December 2006)

Environmental Information Centre, 2003. TWINSPAN, *www.eic.ceh.ac.uk/products.htm*

European Commission, 2000. *Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy,* Official Journal 22 December 2000 L 327/1, European Commission, Brussels

European Environment Agency, 2003. Information for improving Europe's environment: glossary, *www.glossary.eea.eu.int/EEAGlossary/R/river_basin* (Last Accessed April 2006)

Evans, B. 1997. From town planning to environmental planning. In: Blowers, A., and Evans, B. (Eds), *Town Planning into the 21st Century,* Routledge, London, pp. 1-14

Evans, J., and Benefield, P. 2001. Systematic reviews of educational research: does the medical model fit? *British Educational Research Journal,* 27 (5), 527-541

Evans, N.J., and Morris, C. 1997. Towards a geography of agri-environmental policies in England and Wales, *Geoforum,* 28 (2), 189-204

Evidence Network, 2001. *How to do a Systematic Review,* ESRC, Swindon

Fairclough, N. 1995a. *Critical Discourse Analysis: The Critical Study of Language,* Longman Group Limited, London

Fairclough, N. 1995b. *Media Discourse,* Arnold, London

Fairclough, N., and Wodak, R. 1997. Critical discourse analysis: an overview. In: van Dijk, T.A. (Ed). *Discourse as Social Interaction,* Sage Publications, London, 258-284

Falconer, K. 2000. Farm-level constraints on agri-environment scheme participation: a transactional perspective, *Journal of Rural Studies,* 16, 379-394

Falconer, K., Al-Hindi, and Kawabata, H. 2002. Towards a more fully reflexive Feminist Geography. In: Moss, P., (ed), *Feminist Geography in Practice: Research and Methods,* Blackwell Publishers Ltd, Oxford, 103-115

Falconer, K., and Ward, N. 2000. Using modulation to green the CAP: the UK case, *Land Use Policy,* 17, 269-277

Falkenmark, M. 2004. Towards integrated catchment management: opening the paradigm locks between hydrology, ecology and policy-making, *Water Resources Development,* 20 (3), 275-282

Farmer, M., and Swales, V. 2004. *The Development and Implementation of Cross Compliance in the EU 15: An Analysis- A Report for the RSPB,* Institute for European Environmental Policy, London

Feld, S., and Basso, K.H. 1996. *Senses of Place,* School of American Research Press, Santa Fe

Feldman, D.L., and Wilt, C.A. 1999. Climate-change policy from a bioregional perspective: reconciling spatial scale with human and ecological impact. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 133-154

Fish, R., Seymour, S., and Watkins, C. 2003. Conserving English landscapes: land managers and agri-environmental policy, *Environment and Planning A,* 35, 19-41

Flores, D. 1999. Thinking about bioregional history. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 43-58

Forestry Commission, 2005. *English Woodland Grant Scheme Prospectus,* Forestry Commission, England

Forman, R. 1995. *Land Mosaics,* Cambridge University Press, Cambridge

Forman, R.T.T., and Godron, M. 1986. *Landscape Ecology,* John Wiley & Sons, New York

Foucault, M. 1979. *The History of Sexuality,* Allen Lane, London

Foud, J. 1994. Upland moorland with complex property rights: The case of the North Peak. In: Whitby, M. (Ed). *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas,* CAB International, Wallingford, pp. 81-104

Frenkel, S. 1994. Old theories in new places? Environmental determinism and bioregionalism, *Professional Geographer,* 46 (3), 289-295

Fry, G.L.A. 2001. Multi-functional landscapes-towards transdisciplinary research, *Landscape and Urban Planning,* 57, 159-168

FWAG, 2001a. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (a) Temporary Retention of Floodwater in Floodplain Areas,* FWAG, Taunton

FWAG, 2001b. *Parrett Catchment Project: Proposal for the Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (b) Small Reservoir Flood Storage by Interception in Mid Catchment,* FWAG, Somerset

FWAG, 2001c. *Parrett Catchment Project: Proposal for Development of Pilot Project in Upper-Mid Catchment: Farming Water 1 © i: Arable Reversion to Woodland,* FWAG, Somerset

FWAG, 2001d. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchments: Farming Water 1 © ii: Arable Reversion to Grassland,* FWAG, Somerset

Game, M., and Peterken, G.F. 1984. Nature Reserve selection strategies in the woodlands of central Lincolnshire, England, *Biological Conservation,* 29, 157-181

Gardiner, J.L., 1994 Sustainable Development for River Catchments, *Journal of the Institute of Water and Environmental Management,* 8, 308-319

George, S. 1992. *The Debt Boomerang,* Institute for Policy Studies, London

Gerrard, J. 1990. *Mountain Environments: An Examination of the Physical Geography of Mountains,* John Wiley & Sons, Chichester

Gilg, A.W. 1996. *Countryside Planning: The First Half Century,* Second Edition, Routledge, London

Glaser, B., 1978. *Theoretical Sensitivity,* The Sociology Press, Mill Valley

Glaser, B., 1992. *Basics of Grounded Theory Analysis: Emergence v Forcing,* The Sociology Press, Mill Valley

Glaser, B.G. 2002a. Conceptualization: On theory and theorizing using Grounded Theory, *International Journal of Qualitative Methods,* 1 (2), 1-31

Glaser, B.G. 2002b. Constructivist Grounded Theory, *Forum: Qualitative Social Research,* 3 (3), 1-10

Glaser, B.G., and Holton, J. 2004. Remodelling Grounded Theory, *Forum: Qualitative Social Research,* 5 (2), Article 4

Glaser, B.G., and Strauss, A.L. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research,* Aldine de Gruyter, New York

Glaser, N.F. 2001. Conservation and the management of the earth heritage resource in Great Britain, *Journal of Environmental Planning and Management,* 44 (6), 889-906

Glover, P., and Slagle, T. 1983. Los Angeles: a history of the future, *Raise the Stakes,* Winter

Gold, M. 1984. A history of nature. In: Massey, D. (Ed). *Geography Matters: A Reader,* Cambridge University Press, Cambridge, pp. 12-33

Goldkahl, G., and Cronholm, S. 2003. *Multi-Grounded Theory – Adding Theoretical Grounding to Grounded Theory,* 2nd European Conference on Research Methods in Business and Management, ECRM, Reading, UK, 20-21 March, 2003, 1-14

Goldsmith, F.B. 1983. Evaluating nature. In: Warren, A., and Goldsmith, F.B. (Eds). *Conservation in Perspective,* John Wiley & Sons, Chichester, pp. 233-246

Goldstein, B.E. 1999. Combining science and place-based knowledge: pragmatic and visionary approaches to bioregional understanding. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 157-170

Gorsline, J., and House, F. 1990. Future primitive. In: Andrus, V., Plant, C., Plant, J., and Wright, E. (Eds). *Home! A Bioregional Reader,* New Society, Philadelphia, pp. 39-41

Goulding, C., 1999. *Grounded Theory: Some Reflections on Paradigm, Procedure and Misconceptions,* Working Paper Series June 1999, Wolverhampton Business School, Management Research Centre, University of Wolverhampton, Wolverhampton

Graham, E. 1997. Philosophies underlying human Geography. In: Flowerdew, M., and Martin, D. (Eds). *Methods in Human Geography: A Guide for Students Doing Research Projects,* Addison Wesley Longman Limited, London, 6-30

Graham, S. 1998. The of geography of the explosion of place? Conceptualising space, place and information technology, *Progress in Human Geography,* 22 (2), 165-185

Graham, S. and Healey, P. 1999. Relational concepts of space and place: issues for planning theory and practice, *European Planning Studies,* 7 (5), 623-646

Grant, W. 1997. *The Common Agricultural Policy,* Macmillan, Basingstoke

Gray, J.N. 2000. *At Home in the Hills: Sense of Place in the Scottish Borders,* Berghahn Books, New York

Gray, J. 2003. A rural sense of place: intimate experience in planning a countryside for life, *Planning Theory and Practice,* 4 (1), 93-96

Green, B. 1996. *Countryside Conservation,* Third Edition, E & F Spon, London

Green, J., and Britten, N. 1998. Qualitative research and evidence based medicine, *British Medical Journal,* 316, 1230-1232

Greenhalgh, T. 1997. How to read a paper: Papers that summarise other papers (systematic reviews and meta-analyses), *British Medical Journal,* 315, 672-675

Green, R.G., and Robins, M. 1993. The decline of the ornithological importance of the Somerset Levels and Moors, England and changes in the management of water levels, *Biological Conservation,* 66, 95-106

Gregory, K.J. 2000. *The Changing Nature of Physical Geography,* Arnold, London

Gregory, K.J and Davis, R.J. 1992. Coarse woody debris in stream channels in relation to river channel management in woodland areas, *Regulated Rivers, Research and Management,* 7, 117-136.

Griffiths, G., Porter, S., Simmons, E., and Warnock, S., 2004. *The Living Landscapes Project: Landscape Character and Biodiversity Final Report, English Nature Research Reports Number 475,* English Nature, Peterborough

Griffin, S. 1978. *Woman and Nature: The Roaring Inside Her,* The Women's Press, London

Group 75. 2005. Spirit of the place (Genius loci), *www.group75.co.uk/spirit/html* last accessed May 2006

Gupta, A., and Ferguson, J. 1997. Culture, power, place: ethnography at the end of an era. In: Gupta, A., and Ferguson, J. (Eds), *Culture, Power, Place: Explorations in Critical Anthropology,* Duke University Press, Durham, pp. 1-32

Gurevitch, J., Scheiner, S.M., and Fox, G.A. 2002. *The Ecology of Plants,* Sinauer Associates Inc. Publishers, Sunderland

Gurnell, A.M. 1995. Vegetation along river corridors: hydroggeomorphological interactions. In: Gurnell, A and Petts, G. (Eds) *Changing River Channels*, John Wiley & Sons Inc, Chichester, pp. 237-259

Haenke, D. 1996. Bioregionalism and community: a call to action the fellowship for intentional community, *www.ic.org/pnp/cdir/1995/2/haenke.html*

Haig, B.D. 1995. *Grounded Theory as Scientific Method*, Philosophy of Education Society, www.ed.uiuc.edu/EPS/PES-Yearbook/95_docs/haig.html

Hales, R. 2000. Landuse development planning and the notion of Sustainable Development, exploring constraint and facilitation within the English planning system, *Journal of Environmental Planning and Management,* 43 (1), 99-121

Hamilton, K. 2003. *A Critical Comparative Review of Spatial Biodiversity Planning in the Wider Countryside*, MA Thesis, University of Gloucestershire, Cheltenham

Hamilton, K., and Selman, P. 2005a. The 'landscape scale' in planning: recent experience of bio-geographic planning units in Britain, *Landscape Research,* 30 (4), 549-558

Hamilton, K., and Selman, P., 2005b. Using biogeographic units in landscape-scale policy and planning. In: McCollin, D., and Jackson, J.I. (Eds), *Planning, People and Practice: The Landscape Ecology of Sustainable Landscapes,* Proceedings of the 13th Annual IALE (UK) College, International Association of Landscape Ecology, Northampton, pp. 45-52

Hammersley, M. 2001. On 'systematic' reviews of research literatures: a 'narrative' response to Evans and Benefield, *British Educational Research Journal,* 27 (5), 543-554

Haraway, D. 1985. Manifesto for cyborgs: science, technology and socialist feminism in the 1980s, *Socialist Review,* 80, 65-108

Haraway, D. 1986. Primatology is politics. In R. Bleir (Ed.) *Feminist Approaches to Science.* Elmsford, NY: Pergammon Press.

Haraway, D.J. 1988. Situated knowledges: The science question in feminism as a site of discourse on the privilege of partial perspective, *Feminist Studies,* 14 (3), 575-600

Haraway, D.J. 1989. *Primate Visions: Gender, Race, and Nature in the World of Modern Science,* Routledge, New York

Haraway, D.J. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature,* Free Association Books, London

Haraway, D. 1992. Otherwordly conversations; terrain topics; local terms, *Science as Culture,* 3 (1), 64-98

Haraway, D. J. 1999 'Situated knowledges: the science question in feminism and the privilege of partial perspective (1988)'. Em M. Biagioli (org.), *The science studies reader*. Nova York, Routledge, 172-88.

Haraway, D. 2004. *The Haraway Reader,* Routledge, New York

Harding, S. 1991. *Whose Science? Whose Knowledge?: Thinking from Women's Lives,* Cornwell University Press, Ithaca

Harry, B., Sturges, K.M., and Klingner, J.K. 2003. Mapping the process: an exemplar process and challenge in Grounded Theory analysis, *Educational Researcher,* 34 (2), 3-13

Harrison, S., and Bruna, E. 1999. Habitat fragmentation and large scale conservation: what do we know for sure? *Ecography,* 22, 225-232

Harvey, G. 1997. *The Killing of the Countryside,* Vintage, London

Hawker, S., Payne, S., Kerr, C., Hardey, M., and Powell, J. 2002. Appraising the evidence: reviewing disparate data systematically, *Qualitative Health Research,* 12 (9), 1284-1299

Hayden, D. 1995. *The Power of Place: Urban Landscapes as Public History,* The MIT Press, Cambridge

Hayes, N. 2000. *Doing Psychological Research: Gathering and Analysing Data,* Open University Press, Buckingham

Head, L. 2000. *Cultural Landscapes and Environmental Change,* Arnold, London

Healy, P., and Shaw, T. 1994. Changing meanings of 'environment' in the British planning system, *Transactions of the Institute of British Geographers,* 19, 425-438

Hebdige, D. 2003. Dis-gnosis: Disney and the re-tooling of knowledge, art, culture, life, etc, *Cultural Studies,* 14 (2), 150-165

Hepple, L.W., and Doggett, A.M. 1994. *The Chilterns,* Second Edition, Phillmore & Co, London

Herod, A. 1999. Reflections on Interviewing Foreign Elite's: Prxis, Positionality, Validity, and the Cult of the Insider, *Geoforum,* 30, 313-327

Hey, R.D. 1996. Environmentally sensitive river engineering. In: Petts, G and Calow, P. (Eds). *River Restoration, Selected Extracts from the Rivers Handbook,* Blackwell Science Ltd, London, pp. 80-105

Hillman, M., and Brierley, G. 2005. A critical review of catchment-scale stream rehabilitation programmes, *Progress in Physical Geography,* 29 (1), 50-70

Hodge, I.D. 1989. Compensation for nature conservation, *Environment and Planning A,* 21, 1027-1036

Hodge, I. 1999. Countryside planning from urban containment to sustainable development. In: Cullingworth, B. (Ed). *British Planning: 50 Years of Urban and Regional Planning,* The Athlone Press, London, pp. 91-104

Hodge, I., Kiddle, C., and McNally, S. 2001. The uncertain growth of part-time farming and diversification, *Farm Management,* 11 (1), 11-24

Hoffman, J. 2001. Blind alley: Defining Feminism, *Politics,* 21 (3), 193-199
Holdaway, E., and Smart, G. 2001. *Landscapes at risk? The Future for Areas of Outstanding Natural Beauty,* Spon Press, London

Hoggart, K. 1988. Not a definition of rural, *Area,* 20 (1), 35-40

House, L.F. 1999. *Totem Salmon: Life Lessons from another Species,* Beacon Press, Boston

Huggett, R.J. 1998. *Fundamentals in Biogeography,* Routledge, London

Humberstone, B., and Pedersen, K. 2001. Gender, class and outdoor traditions in the UK and Norway, *Sport, Education and Society,* 6 (1), 23-33

Humbler, C. 2004. *Conservation,* Studies in Biology Series, Cambridge University Press, Cambridge

Humm, M. 2003. *The Dictionary of Feminist Theory,* Second Edition, Edinburgh University Press, Edinburgh

Hutchings, D. 1999. Integrated river basin management and its importance for the future well being of Wales, *Environment Agency Document 37APRLR,* Environment Agency, Preston

International Association of Landscape Ecology, 2004. IALE Home Page, *www.IALE.org.uk*

Jackson, J.B. 1994. *A Sense of Place, a Sense of Time,* Yale University Press, New Haven

James, P., and Boothby, J. 2002. Frameworks, networks and the UK regional agenda: nature planning for landscapes? *Landscape Research,* 27 (4), 325-342

James, P., Ashley, J., and Evans, A. 2000. Ecological Networks: connecting environmental, economic and social systems, *Landscape Research,* 25 (3), 345-353

Jefferson, R.G. 1997. *Lowland Grassland in Natural Areas: National Assessment of Significance: English Nature Research Reports Supplement to number 171*, English Nature, Peterborough

Jensen, L.H. 2005. Changing conceptualization of landscape in English landscape assessment methods. In Tress, B., Tress, G, Fry, G., and Opdam, P. (Eds). *From Landscape Research to Landscape Planning: Aspects of Integration, Education and Application,* Springer, Dordrecht

Jivén, G., and Larkham, P.J. 2003. Sense of place, authenticity and character: a commentary, *Journal of Urban Design,* 8 (1), 67-81

Johnstone, B. 2002. *Discourse Analysis,* Blackwell Publishers, Malden

Jones, P. 1999. The LEAP approach to environmental management, *Town and Country Planning,* 342-348

Jones, P., Mortimer, S., Park, J., Parker, G., Stabler, M., Ansell, D., and Griffiths, G., 2001. *A Socio-economic Profile of the Chilterns Natural Area: Costing Biodiversity Targets and Linking Biodiversity to Socio-economic Drivers, Contract Number TC/18/01,* School of Agriculture, Policy and Development, University of Reading

Jongman, R.G.H. 2002. Landscape planning for biological diversity in Europe, *Landscape Research,* 27 (2), 187-195

Joseph Rowntree Foundation, 2000. *Low Intensity Support Services: A Systematic Literature Review Findings,* Joseph Rowntree Foundation

Kalinowski, F.A. 2004. *Bioregionalism: Creating Environmental Citizens and Expanding Ethical Communities,* Warren Wilson College, North Carolina 14th North American Interdisciplinary Conference, state University of New York, Environment and Community

Kallis, G., and Butler, D. 2001. The EU Water Framework Directive: measures and implications, *Water Policy,* 3, 125-142

Kambites, C. 2004. *From Global Discourse to Local Action? Town Councils and Sustainable Development,* PhD Thesis, University of Gloucestershire

Kelly, L., Burton, S., and Regan, L. 1994. Researching women's lives or studying women's oppression? Reflections on what constitutes feminist research. In: Maynard, M., and Purvis, J. (Eds), *Researching Women's Lives from a Feminist Perspective,* Taylor Francis, London, pp. 27-48

Kent County Council, 2001. *Kent Lifescapes: A Countywide Framework for Whole Landscape Biodiversity Conservation,* 3rd Draft-Discussion/Options Paper, Kent County Council, Kent

Kern, L. 2005. In place and at home in the city: connecting privilege, safety and belonging for women in Toronto, *Gender, Place and Culture,* 12 (3), 357-377

Kirkby, J., O'Keefe, P., and Timberlake, L. 1995. *The Earthscan Reader in Sustainable Development,* Earthscan, London

Knightbridge, R. 2000. The UK BAP – five years on, *Ecos,* 21 (2), 2-8

Knighton, D. 1998. *Fluvial Forms and Processes, A New Perspective* (Second Edition), John Wiley & Sons Inc., New York, 383pp.

Knopp, L. 2004. Ontologies of place, placelessness, and movement: queer quests for identity and their impacts on contemporary geographic thought, *Gender, Place and Culture,* 11 (1), 121-134

Knox, P.L. 2005. Creating ordinary places: slow cities in a fast world, *Journal of Urban Design,* 10 (1), 1-11

Kobayashi, A. 2003. Gender, Place and Culture: Ten years on: is self reflexivity enough? *Gender, Place and Culture,* 10 (4), 345-349

Kumar, S., Little, P., and Brittan, N. 2003. Why do general practitioners prescribe anti-biotics for sore throat? Grounded Theory interview study, *British Medical Journal,* 326, 1-6

Land Use Consultants, 2001. *The Parrett Catchment Project: An Action Strategy for Integrated Catchment Management,* Land Use Consultants, Somerset

Land Use Consultants, 2005. *Future Organisational Structure for the Levels and Moors and Parrett Catchment Draft,* PCP, Taunton

Langslow, D. 2001. Biodiversity into the Twenty-First Century. In: Smout, T.C. (Ed). *Nature, Landscape and People Since the Second World War,* Tuckwell Press, Edinburgh, pp. 181-185

Larkham, P.J. 1993. Conservation in action, evaluating policy and practice in the United Kingdom, *Town Planning Review,* 64 (4), 351-357

Latour, B. 1992. Where are the missing masses? The sociology of a few mundane artefacts. In: Bijker, W., and Law, J. (Eds). *Shaping Technology/Building Society: Studies in Socio-technical Change,* MIT Press, London, pp. 225-264

Latour, B., 1993. *We have never been modern* (translated by C.Porter), Harvester Wheatsheaf, Hemel Hempstead

Latour, B. 1999. On recalling ANT. In: Law, J., and Hassard, J. (Eds). *Actor Network Theory and After,* Blackwell Publishers/The Sociological Review, Oxford, pp. 15-25

Latour, B. 2000. When things strike back: a possible contribution of 'science studies' to the social sciences, *British Journal of Sociology,* 51 (1), 107-123

Law, J. 1999. After ANT: complexity, naming and topology. In: Law, J., and Hassard, J. (Eds). *Actor Network Theory and After,* Blackwell Publishers/The Sociological Review, Oxford, pp. 1-14

Lee, J.T., Elton, M.J., and Thompson, S. 1999. The role of GIS in landscape assessment: using land-use based criteria for an area of the Chiltern Hills Area of Outstanding Natural Beauty, *Land Use Policy,* 6, 23-32

Lee, J.T., Bailey, N., Bayliss, J.L., and Thompson, S., 2001a. *Development of a Biodiversity and Landscape Map for the Chilterns Using a GIS based Model Phase I: Production of Land Use Map for the Chilterns Natural Area, Contract Number TC/12/00,* The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford

Lee, J., Griffiths, G., Warnock, S., Bailey, N., Bayliss, J., Vogiatzakis, I., and Thompson, S., 2001b. *Development of a Biodiversity and Landscape Map for the Chilterns using a GIS Based Model: Phase II: Habitat Model: Formulation, Operation and Results, Contract Number TC/17/00,* The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford

Lee, J.T., Woddy, S.J., and Thompson, S. 2001c. Targeting sites for conservation: using a patch-based ranking system to assess conservation potential, *Journal of Environmental Management,* 61, 367-380

Lee, J.T., Bailey, N., and Thompson, S. 2002. Using Geographical Information Systems to identify and target sites for the creation and restoration of native woodlands: a case study of the Chiltern Hills, UK, *Journal of Environmental Management,* 64, 25-34

Leopold, A. 1949. *A Sand County Almanac*, Oxford University Press, New York

Levels and Moors Partnership, 2006. Somerset Levels and Moors: introduction, *www.somersetlevels.com/lampr_about.php#pf* (Last accessed April 2006)

Lewin, Fryer and Partners Consulting Engineers, 2003. *Parrett Catchment Flood Management Plan Consultation Draft,* Lewin, Fryer and Partners, Somerset

Ley, D., and Mountz, A. 2001. Interpretation, representation, positionality: issues in field research in human Geography. In: Limb, M., and Dwyer, C. (Eds), *Qualitative Methodologies for Geographers,* Arnold, London, pp. 234-237

Life Econet International Conference and Exhibition. 2003. *Life Econet Conference Chester, 2nd-4th April 2003,* Conference CD ROM

Light, J.S. 1997. The changing nature of nature, *Ecumene,* 4 (2), 181-195

Limb, M., and Dwyer, C. 2001. (Eds), *Qualitative Methods for Geographers, Issues and Debates,* Arnold, London

Ling, K.A., and Ashmore, M.R. 1999. Influence of tree health on ground flora in the Chiltern Beechwoods, England, *Forest Ecology,* 119, 77-88

Little, J., and Austin, P. 1996. Women and the rural idyll, *Journal of Rural Studies,* 12 (2), 101-111

Lipschutz, R.D. 1999. Bioregionalism, civil society and global environmental governance. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 101-120

Lipschutz, R.D., and Mayer, 1996. *Global Civil Society and Global Environmental Governance: The Politics of Nature from Place to Planet,* New York University Press, Albany

Lobley, M., and Potter, C. 1998. Environmental stewardship in UK agriculture: a comparison of the Environmentally Sensitive Area programme and the Countryside Stewardship Scheme in south east England, *Geoforum,* 29 (4), 413-432

Longhurst, R. 2001. Classics in Human Geography revisited: Geography and gender: an introduction to feminist Geography, *Progress in Human Geography,* 25 (2), 253-260

Loukaki, A. 1997. Whose genius loci? Contrasting interpretations of the 'sacred' rock of the Athenian Acropolis, *Annals of the Association of American Geographers,* 87 (2), 306-329

Lovelock, J. 1979. *Gaia: A New Look at Life on Earth,* Oxford University Press, Oxford

Lowe, P.D. 1983. Values and institutions in the history of British nature conservation. In: Warren, A., and Goldsmith, F.B. (Eds). *Conservation in Perspective,* John Wiley & Sons, Chichester, pp. 329-352

Lowe, P., and Ward, S., 1998. Britain in Europe: themes and issues in national environmental policy. In: Lowe, P., and Ward, S. (Eds). *British Environmental Policy and Europe: Politics and Policy in Transition,* Routledge, London, pp. 3-30

Lowenthal D, 1961. Geography, experience, and imagination: towards a geographical epistemology, *Annals of the Association of American Geographers,* 51, 241 – 260

Lowerson, J. 1992. The mystical geography of the English. In: Short, B. (Ed). *The English Rural Community: Image and Analysis,* Cambridge University Press, Cambridge, pp. 152-174

Luccanelli, M. 1995. *Lewis Mumford and the Ecological Region: The Politics of Planning,* The Guildford Press, New York

Lunt, I.D., and Spooner, P.G. 2005. Using historical ecology to understand patterns of biodiversity in fragmented agricultural landscapes, *Journal of Biogeography,* 32, 1859-1873

Mabey, R. 1993. Nature and change the two faces of naturalisation. In: Clifford, S., and King, A. (Eds). *Local Distinctiveness, Place, Particularity and Identity,* Common Ground, London, pp. 21-27

Mabey, R. 1998. *Flora Britannica: The Concise Edition,* Chatto & Windus, London

MacArthur, R.H., and Wilson, E.O. 1967. *The Theory of Island Biogeography,* Princeton University Press, Princeton

Macdonald, D.W., and Johnson, P.J. 2000. Farmers and the custody of the countryside: trends in loss and conservation of non-productive habitats 1981-1998, *Biological Conservation,* 94, 221-234

MacEwen, A. and MacEwen, M. 1987. *Greenprints for the Countryside: The Story of Britain's National Park,* Unwin Hyman Ltd, London

MacFarlane, R. 1998. Implementing agri-environmental policy, a landscape ecology perspective, *Journal of Environmental Planning and Management,* 41 (5), 575-596

MacFarlane, R. 2000a. Achieving whole-landscape management across multiple land management units: a case study from the Lake District Environmentally Sensitive Area, *Landscape Research,* 25 (2), 229-254

MacFarlane, R. 2000b. Building blocks or stumbling blocks? Landscape ecology and farm-level participation in agri-environment policy, *Landscape Research,* 25 (3), 321-331

Macnaghten, P., and Urry, J. 1998. *Contested Natures,* Sage Publications, London

Madge, C., Raghuram, P., Skelton, T., Willis, K., and Williams, J. 1997. Methods and methodologies in feminist research. In: Women and Geography Study Group. (Eds), *Feminist Geographies: Diversity and Difference,* Longman, London, pp. 86-111

Marsden, T., Lowe, P., and Whatmore, S. 1990. Introduction: questions of rurality. In: Marsden, T., Lowe, P., and Whatmore, S. (Eds). *Rural Restructuring, Global Processes and their Responses,* David Fulton Publishers, London, pp. 1-20

Marshall, J. 2002. Borderlands and feminist ethnography. In: Moss, P. (Ed). *Feminist Geography in Practice: Research and Methods,* Blackwell Publishers, Oxford, pp. 174-186

Marshall, R., and Smith, C. 1999. Planning for nature conservation: the role and performance of English Lake District Local Authorities in the 1990's, *Journal of Environmental Planning and Management,* 42 (5), 691-706

Maser, C. 1998. The community is founded on a sense of place, history and trust, *The Trumpeter,* 15 (1)

Massey, D. 1994. *Space, Place and Gender,* Polity Press, Cambridge

Massey, D. 2005. *For Space,* Sage Publications, London

May, R.M. 1972. Will a large complex system by stable? *Nature,* 238, 423-414

May, R.M. 1977. Thresholds and breakpoints in ecosystems with a multiplicity of stable states, *Nature,* 269, 471-477

May, R.M. 1993. Resisting resistence, *Nature,* 361, 593-594

May, T. 1997. *Social Research: Issues, Methods and Process,* Second Edition, Open University Press, Buckingham

McClelland, K. 2000. *Symbolic Interactionism,* http://web,Grinnell.edu?courses/soc/s00/soc111-01/IntroTheories/Symbolic.html, 03/01/2006

McCloskey, D.D. 1996. Ecology and Community: the Bioregional Vision, *http://www.tnews.com/text/mccloskey2.html* (Last Accessed July 2006)

McDowell, L. 1992. Doing gender, feminism, feminists and research methods in Human Geography, *Transactions of the Institute of British Geographers,* 17, 399-416

McDowell, L. 1993. Space, place and gender relations: Part II. Identity, difference, feminist, geometrics and geographies, *Progress in Human Geography,* 17 (3), 305-318

McGinnis, M.V. 1995. Bioregional organisation: a constitution of home place, *Human Ecology Review,* 2 (1), 72-84

McGinnis, M.V. 1999a. A Rehearsal to bioregionalism. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, 1-9

McGinnis, M.V. 1999b. Boundary creatures and bounded spaces. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 61-80

McGinnis, M.V, House, F., and Jordan W. 1999. Bioregional restoration re-establising an ecology of shared identity. In: McGinnis, M.V. (Ed). *Bioregionalism,* Routledge, London, pp. 205-222

McKinlay, A., and Potter, J. 1987. Model discourse: interpretative repertoires in scientist's conference talk, *Social Studies of Science,* 17, 443-463

McMahon, M. 1997. From the ground up: ecofeminism and ecological economics, *Ecological Economics,* 20, 163-173

McManus, R.J., Wilson, S., Delany, B.C., Fitzmaurice, D.A., Hyde, C.J., Tobias, R.S., Jowett, S., and Hobbs, F.D.R. 1998. Review of the usefulness of contacting other experts when conducting a literature search for systematic reviews, *British Medical Journal,* 317, 1562-1563

McNeely, J.A. 1996. Politics and economics. In: Spellerberg, G.F. (Ed), *Conservation Biology,* Longman Group Limited, Harlow, pp. 38-47

Meadowcroft, J. 2002. Politics and scale: some implications for environmental governance, *Landscape and Urban Planning,* 61, 169-179

Meadows, D.L., Randers, J., and Behrens, W.W. 1972. *The Limits to Growth: A Report to the Club of Rome's Project on the Predicament of Mankind,* Potomac Associates, New York

Meinig, D.W. 1979. The beholding eye: ten versions of the same scene. In: Meinig, D.W., and Brickerhoff-Jackson, J. (Eds), *The Interpretation of Ordinary Landscapes: Geographical Essays,* Oxford University Press, New York, pp. 11-32

Merchant, C. 1980. *The Death of Nature: Women, Ecology and the Scientific Revolution,* Harper Collins Publishers, San Francisco

Merchant, C. 1990. Ecofeminism and feminist theory. In: Diamond, I., and Orenstein, G.F. (Eds). *Reweaving the World: The Emergence of Ecofeminism,* Sierra Club Books, San Francisco, 100-105

Merchant, C. 1992. *Radical Ecology: The Search for a Livable World,* Routledge, New York

Metzner, R. 1995. The place and the story: where Ecopsychology and bioregionalism meet, *The Trumpeter,* 12 (3)

Metzner, R. 2003. *The Place and the Story: Bioregionalism and Ecopsychology,* Green Earth Foundation, Canada

Michael, M. 1996. *Constructing Identities: The Social, the Non-Human and Change,* Sage Publications, London

Michael, N. 1996. *:Lowland Heathland in England: A Natural Areas Approach, English Nature Research Reports Number 170,* English Nature, Peterborough

Michael, R. 1983. The power of place, *Coyote,* 2, 1-2

Mies, M., and Shiva, V. 1993. *Ecofeminism,* Spinifex Press, Victoria

Mitchell, D. 2000. *Cultural Geography: A Critical Introduction,* Blackwell Publishing, Malden

Morley, D. 2001. Belongings: place, space and identity in a mediated world, *European Journal of Cultural Studies,* 4 (4), 425-448

Morris, C., and Potter, C. 1995. Recruiting the new conservationists: farmers' adoption of Agri-environmental Schemes in the UK, *Journal of Rural Studies,* 11 (1), 51-63

Morris, C., and Young, C. 1997. Towards environmentally beneficial farming? An evaluation of the Countryside Stewardship Scheme, *Geography,* 82 (4), 305-316

Morris, C., and Winter, M. 2002. Barn owls, bumble bees and beetles: UK agriculture, biodiversity and Biodiversity Action Planning, *Journal of Environmental Planning and Management,* 45 (5), 653-671

Moss, P. 2002. Taking on, thinking about, and doing Feminist research in Geography. In: Moss, P., (ed), *Feminist Geography in Practice: Research and Methods,* Blackwell Publishers Ltd, Oxford, 1-17

Muir, R. 1999. *Approaches to Landscape*, Macmillan Press Ltd, Basingstoke

Mullings, B. 1999. Insider or Outsider, Both or Neither: Some Dilemmas of Interviewing in a Cross-Cultural Setting, *Geoforum,* 30, 337-350.

Mulrow, C. 2001. Review: ACE inhibitors, calcium antagonists, and more intensive blood pressure lowering strategies reduce cardiovascular events, *Evidence Based Medicine,* 6, 111

Mumford, L. 1938. *The Culture of Cities,* Harcourt, Brace and Company, Orlando

Mumford, L. 1973. *The Condition of Man,* Lightening Source Inc., New York

Mumford, L. 1974. *Pentagon of Power: The Myth of the Machine Volume 2,* H Harvest/HBJ Book, San Diego

Munton, R. 1983. Agriculture and conservation: what room for compromise? In: Warren, A., and Goldsmith, F.B. (Eds). *Conservation in Perspective,* John Wiley & Sons, Chichester, pp. 353-373

Murdoch, J. 1997. Towards a geography of heterogeneous associations, *Progress in Human Geography,* 21 (3), 321-337

Murdoch, J. 1998. The spaces of Actor-Network Theory, *Geoforum,* 29 (4), 357-374

Murdoch, J. 2001. Ecologising Sociology: Actor-Network Theory, co-construction and the problem of human exemptionalism, *Sociology,* 35 (1), 111-133

Myers, G., and Macnaghten, P. 1999. Can focus groups be analyzed as talk? In: Barbour, R.S., and Kitzinger, J. (Eds.), *Developing focus group research: Theory and practice*, Sage, London, pp173-185.

Nadel-Klein, J. 1991. Reweaving the fringe: localism, tradition and representation in British ethnography, *American Ethnologist,* 18, 500-515

Nadin, V. 1999. British planning in its European context. In: Cullingworth, B. (Ed). *British Planning: 50 Years of Urban and Regional Policy,* The Athlone Press, London, pp. 123-136

Naess, A. 1989. *Ecology, Community and Lifestyle,* Cambridge University Press, Cambridge

Nairn, K. 2002. Doing feminist fieldwork about Geography fieldwork. In: Moss, P. (Eds), *Feminist Geography in Practice: Research and Methods,* Blackwell, Oxford, pp. 147-159

Naveh, Z. 2001. Ten major premises for a holistic conception of multifunctional landscapes, *Landscape and Urban Planning,* 57, 269-284

Naveh, Z., and Lieberman, A.S. 1990. *Landscape Ecology: Theory and Application, Student Edition,* Springer-Verlag, London

Nature Conservancy Council, 1984. *Nature Conservation in Great Britain,* Nature Conservancy Council, Shrewsbury

Neuman, W.L. 2003. *Social Research Methods, Qualitative and Quantitative Approaches,* Fifth Edition, Pearon Education, Inc., Boston

Newby, H. 1979. *Green and Pleasant Land? Social Change in Rural England,* Hutchinson & Co (Publishers) Ltd, Middlesex

Newson, M. 1994. *Hydrology and the River Environment,* Clarendon Press, Oxford

Newson, M.D., and Newson, C.L. 2000. Geomorphology, ecology and river channel habitat: meso-scale approaches to basin-scale challenges, *Progress in Physical Geography,* 24 (2), 195-217

Nisbet, T.R., and Broadmeadow, S., 2005. *Opportunity Mapping for Trees and Floods, Final Report to the Parrett Catchment Project Wet Woodlands,* Forest Research, Surrey

Norberg-Schulz, C. 1980. *Genius Loci: Towards a Phenomenology of Architecture,* Rizzoli, London

O'Carroll, L. 1994. Competition with other environmental designations on a lowland heath: the case of Breckland. In: Whitby, M. (Ed). *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas,* CAB International, Wallingford, pp. 61-79

O'Connell, M. 1996. Legislation. In: Spellerberg, I.F. (Ed). *Conservation Biology,* Longman Group Limited, Harlow, pp. 48-56

Ogaji, J. 2005. Sustainable agriculture in the UK, *Environment, Development and Sustainability,* 7, 253-270

Oglethorpe, D.R. 2005. Livestock production post CAP reform: implications for the environment, *Animal Science,* 81, 159-192

Okun, D.A. 1975. Water management in England: a regional model, *Environmental Science and Technology,* 918

O'Hara, Sarah L., F. Alayne Street-Perrott, and Timothy P. Burt. 1993. Accelerated soil erosion around a Mexican highland lake caused by prehispanic agriculture. *Nature* 362, 48-51

O'Riordan, T. 1981. *Environmentalism*, Pion, London

Osborne, S., and Cook, H.F. 1997. Nitrate vulnerable zones and Nitrate Sensitive Areas: a policy and technical analysis of groundwater protection in England and Wales, *Journal of Environmental Planning and Management,* 40 (2), 217-234

Owen, S., and Curry, N. 1996. Introduction: changing rural policy in Britain. In: Curry, N., and Owen, S. (Eds). *Changing Rural Policy in Britain: Planning, Administration, Agriculture and the Environment,* Countryside and Community Press, Cheltenham, pp. 1-28

Oxford English Dictionary, 2002. *The Paperback Oxford English Dictionary,* Oxford University Press, Oxford

Palang, M., Mander, U, Naveh, Z. 2000. Holistic landscape ecology in action, *Landscape and Urban Planning,* 50, 1-6

Parfitt, J. 1997. Questionnaire design and sampling. In: Flowerdew, R., and Martin, D., (eds). *Methods in Human Geography: A Guide for Students doing a Research Project,* Addison Wesley Longman Limited, Essex, 76-109

Parker, G., and Ravenscroft, N. 1999. Benevolence, nationalism and hegemony: fifty years of the National Parks and Access to Countryside Act 1949, *Leisure Studies,* 18, 297-313

Parker, I. 1999. Introduction: Varieties of discourse and analysis: In: Parker, I., and The Bolton Discourse Analysis. (Eds). *Critical Textwork: An Introduction to the Varieties of Discourse and Analysis,* Open University Press, Buckingham, 1-12

Parry, J., Barnes, H, Lindsey, R., and Taylor, R. 2005. *Farmers, Farm Workers and Work Related Stress: Research Report 362,* Research Report to the Health and Safety Executive, Policy Studies Institute, London

Parsons, J. 1985. On bioregionalism and watershed conciousness, *Professional Geographer,* 37 (1), 1-6

Pascual-de-Sans, A. 2004. Sense of place and migration histories *Idiotopy* and *idiotope*, *Area,* 36 (4), 348-357

Peach, W.J., Lovett, L.J., Wotton, S.R., and Jeffs, C. 2001. Countryside stewardship delivers cirl buntings (*Emberiza cirlus*) in Devon, UK, *Biological Conservation,* 101, 361-373

Peet, R. 1998. *Modern Geographical Thought,* Blackwell Publishers Limited, Oxford

Peterken, G.F. 1977. Habitat conservation priorities in British and European woodlands, *Biological Conservation,* 11, 223-235

Peterken, G.F. 1981. *Woodland Conservation and Management,* Chapman & Hall, London

Peterken, G.G. 1996. *Natural Woodland, Ecology and Conservation in Northern Temperate Regions,* Cambridge University Press, Cambridge

Petrzelka, P. 2004. The new landform's here! The new landform's here! We're somebody now!! The role of discursive practices on place identity, *Rural Sociology,* 69 (3), 386-404

Petts, G., and Calow, P. 1996. The nature of rivers. In: Petts, G., and Calow, P., (eds). *River Restoration: Selected Extracts from the Rivers Handbook,* Blackwell Science, Oxford, 1-6

Petticrew, M. 2001. Systematic reviews from astronomy to zoology: myths and misconceptions, *British Medical Journal,* 322, 98-101

Phillips, L. 2000. Mediated communication and the privatization of public problems: Discourse on ecological risks and political action, *European Journal of Communication,* 15 (2), 171-207

Phillips, A., and Clarke, R. 2004. Our landscapes from a wider perspective. In: Bishop, K., and Phillips, A. (Eds). *Countryside Planning: New Approaches to Management and Conservation,* Earthscan, London, pp. 49-66

Philips, L., and Jørgensen, M.W. 2002. *Discourse Analysis: As Theory and Method,* Sage Publications Limited, London

Philo, C. 1992. Neglected rural geographies, *Journal of Rural Studies,* 8 (3), 193-207

Pickering, K.T., and Owen, L.A. 1997. *An Introduction to Global Environmental Issues,* Second Edition, Routledge, London

Pieterse, J.N. 2001. Hybridity; so what? The anti-hybridity backlash and the riddles of recognition, *Theory, Culture & Society,* 18 (23), 219-245

Pile, S. 1991. Practising interpretative Geography, *Transactions of the Institute for British Geographers,* 16, 458-469

Pini, B. 2002. Focus groups, feminist research and farm women: Opportunities for empowerment in rural social research, *Journal of Rural Studies,* 18, 339-351

Plant, J. 1990a. Searching for common ground: ecofeminism and bioregionalism. In: Diamond, I., and Orenstein, F. (Eds). *Reweaving the World: The Emergence of Ecofeminism,* Sierra Club Books, San Francisco, pp. 155-161

Plant, J. 1990b. Revaluing home: feminism and bioregionalism. In: Andruss, V., Plant, C., Plant, J., and Mills, S. (Eds). *Home: A Bioregional Reader,* New Society Publishers, Gabriola Island, pp. 21-23

Plumwood, V. 1993. *Feminism and the Mastery of Nature,* Routledge, London

Plumwood, V. 2000. Integrating ethical frameworks for animals, humans and nature: a critical feminist eco-socialist analysis, *Ethics and the Environment,* 5 (2), 285-322

Porter, K. 2004. The Natural Area experience. In: Bishop, K., and Phillips, A., (eds). *Countryside Planning: New Approaches to Management and Conservation,* Earthscan, London, pp.91-108

Porter, J., and Ahern, K. 2003. *Landscape Character Assessment Guidance: Topic Paper 4: Use of Geographical Information Systems and other Computer Methods,* Countryside Character Network, Cheltenham

Porter, K., and Preston, S. 2001. *Lifescapes: Progress Report: English Nature Report GC PO1,* English Nature, Peterborough

Potter, J. 1996. *Representing Reality: Discourse, Rhetoric and Social Construction,* Sage Publications, London

Potter, J., and Wetherell, M. 1987. *Discourse and Social Psychology: Beyond Attitudes and Behaviour,* Sage Publications, London

Potter, J., and Wetherell, M. 1994. Analyzing discourse. In Bryman, A., and Burgess, B. (Eds), *Analyzing Qualitative Data,* Routledge, London, pp. 47-66

Potter, J., and Wetherell, M. 1995. Discourse Analysis. In: Smith, J.A., Harré, R., and Van Langenhove, L. (Eds). *Rethinking Methods in Psychology,* Sage Publications, London, 80-92

Potter, J., and Wetherell, M. 2001. Unfolding discourse analysis. In: Wetherell, M., Taylor, S., and Yates, S.J. (Eds). *Discourse Theory and Practice: A Reader,* Sage Publications, London, 198-209

Potter, J., Wetherell, M., Gill, R., and Edwards, D. 1990. Discourse: noun, verb or social practice, *Philosophical Psychology,* 3 (2), 205-217

Powe, N.A., Wadsworth, W.A., Garrod, G.D., and McMahon, P.L. 2004. Putting action into biodiversity planning: assessing preferences towards funding, *Journal of Environmental Planning and Management,* 47 (2), 287-301

Pratt, G. 2002. Studying immigrants in focus groups. In: Moss, P. (Ed). *Feminist Geography in Practice: Research and Methods,* Blackwell Publishers, Oxford, pp. 214-229

Pressey, R.L. 1996. Protected areas: where should they be and why should they be there? In: Spellerberg, I.F. (Ed). *Conservation Biology,* Longman Group Limited, Harlow, pp. 171-185

Preston, S. 2001. Landscape characterisation – a tool for English Nature? *Power Point Presentation,* English Nature, Peterborough

Preston, S. 2002. *English Natures Landscape Approach to Delivering Biodiversity, English Nature Report December 2002,* English Nature, Peterborough

Pullin, A.S. 2002. *Conservation Biology.* Cambridge University Press, Cambridge

Pullin, A.S. and Knight, T.M. 2001. Effectiveness in conservation practice: pointers from medicine and public health. *Conservation Biology* 15, 50-54

Pullin, A.S. and Knight, T.M. 2003. Support for decision making in conservation practice: an evidence-based approach, *Journal for Nature Conservation,* 11, 83-90

Quantock Hills AONB Joint Advisory Committee, 2004. *Quantock Hills Area of Outstanding Natural Beauty Management Plan 2004-2009,* The Quantock Hills Joint Advisory Committee, Nether Stowey

Rackham, O. 1980. *Ancient Woodland,* Edward Arnold, London

Rackham, O. 1986. *The History of the Countryside,* J.M. Dent & Sons Ltd, London

Radford-Ruether, R. 1989. Toward an ecological-feminist theology of nature. In: Plant, J. (Ed). *Healing the Wounds: The Promise of Ecofeminism,* New Society Publishers, Philadelphia, pp. 145-150

Ratcliffe, D.A. 1977. *A Nature Conservation Review,* Cambridge University Press, Cambridge

Read, P. 2000. *Belonging: Australians, Place and Aboriginal Origins,* Cambridge University Press, Cambridge

Reid, W.V., McNeely, J.A., Tunstall, D.B., Bryant, D.A., and Winograd, M. 1993. *Biodiversity Indicators for Policy Makers,* World Resources Institute, USA

Relph, E. 1976. *Place and Placelessness,* Pion Limited, London

Ribble Project. 2004. *Public Participation Report,* Environment Agency, Preston

Richards, L. 1999. Computer monitor, data alive! The thinking behind Nvivo, *Qualitative Health Research,* 9 (3), 412-428

Rickinson, M. 2003. Reviewing research evidence in environmental education: some methodological reflections and challenges, *Environmental Education Research,* 9 (2), 257-271

Rishbeth, C. 2001. Ethnic minority groups and the design of public open space: an inclusive landscape, *Landscape Research,* 26 (4), 351-366

Rispoli, D., and Hambler, C. 1999. Attitudes to wetland restoration in Oxfordshire and Cambridgeshire, UK, *International Journal of Scientific Education,* 21 (5), 467-484

Roberts, D. 2001. Rural change and the impact of Foot and Mouth Disease, *Countryside Recreation,* 9 (3/4), 4-8

Roberts, N. 1998. *The Holocene: An Environmental History,* Second Edition, Blackwell Publishers, Oxford

Robinson, G.M., and Lind, M. 1999. Set-aside and environment: a case study in Southern England, *Journal of Economic and Social Geography,* 90 (3), 296

Robson, C. 2002. *Real World Research: A Resource for Social Scientists and Practitioner Researchers,* Second Edition, Blackwell Publishers, Oxford

Rose, G. 1993. *Feminism and Geography,* Blackwell Publishers, Cambridge

Rose, G. 1997. Situated knowledge's: Positionality, reflexivities and other tactics, *Progress in Human Geography,* 21 (3), 305-320

Rowe, J.S. 1988. Landscape ecology: the study of terrain ecosystems. In: Moss, R. (Ed), *Landscape Ecology and Management,* Polyscience Publications, Montreal, Canada, pp. 35-42

RSPB, 1999. *LEAP Forward for Wildlife: Promoting Biodiversity through Local Environment Agency Plans,* RSPB, Sandy

Rudy, A.P. 2005. Imperial contradictions: is the valley a watershed, region or cyborg? *Journal of Rural Studies,* 21, 19-38

Rural Development Service, 2005. *Environmental Stewardship: Look After your Land and be Rewarded,* DEFRA Rural Development Service, London

Russ, J. 1995. A bioregional perspective on planning and regional economics, *The Trumpter,* 12 (3)

Ryder, M. 1999. What is Actor-Network Theory? *http://carbon.cudenver.edu/~mryder/itc/act_net_dff.html,* Last accessed May 2006

Rydin, Y. 1993. *The British Planning System: An Introduction,* MacMillan, London

Rydin, Y. 1998. *Urban and Environmental Planning in the UK,* MacMillan Press Ltd, Houndmills

Rydin, Y. 1999. Public participation in planning. In: Cullingworth, B. (Ed). *British Planning: 50 Years of Urban and Regional Policy,* The Athlone Press, London, pp. 184-197

Sale, K. 1985. *Dwellers in the Land: The Bioregional Vision,* Sierra Club Books, San Francisco

Sale, K. 2000. *Dwellers in the Land: The Bioregional Vision,* Second Edition, The University of Georgia Press, Athens

Sandilands, C. 1993. On green consumerism: environmental privatization and 'family values', *Canadian Woman Studies,* 13 (3), 45-47

Sarantakos, S. 1998. *Social Research,* Second Edition, MacMillan Press Ltd, London

Sargisson, L. 2001. What's wrong with ecofeminism? *Environmental Politics,* 10 (1), 52-64

Saunders, C. 1994. Single-tier system with many farms partly outside the ESA: the case of the Pennine Dales. In: Whitby, M. (Ed). *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas,* CAB International, Wallingford, pp. 41-59

Sclater, P. L. 1858. On the general geographic distribution of the members of the class Aves. *Journal of the Linnaean Society, Zoology 2*: 130-145

Scott, A. 2002. Assessing public perception of landscape: the LANDMAP experience. *Landscape Research,* 27 (3), 271-295

Scott, A.J. 1998. The contribution of forums to rural sustainable development: a preliminary evaluation, *Journal of Environmental Management,* 54, 291-303

Scrase, J.I., and Sheate, W.R. 2005. Re-framing flood control in England and Wales, *Environmental Values,* 14, 113-137
Seale C.F and Kelly M. 1998. Coding and analysing data. In Seale C.F. (Ed) *Researching Society and Culture*, Sage, London, pp. 305-322

Seddon, G. 1997. *Landprints: Reflections on Place and Landscape,* Cambridge University Press, Cambridge

Selman, P. 1993. Landscape ecology and landscape planning: vision, theory and practice, *Journal of Rural Studies,* 9 (1), 1-21

Selman, P. 1996. *Local Sustainability,* Paul Chapman Publishing, London

Selman, P. 2000. *Environmental Planning,* Second Edition, Sage Publications Ltd. London

Selman, P. 2001. 'Social capital, sustainability and environmental planning, *Planning Theory and Practice,* 2 (1), 13-30

Selman, P. 2002. Multi-function landscape plans: a missing link in sustainability planning, *Local Environment,* 7 (3), 283-294

Selman, P. 2004a. Community participation in the planning and management of cultural landscapes, *Journal of Environmental Planning and Management,* 47 (3), 365-392

Selman, P. 2004b. Barriers and bridges to sustaining cultural landscapes. In: Jongman, R. (Ed), *The New Dimension of the European Landscape,* Wageningen University Press, Springer, pp. 93-102

Seyfang, G., and Jordan, A. 2002. The Johannesburg Summit and sustainable development: how effective are environmental mega-conferences. In: Stokke, O.S., and Øystein, T.B. (Eds). *Yearbook of International Co-operation on Environment and Development 2002/2003,* Earthscan Publications, London, pp. 19-39

Sharpley, R., and Craven, B. 2001. The 2001 Foot and Mouth crisis – rural economy and tourism policy implications: a comment, *Current Issues in Tourism,* 4 (6), 527-537

Sheail, J. 1976. *Nature in Trust: A History of Nature Conservation in Britain,* Blackie Publishers, Glasgow

Sheail, J. 1983. The historical perspective. In: Warren, A., and Goldsmith, F.B. (Eds). *Conservation in Perspective,* John Wiley & Sons, Chichester, pp. 315-328

Sheail, J. 1995a. Nature protection, ecologists and the farming context, *Journal of Rural Studies,* 11 (1), 79-88

Sheail, J. 1995b. War and the development of nature conservation in Britain, *Journal of Environmental Management,* 44, 267-283

Sheail, J. 1997. "Guardianship" and the rural 'workshop' – the first quarter century of UK experience in nature conservation, *Journal of Environmental Management,* 50, 429-443

Sheail, J. 1999. Creating landscape from the old – an English perspective on nature conservation, *Norsk Geografisk Tidsskrift,* 53, 71-76

Sheail, J. 2000. Ecology: a science put to use, *Biodiversity and Conservation,* 9, 1099-1113

Sheail, J. 2001. The National Parks and Access to Countryside Act 1949: It's origins and significance. In: Smout, T.C. (Ed), *Nature, Landscape and People Since the Second World War,* Tuckwell Press, Linton, pp. 1-12

Shoard, M. 1980. *Theft of the Countryside,* Temple Smith, Aldershot

Shoard, M. 1997. *This Land is Our Land: The Struggle for Britain's Countryside,* Second Edition, Gaia Books Ltd, Stroud

Shoard, M. 1999. *A Right to Roam,* Oxford University Press, Oxford

Short, B. 1992. Images and realities in the English rural community: an introduction. In: Short, B. (Ed), *The English Rural Community: Image and Analysis,* Cambridge University Press, Cambridge, pp. 1-18

Silverman, D., 2001. *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction,* Second Edition, Sage Publications, London

Simonis, U. 1994. Bioregionalism: a pragmatic European perspective, *Ekistics,* 63 (382-384), 67-72

Simmons, I.G. 1993. *Interpreting Nature: Cultural Constructions of the Environment,* Routledge, London

Skelton, T. 2001. Cross-cultural research: issues of power, positionality, and race. In: Limb, M., and Dwyer, C. (Eds). *Qualitative Methodologies for Geographers,* Arnold, London, 87-100

Slater, S., Marvin, S., and Newson, M. 1994. Land use planning and water sector, *Town Planning Review,* 65 (4), 375-397

Smith, N. 1996. The production of nature. In: Robertson, G., Mash, M., Tickner, L., Bird, J., Curtis, B., and Putnam, T. (Eds). *Future Natural: Nature/Science/Culture,* Routledge, London, pp. 35-54

Smith, S.J. 1993. Bounding the borders: claiming space and making place in rural Scotland, *Transactions of the Institute of British Geographers,* 18 (3), 291-308

Smith, S.J. 2001. Commentary 2: classics in Human Geography revisited, *Progress in Human Geography,* 25 (2), 255-257

Snyder, G. 1980. *The Real Work: Interviews & Talks, 1964-1979,* New Directions Publishing Corporation

Solesbury, W. 2001. Evidence based policy: Whence it came from and where it's going, *ESRC Centre for Evidence Based Policy and Practice: Working Paper 1,* ESRC Centre for Evidence Based Policy and Practice, Queen Mary, University of London

Somerset County Council, 2001. The Parrett Catchment Project, *http://www.somerset.gov.uk/somerset/ete/pcp/wherewework/* (Last Accessed: December 2006)

Somper, C. 2005. *The Parrett Catchment Project: Sustainability Appraisal Case Study,* South West Sustainable Land Use Initiative, Forum for the Future, Cheltenham

Sopher, D.E. 1979. The landscape of home: myth, experience, social meaning: In: Meinig, D.W. (Ed). *The Interpretation of Ordinary Landscapes: Geographical Essays,* Oxford University Press, New York, pp.129-149

Sorvig, K. 2002. Nature/culture/words/landscapes, *Landscape Journal,* 21 (2), 1-14

Spellerberg. I.F. 1992. *Evaluation and Assessment for Conservation,* Chapman & Hall, London

Spellerberg, I.F. 1996. Conserving biological conservation. In. Spellerberg, I.F. (Ed). *Conservation Biology,* Longman Group Limited, Harlow, pp. 25—35

Spretnak, C. 1989. Towards an ecofeminist spirituality. In. Plant, J. (Ed). *Healing the Wounds: The Promise of Ecofeminism,* New Society Publishers, Philadelphia, PA, pp. 127-132

Spretnak, C. 1998. *The Resurgence of the Real: Body, Nature and Place in a Hypermodern World,* Harper Collins, Canada

Starhawk, 1990. Power, authority and mystery: ecofeminism and earth based spirituality. In: Diamond, I., and Orenstein, G.F. (Eds). *Reweaving the World: The Emergence of Ecofeminism,* Sierra Club Books, San Francisco, pp. 73-86

Steele, F. 1981. *The Sense of Place,* CBI Publishing Company Inc, Boston

Stephenson, T. 1989. *Forbidden Land, the Struggle for Access to Mountain and Moorland,* Manchester University Press, Manchester

Stewart, D. W., and Shamdasani, P. N. 1990. *Focus groups: Theory and practice*. Newbury Park, CA

Stone, D.A., and Thomas, R.C. 2002. *Landscapes for biodiversity – Lifescapes,* English Nature, Peterborough

Strahler, A., and Strahler, A. 1994. *Introducing Physical Geography,* John Wiley & Sons Inc, Chichester

Strauss, A., and Corbin, J., 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques,* Sage, London

Strauss, A., and Corbin, J. 1994. Grounded Theory methodology: an overview. In: Denzin, N., and Lincoln, Y., (eds), *Handbook of Qualitative Research,* Sage, California

Strauss, A., and Corbin, J., 1998. Grounded Theory Methodology. In: Denzin, N., and Lincoln, Y., (eds), *Strategies of Qualitative Inquiry,* Sage Publications Limited, London, pp. 158-183

Sutherland, W.J. 2002. Restoring a sustainable countryside, *TRENDS in Ecology & Evolution,* 17 (3), 148-150

Swanwick, C. 2000. *Landscape Character Assessment: Topic Paper1: recent Practice and the Evolution of Landscape Character Assessment,* Countryside Agency and Scottish Natural Heritage, Cheltenham

Swanwick, C. 2004. The assessment of countryside and landscape character in England: an overview. In: Bishop, K., and Phillips, A. (Eds). *Countryside Planning: New Approaches to Management and Conservation,* Earthscan, London, pp. 109-124

Swearigen-White, S. 2003. Life Place: bioregional thought and practice: review, *Journal of Planning Education and Research,* 23, 317-318

Swyngedouw, E. 1999. Modernity and hybridity: nature, regeneracionismo, and the production of the Spanish waterscape, *Annals of the Association of American Geographers,* 89 (3), 443-465

Taylor, P.J. 1999. Places, spaces and Macy's: place-space tensions in the political geography of modernities, *Progress in Human Geography,* 25 (1), 7-26

Terkenli, T. 2001. Towards a theory of the landscape: The Aegean Landscape as a cultural image, *Landscape and Urban Planning,* 57

Thayer, R.L. 2003. *LifePlace: Bioregional Thought and Practice,* University of California Press, Berkeley

The Chinnor Net, 2003. Red Kites, *www.chinnor.net/red_kites.htm*

The Telematics Centre, 1999. *The Countryside Character Initiative-South West Region-Introduction,* University of Exeter, Exeter

Thompson, S., McElwee, K., and Lee, J.T. 2001. Using landscape characteristics for targeting habitat conservation and restoration: a case study of ancient semi-natural woodland in the Chiltern Hills AONB, UK, *Landscape Research,* 26 (3), 203-223

Thrift, N. 1999. The place of complexity, *Theory, Culture & Society,* 16 (3), 31-69

Tilley, C. 1994. *A Phenomenology of Landscape: Places, Paths and Monuments,* Berg Publishers, Oxford

Tilzey, M. 2000. Natural Areas, the whole countryside approach and sustainable agriculture, *Land Use Policy,* 17, 279-294

Tivy, J. 1993. *Biogeography: A Study of Plants in the Ecosphere,* Longman Group UK Limited, Harlow

Tonkiss, F. 1998. Analysing discourse. In: Seale, C. (Ed). *Researching Society and Culture,* Sage Publications, London, 245-260

Trenam, K. 2000. Public consultation in Local Environment Agency Plans (LEAPs), *Landscape Research,* 25 (3), 382-385

Tress, B., and Tress, G. 2001. Capitalising on multiplicity: a transdisciplinary approach to landscape research, *Landscape and Urban Planning,* 57, 143-157

Tress, B., Tress, G., Décamps, H., and d'Hauteserre, A.M. 2001. Bridging human and natural sciences in landscape research, *Landscape and Urban Planning,* 57, 137-141

Tuan, Yi-Fu, 1977. *Space and Place: The Perspective of Experience,* Edward Arnold Publishers Ltd, London

Tuan, Yi-Fu, 1991. Language and the making of place: a narrative-descriptive approach, *Annals of the Association of American Geographers,* 81 (4), 684-696

Turner, A., 1998. *Local Environment Agency Plan: River Parrett Action Plan,* Environment Agency, Bridgwater

Turner, F.J. 1893 The Significance of the Frontier in American History. *American Historical Association*. Chicago Worlds Fair. Chicago, 12 July 1893

Turner, F.J. 1932. *The Significance of Sections in American History,* Henry Holt, New York

Turner, M.G., Garcher, R.H., and O'Neill, R.V. 2001. *Landscape Ecology in Theory and Practice,* Springer, New York

Udvardy, M.D.F. 1975. *A Classification of the Biogeographical Provinces of the World, Occasional Paper No. 18,* International Union for Conservation, Morges, Switzerland

UK Biodiversity Group, 2001. *Sustaining the Variety of Life: 5 Years of the UK Biodiversity Action Plan: Report of the UK Government, the Scottish Executive, the National Assembly of Wales and the Northern Ireland Executive,* DETR, HMSO, London

UNCED, 1992. *Agenda 21: Programme of action for sustainable development, Rio declaration on environment and development, statement of principles. Final text agreement negotiated by governments at the United Nations Conference on Environment and Development, 3-14 June 1992,* Rio de Janeiro, Brazil, UNDP, New York

Valentine, G. 1997. Tell me about…:using interviews as research methodology. In: Flowerdew, R., and Martin, D., (eds). *Methods in Human Geography: A Guide for Students doing a Research Project,* Addison Wesley Longman Limited, Essex, 110-126

Vanderbilt, T. 1999. It's a mall world after all, *Harvard Design Magazine,* 9, 1-6

Van Lier, H., and Cook, E.A. 1994. Ecological networks: a conspectus. In: Cook, E.A., and Van Lier, H.N. (Eds), *Landscape Planning and Ecological Networks,* Elsevier, Amsterdam, pp. 327-346

Vasishth, A., and Sloane, D. 2002. Returning to ecology: an ecosystem approach to understanding the city from Chicago to LA. Making sense of urban theory, *www.-rcf.usc.edu* (Last Accessed April 2006)

von Humboldt, A. 1849. *System Der Isotherm-kurven,* Gotha, Justus Perthes

Wallace, A. R. 1876. *The geographical distribution of animals with a study of the relations of living and extinct faunas as elucidating the past changes of the earth's surface*, Macmillan, London

Wallwork, J., and Dixon, J.A. 2004. Foxes, green fields and Britishness: on the rhetorical construction of place and national identity, *Journal of Psychology,* 43, 21-39

Walton, D.W.H. 1996. Conservation strategies. In: Spellerberg, I.F. (Ed). *Conservation Biology,* Longman Group Limited, Harlow, pp. 57-68

Ward, J.V., Tockner, K., and Scheimer, F. 1999. Biodiversity of floodplain river ecosystems: ecotones and connectivity, *Regulated Rivers, Research and Management,* 15, 125-139

Ward, N., and Lowe, P. 2004. Europeanising rural development? Implementing the CAP's second pillar in England, *International Planning Studies,* 9 (2-3), 1211-1237

Warren, K.J. 1987. Feminism and ecology: making connections, *Environmental Ethics,* 9 (1), 3-20

Warren, K.J. 1996a. Ecological feminist philosophies: an overview of the issues. In: Warren, K.J. (Ed), *Ecological Feminist Philosophies,* Indiana University Press, Indiana, pp. ix-xxvi

Warren, K.J. 1996b. The power and promise of ecological feminism. In: Warren, K.J. (Ed), *Ecological Feminist Philosophies,* Indiana University Press, Indiana, pp. 19-41

Warren, K.J. 2000. *Ecofeminist Philosophy: A Western Perspective on What it is and Why it Matters,* Rowman and Littlefield Publishers Inc., London

Waterton, E. 2005. Whose sense of place? Reconciling archaeological perspectives with community values: cultural landscapes in England, *International Journal of Heritage Studies,* 11 (4), 309-325

Weins, J.A., 2002. Riverine landscapes: taking landscape ecology into the water. *Freshwater Biology,* 47, 501-515

Wetherall, A., and Priestley, A. 2001. A feminist discourse analysis of sex 'work', *Feminism & Psychology,* 11 (3), 323-340

Whatmore, S. 1997. Dissecting the autonomous self: hybrid cartographies for relational ethics, *Environment and Planning D, Society and Space,* 15, 37-53

Whatmore, S. 2002. *Hybrid Geographies: Natures, Cultures, Spaces,* Sage Publications Limited, London

Whatmore, S., and Thorne, L. 1998. Wild(er)ness: reconfiguring the geographies of wildlife, *Transactions of the Institute of British Geographers,* 23, 435-454

Whatmore, S., and Thorne, L. 2000. Elephants on the move: spatial formations of wildlife exchange, *Environment and Planning D: Society and Space,* 18, 185-203

Whitby, M. 1994. What futures for ESA's? In: Whitby, M. (Ed). *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas,* CAB International, Wallingford, pp. 253-272

Whitby, M. 2000. Reflections on the costs and benefits of agri-environment schemes, *Landscape Research,* 25 (3), 365-374

Whitby, M., and Lowe, P. 1994. The political and economic roots of environmental policy in agriculture. In: Whitby, M. (Ed). *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas,* CAB International, Wallingford, pp. 1-24

White, I., and Howe, J. 2003. Planning and the European Union Water Framework Directive, *Journal of Environmental Planning and Management,* 46 (4), 621-631

Widdicombe, S. 1995. Identity, politics and talk: a case for the mundane and the everyday. In: Wilkinson, S., and Kitzinger, C. (Eds). *Feminist and Discourse: Psychological Perspective,* Sage Publications, London, 106-127

Wiggins, S., and Potter, J. 2003. Attitudes and evaluative practices: category vs. item and subjective vs. objective constructions in everyday food assessments, *British Journal of Psychology,* 42, 513-531

Wilkins, R.J. 2000. Grassland in the twentieth century, *Iger Innovations,* 25-33

Williamson, G. 1999. *The Campaign for Political Ecology; Britain and Ireland Constitutional Change and Bioregionalism,* Eco, London

Willig, C. 1999. *Applied Discourse Analysis: Social and Psychological Interventions,* Open University Press, Buckingham

Wilson, E.O. 1996. Introduction. In: Wilson, E.O., Peter, F.M., Reaka-Kudla, M.L. and Wilson, D.E. (Eds). *Biodiversity II: Understanding and Protecting our Biological Resources,* Henry (Joseph) Press, Washington, pp. 1-11

Wilson, G.A. 1997. Selective targeting in Environmentally Sensitive Areas: implications for farmers and the environment, *Journal of Environmental Planning and Management,* 40 (2), 199-215

Winter, M. 1996. Landwise or land foolish? Free conservation advice for farmers in the wider English countryside, *Landscape Research,* 21 (3), 243-263

Winter, M. 2000. Strong policy or weak policy? The environmental impact of the 1992 reforms to the CAP arable regime in Great Britain, *Journal of Rural Studies,* 16, 47-59

Winter, M., and Smith, G. 2000. Appendix 4: Drivers of countryside change, *Study review of Key Trends in Agriculture,* Countryside and Community Research Unit and Royal Agricultural College, Cheltenham

Wolmer, W. 2005. Transboundary Protected Area Governance: Tensions and Paradoxes, *Policy Matters* 13, 137-147

Wondrak, A.K. 2002. Seen any wildlife? Community conflict and struggle for the soul of Estes Park, Colorado, *Cultural Geographies,* 9, 68-94

Wood, C. 1999. Environmental Planning. In: Cullingworth, B. (Ed). *British Planning: 50 Years of Urban and Regional Planning,* The Athlone Press, London, pp. 250-263

Wood, R., Handley, J., and Kidd, S. 1999. Sustainable development and institutional design: the example of the Mersey Basin Campaign, *Journal of Environmental Planning and Management,* 42 (3), 341-354

Woods, M. 1997. Discourses of power and rurality local politics in Somerset in the 20th Century, *Political Geography,* 16 (6), 453-478

Wotton, S.R., Carter, I., Cross, A.V., Etheridge, B., Snell, N., Duffy, K., Thorpe, R., and Gregory, R.D. 2002. Breeding status of the Red Kite *Milvus milvus* in Britain in 2000, *Bird Study,* 49, 278-286

World Commission on Environment and Development, 1987. *Our Common Future,* Oxford University Press, Oxford

Wragg, A. 2000. Towards sustainable landscape planning: experience for the Wye Valley Area of Outstanding Natural Beauty, *Landscape Research,* 25 (2), 183-200

Wright, P. 1993. Local distinctiveness: on curiosities and perils of the English approach. In: Clifford, S., and King, A. (Eds). *Local Distinctiveness, Place, Particularity and Identity,* Common Ground, London, pp. 37-45

Wynne, G., Avery, M., Campbell, L., Gubbay, S., Hawkswell, S., Juniper, T., King, M., Newbery, P., Smart, J., Steel, C., Stones, T., Stubbs. A., Taylor, J., Tydeman, C and Wynde, R., 1995. *Biodiversity Challenge,* Second Edition, RSPB, Sandy

Young, K. 2003. Research and policy: building a good relationship, *Social Sciences News from the ESRC,* 54

Zimmerer, K.S. 2000. The reworking of conservation geographies: nonequilibrium landscapes and nature-society hybrids, *Annals of the Association of American Geographers,* 90 (2), 356-369

Zonneveld, I.S. 1988. Landscape ecology and its application. In: Moss, R. (Ed), *Landscape Ecology and Management,* Polyscience Publications, Montreal, Canada, pp. 3-15

Zonneveld, I. 1994. Landscape ecology and ecological networks. In: Cook, E.A., and Van Lier, H.N. (Eds), *Landscape Planning and Ecological Networks,* Elsevier, Amsterdam, pp. 13-26

APPENDIX I

List of Documents Identified during the Systematic Review

Biodiversity Steering Group, 1994. *Biodiversity: The UK Action Plan,* HMSO, London

Biodiversity Steering Group, 1995. *Biodiversity the UK Steering Group Report Volume 1: The Rio Challenge,* HMSO, London

Edworthy, M., 2002. *Chilterns GIS Project: Summary,* English Nature, Oxfordshire

English Nature, 1998. *Natural Areas: Nature Conservation in Context, CD ROM,* English Nature, Peterborough

English Nature, 1997. *Chilterns Natural Area Profile,* English Nature, Peterborough

English Nature and ADAS, 2002. Pilot Agri-environment Scheme Targeting in the Chilterns: Farmer Questionnaire Analysis, English Nature and ADAS, Oxfordshire

Environment Agency, 1997. *Local Environment Agency Plan: River Parrett Consultation Report,* Environment Agency, Exeter

Environment Agency, 2001. *Local Environment Agency Plan: Third Annual Review,* Environment Agency, Bridgwater

Environment Agency, 2002b. *The Parrett Catchment Water Management Strategy Action Plan Spring 2002,* Environment Agency, Somerset

Environment Agency, 2003. *The Tone Catchment Abstraction Management Strategy Consultation Document,* Environment Agency, Exeter

European Commission, 2000. *Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy,* Official Journal 22 December 2000 L 327/1, European Commission, Brussels

FWAG, 2001a. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (a) Temporary Retention of Floodwater in Floodplain Areas,* FWAG, Taunton

FWAG, 2001b. *Parrett Catchment Project: Proposal for the Development of Pilot Projects in the Upper-Mid Catchment: Farming Water 1 (b) Small Reservoir Flood Storage by Interception in Mid Catchment,* FWAG, Somerset

FWAG, 2001c. *Parrett Catchment Project: Proposal for Development of Pilot Project in Upper-Mid Catchment: Farming Water 1 © i: Arable Reversion to Woodland,* FWAG, Somerset

FWAG, 2001d. *Parrett Catchment Project: Proposal for Development of Pilot Projects in the Upper-Mid Catchments: Farming Water 1 © ii: Arable Reversion to Grassland,* FWAG, Somerset

Griffiths, G., Porter, S., Simmons, E., and Warnock, S., 2004. *The Living Landscapes Project: Landscape Character and Biodiversity Final Report, English Nature Research Reports Number 475,* English Nature, Peterborough

Jefferson, R.G. 1997. *Lowland Grassland in Natural Areas: National Assessment of Significance: English Nature Research Reports Supplement to number 171,* English Nature, Peterborough

Jones, P., Mortimer, S., Park, J., Parker, G., Stabler, M., Ansell, D., and Griffiths, G., 2002. *A Socio-economic Profile of the Chilterns Natural Area: Costing Biodiversity Targets and Linking Biodiversity to Socio-economic Drivers, Contract Number TC/18/01,* School of Agriculture, Policy and Development, University of Reading

Land Use Consultants, 2001. *The Parrett Catchment Project: An Action Strategy for Integrated Catchment Management,* Land Use Consultants, Somerset

Lee, J.T., Bailey, N., Bayliss, J.L., and Thompson, S., 2001a. *Development of a Biodiversity and Landscape Map for the Chilterns Using a GIS based Model Phase I: Production of Land Use Map for the Chilterns Natural Area, Contract Number TC/12/00,* The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford

Lee, J., Griffiths, G., Warnock, S., Bailey, N., Bayliss, J., Vogiatzakis, I., and Thompson, S., 2001b. *Development of a Biodiversity and Landscape Map for the Chilterns using a GIS Based Model: Phase II: Habitat Model: Formulation, Operation and Results, Contract Number TC/17/00,* The Chilterns AONB, English Nature, Forestry Commission and Oxford Brookes University, Oxford

Lee, J.T., Bailey, N., and Thompson, S. 2002. Using Geographical Information Systems to identify and target sites for creation and restoration of native woodlands: a case study of the Chiltern Hills, UK, *Journal of Environmental Management,* 64, 25-34

Lewin, Fryer and Partners Consulting Engineers, 2003. *Parrett Catchment Flood Management Plan Consultation Draft,* Lewin, Fryer and Partners, Somerset

Michael, N. 1996. *:Lowland Heathland in England: A Natural Areas Approach, English Nature Research Reports Number 170,* English Nature, Peterborough

Nisbet, T.R., and Broadmeadow, S., 2005. *Opportunity Mapping for Trees and Floods, Final Report to the Parrett Catchment Project Wet Woodlands,* Forest Research, Surrey

Preston, S. 2001. Landscape characterisation – a tool for English Nature? *Power Point Presentation,* English Nature, Peterborough

Preston, S. 2002. *English Natures Landscape Approach to Delivering Biodiversity, English Nature Report December 2002,* English Nature, Peterborough

RSPB, 1999. *LEAP Forward for Wildlife: Promoting Biodiversity through Local Environment Agency Plans,* RSPB, Sandy

Tilzey, M. 2000. Natural Areas, the whole countryside approach and sustainable agriculture, *Land Use Policy,* 17, 279-294

Turner, A., 1998. *Local Environment Agency Plan: River Parrett Action Plan,* Environment Agency, Bridgwater

UK Biodiversity Group, 2001. *Sustaining the Variety of Life: 5 Years of the UK Biodiversity Action Plan: Report of the UK Government, the Scottish Executive, the National Assembly of Wales and the Northern Ireland Executive,* DETR, HMSO, London

Wynne, G., Avery, M., Campbell, L., Gubbay, S., Hawkswell, S., Juniper, T., King, M., Newbery, P., Smart, J., Steel, C., Stones, T., Stubbs. A., Taylor, J., Tydeman, C and Wynde, R., 1995. *Biodiversity Challenge,* Second Edition, RSPB, Sandy

APPENDIX II

INTERVIEW SCHEDULE

- Name
- Employment/position
- Length of time living or working in area
- What they do – type of farming/position in organisation/do they work/live in area
- Description of area
- Favourite places
- Important parts
- Conservation/biodiversity – what do they think
- Meaning of area
- Like/dislike about area
- Specifics that important
- Influences on conservation

Agency

- Awareness of framework
- Awareness of EN/EA
- What they do
- Influences on view of area

APPENDIX III

LIST OF PARTICIPANTS

1. Participants from the Parrett Catchment

Young People aged between ten and sixteen (land users)

Claire
Joshua
Mathilda
Paul
Sarah
Zack

Land Managers

Carris (farmer)
Carl (fish farmer)
Dan (farmer)
Darren (tenant farmer)
Duncan (farmer)
George (landowner)
George (farmer)
Gerrald (Landowner)
Jorja (farmer)
Keith (farmer)
Lisa (farmer)
Mathew (farmer)
Mel (farmer)
Melissa (farmer)
Michael (Hunt Estate)
Paula (farmer)
Steven (farmer)
Tom (farmer)
Tony (farmer)

Land Users

Bailey
Ben
Beth
Brian
Charles
Charlie
Chris
Hazel
Janet
Jess
Jonathan
Lloyd
Mitchell
Paula
Ray
Sara
Stella

Land Management Organisations
(PCP, RSPB, Councils, AONB,
National Trust, Forestry Commission)

Amy
Anna
Byron
Mark
Matt
Pam
Patrick
Tim

Agencies (EN, EA)

Aaron
Edward
Simon
Tony

2. Participants from the Chiltern Hills Natural Areas

Young People aged between ten and sixteen (land users)

Bret
Dwaine
Kim
Marie
Melissa
Simon

Land Managers

Barry (farmer)
Bob (hunt estate)
Jamie (farmer)
Kevin (hunt estate)
Lee (tenant farmer)
Mary (farmer)
Pamela (landowner)
Sandra (farmer)
Stephanie (farmer)
Winston (landowner)

Land Management Organisations
(AONB,Councils, National Trust,
Forestry Commission)

Brian
Chelsea
Daryl
David
Frank
James
Julie
Karen
Percy
Rosie
Sandra
Sophie
Stewart
Thomas

Land Users

Alan
Carla
Caroline
Cassie
Dana
Elliot
Joel
Jack
Jake
Justin
Kris
Luke
Olivia
Paul
Robbie
Sam
Sebastian
Shelly
Sue
Rory
Zoe

Agencies (EN, EA)

Bill
Dylon
Jason
Max