

**Exploring The Cultural Ecosystem Services Associated With
Unmanaged Urban Brownfield Sites:
An Interdisciplinary (Art and Sciences) Approach**

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ABSTRACT

Unmanaged urban brownfields are widely perceived as wastelands and derelict empty spaces in need of a determined future end-use; how people utilize these spaces and connect with unmanaged nature appears inconsequential. There is a dearth of knowledge on the Cultural Ecosystem Services (CES) of seemingly abandoned urban brownfields. The benefits of these sites as natural green space CES providers are neglected. Consequently, they are latent landscapes not fully understood or taken into consideration by decision-makers.

Perspectives on brownfields vary: informed by profession, discipline, experiential knowledge, and brownfield terminology. Knowledge from across disciplines that articulates connections that shed light on unmanaged brownfields as CES providers is reviewed critically. Process-led interdisciplinary fieldwork - integrating participatory social art practice, durational and performative public art - was used to explore every day phenomena of brownfields, and link the environmental settings and nature of unmanaged brownfields to cultural practices, benefits, and values.

Analysis of the data generated by the fieldwork reveals that unmanaged brownfields are accessed for cultural practices - play and exercise; creating and expressing; producing and caring; gathering and consuming - that yield cultural benefits. Reflexive practice provides a rich picture of unmanaged urban brownfields as CES providers: as natural green space for near-by communities and urban nature explorers. It also reveals physical and sociocultural barriers that affect access, perception, and appreciation.

Unmanaged urban brownfields have cultural value for those who use them. The interdisciplinary Arts and Sciences research and practice presented here reveals cultural practices and hitherto not-yet-valued CES of unmanaged urban brownfields. This is a new area of research: a first step in embedding approaches from these disciplines within ecosystem service and CES research. This research also identifies a need for an interdisciplinary

characterization of brownfields to fully understand brownfields as environmental settings and the gamut of CES they provide.

CHAPTER 1

INTRODUCTION

1:1. Brownfields

In this thesis the cultural ecosystem services (CES) of pockets of brownfield land in urban areas are explored and examined. Brownfield land is land lying abandoned and neglected; land that has had a previous use but now sits in a form of limbo, and its future possibly undecided; land that has been left unmanaged and subsequently supports unplanned ecosystems along with maintenance free ecosystem services (Wilson, n.d.; Taylor, 2008). The terminology used to describe such land is extensive and indicative of the value attributed to such sites, but also of value judgements; much of which is pejorative.

For the purpose of the research reported in this thesis, for clarity, and continuity, the term 'brownfield' is being used throughout as the governing descriptor. A brownfield is:

...any land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilized. It may also be vacant, derelict, or contaminated (Alker et al., 2000, p.2).

This definition is one of the least provocative of terms applied to such spaces. It describes the physical state of the landscapes appraised in the case studies of this research, and, importantly, it is widely acknowledged as a sound definition within the fields of Environmental Science and Urban Planning (for example; Homes and Communities Agency, n.d.; Environment Agency, 2004; English Partnerships, 2006, 2007, 2008; Roberts et al., 2006; Riding et al., 2010; Communities and Local Government, 2012). However, due to the association with Town Planning (brownfield sites being prime development land for new build (Environment Agency, 2003; Wong and Schulze Bäing, 2010; The National Planning Policy Framework, 2012)), some researchers prefer to use

the word wasteland (for example, Mabey, 2010; Foster et al., 2011). In this thesis when referring to authors who have used the word 'wasteland' that word will be used but should be seen as being interchangeable with 'brownfield'.

1:2. Aims of This Research

If left unmanaged, brownfield land will become colonised by plants and then animals (through natural succession). The result of this process will be an unplanned ecosystem, along with which there will be maintenance free ecosystem services (Wilson, n.d.). However, brownfield land is not considered as a CES provider within the frameworks proposed by Millennium Assessment (2005); TEEB (2010); UK NEA (2011); or Haines-Young and Potschin (2013). This omission indicates that the CES benefits brownfields provide have been neglected within the ecosystem service framework. If overlooked, the CES value of brownfield land is in danger of not being taken into account by decision-makers. Hence, the first aim of the research reported here is:

1. To examine unmanaged brownfields as CES providers and explore the associated CES as defined by the Millennium Assessment (MA, 2005); the UK National Ecosystem Assessment (Church et al., 2011); and Haines-Young and Potschin (2013). (TEEB (2010) uses CES definitions from MA (2005)).

In developing the argument presented throughout this thesis, my proposition is that unmanaged urban brownfields where nature has encroached are overlooked as CES providers even though they hold an allure that begets an array of CES goods. To evidence and articulate the CES of unmanaged urban brownfields, the second aim of this research is:

2. To bring together knowledge and learning from the sciences – quantitative and qualitative - and the arts and develop an interdisciplinary approach which, through novel site surveys will illuminate brownfields as CES environmental settings together with non-material CES values; and, shed light on sense of place through

conversations with site users which listens into existence the voices of the CES beneficiaries.

In 2014, the UK National Ecosystem Assessment Follow-on (UK NEAFO, 2014) was published. This is a significant document, published as the research reported in this thesis was drawing to a close. The UK NEAFO (2014) provides new information about UK ecosystems and the services they provide, in particular, advances were made in the understanding of cultural ecosystem services. Still, brownfield land is not examined as a CES provider within the UK NEAFO (2014). However, the UK NEAFO (2014) does acknowledge that brownfields are unexamined as CES environmental settings. Further, the UK NEAFO (2014) calls for multidisciplinary and interdisciplinary research spanning the Sciences and the Arts and Humanities (AH) to articulate and evidence CES and the CES value and benefits of not yet examined ecosystems such as brownfields and urban edgelands (Church et al., 2014; Coates et al., 2014). As a consequence, the UK NEAFO (2014) has latterly underpinned the original contribution to knowledge of this thesis: an interdisciplinary (art and sciences) approach to explore the CES associated with unmanaged urban brownfield sites.

1:3. Blank Canvases and Restoration

Unmanaged brownfield sites and their ecosystems mean different things to different people and are valued by different people in different ways. To some - though not the focus of the research reported in this thesis - brownfield sites have a monetary (re-sale) value as redevelopment sites. In the context of urban re-invigoration and redevelopment - broadly speaking - brownfields are blank canvasses for architects, urban planners, landscape designers, and land artists. They are spaces that can be reshaped, reformed, and redeveloped into new build or new landscapes (DeSousa, 2004; REMADE, n.d.; Liverpool Biennial and Design Liverpool, 2007; Wong and Schulze Bäing, 2010; Sinnott et al., 2014), including land art (for example, Grande, 2004; Liverpool Biennial and Design Liverpool, 2007; Landry, 2008; Haarmann and Lemke, 2009; Arts Council England, n.d.). They can also be reinvigorated and transformed from

wastelands to wildflower meadows (for example, Green Estate, n.d.; Wrap, n.d.; Prentis and Norton, 1992), and community gardens or urban agriculture plots (for example, Gov.UK, n.d.; McClintock, 2010; EPA, 2011; McPhearson et al., 2013). They are also spaces ripe for ecological restoration – the practice of restoring and renewing degraded, damaged or destroyed ecosystems and habitats by human activity (Westphal, 2010; EPA, 2010; Hartley et al., 2012). While acknowledging that the concerns for redevelopment, restoration, and re-use are real and relevant to society, during the course of the research reported in this thesis another set of values was identified: CES value of brownfields as they are – unmanaged and not (re)developed. CES of unmanaged brownfields are explored in greater detail as this thesis unfolds.

1:4. Connecting CES to Unmanaged Urban Brownfields

Interaction with nature can nurture spiritual, mental, and physical well-being, thereby developing understandings and connectedness with the natural world (Kellert and Wilson, 1993). People officially and unofficially [use](#) unmanaged, abandoned brownfields for their existing value of experiencing nature in an urban landscape, for example, entomology (Jones, 2003). Unmanaged brownfields provide unplanned ecosystems, and nature amid ruin and dereliction can inspire creativity (Woodward, 2002 and 2007). Locations and places giving rise to CES, for example inspiration, leisure and recreation, information and knowledge, and spiritual and symbolic meaning, are referred to in some literature as environmental settings (UK NEA, 2011, Haines-Young and Potschin, 2013). Environmental settings can be *semi-natural as well as natural settings (i.e. can include cultural landscapes) providing they are dependent on in situ living processes* (Haines-Young and Potschin, 2013, p.18). In these terms, unmanaged brownfields containing unplanned ecosystems can be seen as environmental settings that give rise to CES.

The CES are the so-called soft, non-material goods and benefits, of ecosystems, such as: aesthetic appreciation, inspiration, knowledge, leisure, spiritual experiences and enrichment, and sense of place - as opposed to

ecological phenomena which are unifying characteristics of the supporting, provisioning, and regulating ecosystem services (Fisher et al., 2009). CES connections to places are often complex and personalized and identifying their value to society is problematic, even when a consensus of appreciation is agreed - as with natural heritage sites and areas of outstanding natural beauty (AONB) (Church et al., 2011). Consequently, the CES is considered to be one of the most difficult ecosystem services to measure by many researchers (for example; MA, 2005; Church et al., 2011). With this in mind, to attempt to apply a cultural value to disorderly, unmanaged, non-picturesque, brownfields in urban areas may seem incongruous; their inherent nature aesthetic - which could be described as a negative aesthetic - or ugly truth (Brady, 2011) - in discord with the canonized Picturesque and Romantic ideals of beauty (Saito, 1998; Shaw, 2006; Brady, 2011). Yet, as is argued in this thesis, landscapes that lack scenic beauty, such as unmanaged brownfields, returning to a natural state of re-wilding can still hold an aesthetic allure and should not be overlooked simply because they do not confirm to Romantic or Picturesque ideals of beauty.

1:5. Interdisciplinary Approach

To further understanding of the CES of brownfield sites, an interdisciplinary research approach has been undertaken.

... an interdisciplinary approach is one where an individual or a group work at the boundaries of traditional disciplines and often in gaps that emerge between disciplines, ... (James et al., 2009, p.66)

In Chapter 2, *The Literature Review*, the literature pertaining to unmanaged brownfields, natural green space, the ecosystem service framework, and health and well-being benefits of nature is examined. The literature review draws in work from across the arts, sciences, and humanities, as well as literary text, popular culture, and social media. Examining literature across different disciplines and from different cultural perspectives brings together a breadth of different knowledge and learning, contextualizing this research, highlighting

gaps in knowledge, and identifying gaps that lie within the interstices of interdisciplinary practice.

Epistemology to methods is discussed in Chapter 3: *Methodology*. This research has been undertaken from a constructionist stance: rejecting the search for a single or universal truth in order to recognize the multiple meanings and interpretations given to (social) realities by the actors, agents, and social groups who interact with them. Different methods of inquiry and recording have been integrated. Participatory social art practice, durational and performative public art (performative happenings), drawing, photography, mapping, site-surveys, site-user surveys, observation, reflection, reflexive writing, and thick descriptions are used to explore and recount everyday phenomena of brownfields, and link the environmental settings and nature of unmanaged brownfields to cultural practices, benefits, and values. This fusing of different approaches cuts across modes of thought, strategically restructuring processes (methods) from art and the sciences to open another space: a 'Secondspace' (Soja, 1996). Knowledge formation is constructed around 'being' and 'becoming': empirical analysis, critical enquiry, and social practice in a space where new insights and connections are gained (Soja, 1996).

Chapter 4: *Fieldwork Case Studies*, is an analytical account of the three fieldwork case studies designed to explore CES associated with unmanaged urban brownfields. Although it may be conventional to write in the third person, particularly within positivist-orientated or quantitatively-driven science research in order to better present an objective stance, the third-person passive voice is insufficient to convey the mess and the wild essence of unmanaged urban brownfield sites - as experienced during the case study research. As outlined in Chapter Three, it also struggles to reflect the performative and personally-felt nature of art-based practices and other techniques that inform the research. The 'research near' (Gray, 2009; Holloway, 2009) experiences and sense of place felt during the investigative case studies qualify to be conveyed and retold. Without the emotion and imagination of the researcher, meaning is depleted (Holloway, 2009). Hence, the first person, as well as the narrative

literary voice, will be used to stimulate the imagination of the reader and transport them to a place (in their mind) where they can smell, hear, or even taste, the vivacity of unmanaged urban brownfields (Gregson, 2011).

The thesis presents insight from three case studies. Two of these examine the environmental settings of two unmanaged urban brownfields overtime; taking into account seasonal changes.

- **Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES** investigates a disused (6.5 km) stretch of the Leeds Liverpool Canal (a linear brownfield) from Stanley Dock, Liverpool, to Seaforth, Sefton, January 2009 to September 2009. A durational and collaborative investigation including social art practice, performative public art, mapping, site surveys, and site-user surveys, was used to record the environmental setting, CES goods and practices, and physical and psychological barriers that may prevent, deter – or alternatively, encourage - people from accessing the brownfield canal corridor.
- **Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25ha** is a subtle, performative intervention in collaboration with a botanist on an open access site in Salford. Over a twelve-month period (February 2011 to February 2012) we familiarized ourselves with the site, observed and recorded changes in the site, and recorded shifts in our attitude towards the site in relation to CES and feelings of well-being. Seasonal changes in flora and ‘moving’ detritus were recorded in photographs and reflexive writing; and, our own subjective perceptions and shifting appreciation of the site was recorded through creative writing and poetry.

Reflecting on observations and findings from Case Study 1: Examining A Linear Brownfield > 0.25ha And Locating CES, specifically attitudes towards unmanaged nature and so called ‘weeds’, a second case study was designed

to explore interactions with nature and social interactions in an unmanaged grassed area in an otherwise managed landscape; in two urban settings:

- **Case Study 2: Perceptions of Unmanaged Nature and CES Goods Connected to Weeds** is the only case study not performed in, on, or near a brownfield site. It was performed in a Grade I listed park in Wiesbaden, Germany (June to August 2010), and in the landscaped campus grounds of the University of Salford (April to November 2011). *Perceptions of Unmanaged Nature and CES Goods Connected to Weeds*, investigates attitudes to non-managed green space and so-called weeds. Lawns were left to grow: unmanaged. Changes in the environment were recorded as well as people's interactions with, and perceptions of, re-wilding amid ordered, managed landscapes. The purpose of this case study was to gain a deeper understanding of people's attitudes towards unkempt nature and weeds in order to try to unpick whether or not weeds are an ugly truth (Brady, 2011) of urban nature that might negatively affect appreciations of unmanaged urban brownfields.

The fieldwork case studies were conducted as investigative, interdisciplinary, performative process-led – and reflexive – practice. The methods used in the case study investigations revealed that - regardless of size or biological diversity - unmanaged urban brownfield sites are used in ways that align with CES; however, barriers – both physical and socio-cultural - affect access, perception, and appreciation.

1:6. Findings, Outcomes and New Insights

The final chapter, Chapter 5: *Discussion*, brings together findings, outcomes, and new insights gained from the case studies combined with continuous literature review. The hitherto not-yet-valued environmental settings of unmanaged urban brownfields as CES providers is a new area of research: a first step in embedding approaches from the arts, humanities, and the sciences within ecosystem service research and CES assessment. The research

reported has evidenced that unmanaged brownfield sites are environmental settings that are used in a manner that aligns directly to the CES, and as such have a value for aesthetic appreciation, sense of place, spiritual enrichment, education, inspiration, social interaction, recreation, and knowledge systems, as well as shared and plural values.

The findings from the research indicate that CES opportunities are inherent within re-wilding, unmanaged, urban brownfield sites. However, unmanaged brownfields as environmental settings for CES are not yet valued within the ES framework, and as such, they are at risk of being developed or designed for a specific meanwhile use such as community gardening or ad hoc car-parking. While acknowledging that community gardening in the meanwhile has community benefits and ES benefits (food provision), it brings into question inequalities of access to nature and green space. Elsewhere, literature, for example, Bey (1985), Edensor (2005), and Edensor et al., (2012), discuss the importance of such places for social interactions. Further, there is evidence in the literature to suggest that adult professional interests in ecology and nature aesthetics have been fostered through childhood interaction and play in brownfield sites (Mabey, 1973; Louv, 2005; James, et al., 2010; Farley and Symmons Roberts, 2011; Wells and Lekies, 2012). The research reported in this thesis sheds light on inequalities that may exist within CES value, for example, placing the needs and desires of some over others. What was discovered during the case studies is that the physical barriers around urban brownfields, so called weeds, and detritus, play an important role in how brownfields are perceived, and subsequently how they are used, and by whom. While this study records the types of barriers around brownfield land, further research is required to understand the role that barricaded brownfields play in relation to access, and inequalities of access to natural green space and CES – and benefits thereof - in urban areas.

The UK NEAFO (2014) outwardly acknowledges the need for research from the arts and humanities – including the practice of artists - to shed light on what has been illusive to the disciplines leading ES research for the past two decades: the CES (Church et al., 2014; Coates et al., 2014; Kenter et al.,

2014). The research presented takes this initial step. Feeding on knowledge and methods from beyond the arts - integrating sciences – and weaving together the social, the ecological, the political, and the everyday to shed light on the CES of the latent landscapes of brownfields. The research reported illustrates that artists are drawn to the aesthetics and politics of such landscapes; and, through applying some of the more scientific techniques used during the case studies, other artists could also consciously contribute within an ES framework.

This research also identifies a need for a multidisciplinary characterization of brownfields to fully understand brownfields as environmental settings and the gamut of CES they provide. Unmanaged urban brownfields vary in size, physical accessibility, topography, landscape characteristics, vegetative succession, biodiversity, habitats, and context (for example, urban, neighbourhood scale, industrial, peri-urban, rural). Without multidisciplinary brownfield characterization (spanning the sciences, humanities, and arts) understanding the value of brownfields will remain obscure and a muddled territory.

CHAPTER 2

LITERATURE REVIEW

2:1. Introduction

Within our urban environments there are numerous brownfield sites: areas of land no longer of use as originally intended, and subsequently - seemingly - abandoned. They come in various shapes and sizes and with differing landscape characteristics. Some are managed, and some are not. What urban brownfields are, what they may contain, how they can be utilized, and the value attributed to them by people from different professional backgrounds, are reviewed.

The prevailing literature on urban brownfield land lies predominantly within nature conservation; green infrastructure; children's natural play; health and well-being through access to [natural] green space; urban regeneration; and landscape remediation. This literature is reviewed and an overview of the different perspectives is presented. To gain a broader understanding of unmanaged brownfields and a deeper understanding of inspirational and aesthetic values of these environmental settings the literature review also delves into art: literature and artworks inspired by unmanaged brownfield environments. Gaps in this knowledge are identified and are presented at the end of the chapter.

2:2. What are Brownfield sites?

The term 'brownfield' began to be used in the early 1990s (Smith, 2002). It came to the fore in Britain in 1998 when the then Labour Government announced a ten-year target for at least 60% of new homes in England to be built on brownfield land (signifying the opposite of new build on greenfield land: land previously undeveloped (Alker et al., 2000)). At that time, there were several definitions of brownfield land and an absence of an agreed definition of brownfield.

In the opening of her paper: ...*badlands, blank space, border vacuums, brown fields, conceptual Nevada, Dead Zones* ..., Doron (2007, p.10) sets out twenty seven terms used to describe previously used and now abandoned land:

...badlands, blank space, border vacuums, brown fields, conceptual Nevada, Dead Zones, derelict areas, ellipsis spaces, empty places, free space, liminal spaces, ,nameless spaces, No Man's Lands, polite spaces, post architectural zones, spaces of indeterminacy, spaces of uncertainty, smooth spaces, Tabula Rasa, Temporary Autonomous Zones [TAZ], terrain vague, urban deserts, vacant lands, voids, white areas, Wasteland... SLOAPs [space left over after planning] (Doron, 2007, p.10).

This is not an exhaustive list of terms ascribed to brownfield sites. They are also described as: 'degraded ground' and 'contaminated land' (Smith, 2002); 'edgelands' (Shoard, 2002; Farley and Symmons Roberts, 2011); 'wasted space' (CABE Space, 2003); 'land in limbo' (Taylor, 2008); 'the third landscape' (Clement, 2006); 'ambivalent landscapes' and 'wilderness in urban interstices' (Jorgensen and Tylecote, 2007); 'meanwhile' sites (Dutton and Armstrong, 2012); and 'vague spaces' (Larsen, 2010). Some more positive terms are used that afford respect to what these sites may contain: 'ruderal biotopes' (Scholz, 1956 in Lachmund, 2013) 'urban commons' (Gilbert, 1992); 'Greenfield' (Frith and Chipchase, 2002), Open Mosaic Habitat (Harrison, 2006); 'Open Mosaic Habitat on Previously Developed Land' (Riding et al., 2010); and 'urban wildscapes' (Jorgensen and Keenan, 2012). The descriptors are as provocative as the sites themselves. While some words used to describe these sites have robust definitions, for example *brownfield* (Alker et al., 2000) only Open Mosaic Habitat on Previously Developed Land (OMH PDL) is defined as a set of criteria (Riding et al., 2010).

It is clear from this review of definitions that perspectives on brownfields vary, informed by profession, discipline, experiential knowledge, and brownfield terminology. In *The Definition of Brownfield*, Alker et al., (2000) set out to clarify

a multidisciplinary definition of brownfield acceptable to stakeholders working in, or affected by, brownfield redevelopment *such as planners, surveyors, lawyers and developers; local authorities; other public agencies; environmental groups; and local communities* (p.3). Terms and definitions of brownfields - as used at that time by different agencies and disciplines - are discussed: contaminated land, vacant land, derelict land, and previously developed land; and, how people and agencies appropriate these plots of land was considered. The rigorous research and debate of the terms and associated use resulted in key criteria for 'brownfield' land:

- Previously developed land no longer in use, having been abandoned for a significant period of time (Handley, 1996, in Alker et al., 2000, p.6).
- The previous development and uses can be any anthropological endeavour, for example: agriculture; mining; amenities: sewage, gas, waste disposal; airports; transport networks: roads, railways, and canals; buildings; business and industrial premises; military sites; churchyards and cemeteries; and recreation amenities: allotments, gardens, parks, and greens.
- 'Brownfield' land may exist in both urban and rural locations, as well as within designated Green Belt areas.
- When 'use' no longer occurs – as intended in connection to the development - the land may be abandoned for a significant period of time so premises and land lie vacant: sliding into dereliction (hence, sometimes being referred to as derelict land or vacant land).
- A 'brownfield' may be a section of land that is unused, vacant, or derelict, within a larger site that is in use. (Up until June 2010 this included gardens within the grounds of occupied dwellings (Communities and Local Government Committee, 2011)).
- Some previous uses will result in land contamination.
- Much 'brownfield' land will not be contaminated. Re-wilding, overgrown, and unmanaged allotment sites, along with abandoned recreation grounds, parks, and gardens, are not likely to be contaminated.

- Contaminated land does not automatically equate to brownfield land. If land is in use, regardless of levels of contamination, it cannot be classified as 'brownfield'.

These criteria led Alker et al., (2000) to a succinct definition pertinent to their identified stakeholders:

A brownfield site is any land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilised. It may also be vacant, derelict or contaminated. Therefore a brownfield site is not available for immediate use without intervention. (Alker et al., 2000, p.17)

This definition has been widely adopted and cited (albeit with the last sentence omitted) by built environment agencies; conservation trusts; government departments (local authority and central government); and academics, concerned with brownfield use and redevelopment (for example: Benson, 2002; Smith, 2002; Shoard, 2002; Box and Stanhope, 2004; English Partnerships, 2006, 2007, 2008; Cabe Space, 2003; Taylor, 2008; CABI, 2009a; Roberts et al., 2006; de Sousa, 2006; Jorgensen & Tylecot, 2007 Loures & Panagopoulos, 2007; Doron, 2007; Doick and Hutchings, 2007; Siikamäki, J, and Wernstedt, 2008; Doick et al., 2009; ; Sixsmith, 2009; Riding et al., 2010; Kattwinkel et al., 2011; Communities and Local Government, 2012; Homes and Communities Agency, n.d., 2009; Woods, 2012; CL:aire, 2013; Natural England, 2008, 2010a, 2010b, 2013). However, in reviewing literature across disciplines, some writers meaningfully avoid the term 'brownfield', objecting to the legal planning status of brownfield land as priority development land (in the United Kingdom), arguing that, as such, other purpose or use is seemingly negated. For example, Herbst, (2003) and Herbst and Herbst (2006) (geographers); Mabey (2010) (nature writer); and Foster et al., (2011) (a collective of artists, geographers, and philosophers) all use the term 'wasteland' in preference to 'brownfield'. Others question the use of *brown* when, in fact, many such sites have evolved into biodiverse secondary habitats awash with living colour which is more green than brown (for example, Frith and Chipchase, 2002; Jones, 2003 in Roberts et

al., 2006). What this – seemingly - abandoned land should be called continues to be contentious and opinion remains divided with regard to sites that do not meet specific criteria such as that outlined in Open Mosaic Habitat on Previously Developed Land (OMH PDL) (reviewed later in this chapter).

Without going into detailed specifics of brownfield characteristics, size, location, or uses, the Alker et al., (2000) brownfield definition adequately accounts for land previously developed, subsequently abandoned, and no longer in use as originally intended. It is not (intentionally) aligned to a single profession. Although the authors' intention was a multi-disciplinary definition, it appears that the term has since been appropriated within the rhetoric of Town Planning.

The definition of 'brownfield' used throughout this research – as set out on p.1 - omits the final sentence from the original: *Therefore a brownfield site is not available for immediate use without intervention* (Alker et al., 2000, p.17). The omission of this sentence is in common with other authors, for example, Benson 2002; Environment Agency, 2004; English Partnerships, 2006a; Roberts et al., 2006; Office of the Deputy Prime Minister, 2006; Doick et al., 2009; Riding et al., 2010; Communities and Local Government, 2012. The term intervention refers not only to major redevelopment intervention as carried out by agencies: new build, landscaping, remediation; but also subtle actions that may not necessarily alter the structure and habitat of brownfield land, what Alker et al., (2000) refer to as other forms of [unspecified] action and interventions undertaken by local communities. The unspecified actions and interventions as undertaken by different (geographical and interest-groups) communities, which may include artists, are among the least debated. This is an issue that will be explored in the literature review and research case studies presented in this thesis.

2:3. Uniting features of Brownfields

Brownfield sites are common within our urban landscapes (Harrison et al., 1995). They can occur in densely populated conurbations, for example, neighbourhoods and housing estates, as well as industrial areas or on the

edges of towns and cities (Mabey, 1973; Harrison et al., 1995; Herbst, 2003; Edensor, 2005; Homes and Communities Agency, 2009; Farley and Symmons Roberts, 2011; Kattwinkel et al., 2011; Jorgensen and Keenan, 2012; Chell, 2013). Unmanaged, brownfields succumb to natural succession and begin to host evolving ecosystems, which, in essence, are beneficial to the health and well-being of near-by communities (Kuo and Sullivan, 2001; Groenewegen, 2006; and Mayer et al., 2009). Regardless of how these sites are perceived or enjoyed, the health and well-being benefits they might provide, or the part they play in green infrastructure, species conservation, and biodiversity (all reviewed in this chapter), what unites all brownfields is the rhetoric of Town - and Country - Planning (Smith, 2002; de Sousa, 2006). The word rhetoric is pertinent. Over the past decade, it would appear that the aim of Alker et al., (2000), to define brownfield as a multidisciplinary term, has been swallowed by planning policy, urban planning, and regeneration agendas. Within this planning rhetoric, brownfield land is prime development land and prioritized as redevelopment land (for example, Environment Agency, 2003; Wong and Schulze Bäing, 2010; The National Planning Policy Framework, 2012). Further, tax incentives (such as land remediation relief and landfill tax exemption) have been proposed and initiated to encourage the redevelopment of brownfield land (HM Treasury, 2007 and Department for Communities and Local Government, 2015). Brownfield land as prime development land puts an economic land value on brownfields: a market value for the purchase of land as a business investment for re-development and subsequent sales of new development.

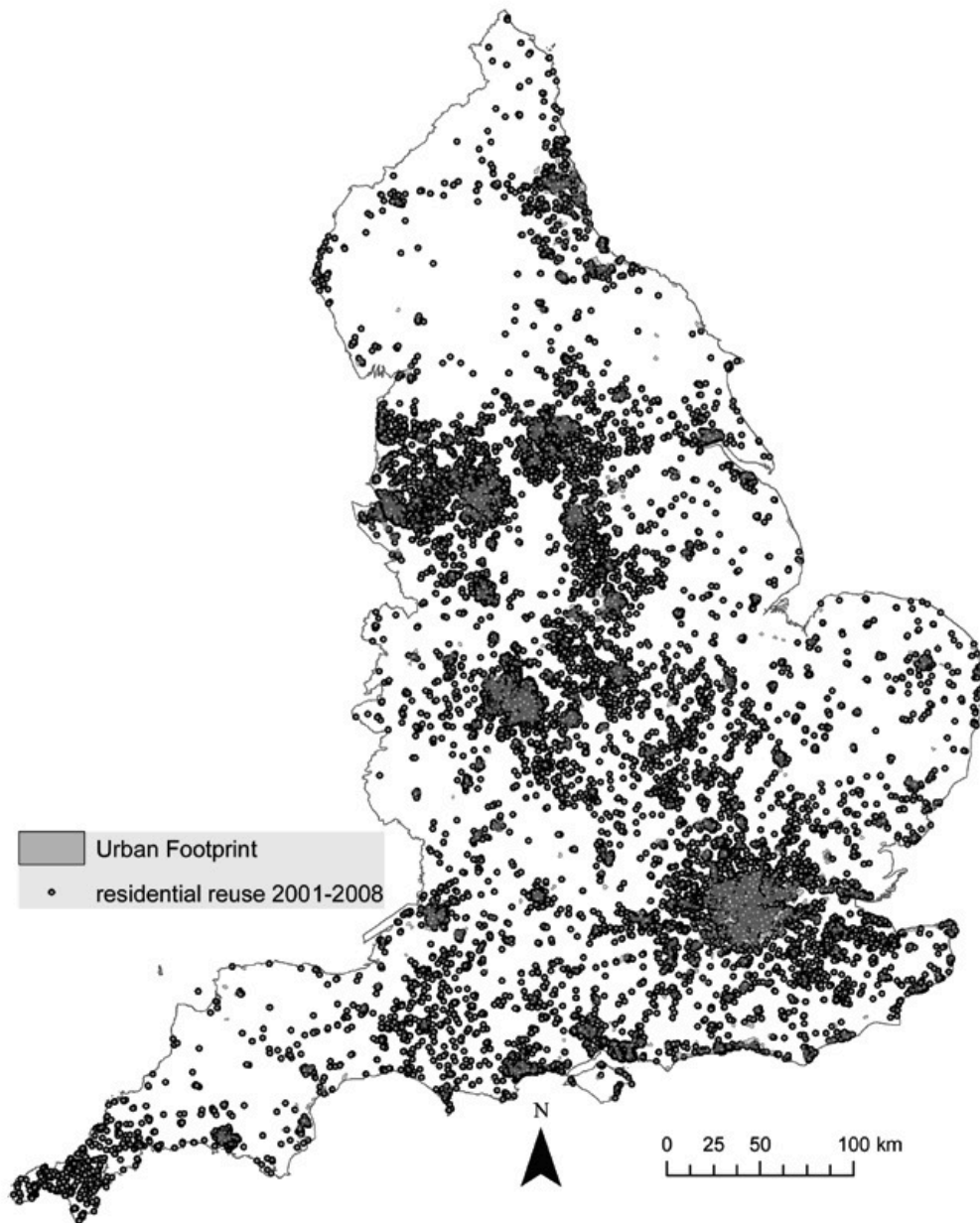


Fig. 2-1: Brownfield sites in England reused for residential development, 2001-08 (Wong and Schulze Bäing, 2010, p.15)

Brownfield land is thus a commodity with a price tag. Over the course of the past twenty years, the price of residential (brownfield) land for sale has risen eight-fold (Donaldson, 2013). This economic value is considered to be a threat to Green Infrastructure networks, OMH PDL, Priority Habitats, BAP (Biodiversity Action Plans) species, and Red List species (Sixsmith et al., 2009; Wong and Schulze Bäing, 2010; Church et al., 2011; Forest Research, 2010;

Ishimatzu and Ito, 2011): developers destroy habitats to replace them with new build developments.

Brownfields in towns and cities where property market values are high are at greater risk of redevelopment, for example, London, and the Thames Gateway (Robins et al., 2013). The Thames Gateway is the largest regeneration area in the UK and Europe, and the redevelopment of brownfield land is central to the regeneration economic policy (Robins et al., 2013). In areas such as the Thames Gateway, economic reasons are presented for brownfield development. For example, it has been estimated that brownfield redevelopment in the Thames Gateway will provide 110,000 new homes and 225,000 new jobs by 2016 (Department for Communities & Local Government 2007 in Robins et al., 2013, p.7). Within the context of mass redevelopment, brownfield habitats are in danger of becoming fragmented. This fragmentation can result in species becoming isolated; species isolation can lead to local extinction; and, ultimately, *the loss of a single site has the potential to bring about national extinction of a species* (Robins et al., 2013, p.7). While this may be the situation in the Thames Gateway, in areas of the UK where the housing market is less profitable, such as areas in economic decline (Wong and Schulze Bäing, 2010), locations where there is low demand for property (Donaldson, 2013), and the parts of northern towns and cities identified in the Housing Market Renewal Programme (Communities and Local Government, 2007; Minton, 2009; Wilson, W., 2012), redevelopment and new build is not always a profitable business proposition. Consequently, in some areas, brownfields may linger in a state of – redevelopment - limbo for years (Taylor, 2008). The length of time a brownfield exists is, by and large, unrecorded (Kattwinkel et al., 2011). I was unable to find any published data specifically recording the duration of brownfield ‘limbo’; yet, an interim period – the time betwixt abandonment and re-development - often exists. It is this period between so-called abandonment and redevelopment that is examined within this thesis; and, although still prime development land, it is during this interim period that perceptions of brownfields and their uses (potential or actual) diversify; where diverse, and as yet unexplored, ecosystem services are delivered.

2:4. Ecosystem Services

Brownfields are all too often seen as sites of opportunity and pockets of land that can be used in the interim for the benefit of nearby communities and interest groups. For example, urban ecologist Timon McPhearson views urban brownfields as: *underutilized land [that] has the potential to provide cities with opportunity to create and develop new ecosystems that support biodiversity and increase the provisioning of vital ecosystem services for urban residents. Vacant land is ripe for transformation into more sustainable, resilient urban forms* (McPhearson, 2012, no page numbers); and, that with small amounts of investment brownfields can be transformed into more useful spaces.

McPhearson has an ecosystem service approach to brownfield land whereby he examines vacant lots (an Americanism for brownfield land) through an ES lens as *an heterogeneous matrix of social–ecological patches that provide multiple ES* (McPhearson et al., 2013). In his paper: *Vacant Land In Cities Could Provide Important Social And Ecological Benefits*, McPhearson provides us with a list of the potential ES benefits brownfields could provide if adapted (through varying degrees of landscaping) and managed:

- *Stormwater absorption*
- *Air temperature regulation*
- *Wind speed mitigation*
- *Air purification (pollution absorption)*
- *Carbon absorption*
- *Flood control*
- *Habitat for biodiversity (e.g. plants and pollinators)*
- *Green corridors between urban natural areas*
- *Recreation space*
- *Community garden space*
- *Social gathering space*
- *Temporary art installation space*
- *Crime reduction*
- *Noise reduction*
- *Neighborhood beautification*

- *Increased adjacent property value*
 - *Sense of place*
 - *Environmental education opportunity*
 - *Sense of well-being*
 - *Green spaces for low-income neighborhoods*
 - *Residential and commercial building energy savings*
- (McPhearson, 2012, no page numbers)

The ecosystem service concept provides a framework for cost–benefit analysis for ecosystem provision and change to aid environmental decision-making (Fisher et al., 2009). To unravel the complexities of ecosystems and nature's services to humankind, the construct of ecosystem services was developed in the late 1960s; though research in this field did not begin to become prevalent until 1997 (Daily, 1997). In 2003 an international ecosystem service framework for assessment was established (Millennium Assessment, 2003) and in 2005 an international scientific basis for actions needed to augment ecosystem conservation and sustainability – for their contributions to human health and well-being – was established: The Millennium Ecosystem Assessment 2005 (Millennium Assessment, 2005).

The ecosystem service framework endeavours to place anthropomorphic values on nature - the benefits that people obtain from ecosystems - that can be logically understood while, at the same time, raising awareness of the multifarious and interconnected values (economic and non-material) of ecosystems (Daily, 1997; Daily et al., 1997; Millennium Assessment, 2003, 2005). The Millennium Ecosystem Assessment (MA) divided ecosystem services into four interrelated categories, providing a framework for assessment and cost benefit analysis. Each category denotes an ecosystem 'service' - supporting, provisioning, regulating, and cultural - with processes and components within each providing 'services' and 'goods' of value to human health and well-being (MA, 2005). The services are interconnected and framed within biodiversity and life on earth (Fig. 2-2).

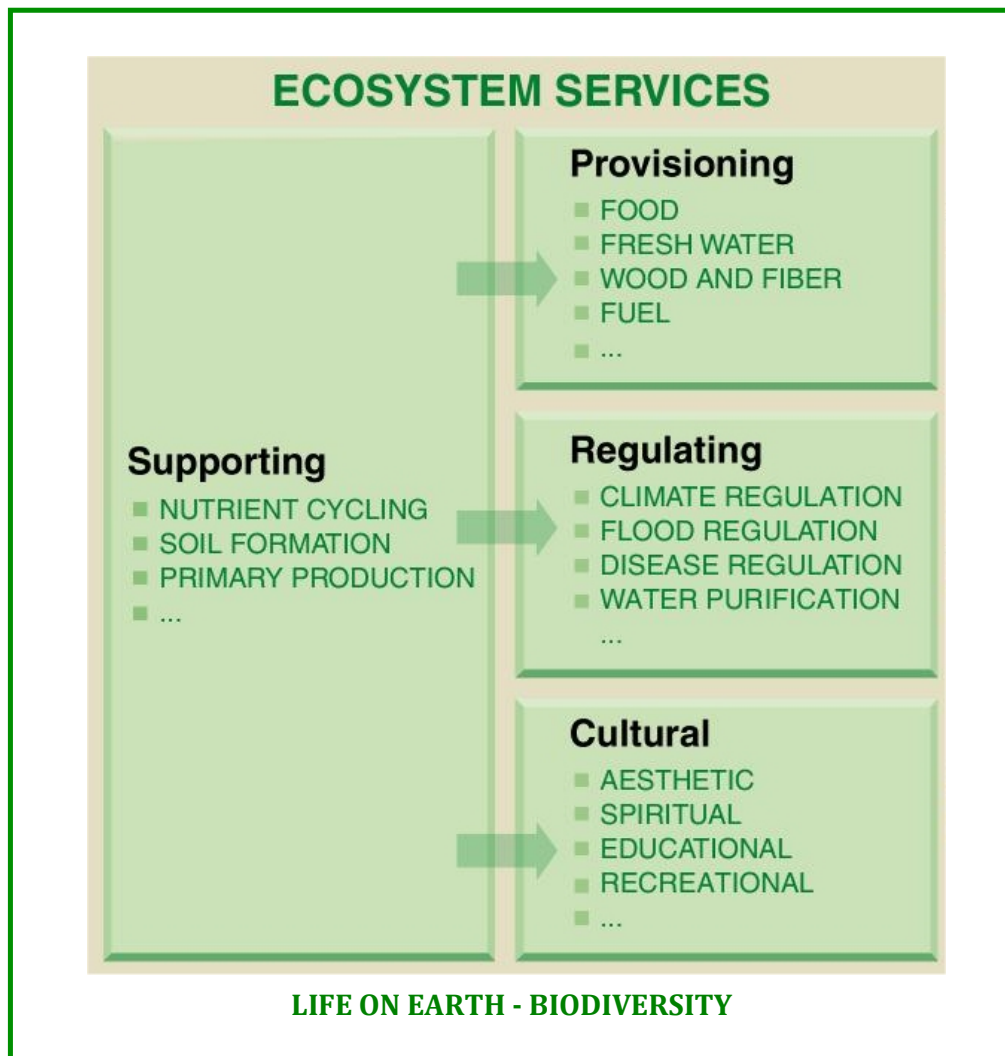


Fig. 2-2: Ecosystem Services diagram (MA, 2005, in Rodríguez et al., 2006)

These services, and the goods provided, give rise to multifarious health and well-being benefits (Fig. 2-3).

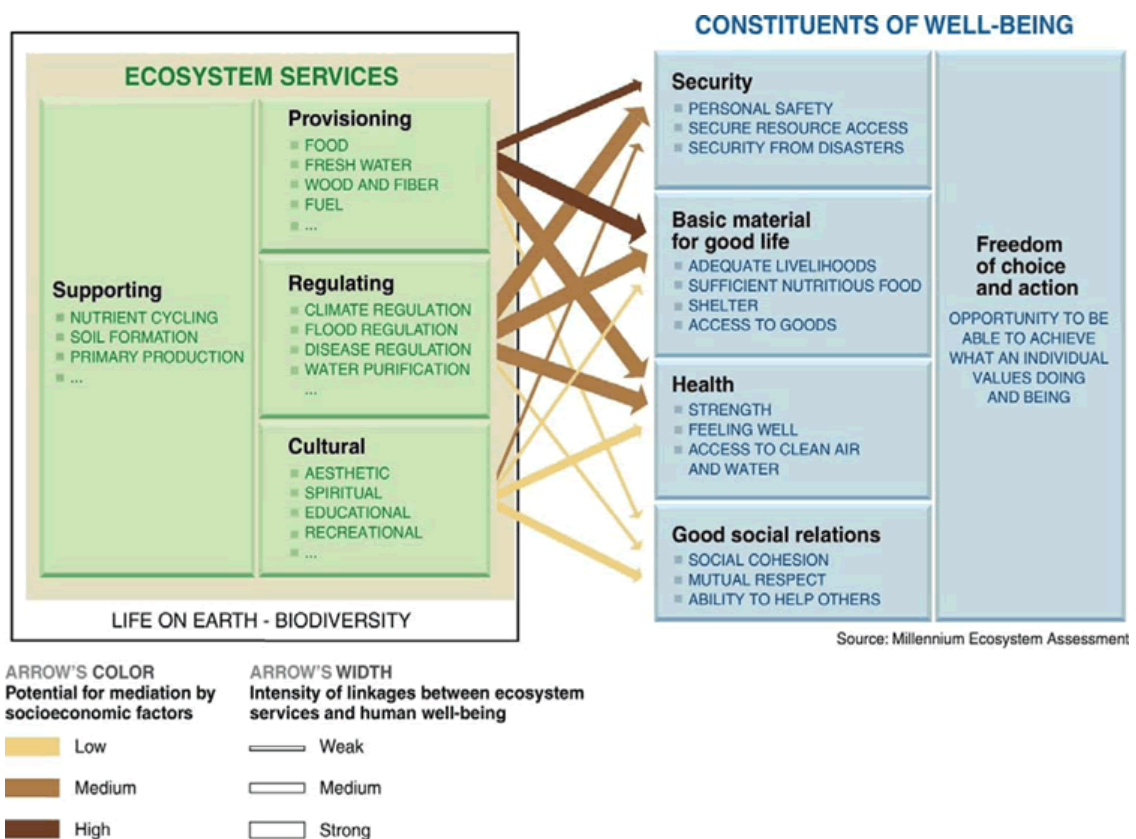


Fig. 2-3: Relationships among Ecosystem Services and Human Well-being (MA, 2005, p.vi)

Even though ecosystems are interconnected biological systems providing interconnected benefits for human life and well-being, there is a danger that the provisioning ecosystem service - the basic natural resources needed for human survival: food, water, fuel, and fibre (all commodities with direct economic or monetary values tied into capitalist structures) – could be the primary focus of most human societies (Rodríguez et al., 2006). Land managed to provide an optimum of provisioning goods, such as fossil fuel extraction, intensive farming, and mineral extraction, could erode biodiversity and, ultimately, the sustainability of life on earth. Hence the need for ecosystem conservation and a framework that places value – directly linked to human health and well-being - on biodiversity (MA, 2005).

The provisioning ecosystem service may be the primary focus (of most human societies), followed respectively by regulating, cultural, and finally supporting

ecosystem services (Foley et al., 2005; Pereira et al., 2005; van Jaarsveld et al., 2005; in Rodríguez et al., 2006). Yet, the supporting ecosystem services, although perceived as last in priority and the most likely to be taken for granted by people (Rodríguez et al., 2006), underpin all other ecosystem services (MA, 2005). The supporting ES give rise to the provisioning, regulating, and cultural ecosystem services.

The supporting ecosystem services are, in short, those that support the cycles of life on earth. Supporting ecosystem services include the ground beneath our feet: the inert, the micro life, lower life forms, and invertebrates that, in conjunction with air, water, and light, support vegetation and thus all higher life forms (Daily et al., 1997; Rodríguez et al., 2006; MA, 2005). Soil and soil fertility is critical to the cycle of life (Daily et al., 1997; Rodríguez et al., 2006; MA, 2005). In the paper *Ecosystem Service: Benefits supplied to Human Societies by Natural Ecosystems* (Daily et al., 1997), five interrelated services (functions) provided by soil are described including three that lie within the supporting ecosystem services: one, soil protects seeds and physically supports their growth as they mature into plants; two, soil retains and delivers nutrients to plants; and three, soil plays a crucial role in the decomposition of dead and decaying matter. Without these functions, higher life forms, including humans, would not be able to survive. So, although often taken for granted, the supporting ecosystem services are as critical to human life as the provisioning service.

The concept of provisioning ecosystem services is easy to grasp because it is that which provides the basic natural resources needed for human survival: food, water, fuel, and fibre. These natural resources have a quantifiable economic value and a value that most people will intuitively, as well as financially, understand (MA, 2005). Because food, fuel, water, and fibre have direct economic values within most cultures it is not uncommon for cultivation, farming, and extraction of goods to take priority over the other ecosystem services (Rodríguez et al., 2006). Optimizing production of any service above another, in other words, an ecosystem service trade-off (Holling and Meffe, 1996; in Rodríguez et al., 2006), can lead to reductions or losses in other

services, resulting in ecosystem changes that could have a detrimental effect on human health and well-being (Carpenter et al., 2006). For example, deforestation for meat cattle rearing is an ecosystem change that leads to a loss of regulating ecosystem services.

The regulating ecosystem services: air quality, water purification, climate regulation, natural pest control, and disease regulation, provide less tangible support and protection for human health and well-being; yet, these ecosystem services and goods are equally as critical to life on earth as the provisioning ecosystem services and goods, not least because the interconnected web of air quality, water quality, and natural pest control, directly affect food production (Zhang et al., 2007).

Some ecosystems have a profound effect upon climate, and air quality. For example, trees, woodlands, and forests regulate climate: cooling air, and acting as sinks for greenhouse gases (MA, 2005). In addition, vegetation, water (including ice), and soil, also sequester or hyper-accumulate gasses, fine particles, and toxins, as well absorb heat, and reflect solar radiation (MA, 2005). Along with purification of air and water, partial climate stabilization, and moderating the effects of extreme weather conditions, the regulating ecosystem services also provide: drought and flood mitigation, protection from water erosion, pollination of vegetation, natural pest control, and disease regulation (Daily et al., 1997).

The supporting, provisioning, and regulating ecosystem services are all ecological phenomena: nature and natural ecosystem cycles that occur whether humans are around or not (Fisher et al., 2009). For example, seeds will continue to disperse, germinate, and grow regardless of being a 'service' to humankind. However, the cultural ecosystem services are not an ecological phenomenon, it is a human construct: a perception of, and interaction with, nature (Fisher et al., 2009).

Although all ecosystem services are the benefits obtained by humans from ecosystems, and, without humans there would be no 'service' (Fisher et al.,

2009), the cultural ecosystem services only manifest if people are around to experience nature (MA, 2003; Fisher et al., 2009), in other words, they reflect and represent people's emotional connections to nature and interactions with nature for personal motivation. The cultural ecosystem services are the benefits gained by people from experiencing ecosystems (Fisher et al., 2009). For many people, nature and ecosystems are *an unparalleled source of wonderment and inspiration, peace and beauty, fulfillment and rejuvenation* (Kellert and Wilson, in Daily et al., 1997, p.11). The Millennium Ecosystem Assessment (2003) classified cultural ecosystem services as the non-material benefits obtained from ecosystems. Ten criteria were identified:

1. *Cultural diversity*: acknowledging that nature is an influencing factor of cultural diversity, for example, a Sami's identity is inextricably bound to the nature of the Finish tundra, which is very different to the cultural identity of Australian Aborigines (originating from an arid outback).
2. *Spiritual and religious values* and the attachment of spiritual and religious symbolism and faith-constructs to biotopes, for example, gardens of Eden; or specific species, for example, a tree (of life).
3. *Knowledge systems (traditional and formal)*, knowledge developed by different cultures, societies, and communities influenced by nature and ecosystems.
4. *Educational values* in many societies are linked to ecosystems and their components and processes through formal education as well as informal learning such as play.
5. *Inspiration*: nature can be a mental stimulus, inspiring creativity within people expressed through folklore, art and design, music, dance, drama, and writing.
6. *Social relations*, social cohesion, respect, and provision for others - including children - are influenced by ecosystems, that is to say, social relations linked to cultural traditions or practices that take place within natural environments; for example, hunting.
7. *Sense of place* is valued by many people and is often associated with ecosystems, features in an environment, and social relations.
8. *Cultural heritage values* are often allocated by many societies with high

values placed on landscapes perceived to be important, for example, the Grand Canyon, and also culturally significant species, for example, the red rose of Lancashire.

9. *Recreation and ecotourism*: many people choose to spend their leisure time in natural landscapes or cultivated landscapes where they can partake in practices such as swimming, walking, angling, or less physically active past-times such as sightseeing.
10. *Aesthetic values*: many people find beauty or aesthetic value in various aspects of ecosystems, from scenic beauty to an aesthetic appreciation derived from a deeper knowledge of ecosystem functions.

(MA, 2003, p.58-59)

In the Millennium Assessment 2005 (MA, 2005, p.120) CES goods were clustered into six categories:

1. Cultural diversity and identity;
2. Cultural landscapes and heritage values;
3. Spiritual services;
4. Inspiration;
5. Aesthetics;
6. Recreation and tourism.

The cultural ecosystem services falls between a utilitarian value system and an intrinsic value, and, as such, CES are almost entirely un-quantified (Rodriguez, 2006; Church et al., in UK NEA, 2011). There is a lack of suitable quantitative models available to assess the cultural ecosystem services (MA, 2005; Church et al., 2011). Fisher et al., (2009) argue that, although what people derive from experiencing nature is very valuable, CES – within the ecosystem service framework - perhaps muddies the water because CES cannot be assessed within the objective sciences; they cannot be comprehensively assessed using quantitative science methodology, and require a different way of assessing value. An assessment of the CES is perhaps best analyzed within the humanities and the social sciences (Church et al., 2011).

Besides the services and goods that ecosystems provide to humankind, it has been claimed that nature also has an intrinsic value, something of worth in itself and not as a means to something else. Intrinsic values and questions relating to humans' place within nature have occupied philosophers since Plato (Butler and Acott, 2007). An intrinsic value of nature has sustained and is upheld among conservationists, ecologists, and nature philosophers; furthermore, it is a view that dominates many people's attitude towards the conservation of the natural world (Butler and Acott, 2007; MA, 2005; UK NEA, 2011). Within the ecosystem service framework, intrinsic value is acknowledged (MA, 2003, 2005; UK NEA, 2011). However, the viewpoint that nature – ecosystems, biodiversity, and geodiversity – merit conservation regardless of anthropocentric benefits, lies outside of the ecosystem service framework (MA, 2005; UK NEA, 2011).

An intrinsic value cannot be compared with other value assessments within the ecosystem service framework. Yet, it is acknowledged as being an important consideration, and a view that flows towards feelings of well-being. An anthropocentric assessment of the intrinsic value of nature may appear to be a paradox, however, because many people uphold intrinsic views. The Parliamentary Office of Science and Technology Ecosystem Services *Post note* 281 (2007) ascribed three categories of intrinsic value:

- *Altruistic values – derived from knowing that others can enjoy the goods and services from ecosystems;*
- *Bequest values – passing on ecosystem services intact to future generations; and,*
- *Existence value – the satisfaction to humans from knowing that ecosystems continue to exist.*

(Parliamentary Office of Science and Technology, 2007, p.4)

These are acknowledged in the UK NEA (2011), which refers to them as *intrinsic, anthropocentric, but non-market, values...* (Mace et al., 2011, p.19). The Millennium Assessment (2003, 2005) expounds ecosystem services on a

global scale. In response to the Millennium Assessment (2005), the UK NEA (2011) provides an evidence base for ecosystem service - provision and change - to inform decision-making within the United Kingdom. It applies the ecosystem service framework to the UK's natural environment with an ecosystem approach (an integrated management of land and water that promotes conservation, encompassing the structures, processes, functions, and interactions among organisms and their environment) towards conserving, managing and enhancing the natural environment of Britain (Brown et al., 2011).

The research reported in this thesis sets out to explore, and examine, the CES associated with unmanaged brownfield sites in urban areas. As such, Chapter 16: Cultural Services, of the UK NEA (2011) is most germane. This ascribes the CES within the context of British culture, landscape, heritage, economics, education, faith systems, recreation, knowledge, and health and well-being. Of the previously mentioned MA (2005) CES goods, the UK NEA (2011) considers only five:

1. Leisure, recreation, and tourism goods: time set aside for the pursuit of activity, done at leisure, within a local environment or a wider national/international context: tourism.
2. Health goods: provided by places where people can access and interact with nature, and partake in physical activity.
3. Heritage goods: access to historic environmental settings including: battlegrounds, villages, parks, stately gardens, ecclesiastical environs, National Trust land; and landscapes with [past] art and literary associations.
4. Educational and ecological knowledge goods: outdoor engagement with nature which can lead to a connectedness with nature and a deepened understanding of the natural environment, that in turn can lead to increased ecological knowledge.
5. Religious and spiritual goods: accessing nature for spiritual enlightenment, solace, fulfillment, renewal or reflection, or an 'experience'; pilgrimages; and visits to holy sites.

(Church et al., 2011)

Notably, what is missing here are 'aesthetics' and 'inspiration'. The stated reasoning for their absence as a category within the CES is that they are deeply subjective: aesthetic taste and inspiration will be expressed in different ways, by different people and groups of people, and they are subject to change – over time; aesthetic judgements are outcomes of local circumstances and specific times, as such, they are context specific (UK NEA, 2011). Aesthetics and inspiration are considered to be beyond the scope of the UK NEA (2011) because there is lack of evidence to allow for an assessment of their characteristics, goods, and value; as such, they are incommensurable (UK NEA, 2011). Nonetheless, aesthetic taste is acknowledged as significant, and considered within discussions of the Romantic, Sublime, and Picturesque landscape aesthetics, aligned with Heritage goods (UK NEA, 2011). Yet, as argued by nature aesthetic philosopher, Holmes Rolston III: *To try to understand the beauty of wildness with ... pictorial criteria is inevitably to misunderstand it ... [leading to] ... dreadful category mistakes* (Holmes Rolston III in Saito, 1998, p.102).

Within the CES, aesthetic value, sense of place, spiritual enlightenment, educational value, inspiration, social intercourse, and knowledge systems are inextricably bound to subjective human values (Millennium Assessment, 2005; Church et al., 2014). By-and-large these are subjective, even abstruse values; and, as such, difficult to quantify (Church et al., 2011). However, within the Arts – particularly in contemporary art and modern literature - there is evidence to corroborate that unmanaged brownfields are valued for their aesthetics - all-be-it often a negative aesthetic appeal - and that rank landscapes and the ugly truths of nature (for example decay, decomposition, and detritivores and necrophagous species), inspire creativity (for example, Hirst, 1990; Bourgoigne, 2004; Brady, 2006; Haarmann and Lemke, 2009; Mabey, 2010; Farley and Symmons Roberts, 2011; Foster et al., 2011; Gwilliam and Lemke, 2012; Jorgensen and Keenan, 2012).

Aesthetics and inspiration are also linked to ethical concerns inasmuch as they

are human nature relationships and principles that guide human behaviour. Ethical principles, aesthetics, and inspiration are hermeneutic and cannot be expressed meaningfully in monetary terms; they go beyond the remit of the UK NEA (2011) but are highlighted as a priority area for further research (Fish et al., 2011 in Church et al., 2011).

The cultural ecosystem services is considered the hardest and most controversial service to place monetary value on (M.A., 2003, 2005; UK NEA, 2011); the economic valuation being difficult or even impossible to calculate unless there is direct economic value, for example, facilities where money is exchanged to access ecosystems for leisure and recreation such as angling or skiing, or tourism (Church et al., 2011). When it comes to the CES different people will value different landscapes – and components within landscapes - in different ways and for different reasons.

The research reported in this thesis is concerned with urban landscapes. Within UK NEA (2011) Chapter 10: Urban, twelve urban sub habitats are recognized as 'green space':

i) natural and semi-natural greenspace (woodlands, Sites of Special Scientific Interest (SSSIs), urban forestry and scrub); ii) street trees; iii) public parks and formal gardens; iv) domestic gardens; v) green corridors; vi) outdoor sports facilities and recreational areas; vii) amenity greenspace; viii) allotments, community gardens and urban farms; ix) cemeteries, churchyards and burial grounds; x) Previously Developed Land (brownfield); xi) water; and xii) peri-urban areas (the urban fringe between the suburbs and the open countryside).

(Kwiatkowski et al., 2011, p.364)

The UK NEA (2011) acknowledges the value of urban green space in providing ecosystem services, and the provision of urban green space for CES goods and health and well-being benefits (through access to green space). Further, the UK NEA (2011) highlights that there is evidence (in CAGE, 2010) *showing marked inequalities in access to environmental settings linked to residential*

location, social background and income (Church et al., 2011, p.678) and calls for initiatives to tackle knowledge gaps linked to these inequalities of access of CES (Church et al., 2011). Yet, brownfield land is not considered within the discussion of CES environmental settings in urban areas even though unmanaged brownfields can be, and have been, classified as natural green space (Harrison et al., 1995, Kwiatkowski et al., 2011) and urban areas – particularly areas in economic decline – are strewn with unmanaged (consequently re-wilding) brownfield sites (Harrison et al., 1995; CABE, 2003, 2009a; Herbst, 2006, Natural England, 2008, 2014; Wong and Schulze Baing, 2010). As such, unmanaged brownfields are latent CES landscapes: they exist, but the CES goods, practices and benefits, have, until now, remained concealed even though urban brownfields are acknowledged as supporting, provisioning, and regulating ecosystem service providers. If brownfield sites have permeable surfaces and are open to the elements (air, water, and light) they will provide supporting, provisioning, and regulating ecosystem services. According to the ecosystem service framework, a permeable substrate provides both supporting and regulating ecosystem services; and the loss of permeable brownfield land - including fragmenting a site - will result in a reduction of these services: a reduction in biodiversity, flood regulation, and climate regulation (Kwiatkowski et al., 2011). The UK NEA (2011) acknowledges that the reduction of brownfield land has implications for urban ecosystem service provision. However, even though brownfield sites are used on a local scale by people for cultural goods: leisure and recreation; interaction with nature and physical activity (health goods); educational and ecological knowledge; and solace, fulfillment, renewal or reflection (religious and spiritual goods) - as well as for inspiration linked to brownfield aesthetics, the CES of unmanaged brownfield sites (or managed brownfield sites, for example, OMH PDL) is not debated. The CES of brownfield land is the least debated within the ecosystem service framework.

2:5. Brownfields through the lens of Ecosystem Services

Brownfields can be managed or unmanaged. But, unlike the name suggests, most are not brown in colour. Left unmanaged, spontaneous vegetation takes

hold: transforming brownfields into ruderal biotopes (Scholz, 1956 in Lachmund, 2013).

Recently abandoned sites with manufactured surfaces can be greyish in appearance with large swathes of hard surface in various shades of grey, from light grey [concrete] to deep grey [tarmac]. Ostensibly, the grey-looking sites can give the impression that not much is going on in them: void of vegetation, void of life. Closer inspection is likely to reveal the early stages of nature reclaiming the built environment and the early pioneer species taking hold. Brownfield sites with hard surfaces, or rubble and disturbed ground, that are open to the elements and left unmanaged - seemingly neglected - will succumb to nature; opportunistic plant species will gradually re-colonise through natural succession or re-wilding, resulting in ungoverned habitat creation. Lower plant life, such as Bryophyta (mosses, liverworts) and Mycetozoa (slime molds) disperse across surfaces; and, ruderal, higher plant species take root: some in loose substrates, some bursting through surface sealants, some growing in cracks and gaps. Native and non-native plants grow and bloom where so-ever. What was grey or brown land will – if left free of human intervention – through the process of natural succession become shades of greens splashed with an array of vibrant colours (wild flowers and insects); and colours will shift through the colour spectrum as the seasons change. Natural succession on brownfield land (regardless of contamination levels) can result in biodiverse habitats and habitats with unique ecological value supporting rare or endangered taxa and Red List species (for example, BRIG, 2008; Buglife, 2009; Natural England, 2010b; Kattwinkle et al., 2011).

Analysing brownfields for the nature and species they contain brings to the fore nature conservation value. From the perspective of nature conservation, some brownfields are recognized and highly valued as important urban wildlife habitats (for example, Angold et al., 2006; Herbst and Herbst, 2006; Roberts et al., 2006; BRIG, 2008; Natural England, 2008 and 2013; Sixsmith et al., 2009; Buglife, 2009; Riding et al., 2010; Kattwinkle et al., 2011; Macadam and Bairne, 2012; Woods, 2012; Lush et al., 2013; Robins et al., 2013). Brownfields with early pioneer species have been referred to as the new lowland heaths and

flower-rich meadows (Jones, R.A. 2003 in Roberts et al., 2006). Such sites are of particular interest to invertebrate ecologists: between 12% and 15% of all nationally rare insects have been recorded on brownfield land (Gibson, 1998; BRIG, 2008). In 2005, Buglife (a charity dedicated to maintaining sustainable populations of insects, spiders, and earthworms) provided evidence of the importance of brownfield sites in the Thames Gateway as significant habitats for insects and bugs (Roberts et al., 2006). Between 2005 and 2008, Buglife - in collaboration with Natural England assessed the ecological importance of four hundred and fifty brownfield sites along the Thames Gateway as Red Data Book and UKBAP invertebrates (Roberts et al., 2006; Natural England, 2008). One hundred and ninety- eight sites were assessed as being of medium to high ecological importance (Natural England, 2008). An increased awareness of the biodiversity interest of brownfield land, particularly post-industrial land with nutrient-poor or contaminated substrates, resulted - in 2007 - in the UK Biodiversity Action Plan (BAP) for Open Mosaic Habitats On Previously Developed Land (OMH PDL) (Natural England, 2008). The Natural England publication, *The State Of The Natural Environment*, Chapter 3.1 *Urban and Brownfield Land*, advocates the importance of some brownfield land for wildlife, noting their value as urban habitats for species in decline and rare species (Natural England, 2008, p.119-125). However, brownfields must meet set criteria to be considered of high conservation value: Priority Habitats (BRIG, 2008).

Brownfield sites with high conservation value, and larger than 0.25 hectares with spatial variation creating a range of habitats: mosaic habitat (for example, percentage of scrub, grassland, and early succession), could qualify as Open Mosaic Habitat on Previously Developed Land (OPH PDL). In order to be classified as OMH PDL, brownfield land must meet strict set criteria (Table 2-1) (ADAS UK Ltd., 2010; Riding et al., 2010).

Table 2-1: Open Mosaic Habitats on Previously Developed Land (OMH PDL).
Summary of criteria for field recognition of the habitat (ADAS UK Ltd, 2010, p.2)

| | Criterion |
|----|--|
| 1. | The site is at least 0.25 ha in size. |
| 2. | Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added. |
| 3. | The site contains some vegetation. This will comprise early successional communities consisting mainly of stress tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of a) annuals or b) mosses/liverworts or c) lichens or d) ruderals or e) inundation species or f) open grassland or g) flower-rich grassland or h) heathland. |
| 4. | The site contains unvegetated, loose bare substrate and pools may be present. |
| 5. | The site shows spatial variation, forming a mosaic of one or more of the early successional communities plus bare substrate, within 0.25 ha. |

The Definition and Mapping of Open Mosaic Habitat on Previously Developed Land: Phase 1 (Riding et al., 2010) was the first of a two-stage project commissioned by DEFRA (UK Governmental Department for Environment, Food and Rural Affairs). Phase two, *Open Mosaic Habitat Survey Handbook* (Lush et al., 2013) goes into greater detail for surveying and identifying OMH PDL including: lists of substrates, for example, Tarmac, rubble, brick, quarry spoil; water features, for example, river, ditches, saline or brackish water (Lush et al., 2013, p.9); and habitats and vegetation types, for example, early successional vegetation, which is then subdivided further into: bare ground; sparse vegetation; stress tolerant annuals; moss and liverwort communities; lichen communities; and other pioneer vegetation (Lush et al., 2013, pp.11-12). In 2014 a dedicated hub for surveying and recording OMH PDL in the UK (using Lush et al., 2013 Handbook survey forms) went on-line: <http://habitatsurveys.esdm.co.uk/>. This interactive website - supported by Natural England, DEFRA, Homes and Communities Agency, Joint Nature

Conservation Committee (JNCC), Buglife, and Countryside Council for Wales – is a national (live and growing) inventory of OMH PDL. At the time of writing this thesis, circa 44,000 sites had been identified as potential OMH PDL (data retrieved 22.01.15 from [habitatsurveys](http://habitatsurveys.esdm.co.uk), 2014). However, not all brownfield sites meet (or will meet) OMH PDL criteria. At the time of writing, approximately only 8% met the UK OMH PDL criteria for inclusion in the inventory:

Not all brownfields support OMH. In fact, of all the sites checked in the creation of the inventory so far only a small sub set (approximately 8%) meet the UK agreed criteria for inclusion in the habitat inventory. It is therefore essential that these wildlife rich brownfields are properly identified so that their high environmental value is understood when decisions are made locally about land use and site management (habitatsurveys.esdm.co.uk, 2014).

OMH PDL is a very specific type of brownfield, an ecologically important brownfield land containing – within one site – a mosaic of habitats, and species deserved of nature conservation (rarity or increasing rate of decline) (Robins et al., 2013). Conservation of such sites - the habitats and the species - will most likely require on-going management: conservation management for the protection of plant and animals species (Lachmund, 2013, p.9). If left unmanaged, brownfields identified for their high ecological value – such as OMH PDL - will continue to evolve; over time, the species rich ruderal biotopes will slowly disappear through advancing successional stages.

Successional stages naturally occurring on brownfields will, over time, change the structure and the aesthetics of a brownfield site. Without management to maintain desired habitat structures, another habitat type will take root and succeed, for example, flower rich grassland will lose species richness as dominant - or invasive - species succeed; seeds from trees will germinate and shift the habitat from flower-rich grassland to woodland scrub. Value judgements of brownfield land will shift depending on the type of habitats or amount of nature they contain. For example, a necessary component OMH PDL is a mosaic of habitats. Yet, pioneering ruderal plant communities -

species that thrive on low nutrient content soil and substrates (Lush et al., 2013) - can include nitrogen fixing ruderal species (for example, *Trifolium* sp. and *Melilotus* sp.). The processes of nitrogen fixation will eventually change the structure of the substrate, enriching nutrient levels and increasing soil fertility (Reynolds et al., 2003). Changes in soil nutrients affect species. Species replacement occurs and early pioneers are displaced as later successional communities (for example *Salix* sp.) colonize (Reynolds et al., 2003). Spontaneous vegetation succession may also include species that phytoremediate (whereby plants absorb toxins and heavy metals through hyper-accumulation). Phytoextraction may naturally occur on contaminated brownfield land with endemic flora accumulating toxins and ultimately changing pH levels and heavy metal content in the substrates and soil (Lasat, 2000; Kowalska, 2012).

As the substrates of brownfield land change through natural succession processes and successional stages move forward, brownfields will cease to support biodiverse flora and the wealth of invertebrates associated with tall herbs, annuals, and flower rich grass land (Lachmund, 2004): the so-called (brownfield) flower-rich meadows (Jones, 2003) will likely diminish. Consequently, a brownfield may cease to be a Priority Habitat, and subsequently cease to be OMH PDL; hence, value attributed by some conservationists will be lost. Over time, through natural succession, an open mosaic habitat will lose the mosaic of habitats. However, a less biodiverse habitat could hold merit for others, for example, re-wilding brownfields within the context of Natural Green Space (ANGSt) and Green Infrastructure, could have value as wild play environments

Brownfields sites considered by some conservationists to be of lesser ecological importance, for example, the 92% that did not meet OMH PDL habitat and species criteria in the surveys of biodiversity action plan habitats (habitatsurveys, 2014), and sites less than 0.25 hectares, may still be important within the context of Green Infrastructure. (Brownfield land less than 0.25 hectares falls outside the OMH PDL criteria and is not assessed, consequently, the habitat and taxa of smaller brownfield sites are unrecorded within OMH

PDL framework.) Nevertheless, brownfield habitats with spontaneous succession or planted vegetation are recognized as green space within urban green space strategy guidelines (Cabe Space, 2006) and Green Infrastructure (GI) (European Environment Agency, 2011; European Commission Science for Environment Policy, 2012).

Green Infrastructure connects green and blue ecosystems including natural, semi-natural, and constructed ecological systems of differing spatial scales, for example: parks, gardens, commons, greens, watercourses, lakes, verges, and brownfields, within the built environment and between towns and cities (Tzoulas et al., 2007). Collectively, the nature in and around our towns and cities interconnects habitats creating a green infrastructure network that has multifunctional ecological and social benefits (Tzoulas et al., 2007). As such, vegetated brownfield land is as important within a GI network as any other green or blue habitat.

When considered holistically and strategically managed, the connectivity of different types of GI deliver multiple benefits in response to wildlife habitats and corridors, ecosystem services, and human health and well-being (Forest Research, 2010; Natural England; 2010; European Environment Agency, 2011; The Wildlife Trusts, 2012). With an ecosystem approach, a GI aim is to strengthen the provision of ecosystem services at urban, regional, and national scales (Pankhurst, 2010; European Environment Agency, 2011; European Commission Science for Environment Policy, 2012). As yet, there is no single, widely accepted definition of GI (European Environment Agency, 2011), however, Fig. 2-4 illustrates the links between GI types (for example, brownfields, parks, amenity green space, verges, canals, ponds, and wetlands) and ecosystem services.

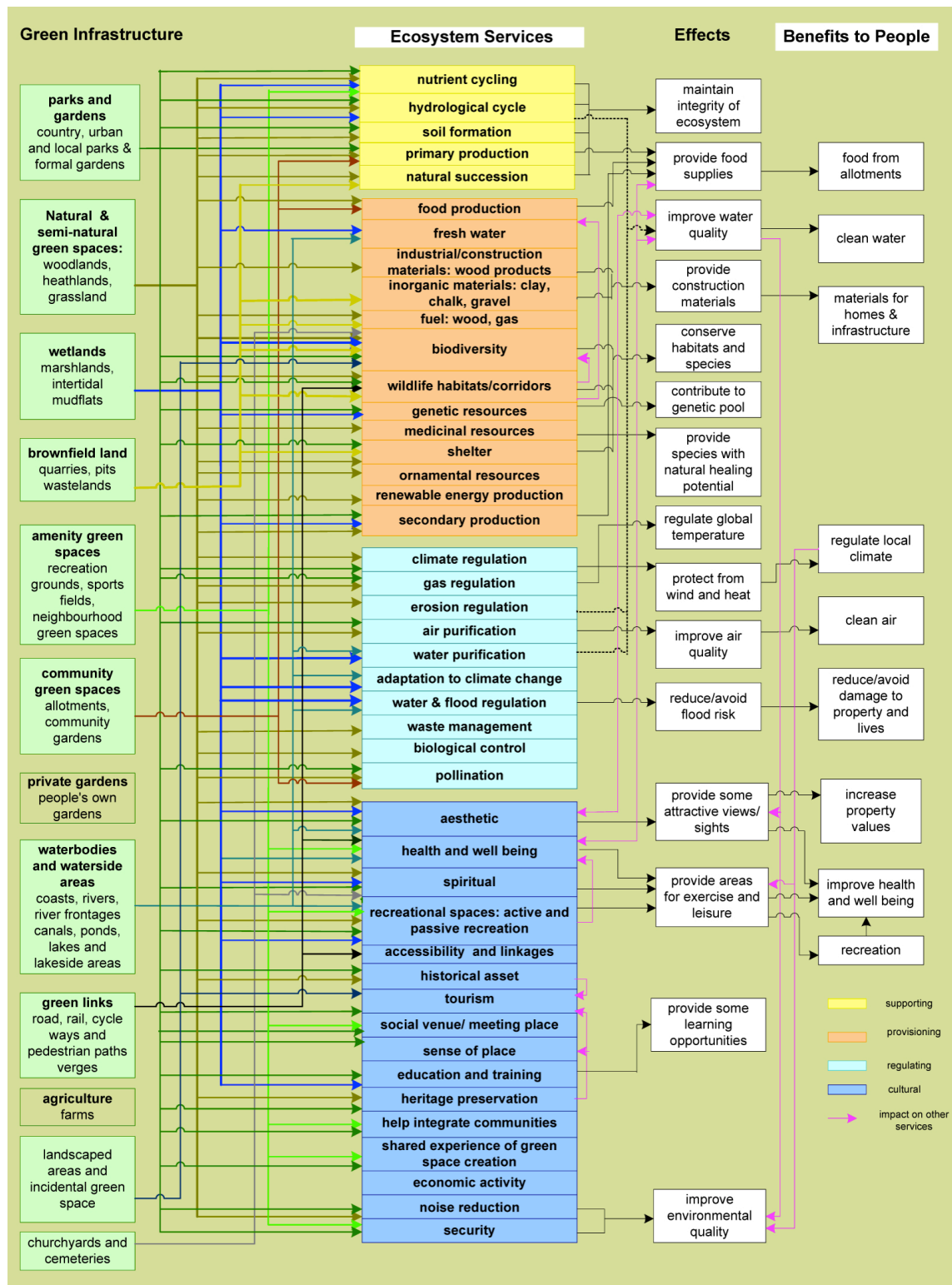


Fig. 2-4: Network analysis diagram illustrating the links between elements of the green infrastructure, ecosystem services currently provided by the Kent Thameside Green Grid, and the benefits people derive from these services (European Environment Agency, 2011, p.45)

Vegetated brownfields (managed and unmanaged) which can include linear green corridor routes (for example, disused rail tracks) or pockets of land that collectively create ecological stepping-stones within the built environment, are an integral element of GI at a regional scale, town and city scale, and a neighborhood scale (European Environment Agency, 2011). Although GI strategies are primarily aimed at Local Authorities (for the provision of quality accessible green space in urban planning), joined up thinking and cross-disciplinary practice increases GI benefits; consequently, cross-disciplinary practice is advocated to connect green and blue ecosystems and unlock, for example, ecosystem services benefits, which give rise to multifarious health and well-being benefits (Tzoulas et al., 2007; HM Government, 2011; European Commission Science for Environment Policy, 2012; The Wildlife Trusts, 2012). Within the MA (2005), well-being has a broad definition including security, social relations, physical and mental health, and personal freedom (MA, 2005). (Human health and well-being in relation to ecosystem services is discussed further in Chapter 2.2: Ecosystem Services Framework: An Overview.) Promoting urban GI for its health and well-being benefit is important in urban environments. Britain's population now has more urban dwellers than rural dwellers. In 2011, 82.4% of the population lived in urban areas defined as towns and cities of more than 10,000 people (Government Statistical Service, 2013); and access to green space improves quality of life (for example, Herbst, 2003; Pyle, 2003; Tzoulas et al., 2007; Natural England, 2009, 2010, 2012; Forest Research, 2010; Kazmierczak et al., 2010; Mell, 2010). However, unmanaged brownfields appear overlooked as accessible green space for leisure and recreation within a GI framework (for example, Tzoulas et al., 2007; European Environment Agency, 2011; HM Government, 2011; European Commission Science for Environment Policy, 2012; The Wildlife Trusts, 2012; Hansen and Pauleit, 2014); or, score poorly in relation to accessibility: uneven surfaces, obscured or no entrances, damaged or vandalized areas, and no information boards (Kazmierczak et al., 2010). Access to green space matters and some brownfields can be described as areas of local natural green space.

Local natural green space and access to it matters, particularly for people living in dense urban environments who do not have the means to access the

countryside (Harrison et al., 1995; Handley et al., 2003; Herbst, 2003; Kaplan and Austin, 2003; Pyle, 2003; Land Use Consultants, 2008; Natural England, 2009, 2010, 2012; Forest Research, 2010).

In 1992, English Nature (now Natural England) commissioned a report into urban residents' access to natural green space: *Accessible natural greenspace in towns and cities: A review of appropriate size and distance criteria* (Harrison et al., 1995). The report defines accessible natural green space as:

Land, water and geological features which have been naturally colonised by plants and animals and which are accessible on foot to large numbers of residents'. (Kaplan and Kaplan, 1987, in Harrison et al., 1995, p.1)

Natural green spaces may be unmanaged, partly managed, or fully managed. Brownfields, colonized with spontaneous assemblages of flora and fauna, are included as areas of natural green space. However, managed amenity grassland, which is managed by frequent mowing, is not included, even if trees are planted. Some brownfields can have the appearance of managed amenity grassland. Although such sites are excluded from the report, it is reported that there are a lot of small brownfield plots in cities; and:

Urban wasteland plots in Liverpool, Birmingham and London range in size between 0.001 and 0.5 hectares with the majority of sites being less than 0.02hectares.
(Harrison et al., 1995, p.5)

Brownfield sites, running through the urban landscape as wildlife corridors or dispersed throughout forming ecological stepping-stones can be experienced on a local or neighborhood scale (European Environment Agency, 2011). While smaller brownfield sites create a mosaic of green space within the built environment, sites in excess of 0.5 hectares correlate positively with species diversity and diversity of vegetation structure; furthermore, large sites may contain more than one habitat type. So, according to Harrison et al., (1995), the

visitor experience and benefits gained could be greater. As with OMH PDL, larger brownfield sites with more than one habitat type and a diversity of species appear to have greater benefits.

The distance a person has to travel to experience a natural green space is also critical. Access to natural green space should be within a short walking distance from the home, ensuring that frequent access to natural green space is possible regardless of financial means (Harrison et al., 1995). Free access to natural spaces and social equality in the pursuit of outdoor adventure, leisure, and relaxation practices contributes much to people's health and well-being, and, in turn, contributes towards sustainable communities (Harrison et al., 1995). To improve access to natural green space in towns and cities, and people's connectivity with nature, the original Access to Natural Greenspace Standards (ANGSt) model was developed. This was a non-statutory aspirational model of spatial distribution of natural green spaces in relation to people's homes (Handley et al., 2003). The original ANGSt model required that:

No person should live more than 300m from their nearest area of natural green space;

There should be at least one accessible 20ha site within 2km from home;

There should be one accessible 100ha site within 5km;

There should be one accessible 500ha site within 10km.

(Handley, et al., 2003, p.15)

The ANGSt model - intended as guidance for local authorities to develop urban green space strategies - has been widely adopted and adapted throughout Britain. Overall, Local Authority natural green space strategies seem to focus on sites in excess of 0.5 hectares. Some local authorities have focused on improving existing green spaces - such as parks and woodlands - to increase biodiversity and access (for example: Salford City Council, n.d.; Manchester, 2009; Sefton Council, 2009; Liverpool, 2010; Sheffield City Council, 2010); whilst the focus of others has been a re-naturing of large and accessible

brownfield sites (for example: Doick and Hutchings, 2007; Doick et al., 2007, 2009; Durham Council Council, 2012). Practice and the discourse around urban green space renaissance in urban regeneration (for example, Loures and Panagopoulos, 2007; CABI, 2009b; Doick, 2009) has shifted attention away from the natural and spontaneous colonization of brownfields to re-naturing and management of large brownfield spaces with an intention to make them attractive and more accessible to near-by residents (adding pathways, information boards, and entrances) and to provide an appearance of stewardship; all designed to increase access to green space (CABI Space, 2003, 2004; De Sousa, 2006; English Partnerships, 2007; Liverpool Biennial and Design Liverpool, 2007; Taylor, 2008; Siikamäki and Wernstedt, 2008; CABI, 2009a, 2009b; Hollander et al., 2009; Westphal, L. et al., 2010).

As attentions have shifted to the larger sites with seemingly greater health and well-being benefits, smaller brownfield sites throughout our towns and cities that have been *naturally colonised by plants and animals and which are accessible on foot to large numbers of residents* (Kaplan and Kaplan, 1987, in Harrison et al., 1995, p.1) appear to have become overlooked with regard to accessible natural green space strategies and ANGSt. Moreover, there has also been a shift away from wild and natural - as experienced in unmanaged brownfields - to reclaiming and landscaping brownfield land. Examples of this include incorporating wild flower gardening to increase biodiversity and enhancing aesthetic appreciation through selected planting schemes; the introduction of pathways, interpretation boards, seating, and selected features; and litter management.

One highly acclaimed and internationally renowned example of brownfield reclamation and re-naturing to enhance (an) aesthetic appreciation is The High Line, New York (Fig. 2-5). The once disused, overgrown, and difficult to access elevated train line, running above the art gallery lined-streets of Manhattan, was transformed into a state-of-the-art elevated urban nature park; carefully landscaped and designed with uniformly planted wild flowers; raised decking boardwalks; railway sleepers cleaned and re-laid as (reclaimed) features; seating; and public art.



Fig. 2-5: The High Line, New York, April 2010

The High Line is having a far-reaching influence which is often cited as an exemplar of excellence in brownfield reclamation and urban green space design: transforming underused, neglected, spaces into vibrant, well used, twenty-first century city parks (Goldberger, 2011; Steiner, 2011; Liverpool Biennial, 2012). The success of the High Line (designed by James Corner of Field Operations, Diller Scofidio, and Piet Oudolf, and opened in 2009) has inspired similar brownfield greening projects, for example, the Bloomingdale Rail Line, formerly a disused section of *The El* (elevated train line) in Chicago, and the Bay Line, an abandoned section of San Francisco's Bay Bridge. Within this paradigm of brownfield reclamation, wild nature, natural colonization, and spontaneous assemblages of flora and fauna, is lost. Wild – that is to say spontaneous and unmanaged - urban nature and existing features as found in unmanaged brownfields are being ripped up and grubbed out, the untamed brownfield habitat destroyed to make way for a neater, perhaps socially more acceptable or expected view of the wild (Fig. 2-6).



Fig. 2-6: The High Line, New York. Image of fenced off/in 'nature', up lighting, and *KEEP IT WILD KEEP ON THE PATH* sign, April 2010

The restructuring and replanting of brownfield sites to create urban nature reserves and twenty first century wildflower parks is not without its critics (for example, Lachmund, 2004, 2013; Mabey, 2010; Kattwinkel, 2011). While some green-space aesthetic preference may be for colour blocked blooms, boardwalks, and benches, disorderly wild nature in seemingly abandoned places holds a fundamental attraction for others, including conservationists, naturalists, children, and artists (Mabey, 1973, 2010; Kellert and Wilson, 1993; Pyle, 2003; Herbst, 2003; Ross, 2004; Lachmund, 2004, 2013; Clement, 2006; Maudsley, 2007, Doron, 2007; Buglife, 2009; R.S.P.B., 2010; James, J. et al., 2010; Brady, 2011; Farley, and Symmons Roberts, 2011; Foster et al., 2011; Gwilliam and Lemke, 2012; Macadam and Bairne, 2012; Jorgensen and Keenan, 2012). Brownfields do not have to be ordered or managed to attract visitors or urban nature adventurers (for example, Lachmund, 2004, 2013).

Brownfields may be accessed - officially or unofficially - and used for a variety of purposes and pursuits. Play and recreation may be a reason for some to access brownfields. Abandoned sites can be as ideal for opportunistic recreation seekers as they can be for opportunistic pioneering plant species. For some people - including children - they are un-governed leisure activity

spaces (Edensor, 2005) and free-range play environments providing opportunities to explore. In this context, size rarely matters. A site does not have to be in excess of 0.25 hectares to provide a recreation sanctuary or a connectedness with nature; small habitats in urban settings can be important habitats for nature exploration (Pyle, 2003), and brownfields are no exception. For children the unmanaged and abandoned brownfield can be a space for playful activities away from the judicious gaze of adults. Risk taking in the absence of regulating adults can be amongst the main attractions (Edensor, 2005). Away from the gaze or governance of adults, children can take chances, they can give their imaginations full rein and explore without the adhering to conventions imposed upon them by their elders. They can make their own rules (Edensor, 2005 p.26). Within the environmental setting of an unmanaged brownfield, nature can be intertwined with the manufactured. Trees, scrub, mud, walls, ditches, abandoned vehicles, weeds, discarded mattresses, and broken glass are the setting, the backdrop, the materials, and the props for imagination and creations. With (unrestricted) imagination, features and discarded stuff can be transformed. For a child, natural environments, including re-wilding brownfields, can provide a “theatre of perception” whereby the child is the actor, the director, and the designer (Cobb, 1977, p.29). For example, sat in a discarded car seat or rusting car on an edgeland, the child becomes the racing driver speeding through the landscape (Farley and Symmons Roberts, 2010). Children’s literature too illuminates a world of adventure in wastelands, for example, Katy Mugford reviews the role of wildscapes and wastelands in children’s literature, including *Stig of the Dump* by Clive Kings (1963) and *Little Foxes* by Michael Morpurgo (1984) (Mugford, 2012). Urban brownfields splashed or awash with nature, with or without litter, can provide the space and the freedom for imagination to expand, for fantastical play scenarios to be created and acted out, and for physical activity and fun.

In brownfield sites with trees, the trees can provide a *backdrop for every conceivable game of the imagination* (Ward, 1988, in Maudsley, 2007, p.3):

Trees can be climbed and hidden behind; they can become forts or bases; with their surrounding vegetation and roots, they become dens

and little houses; they provide shelter, landmarks and privacy; fallen, they become part of an obstacle course or material for den building; near them you find birds, little animals, conkers, fallen leaves, mud, fir cones and winged seeds...

Play and recreation in these situations and environmental settings helps young people to develop spatial awareness, personal risk assessment, confidence, and connectedness with nature (Pyle, 2003; Lester and Russell, 2008; Natural England, 2010; RSPB, 2010; Ward Thompson, 2012). The value of unmanaged brownfield sites for children's wild play is progressively recognised and advocated (Lester and Russell, 2008; Wooley et al., 2009; Ward Thompson, 2012; Moss, 2012; Mugford, 2012). Further, childhood years – being adventurous and scrubbing around in gritty ground and foraging for wild things away from the gaze of adults – form building blocks that can shape a lasting fascination with nature (Pyle, 2003; Louv, 2005; Ward Thompson et al., 2006; Natural England, 2009a; RSPB, 2010; Moss, S., 2012; Wells and Lekies, 2012). Some evidence suggests that childhood adventures and experiential learning in wild nature spaces can set into motion a life time passion for nature, creating a pathway leading to adult environmental stewardship (Pyle, 2003; Wells and Lekies, 2006, 2012). However, literature suggests that children are no longer permitted to roam as freely as in the past (Natural England, 2009b). Society's attitudes towards parenting have shifted over the years. Even though fewer children and young people are free to explore natural environments without constraint, some young people do still continue to find sanctuary amid brownfields away from the gaze of guardians and adults: playing games, being adventurous, taking risks, and being creative (Ross, 2004; Ward Thompson et al., 2006; Gill, T., 2007; Maudsley, 2007; Natural England, 2010; Edensor et al., 2012; Ward Thompson, 2012).

Moving into the teen years, and beyond, brownfields can - and do – provide counterculture havens (Edensor, 2005). Considered to be away from prying eyes, they provide hangouts as well as spaces to experiment, for example: with smoking, with drugs and alcohol, and with sex (Natural England, 2010; Farley and Symmons Roberts, 2011; Edensor et al., 2012; Ward Thompson, 2012).

Overgrown brownfields with trees and shrubs (especially plants like the Rhododendron, with concealing canopies and sparse – if any - understory) can provide perfect shelter and dens. The wildlife and the natural environment may not be the focus of a teen adventurer's attention; however, activities do take place amid nature. This is significant. Exposure to the natural environment has an independent effect on health and well-being (Mitchell and Popham, 2008; Barton and Pretty, 2010); for example, spending fifteen minutes in a natural environment lowers blood pressure and stress levels, and increases feelings of well-being, attention capacity, the ability to reflect upon life's problems, as well as increasing a connectedness to nature (Mayer et al., 2009).

There is a wealth of literature evidencing the health and well-being benefits of nature for children and young people (for example: Corvalan et al., 2005; Louv, 2005; Groenewegen et al., 2006; Mitchell and Popham, 2008; Stephan Mayer et al., 2009; Faculty of Public Health, 2010; Forest Research, 2010; Jorgensen and Gobster, 2010; Pretty et al., 2009; Barton and Pretty, 2010; Barton et al., 2011; Natural England, 2012). Seminal research into the health benefits of merely looking at nature from a hospital window evidenced that an outlook onto nature and green space speeds recovery (Ulrich, 1984, 2002). Physical access to nature has more profound positive impacts on health and well-being: improving self-esteem, confidence, mood, and increasing self-worth; reducing the risk of mental ill-health; and relieving depression, social anxiety, loneliness, alienation, and stress (Ulrich et al., 1991; Groenewegen et al., 2006; Mitchell and Popham, 2008; Mayer et al., 2009; Faculty of Public Health, 2010; Forest Research, 2010; Jorgensen and Gobster, 2010; Barton and Pretty, 2010; Barton et al., 2011; Natural England, 2012). It could be argued that brownfield – seemingly countercultural - experiences with nature inadvertently improve health, ultimately benefiting society at large through reduction in crime and improved social interactions and community cohesion (Kuo and Sullivan, 2001; Louv, 2005; Groenewegen et al., 2006; Mayer et al., 2009; Natural England, 2010; Natural England, 2012).

The well-being benefits of contact with nature and access to green space spans all generations (Barton and Pretty, 2009; Jorgensen and Gobster, 2010).

And, the desire to access brownfield sites is not confined to the young, or for activities perceived by some as anti-social (for example, drug-taking and fly-tipping). Day-to-day and routine activities occur too, for example, walking across a site - perhaps as a short cut - dog walking, and physical exercise routines like jogging or mountain biking (Edensor, 2005). Other recreational activities directly connected to nature pursuits occur as well, for example angling and bird watching. Brownfields can be utilized in many ways, and the value they hold to an individual will not always be restricted to the nature, or the type of wildlife they contain. Brownfield users may not necessarily be primarily concerned with access to nature and might not be interested in nature at all. Nevertheless, the health well-being benefits associated with access to nature will be gained in the process of accessing re-wilding brownfields.

Arguing the case for the human related well-being benefits of wild nature and the ecological benefits of urban wastelands, Harriet Herbst (2003), developed an evaluation method to determine the importance of wasteland sites as wildlife areas where nature and wildlife can be experienced by people as part of their daily lives. Research was undertaken in two major urban conurbations: the city of Birmingham, England, and the city of Leipzig, Germany. The importance of wastelands as wildlife areas was examined within the context of urban green space strategies combined with connectivity to existing green space and wildlife areas - managed or otherwise. A site's distance from homes or schools; who the potential user may be; the size of the site; surface sealants; the percentage cover of vegetation, and at what successional stage; and habitat types, were all considered in evaluating wastelands as wildlife areas. In Leipzig, one hundred and five wasteland sites were surveyed, enabling successional stages, habitat types, landscape characteristics, surface sealants, and additional features (for example, water) to be assessed, as well as proximity to existing green networks, and people. Wasteland sites *circa* 300m from homes or schools (linking into Harrison et al., 1995, and the developing ANGSt model); within 50 metres from an existing green space (to tie into urban Green Infrastructures), within 50 metres from a hard surface thoroughfare (ease of accessibility); over 0.25 hectares in size with more than one habitat type (subsequently linking into open mosaic habitat on previously developed

land (OMH PDL)); and in a wildlife deficient area, were awarded the greatest value for experiencing wildlife.

Ultimately, the research in Birmingham proved to be inconclusive. Nonetheless, a Geographic Information System (GIS) evaluation tool was developed from the research (Herbst and Herbst, 2006). The aim of the tool is to aid the assessment of wastelands, identifying sites that could be viable as urban community wildlife areas, and securing wastelands as wildlife areas to protect them from development. Upon identifying a suitable site, to optimize wastelands as wildlife areas the authors recommend site interventions including pathways, improved entrances, and interpretation notice boards; site management including tidying and seeding; and educational projects to increase peoples' appreciation of the wildlife they contain. While the evaluation method, and GIS tool, enable wasteland sites to be prioritized in relation to enhancing urban green infrastructure and public accessibility to wildlife, the authors urge caution since the evaluation method does not take into account people's perceptions of the wastelands, or current use of the sites - particularly by young people. Furthermore, the tool overlooks the existing values attributed to wastelands (positive and negative perceptions). The success of transforming wasteland into used and valued wildlife areas is dependent upon local buy-in since the local community – inclusive of youth voices - should be involved in decision-making (including whether they want a designated wildlife area), site reclamation and restoration, and general management of the wildlife area (Herbst and Herbst, 2006).

As well as wildlife value (or potential value) and the health and well-being benefits derived from access to nature, unmanaged brownfields also have nonmaterial, esoteric value - connected to sense of place, inspiration, and aesthetic appreciation. Academic literature relating to these qualities, particularly within the ecosystem service framework, is elusive (Church et al., 2011). Data are complicated to capture because of the hugely subjective nature of aesthetic preferences, inspiration, and what constitutes a sense of place for an individual. Literature pertaining to these esoteric and subjective experiences sits predominantly in the fields of the social sciences and

philosophy (Church et al., 2014; Coates et al., 2014), while the majority of research within the ecosystem service framework is undertaken within the objective and quantifiable science discipline (Fisher et al., 2009; Church et al., 2011; Coates et al., 2014). At the time of writing, research into the cultural service metaphysical categories - aesthetics, inspiration, spiritualism - appeared to focus on landscapes with a positive aesthetic, beautiful or breath taking – sublime - landscapes with a *status quo* appeal, for example, sea shores and coastlines (ODEMM, 2013); and the Pennines (Pennine Prospects, 2011). Muckier landscapes - such as unmanaged urban brownfields - are generally considered to be a blight on the landscape (for example, CABI space, 2003; de Sousa, 2006; Doron, 2007; Hollander et al., 2009). Consequently, it is not surprising that little literature exists in relation to the CES of unmanaged, un-scenic, urban brownfields. Yet, there is evidence that unmanaged brownfields do have a strong aesthetic appeal, inspiring - amongst others – artists, including those working in visual art and fine art, the performing arts, sound, and creative and literary writing, including children's literature.

Artists' perspectives of brownfields are revealed in their practice through expressive interpretation and [re]presentation to an audience. However, a compendium of art and brownfields does not exist; and, there is no concentrated mass of literature relating to creative processes and outcomes inspired by such sites - with all their negative aesthetics incorporating litter, mess, subversive uses, weeds, wildness, decay, broken buildings and structures, split tarmac and concrete, uneven surfaces, and security fencing. Richard Mabey has been writing of the joys of such brownfield sites since the 1970s when he first penned *The Unofficial Countryside* (1973). Known for his writing about nature (books including: *Food for Free* (1972), *The Unofficial Countryside* 1973), *The Common Ground* (1980), *Flora Britannica* (1996), *Weeds* (2010), and broad sheet columns on nature in *The Guardian*, *The Times*, and *The Independent*), his brownfield cogitating and prose extends like rhizomes throughout much of his literary work and columns. There is a lyricism within his writing that illuminates the allure of the wild brownfield; complete with messy nature, barbed wire, and junk. Marion Shoard too, has written about the lure of brownfields as experienced on the edges of our towns and cities, *unruly*,

chaotic, unkempt wastelands, often awash with *riotous growths of colourful plants, both native and exotic*, in the space between the urban and the rural: the edgelands (Shoard, 2002, p.117). Mabey and Shoard are environmentalists and writers; however, there is no mistaking that *Edgelands: Journeys into England's True Wilderness* (Farley and Symmons Roberts, 2010) is penned by poets. The authors wax lyrical about edgy edgelands, which include brownfields – vegetated or not. Their book is embellished with curiously juxtaposing similes, likening broken indicator glass to barley sugar and mucky canal water to melted chocolate (inspired by the then rust coloured water of the iron salt stained, non-navigable, linear brownfield of the Bridgewater Canal in Greater Manchester). The passion they share for these outsider spaces on the edge of society-at-large runs like a thick vein throughout the book. There are numerous references to unstructured play, which gives the impression that the authors cut their teeth in wastelands and brownfields away from the gaze of adults. Personal memories merge with what appear to be ethnographic observations, for example, witnessing dumped car seats fantasized as racing machines. The boundaries between fact and fiction are blurred in creative writing. In writing about brownfields, edgelands, wastelands, and weeds, Mabey, and Farley and Roberts reference other poets and visual artists inspired by such sights. *Weeds* (2010) and *Edgelands: Journeys Into England's True Wilderness* (2010) are two publications that point the reader - interested in brownfields - in the direction of artists creating work of, and about, wild nature and unmanaged brownfields (interesting to note is that Mabey avoids the term brownfield, describing it as *a deliberately derogatory phrase of politicians and developers* (Mabey, 2010, p.183). Their literary writing, eloquently conveying cultural connections with unmanaged brownfields leads on to the work of poets, for example, *Shoreditch Orchid* by Peter Daniels:

[...]

*I'll find you, Shoreditch orchid, true and shy,
rooting in the meadow streets
through old cable, broken porcelain, rivets and springs;
living off the bones of the railway.*

*You'll make your entry unannounced,
in the distraction of buddleia throwing its slender legs
out in the air from nothing,
from off the highest parapets, cheap
attention-seeking shrub from somewhere
like nowhere. But here
you'll identify your own private genes,
a quiet specimen-bloom seeded in junk,
and no use to any of us; only an intricate bee-trap
composed in simple waxy petals, waiting
for the bees to reinvent their appetite.*

[...]

Excerpt taken from *Shoreditch Orchid* (Daniels, 2008, no page numbers).

Artists nationally - and internationally - have been, and continue to be, inspired by un-scenic landscapes and the juxtaposition of ruins embellished with re-wilding nature (Woodward, 2007; Edensor et al., 2012; Woodward, 2012). What some people may view as an ugly mess, deprivation, decline, and neglect may aesthetically stimulate others, becoming the focus of their creative practice. Environment philosopher, Holmes Rolston III, wrote:

We search for something pretty or colourful, for scenic beauty, for the picturesque. Landscapes regularly provide that, but when they do not, we must not think that they have no aesthetic properties.

(Holmes Rolston III, in Saito, 1998, p.101)

Brownfields and wastelands have aesthetic value and perceiving that is dependent upon the effort of the percipient (Brady, 1998). Art in brownfields, about brownfields, and of brownfields, can be seen in the work of many artists. Nana Petzet explored a locked brachland (brownfield) landscape in the south east of the Isle of Elbe, Hamburg, Germany: "im peutegrund" (2008)

(Haarmann and Lemke, 2009; Kopke, 2009). Petzet – officially – entered the site to film document the neglected biotope, and, with support from an ornithologist, an entomologist, a botanist, and a herpetologist, also mapped the site's wildlife. The collaborative work, presenting the animal and plant kingdom of an out-of-bounds, unmanaged, overgrown urban wilderness, was screened during the International Building Exposition, Hamburg, Germany (2008). Although the work in action – the process - could not be viewed, playful interventions and happenings in accessible brownfields in urban conurbations can be experienced. Socially engaging art projects and happenings are occurring globally through a wasteland twinning network. Artists and creative participants (you do not have to be an artist to be creative participant), inspired by a wasteland, twin with a wasteland in another country. The network uses the Oxford Dictionary (2007) definition of wasteland (as opposed to brownfield) to describe the parameters of the sites they explore: bleak, unattractive, neglected, and unused areas of land, in urban or industrial areas that have become barren or overgrown (Foster et al., 2011a). The creative participants work using a set of wasteland research resources and creative interrogation methods as set out on the web site interface; for example, audio mapping; narrative threads and myth making that blend artist imagination with local facts; sit, watch, and record; field studies; textual interventions and graffiti; traditional team games: rounders and golf; and artists' book journals (Foster et al., 2011b). Central to the network is questioning rhetoric around wastelands: the *brown field* and the *dead zone*, and re-framing these places as used, loved, and appreciated urban commons that have a sense of history and a sense of place. At the time of writing, nineteen wastelands are twinned in: The Netherlands, India, Germany, Romania, England, Ireland, Scotland, Finland, Malaysia, U.S.A., Sweden, Australia, and Indonesia, with twenty-eight creative participants (artists, curators, social scientists, social geographers, activists, landscape architects, and philosophy researchers) (Foster et al., 2015). The formal act of twinning with a civic ceremony with local politicians, councillors, and press appears to raise the profile of the selected wasteland, formally challenging negative perceptions and orthodox urban planning perspectives of brownfields. Wasteland-Twinning is a process, un-restricted by deadlines. Artists and participants are free to investigate, create, and record for as long as

they desire, or until such time that the site is reclaimed for development. The desired outcome is not to create a public artwork, but to shift public, local authority, developer, and architect perceptions away from viewing these sites as empty, unused, derelict, wastelands, and blank canvasses awaiting new development. The desire is to reframe the sites as vibrant, wild nature spaces, with a history, and a public recreational use (Foster et al., 2011a). Similar interventions, with likeminded desires, occur outside the framework of the Wasteland-Twinning project with independent artists striking up conversations in brownfields through art action; for example, *IN/fromtheout* (Gwilliam and Lemke, 2012); a two-day sound art symposium facilitated the congregation of artists and thinkers into an unmanaged brownfield to reflect upon site and the sounds of city reverberating in the urban wildness and neglect of a disused car park within earshot of a major urban motorway flyover (Fig. 2-7). As a participating artist at this event, the account given of *IN/fromtheout* is reflexive text.



Fig. 2-7: *IN/fromtheout*, Manchester, photographed, 2011

Sound artists and fine artists were invited to create new work in response to the environment and situation. During Day 1, delegates were invited to meander through the site, experiencing the place and art in conjunction with one another, and each other. On Day 2 – inside the venue adjoining the brownfield

- the presenters talked about their work: what had inspired them, what they wanted the audience to experience through the amplification of art on the brownfield, and what they gained from the experience. For some, it opened up new horizons within their work, for example, Matt Wand amplified pre-recorded city noise through massive speakers onto the venue's exterior wall. Stood in the centre of the expanse of brownfield, Wand was taken aback by the reverberations of sound rebounding from surrounding buildings, mixing within the site at different tempos, pitches, and speeds; inseparable from the physical brownfield experience. Sound artist Max Eastley wandered from one wasteland car park to another. He began to focus-in on fly-tipped rubbish and burnt remnants. The things he encountered activated his imagination and he began to create scenarios such as an exclusive outsider party with vagabonds warming themselves on the flames from a burning sofa, drinking Vodka, and chewing the fat. He retold his imaginings, concluding that, in those moments, he could claim an authority over time and site by representing - sculpturally and sonically - objects and tales retrieved from the brownfield sites. By bringing sounds, found objects, and allegories, inside the venue and presenting them he hoped to highlight how we temporarily occupy space and time, engaging with site (Gwillaim and Lemke, 2012). The symposium was an interactive and discursive closing to an art exhibition. Artists Helmut Lemke and Ben Gwilliam created new works in response to the gallery's brownfield surroundings, bringing in, from the out, elements that resonate with the nature, the quietness, the noisiness, the scruff, and the unease of the windswept exterior, in contrast to the white-walled interior of the gallery. Sound, moving image, projections, installations, and drawings, convey, with plasticity, creative connections of *ego* to an unmanaged city brownfield space.

Brownfields have found their way into the galleries, and the world of High Art. Spanish artist Lara Almarcegui is internationally renowned for her large gallery installations comprising of the stuff of brownfields (New York, Amsterdam, Rome, Madrid, Vienna, and London (Bourgogne, 2004)). Almarcegui takes from brownfields, metaphysically and physically, substance for art (Fig. 2-8). Crushed aggregates, broken substrates, and building materials such as

concrete, are configured into imposing sculptural piles, composed, in relation to one another, and to colour.



Fig. 2-8: Lara Almarcegui;

Top: *Bauschutt Hauptraum*, 2010 (Photograph by Ottenschläger, 2010);

Bottom: *The Abandoned Island Of Murano*, 2013. Photographed at 55th Venice Biennial, 2013

Almarcegui uses the gallery system to 'preserve' wastelands (again, the term wasteland is the prescriptive word used by the artist to define these sites). As she carefully catalogues brownfield entropy in her work - rendering visible to the gallery visitor that which she regards as being commonly overlooked or

disregarded in the urban landscape - so too do the galleries through preserving her work – the matter of brownfields – in printed matter: catalogues and limited edition prints (Almarcegui, 2010). However, Almarcegui prefers what happens outside of the gallery, in the street, in the everyday, in the brownfields, and has conducted much of her work in time-based activity: digging holes, painting broken allotment sheds, peeling back render on buildings (Llorca, 2009) and, vigilance – sometimes with audiences - in brownfields (for example *Enclosed Gardens* (2004) in Liverpool's derelict Garden Festival site (Liverpool Biennial, 2004)). Almarcegui creates photographic inventories and city specific guides to *empty space* aligned with her time-based public actions; again, preserving - in print - the wasteland (Llorca, 2009).

The artists mentioned have all entered into brownfields, and engaged with them: creatively, aesthetically, playfully, and meaningfully. Their CES experiences are articulated in creative rendering and expression that is not confined to formalities of language; a freedom termed art (Kant, 1790). Through the artwork, whether that be final outcome products, or the processes that constitute them, the artist is communicating thoughts, feelings, and experiences of brownfield environs and sharing their interpretations with a wider audience, no longer un-scenic landscapes and ugly nature, but sites of inspiration for art.

2:6. A Complex Reality of Brownfield Perspectives

The value of brownfield land (managed and unmanaged) does - and will - mean different things to different people. Brownfields have different values to different people at different times in their lives. How we view, interact with, appreciate, and value brownfield sites – as with any landscape - depends much upon our personal points of reference at given times in our lives: social, cultural, spiritual, political, and professional (Church et al., 2011, 2014). Our physical proximity to brownfields also colours our perspectives. Individually, we will view or frame a brownfield site according to personal experiences, cultural identity, spiritual beliefs, desires, knowledge, taste, perceived usefulness (including economic), and aesthetic judgements (Leach et al., 2007) (Fig. 2-9).

Interpretations on value for experiencing wildlife will differ, depending upon individual perceptions of the worth of different types of organisms, and the beauty, or the ugliness, of nature (Saito, 1998, 2007; Carlson, 2000; Brady, 2011; Church et al., 2011; Albon et al., 2011). Professionals will frame a brownfield site according to their professional framework. Experts in specific disciplines and fields of knowledge will, likewise, have opinions that frame the worth of a brownfield within the realms of their expertise. Furthermore, organizations will likely frame a brownfield site in line with the organization's policies or aims. In addition, the politics of regeneration, at local and national levels, will have a position on unmanaged urban brownfield land. In all, a plethora of perspectives exist which result in a complex reality of the value of urban brownfield land. Without doubt, how people experience brownfields, perceive, and value them, varies – significantly, resulting in a complex reality.

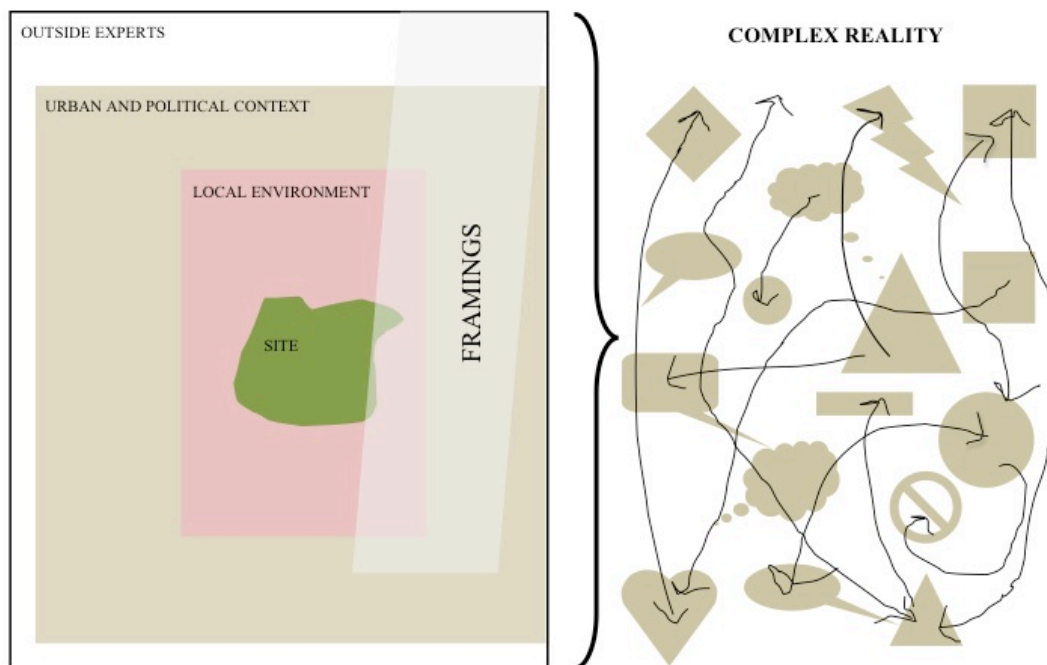


Fig. 2-9: Understanding a complex system (adapted from Leach et al., 2007, p.5)

However, as has been evidenced within this literature review of brownfields, these sites are all too often seen as sites of opportunity, pockets of land that

can be used in the interim for the benefit of nearby communities.

In bringing together knowledge and understanding from different disciplines light is shed on the complex reality of perspectives of brownfields. Value attributed to brownfields differs significantly and the valuing of brownfield environments is by-and-large governed by a professional framing – cannons within disciplines. There is no one straightforward description, value, or use of brownfield; there are multiple perspectives. Within OMH PDL and ANGSt, only land in excess of 0.25 hectares is considered. Smaller sites remain, by and large, uncharted.

This interdisciplinary literature review has revealed that unmanaged urban brownfields provide CES, and furthermore, that CES benefits are obtained through interactions in unmanaged brownfield ecosystems. Although brownfields are valued by different people for a variety of reasons (or not valued at all), how brownfields can be transformed through design and management into useful sites for people, nature, and ES, appears to outweigh the nature, habitats, and uses brownfields offer as they are; as environmental settings in themselves. More elusive is literature concerned with unmanaged sites - as they are; brownfields that have not been modified in the interim. With a majority of literature advocating management and interim treatments to enhance brownfield environments, it is little wonder that they are overlooked within the ecosystem service framework as CES environmental settings.

2:7. Gaps for further investigation

What the literature review reveals is a complex reality and framings of brownfields from which we can identify gaps in knowledge. A literature review of brownfields alongside a literature review of ES and CES begins to shed light on the CES of unmanaged urban brownfields. Artists, children, and urban explorers enter these environments because they have characteristics, for example: wild untamed nature, mess, a lack of policing, and materials (natural, inert, and fabricated) that allow for creative scenarios and creative experiences.

As such, unmanaged urban brownfields provide CES for those who seek untamed nature and (officially) ungoverned environments.

Within prevailing literature, the valuing of brownfield environments appears to be governed by professional framings and the canons of knowledge and learning within disciplines and professions. Within creative writing, art, and design, for example, the work of Giles Clement, 2006; Farley and Symmons Roberts, 2011; Edward Chell, 2013, and other artists already cited, brownfields have value as sources of inspiration with artists actively seeking out these environments for their aesthetics (for example, nature aesthetics, urban decay, muck, and dereliction). However, the CES obtained by artists within the environmental settings of brownfields is hitherto under examined within CES literature. Moreover, CES is under examined from an arts perspective. The CES literature review by Milcu et al., (2013 p.34) listing the disciplines of all first authors of the 107 publications reviewed suggests that the research of artists is not feeding into CES knowledge and understanding, and moreover, that the multi-disciplinary views that have emerged are from the environmental sciences. This could account for unmanaged urban brownfields being latent landscapes within the CES framework. Hence, the goal of this research is to explore and examine the CES and the non-material, heuristic, and hermeneutic benefits obtained from unmanaged brownfield land in urban areas. From the literature review it is possible to identify gaps in knowledge pertaining to brownfields, the CES they provide, and gaps in research within the CES.

In the literature review perceptions of brownfields have been discussed from different academic and non-academic perspectives and perceived uses for brownfield land focusing on: biodiversity, wildlife, and conservation; urban green space and green infrastructure; recreation; and art and creative inspiration. During the research and the writing of the literature review, knowledge gaps became apparent. Brownfields have not been examined as CES environmental settings; and brownfield sites less than 0.25 hectares do not feature as significant in any field of research.

The smaller brownfield sites - less than 0.25 hectare - in our urban

environments are not discussed in literature pertaining to wildlife, conservation, OMPH PDL, and ANGSt. Sites over 0.25 hectares in size correlate positively with species diversity and diversity of vegetation structure and may contain more than one habitat type, thus having biodiversity and conservation merit (Herbst, 2003; Herbst and Herbst; 2006, Riding et al., 2010); brownfields with more than one habitat type may subsequently enhance the visitor experience, and benefits gained from access to nature and natural green space (for example, Harrison et al., 1995, Herbst, 2003, Handley et al., 2003, Herbst and Herbst, 2006). Within nature conservation, the smaller brownfield sites appear to be overlooked.

In the PhD thesis: *The importance of wastelands as urban wildlife areas – with particular reference to the cities of Leipzig and Birmingham* (Herbst, 2003), data retrieved from Birmingham City Council revealed one hundred and two brownfield sites, sixty two smaller than one hectare.

The small sites are extremely problematic and often cause social and environmental problems. They are rarely dealt with since the Council tends to put forward the larger sites for development or improvement... nobody is willing to take on responsibility for these sites, some sites are simply anomalies that may have been neglected or forgotten
(Herbst, 2003, p.85).

The National Land Use Database (NLUD) for previously developed land compiles brownfield data every few years, obtaining statistics from local authorities nationwide: number of brownfields, ownership of land, and planning status, (Homes and Communities Agency, n.d.,b). Brownfield land that has remained undeveloped for fifteen year or longer is considered as a long-term brownfield site, medium term being ten to fifteen years (English Partnerships 2007, p.5). Brownfield land may be abandoned for a significant period of time (Handley, 1996, in Alker et al., 2002, p.6). While it is acknowledged that the period of time between previous use and re-development varies (Wilson, 2012), the length of time a brownfield site may stand undeveloped, or without an acknowledged amenity use, is, by and large, unrecorded. No published data

was found specifically recording the duration of brownfield land in a state of dereliction and neglect, *frozen between long-term uses — land in limbo* (Taylor, 2008, p.1). In email correspondence with Liverpool City Council, I was informed:

We create a copy of our Landfile database each year so we can go back and check previous year's survey and information details for any particular site but checking how long a site has been classed as Brownfield for is never done by us or recorded (John Riley, Planning Officer, Liverpool City Council, personal communication, 21 May 2013).

Given that there is likely to be a large number of smaller brownfield sites in an urban environment, and that these smaller sites fall outside of the OMH PDL and Priority Habitat criteria, a gap in knowledge exists. It may be possible to ascertain how long a site is 'brownfield', yet the interim status of the site is not recorded. This raises questions about these smaller sites as follows: what do the smaller sites look like? What do they contain? Can they be accessed? Are near-by communities using them, in any way?

The live statistical datasets available in the National Land Use Database (NLUD) for previously developed, brownfield land (2012) estimates 33,600 hectares of brownfield land in the UK that is either vacant or derelict (Department for Communities and Local Government, 2012). Harrison et al., (1995) reported that unmanaged brownfields are natural green spaces within urban environments, and as such have health and well-being benefits to near-by citizens. However, much of the rhetoric around brownfield land calls for some kind of redevelopment, permanent intervention, or soft landscaping, to make these landscapes more accessible; or interpretation to increase awareness of nature and wildlife content. An overt assumption is made by decision-makers that unkempt and wild brownfield sites are in need of rearrangement and management. Such assumptions negate any innate qualities of unmanaged nature on brownfield sites and the benefits obtained from them by people, such as inspiration or aesthetic appreciation, connectedness to nature, and opportunity for unstructured recreation and play.

The UK NEA (2011) provides an evidence base for ecosystem services provision - and change - to inform decision making within the United Kingdom. Yet, within the ecosystem service framework, the CES of unmanaged urban brownfields is overlooked. Consequently, unmanaged urban brownfields – and the wildness therein - are under threat, because their benefits are not understood and taken into consideration by decision makers and developers (Kellert and Kahn, 2002, in Wooley et al., 2009, p.18). Recognising that environmental decision makers are required to make environmental 'trade-offs', to strengthen the ecosystem service approach decision makers would benefit from qualitative information relating to CES and hermeneutic landscape preferences (Church et al., 2011, p.640).

Cultural ecosystem services pertaining to unmanaged urban brownfield land is the least debated within the ecosystem service framework (MA, 2005, Church et al., 2014). Moreover, the potential of brownfield land as a CES provider is not considered at all in the UK NEA (2011) (brownfields are considered within the supporting and regulating ecosystem services (UK NEA, 2011)). This may not be surprising given that the CES is considered the hardest and most controversial ecosystem service category to assess, combined with negative perceptions of brownfield land; urban brownfields are considered - by some people - as eyesores and indicators of neighborhood decline and deprivation (for example, English Partnerships, 2006b). Brownfields do not conform to ideals of scenic beauty and, with no formal pathways, and security fencing, they can be difficult to access; as such, the idea that they can attract people on merit of CES does seem incongruent. Yet, from the literature review it is evident that brownfields provide specific biotopes valued for flora and invertebrate biodiversity (for example, OMH PDL and Priority Habitats); as such they have direct educational and ecological goods. The literature review also illustrates that people access brownfields (officially and unofficially) for a range of recreational activities, including some that could be deemed as non-conformist or anti-social. (Size, in relation to unstructured play, inspiration, and on-site interventions is not mentioned as a governing factor in the associated literature.) While it may be difficult to assess a monetary value in terms of *ad hoc* recreational activities, it is clear that unmanaged brownfield land provides

recreational opportunities; and the value and importance of brownfield land for children's recreation and unstructured play is stressed in a commissioned report for Natural England: *Children and the natural environment: experiences, influences and interventions* (Wooley, et al., 2009). Further, contact with nature has health and well-being benefits that extend to society at large (Kuo and Sullivan, 2001; Louv, 2005; Groenewegen et al., 2006; Mayer et al., 2009; Natural England, 2010; Natural England, 2012). In addition to ecological activities and unstructured recreation, professional artists create and produce work in direct response to unkempt brownfield aesthetics, signifying obtainable 'spiritual' goods: solace, fulfillment, renewal and reflection. Four of the five CES categories outlined in Chapter 16 of the UK NEA (2011) are clearly goods obtained from naturally colonized unmanaged urban brownfield sites:

- Leisure, recreation, and tourism goods
- Health goods
- Education and ecological goods
- Religious and spiritual goods

Given that contemporary artists create work within, and are inspired by, urban brownfields, it can be argued that brownfields also provide Heritage goods: landscapes with art and literary associations UK NEA (2011).

'Aesthetics' and 'inspiration' are omitted from the UK NEA (2011) CES categories, yet, included within the Millennium Assessment's (2005). The UK NEA (2011) omits aesthetics and inspiration because it is argued that they are deeply subjective, and subject to change over time, as such, they are complicated to assess, requiring a wide range of methods, both qualitative and quantitative. At the beginning of, and during the research for this PhD thesis there was a lack of evidence to allow for an assessment of aesthetics and inspiration characteristics, goods, and value; they were considered to be incommensurable and beyond the scope of the UK NEA (2011). Nonetheless, aesthetic taste was acknowledged as significant, and considered within discussions of Heritage goods. At the time of writing the literature review and

undertaking the case studies reported, research into the cultural services metaphysical categories - aesthetics, inspiration, and spiritualism - appeared to focus on only landscapes with a positive aesthetic: the Romantic, the Sublime, and the Picturesque. To only align Heritage goods to Art History and positive aesthetic debate blinkers views and ignores other - equally important - aesthetic preferences that correspond to contemporary art practice. There is little doubt that artists who create, exhibit, and publish work focusing on brownfield environments are inspired by them. Even though these landscapes lack scenic beauty, they do hold an aesthetic attraction, albeit a negative aesthetic allure. Literature pertaining to esoteric and subjective experiences of aesthetics sits predominantly in the fields of the social sciences and philosophy while the majority of research within the ecosystem service framework is undertaken within the objective sciences (Fisher et al., 2009; Church et al., 2011).

The UK NEAFO (2014), addresses the subject of aesthetics in greater – and wider – detail: art aesthetics, everyday aesthetics, nature aesthetics, and landscape aesthetics; and, extends beyond the visual to include sound, smell and touch in landscape appreciation (Kenter et al., 2014, Coates, et al., 2014). Yet, Kenter et al., (2014) acknowledge that there is little literature addressing shared aesthetic values; still, aesthetic judgements cannot be distilled into shared aesthetic values. Within the CES, to understand the aesthetics of an environmental setting of concern, discursive engagement is required to support aesthetic benefits and value *through forms of testimony and proof anchored in the perception of aesthetic qualities* (Kenter et al., 2014, p.68).

In the MA, 2005, and the UK NEA (2011) it was argued that there is a lack of empirical research and suitable quantitative models available (Millennium Assessment, 2005; Church et al., 2011):

There are knowledge gaps related to ecosystem cultural services, specifically in data collection and the uneven monitoring of change in different environmental settings. An ecosystem services approach to understanding culture-nature interactions is a relatively new perspective

and consequently many key sources of social, economic and environmental data are not designed to examine key aspects of cultural services and goods. (Church et al., 2011, in the UK NEA, p.637).

Knowledge gaps as identified by Church et al. (2011) still appear in the UK NEAFO (2014). The report *Cultural Ecosystem Services and Indicators* (Church et al., 2014, p.85) states:

...this report encompasses existing and potential contributions of individual AH [Arts and Humanities] subject areas to the filling of 'knowledge gaps' in our understanding of CES, and how AH perspectives and approaches can inform future research by raising fundamental issues. At the same time, the AH domain also embraces practice and action, including mapping projects, exhibitions, documentary films and site based performance, as they engage directly with the physical world and its meanings. This report pays due regard to the substantial body of policy-relevant literature and the evidence already available of hands-on, intellectual-cum-practical collaboration between AH researchers and those who plan for and manage the environmental settings that deliver CES. These case studies indicate that AH researchers work most effectively with specific examples of places, landscapes and ecosystems, as well as with their individual ingredients.

The case studies presenting art approaches in the UK NEAFO (2014) were not designed to explore the CES; they were environmental art projects taking place within environmental settings that deliver CES. Retrospectively, the artwork has become an illustration of how art (artists) can inform future CES research. The two art case study examples indicate that artists work *most effectively with specific examples of places, landscapes and ecosystems* (Church et al., 2014, p.85).

The research reported in this thesis aims to address the gaps identified in this literature review. Brownfields as CES environmental settings have been

hitherto un-examined. An interdisciplinary art and sciences approach will explore the CES associated with unmanaged urban brownfields to shed light on these sites as CES environmental settings; contributing to knowledge and understanding of CES, and in particular those associated with unmanaged brownfields in urban areas.

CHAPTER 3 METHODOLOGY

3.1. Introduction

Interdisciplinary research requires the integration of investigative techniques, in this case from the arts and sciences. The epistemological stance in relation to methods used throughout this research can be illustrated as epistemology, theoretical perspectives, methodology, and methods (Gray, 2009) (Fig. 3-1).

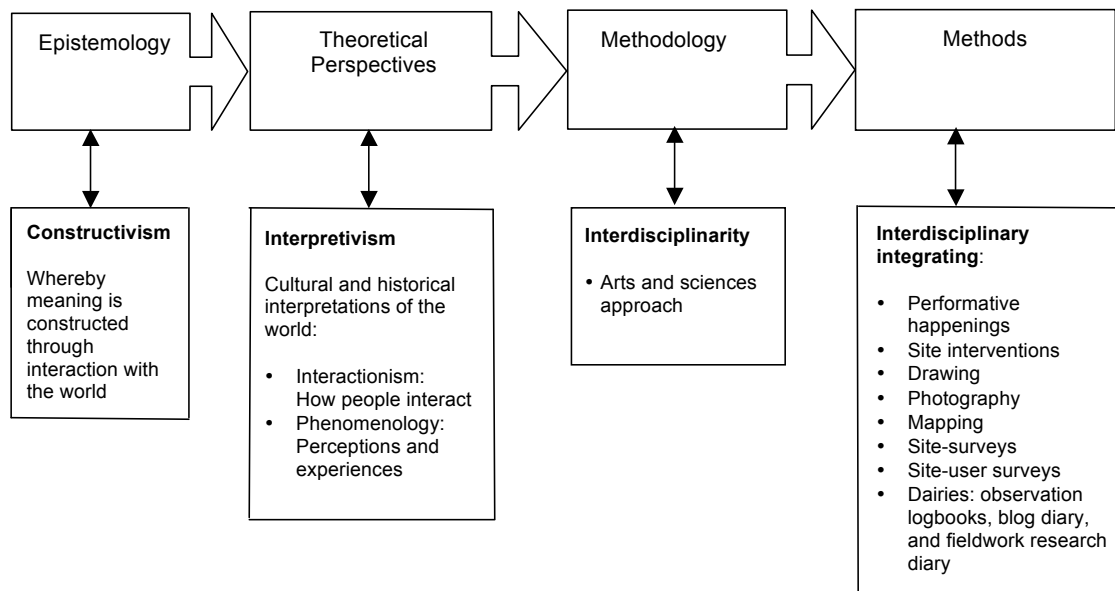


Fig. 3-1: Epistemology, theoretical perspectives, methodology, and methods model

3:1-i. Epistemology: Constructivism

The majority of ecosystem services valuations use a positivist epistemology and quantitative methods (MA, 2005; Luck, 2009; UK NEA, 2011). However, as demonstrated in the literature review (Chapter 2:4), a positivist epistemological stance is not always a comprehensive means for assessing and analysing CES, particularly when assessing more subjective measures associated with cultural value (Church et al., 2011).

The epistemological stance throughout the research reported in this thesis is constructivism. Constructivism is the process whereby knowledge and meaning are constructed through interaction with the world: grounded in sentient experience, and action (Gray, 2009). A constructivism stance acknowledges that different people will have different perspectives and different ways of perceiving the world around them, for instance, social and political as well as philosophical, experimental, and contingent constructs (Demeritt, 2002). Our standing in the world, acquired knowledge, cultural background, and instincts, affect how we perceive and value nature (Demeritt, 2002; Parsons, 2008). Consequently, unmanaged urban brownfields are viewed and valued in different ways by different people. For the purpose of investigating the CES – inclusive of aesthetics - of unmanaged urban brownfield sites, constructivism is highly appropriate.

3:1-ii. Theoretical perspective: interpretivism

The research reported in this thesis draws on aspects of interpretivism including qualitative research concerned with multiple and different realities (Gray, 2009), to explore the subjective, qualitative experiences and appreciations of brownfield sites. Interpretivism looks for *culturally derived and historically situated interpretations of the social world* (Crotty, 1998, in Gary, 2009, p.21). Some researchers argue that the best way to investigate interpretations of the world about us is within the world about us with the researcher immersed within the cultures, environments, or social milieu under investigation (Krauss, 2005). Through a process of *in-situ* investigation - as the researcher becomes ever more familiar with the study - 'how' and 'why' questions will emerge and change, and different interpretations will emerge (Krauss, 2005). By physically placing myself in unmanaged urban brownfields I have been able to explore and experience, first hand, phenomena and milieu of these spaces: the nature, the detritus, the dereliction, and the ruins but also the barriers that can deter access; and how people are utilizing sites.

3:2. Methodology: Interdisciplinary

Interdisciplinarity forms critical insight embodied through collaborations, research, and practice across traditional discipline boundaries (Kester, 2004). In Appendix A1: Preamble. Journeying into Brownfields through Art and Developing an Interdisciplinary Approach, the chronological journey of my work in this field of study is described. To include the full trajectory in this section would break continuity of the text. In short, to summarize, in 2006 I began a durational, socially engaging art project exploring urban brownfields in Liverpool. The project, *liverpool wastelands*, was developed in collaboration with a botanist, Dr Alicia Prowse. We had a common interest in re-wilding brownfields, although, our knowledge and investigative methods were from different disciplines: the subjective arts and the objective sciences. Working in collaboration developed from multidisciplinary investigations - *where individuals or groups working in different disciplines address the same issue* (James et al., 2009 p.66) - into interdisciplinary approaches whereby *an individual or a group work at the boundaries of traditional disciplines and often in the gaps that emerge between the disciplines* (James et al., 2009 p.66). Researching at the boundaries of traditional disciplines to generate knowledge that is pertinent to more than one discipline requires research methods from more than one discipline. Often, what lies outside a (familiar) paradigm can be an enigma, and what lies between the paradigms could be described as the edgelands of learning and the liminal interstice of knowledge. Over time our traditional art and science methods hybridized. Our work took a performative and social turn as our approach straddled the interdisciplinary space between art and science. Our actions and methods of collecting data became performative happenings, a term I coined for a method, which is described later in this chapter. Locating the methodology in a research practice that is an art and sciences hybrid is not straightforward. This space that straddles disciplines – or bolts them together with a hyphen, for example eco-art - is what feminist artist, writer, and filmmaker Trinh T. Minh-ha calls the hyphen space (Trinh, in Hope 2011). The hyphen space lies between clearly defined disciplines and takes the researcher into the space of *the Other* (Henri Lefebvre, 1980 in Soja, 1996, p.53); a space in which to uncover alternative, and multiple truths, insights and interpretations into the phenomena under investigation (Soja, 1996; Sterling, 2003; Hope,

2011). Interdisciplinary research resists a single discipline methodology and this can lead to *methodological trickiness* (Kershaw, 2009, p.5). The challenge is to articulate methodologies and methods adapted or appropriated from other disciplines, which, as a result of interdisciplinarity, no longer strictly conform to any single discipline.

3:2-i. Process led

All three fieldwork case studies for this research have been process led, interdisciplinary investigations that included on-site (place based) and public durational performative actions, which can be seen as rooted in the canon of Western art. The artist, Gustav Metzger, pioneered process led art (Metzger, 1996; Brougher et al., 1999; Cole; 1999, Kemp, 1999). An introduction to Metzger is relevant in order to begin to understand the paradigm shift in modern art that began in the late 1950s. Metzger's work and his manifestos (*Auto-Destructive Art*, 1959; *Manifesto Auto-Destructive Art*, 1960; *Auto-Destructive Art Machine Art Auto Creative Art*, 1961; *Manifesto World*, 1962; and *On Random Activity in Material/Transforming Works of Art*, 1964 (Metzger, 1996)) questioned the capitalist art market and heralded a shift in art practice from 'object' production - the visual artefact: *framed and pedestal art* (Lipard, 1973, in Lushetich, 2011, p.2) to process led and witnessed art actions. The first manifesto *Auto-Destructive Art* declared: *Auto-destructive art is primarily a form of public art for industrial societies...is a total unity of idea, site, form, colour, method, and timing of the disintegrative process...The artist may collaborate with scientists...Auto-destructive [art has] a life time varying from a few moments to twenty years...*(Metzger, 1996, p.59). Metzger, followed by George Maciunas, founder of Fluxus (an international network of artists, designers and composers initiated in 1962) rebelled against the 'object' and art market production (Fig. 3-2). The pioneering work of Metzger, Fluxus, and the work of Allan Kaprow (blurring of art and life whereby the artist forgets his professional identity so art might lose itself in the everyday (Kaprow, 2003)), created inter-subjective experiences outside of the gallery environment: art happenings, performance-based actions, and transdisciplinary social and political events (Kester, 2004) that laid the foundation for interdisciplinary and

process-based investigative artwork and actions in the public realm (Kemp, 1999).

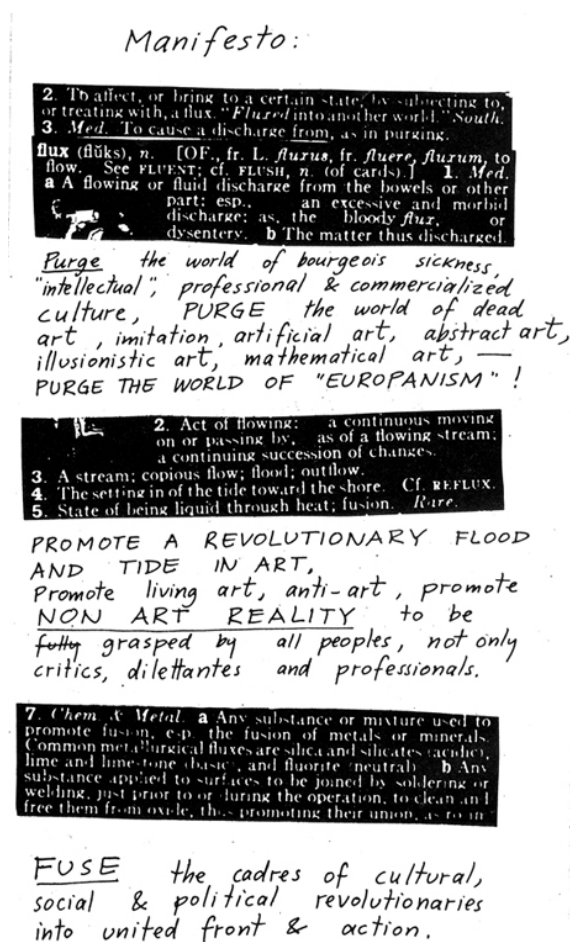


Fig. 3-2: Fluxus Manifesto 1, 1963 (George Maciunas Foundation Inc., nd)

Many artists subsequently parted from what was a tradition of object making (Kester, 2004). Art as process ceases to be a noun: a product, and becomes a verb: an action (Kemp, 1996). British artist and founding member of the Artist Placement Group (APG), John Latham, has argued that artists with an understanding of art as process, who work across disciplines, are skilled in *imaginative and durational thinking, that can produce a transformation in the viewer's consciousness of the world* (Latham, in Kester, 2004, p.62). The UK NEAFO (2014) echoes this sentiment. In reference to the interdisciplinary, collaborative, and durational eco-art work of Reiko Goto's and Tim Collin, Coates et al., (2014, p.58) state: *dynamic creative practices can transform our sense of the world and our place within it.*

3.2-ii. Eco-art

Eco-art - ecological arts practice - can be traced back to the 1960s (Haley, 2009). As defined by Beth Carruthers (Carruthers, 2006a, p.3) eco-art is: *a broad field of interdisciplinary arts practice, distinguished... by its specific focus on world sensitive ideologies and methodologies. EcoART practice seeks to Restore, Protect and Preserve the world for its own sake, and to mediate human/world relations to this end.* In his PhD thesis examining ecological arts practice, Haley (Haley, 2009, p.35) lists the originators of eco-art; pioneers including: Helen and Newton Harrison (The Harrisons), Joseph Beuys, Mierle Laderman Ukeles, Agnes Denes, and Hamish Fulton. Reiko Goto and Tim Collin are in *the second wave: standing on the shoulders of those who went before*. The pioneers and the second wave of eco-artists created work within the environment. Though not all, most can be considered public art – the exceptions being work in non-accessible, non-public places. To delve into public art would be to deviate from the focus of this research; it is a broad topic that embraces all art in public places. The genre of public art that is relevant to the research reported in this thesis is eco-art and socially engaged art.

As an interdisciplinary art and ecology practice, and a genre within art that bolts together - with a hyphen - art and ecology, eco-art needs to be acknowledged as significant and relevant to approaches and methods used in the fieldwork case studies reported. Techniques from afore mentioned artists have been appropriated within the fieldwork case studies. For example: mapping and conversation (The Harrisons); performativity, social sculpture, and art for all people and not just professionals (Joseph Beuys), performance in everyday situations and connecting with people encountered (Mierle Laderman Ukeles); ecological interventions and agro-installations (Agnes Denes); walking and poetry (Hamish Fulton); and collaboration with ecologists and scientists (Reiko Goto and Tim Collin). Eco-art is often complex and multi layered: in collaboration, in public, durational, social, and interdisciplinary work that tackles ecological issues (for example: Matilsky, 1992; Spaid, 2002; Kwon, 2004; Strelow and David, 2004; Haley, 2009; Weintraub, 2012). To explicate the complex interdisciplinary approaches undertaken by artists working within the hyphen space of art and ecology, curator and contemporary art author,

Weintraub (2012) devised a schematic matrix linking the schematics of ecological art approaches, schematics of art strategies, schematics of art genres, and schematics of ecological genres. For example, in Fig. 3-3, the schematic matrix of Helen and Newton Harrison (The Harrisons) is illustrated. The Harrisons are often called the ‘grandparents’ of eco-art (Carruthers, 2006a, p.6).

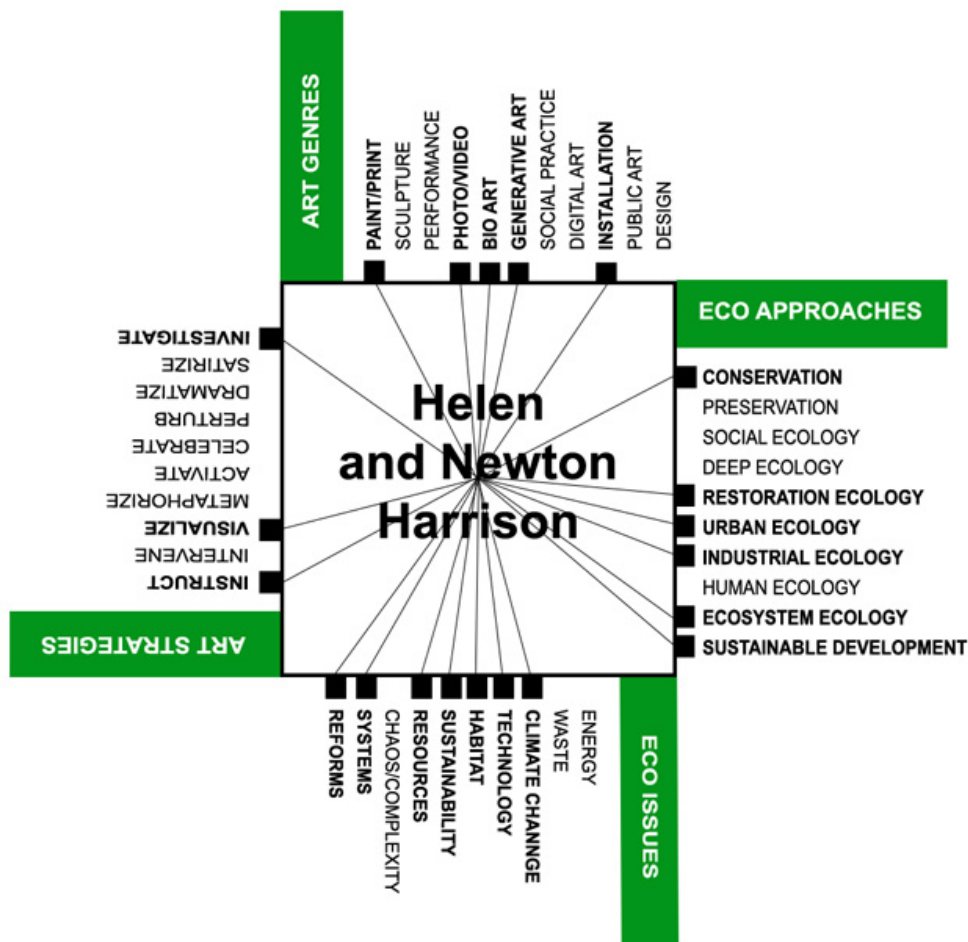


Fig. 3-3: Helen and Newton Harrison, schematic matrix of practice (Weintraub, 2012, p.74)

In addition to interdisciplinary art and ecology approaches, eco-art practice has three modes of engagement; education: a focus on learning and sharing knowledge about nature, habitats, and ecosystems; community: working with others in collaboration and making work accessible to local communities; and conversation: conversations that take place in the work - in collaboration, political and social debates, and wider human and non-human voices that

nurture relationships with people and nature. Of these three modes, conversation lies at the centre of the art making and sharing of knowledge (Carruthers, 2006b). The Harrisons refer to the conversations between collaborators and participants, and discourse across disciplinary boundaries, as a 'conversational drift' (Kester, 2004, Heim, 2005; Haley, 2009; Hope, 2011). The 'conversational drift' is the space where inter-subjectivity occurs: *an empathetic sharing of divergent, contradictory and perhaps antagonistic meanings of the same experience* (Hope, 2011, p.178). Kester (2004, p.64) describes this as the unanticipated forms of knowledge generated by open-ended dialogue.

3:2-iii. The social turn

Since the seventies, process led art and eco-art has given rise to performative social artworks, actions, environmental interventions, and socio political work broadly known as social art (Heim, 2005, p.200). Social art, though rooted in the seminal work of Kaprow (Helguera, 2011), extends beyond the witnessing of an action of art making encompassing issues beyond just the ecological. In her seminal publication, *Mapping the Terrain New Genre Public Art* (Lacy, 1995) Lacy documents the shift in public art from object to a more social practice which engages people and addresses issues directly relevant to their lives – citing Kaprow as one of the most significant artists in pioneering profound influences connecting art to life and the lived in world [the everyday] (Lacy, 1995, p.247). Lacy writes:

As artists begin to analyse social situations through their art, they assume, for themselves skills more commonly associated with social scientists, investigative journalists, and philosophers... entirely new strategies must be learned: how to collaborate, how to develop multi layered and specific audiences, how to cross over with other disciplines, how to choose sites that resonate with public meaning, and how to clarify visual and process symbolism for people who are not educated in art (Lacy, 1995, pp.176-177).

In *Mapping the Terrain New Genre Public Art*, Lacy sets out the foundations of a new kind of public art which, is public, durational, and performative, with social intervention and interactive participation. A new trajectory was being forged. Bishop (2006, p.179), describes this shift in contemporary art practice as the 'Social Turn': *artists using social situations to produce dematerialized, antimarket, politically engaged projects that... blur art and life.*

The 'social turn' in art provides the contexts and places in which people can share a broad spectrum of knowledge and experience through conversations and active participation (Kester, 2004; Heim, 2005). This field of art practice is now critiqued as socially engaged art (Bishop, 2006 and 2012; Froggett et al., 2011; Helguera, 2011). Social interaction is inseparable from socially engaged art (SEA) and SEA events create situations where people can talk, be listened to, and reason together. While SEA can create an experience that includes nature and human-nature relations (Heim, 2005, p.213), it extends beyond eco-art approaches; it is located between art and sociology and attaches itself to areas of inquiry, for example, anthropology, normally researched within science disciplines (Helguera, 2011). To enable human interactions within social contexts to activate situations for social intercourse SEA artists *insert themselves into the most unexpected social environments in ways that breakaway from disciplinary boundaries, hoping to discover something in the process* (Helguera, 2011, p.34). Rather than performing an action to be seen or watched, SEA requires making an event that others will feel free to participate in. However, performance is embedded in SEA. It contains a relationship to the spectacle – aesthetics - and can be entertaining: playful as well as meaningful engagement. How it differs from performance art or theatrical performance is that the experience is a blurring of art and life whereby actions, conversations, and encounters merge and an unrehearsed exchange takes place (Helguera, 2011).

To discover non-material benefits derived from unmanaged nature and brownfield ecosystems, a performative SEA approach has been used in all of the fieldwork case studies reported. Each fieldwork case study has been performed in publically accessible environmental settings. The action of

collecting data has been loosely choreographed as performative events to creatively engage with the environment and the people who use the environment. The performative spectacle elicits playful interactions that inspire people to talk about their relationship with the place and nature.

3:2-iv. The performative turn

Disciplinary boundaries are blurring, for example, the 'performative turn' in the social sciences gave rise to Performative Social Science (PSS). PSS is a *methodological basis to engage and unite scholars across disciplines and, in turn, connect researchers' endeavours with communities and stakeholders* (Jones, 2012, p.4). Performative research practices within the social sciences are in a nascent stage (Gergen and Gergen, 2010). However, the migrating of art into the social sciences has gained momentum (Jones, 2006, 2012; Gergen & Jones, 2008; Guiney Yallop et al., 2008). Jones (2012, p.3) suggests *Relational Aesthetics* (Bourriaud, 2002) as a starting point for PSS because it offered qualitative researchers a contemporary framework to think about aesthetics and the use of art across disciplinary boundaries. The benefits of non-representational, post-positivist, and indeed subjective and creative methods within the social sciences attempt to understand the world from different vantage points through embracing art methods as 'tools' in PSS (for example, Gergen & Jones, 2008; Guiney Yallop et al., 2008; Roberts, 2008; Jones, 2012).

PSS involves utilizing different methods and forms of artistic performance techniques in the execution of the scientific project (Gergen and Gergen, 2010, p.1). *Photography, music, dance, poetry, video installations, dramatic monologues and theatrical performances are now in the researcher's toolbox, under the umbrella paradigm of Performative Social Science* (Jones, 2012, p.2). Although a relatively new development in the social sciences, PSS is unlocking new ways of researching, dissemination, and reflection (Roberts, 2008) connecting with the public – the subject - and triggering social *engagements that are contextual, kinaesthetic and sensual: that live* (Halford & Knowles quoted in Jones 2005, p.4).

There may be similarities between PSS and SEA; they are both interdisciplinary fusions of the arts and the sciences. Yet, they do differ. Each has a specific context and canon from which it arose. SEA practitioners and PSS researchers stand on the shoulders of different giants. To expand knowledge and tap into new ways of seeing and doing, the scientist is looking to the arts for 'tools' (Roberts, 2008); and the artist is looking to the sciences for methods (Froggett et al., 2011).

3:2-v. 'Planning', 'Acting', 'Observing', and 'Reflecting'

Appropriating existing methodologies appears to be an accepted tradition for artists (Froggett et al., 2011; Bishop, 2012), and social scientists (Jones, 2006, 2012; Gergen & Jones, 2008; Froggett et al., 2011). As a researcher coming from an arts background, turning to the social sciences and Action Research (AR) methodology chimed with my interdisciplinary critical inquiry as a continuous process of investigation. More, with an AR approach, interdisciplinary research can be analysed and validated.

The process of AR is a systemic, collaborative, self-reflexive, critical, inquiry consisting of four major phases: 'planning', 'action', reflecting', and 'observing' (Masters, 1995). These phases can occur in any order, and can overlap (Fig. 3-4).

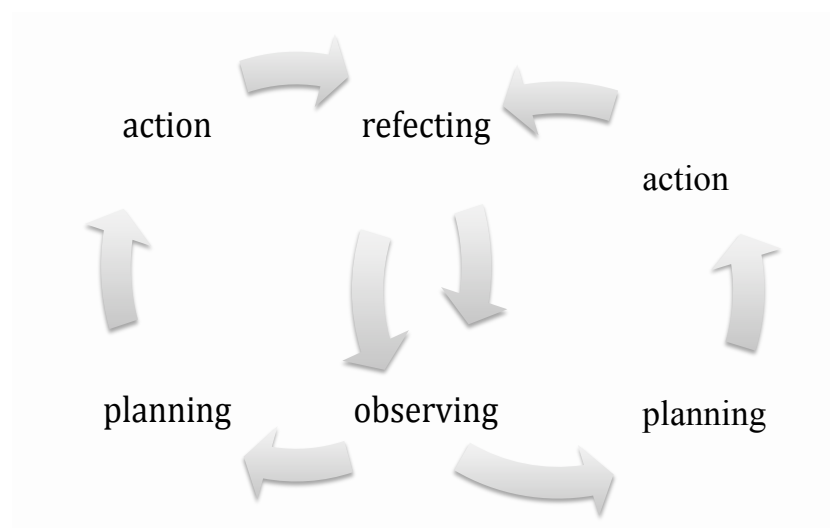


Fig. 3-4: Action Research flow of action, reflection, observation, and planning

Migrating AR from social science to articulate thinking that informs actions of inquiry as case study innovations challenges the boundaries of disciplines; and, appropriating the cyclical phases of action research resonate with the impulses of artists who create durational work in public spaces with a degree of social engagement (Yasuda, 2009). The fieldwork case studies reported in this thesis are all durational and performative. The specific methods used are described later in this chapter: Methods.

Undertaking the research for this thesis from an epistemological stance of constructivism - interacting in the world – required placing myself into different environmental settings; the researcher immersed in the site of study and interacting with the environment, the nature, and with people. AR cyclical processes seemed appropriate to making sense of the investigations as a means to analyse the fieldwork and validate the research. AR can be self-validating; the researcher is engaged in, and committed to, a continuous process of investigation, and, typically, not being satisfied with one cycle of the process, continuously repeats the process in order to validate new knowledge (Gray 2009).

For the fieldwork case studies reported, ‘observing’ and ‘reflecting’ were the first steps into each fieldwork study. ‘Observing’ and ‘reflecting’ stimulated imagination, triggering ideas for ‘action’. Ideas were considered before ‘planning’ an appropriate ‘action’ (appropriate being ethical, and specific to the research study). For the fieldwork case studies, ‘planning’ preceded ‘action’. The ‘planning’ questions: the why, the what, the where, the when, the how, and with whom (Gray, 2009) were considered. The ‘action’ was then designed to stimulate non-prescriptive social engagement. As well as social engagement, each ‘action’ – being on site - involved ‘observation’. The ‘observation’ embraced all of the senses: viewing, touching, smelling, tasting, and listening to record the environmental setting and CES. Within this process was the active listening to dialogue through conversations with people interacting within the study sites as well as with collaborative partners, assistants, and peers. ‘Observation’ is also a method for ‘reflection’. Experiencing a situation with all senses as a visceral response, and ‘reflecting’ upon the experiential can lead to

further 'action' investigations, creating a circuit of activity (Gray, 2009).

The major AR phases: 'planning', 'acting', 'observing', and 'reflecting', run through each case study. Each of the methods used to investigate CES associated with unmanaged urban brownfield sites are described in 3:3. Methods. AR phases inherent within the methods will be clarified, for example, observation as drawing. At times, phases do overlap, for example 'action' and 'observation' occur simultaneously in site surveys conducted as performative happenings.

3:2-v. Collaboration

Collaboration reveals different perspectives of the same study and *seeks to uncover 'truths' (instead of one universal truth) as they are experienced and represented through the context-specific discourses* (Judith Halberstam quoted in Holliday, 2000, in Hope, 2011, p.62). Three of the four sites explored in the three fieldwork case studies were investigated as collaborative inquiries. Case Study 2b: Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, in Salford, was investigated as a lone researcher. Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES and Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield were developed in collaboration with botanist, Dr Alicia Prowse.

Dr Prowse collaborated in Case Study 1 during the initial mapping of the brownfield environment, during habitat survey processes – in particular the recording of plant species, and in reflective conversations that led to developing a method to map the environmental setting as a human habitat. This collaborative process is described in more detail in 3:3. Methods and in the case studies reported: Chapter 4:2 to 4:4. Dr Prowse was a collaborative partner throughout Case Study 3, in the performative investigation of the brownfield and phases from AR: reflection, observation, planning, and action. Details of Case Study 3 are also reported: Chapter 4:4.

In collaboration, Dr Prowse and I are both the participants in the research

processes and the researchers. We are the subjects as well as the observers. We experience the situation of the brownfield environment, because we are there in it. We make meaning of our individual - subjective - experiences through conversations during which we talk at length about how we see and how we feel about things encountered. Through dialogue, emotive, subjective, and objective responses to the site, encounters and observations are externalized and interrogated. As a collaborative partner, Dr Prowse questioned, challenged, and played a role of 'devil's advocate': divergence and convergence that form an important part of AR validation processes (Bray, 2000). Eco-artists Helen and Newton Harrison refer to the discourse between collaborators across disciplinary boundaries as a 'conversational drift' (Kester, 2004). Through a conversational drift inter-subjectivity occurs: *an empathetic sharing of divergent, contradictory and perhaps antagonistic meanings of the same experience* (Hope, 2011, p.178) and new ways of seeing and perceiving the brownfields as a CES environmental settings are formulated.

Paid interns were also part of the teams who undertook the investigations in Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES, and Case Study 2a: Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, in Wiesbaden. The interns – a recent Fine Art graduate (Case Study 1), a geography undergraduate student (Case Study 1), and a landscape architecture undergraduate student (Case Study 2a) - assisted in the research by helping to collect data. However, participating in the act of collecting data as a performative happening, the interns too were participants in the research process. They were in the study sites, experiencing the environment, observing, partaking in conversations, and reflecting. Through processes of action, observation, and reflection, the interns developed a deeper engagement in the study and their involvement shifted from assistant to collaborative participant, sharing observations and reflections through dialogue and discussions (Helguera, 2011). Conversations with the interns shed light on their ways of seeing and perceiving the CES of the environmental settings investigated. New insights were discovered, and acted upon, for example, feelings of trepidation in specific sections of the brownfield canal corridor in Case Study 1. In response, new action investigations were developed

triggering a circuit of action, planning, reflection, and observation. Each intern's contribution to the case studies is reported in Chapter 4: Fieldwork Case Studies.

3:3. Methods

To investigate CES associated with unmanaged urban brownfield sites, three interdisciplinary, durational, fieldwork case studies were undertaken – in four environmental settings:

1. Examining a Linear Brownfield > 0.25ha and Locating CES, was conducted over an nine-month period (January 2009 to September 2009);
2. Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. This case study was conducted in two study sites in different locations – one in Wiesbaden, Germany (June to August 2010) and the other in Salford, England (April to November 2011);
3. Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha, was conducted over twelve months (February 2011 to February 2012).

All were interdisciplinary investigations integrating techniques and approaches from the arts and sciences - over time - to discover new information and shared experiences exploring people's connections with the environmental settings and unmanaged nature. The methods used to investigate each study site are outlined in Table 3.1. Each method is described in detail in this chapter.

Table 3-1: Case studies and methods used

| Methods | Case Study 1 Examining a Linear Brownfield > 0.25ha and Locating CES | Case Study 2a Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. Nerotal Park | Case Study 2b Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. University of Salford | Case Study 3 Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha |
|---|---|--|---|--|
| Performative happenings | / | / | / | / |
| Site interventions | | / | / | |
| Drawing | / | / | / | |
| Photography | / | / | / | / |
| Mapping | / | / | / | / |
| Site-surveys | / | / | / | / |
| Site-user surveys: a quantitative approach | / | | | |
| On-site observation logbook diary | / | / | / | |
| Blog diary | | | | / |
| Fieldwork research diary | | | / | |

3:3-i. Performative happenings

The ‘performative happening’ is a term I devised to articulate an investigative process that is partially performative, partially data collection, and partially art event. The performative *includes the processes and ‘tools’ from all of the arts and humanities and social sciences* (Roberts, 2008, p.55). Performativity is not a theatrical performance, it is a technique, or ‘tool’ used to interrupt everyday situations to produce a transformative moment that can alter how we view our surroundings (Warren, 2009, p.183). It is simultaneously an investigation and a dissemination of data (Jones, 2012). Scientists collecting (not disseminating or sharing) data in the field, will, more often than not, simply get the task done (Waterton, 2003); observing and recording to collect data relating to a subject already decided (Jones, 2012). Social science researchers Halford & Knowles (in Jones, 2012, p4) describe such data collecting as ‘mechanical’. The mechanics of, for example, counting people and writing down actions observed, or mapping an environment through photographs and drawings have been fundamental methods used to gather data about CES associated with unmanaged urban brownfields, and recording brownfields as environmental settings (these methods are described later in this chapter). However, by making the action of data collection performative the investigation is expanded. Through expanding the process of investigation a channel for communication is

opened with the community (CES beneficiaries) being 'observed'. Encounters and conversations with people become integrated within the research and the voices of the CES beneficiaries are heard and re-told. Although 'performative', the research method used to collect data is neither grounded in social science (PSS) nor performance (for example, Pearson, 2007 and 2010; Riley and Hunter, 2009). The method used in the research reported is rooted in the canon of modern art: process art, Fluxus, and Happenings.

A Happening is an art event often experienced in non-art venues - in the streets or in natural surroundings - that simply happens with no separation between audience and performance ('action'). A Happening is open ended and fluid with audience or visitors commingled in some way in the event (Kaprow, 2003). Art practices rooted in Happenings developed through *New Genre Public Art* (Lacy, 1996), SEA (Heim, 2005), and contemporary public art: *The New Rules of Engagement* (Doherty, 2013)). Contemporary artists facilitating and performing site specific and participatory activities recall and update the era of Fluxus and Happenings (Patrick, 2011, p.66).

Site and context specific actions can be choreographed, but can also be everyday actions such as reading or walking, or more frenetic actions, for example, running and jumping. The actions performed in the fieldwork case studies reported include walking through the environmental settings and reading - plant, bird, and insect identification books (for example, Hubbard, 1984; Chinery, 1986; Holden and Cleeves, 2006; Rose, 2006). They also include data collection: filling out survey sheets, measuring, writing, drawing, and photographing. The action of data collection 'happens'. The action of data collection is expanded through performativity – the performative happening. People encounter the performative happening and participation through conversations happens.

The performative happening is a convergence of methods. It is interdisciplinary. The performative happening is a durational process that makes visible the research as it happens and brings the voices of others' into the research process. Kemp (1999, p.36) argues that the most radical use of process in art

is to make visible the actual process as it pursues its course.

The challenge for the research reported in the fieldwork case studies was to make the process stand out in the environmental setting in a manner that would attract intrigue and spark meaningful conversations and interactions in relation to the research questions – and not lure people into becoming an audience of a theatrical event. The intention is to gently interrupt the everyday situations of the environmental setting and produce a socializing effect: engagement through conversation, interaction, and participation, in order to both gather and disseminate information. Locating aesthetic in the action: what is done; and an aesthetic look in relation to the context of the case study questions: how we look and how that look connects the people who encounter us to the subject of the investigation; and an overall aesthetic in relation to the situation: how the visual appearance relates to the environmental setting, are all critical. The aim is to create a focal point, a spectacle that will draw people in and generate interactivity that has the potential to increase understanding in relation to the research questions. This requires planning. With an AR approach, observation, reflection, and planning are necessary to design a performative happening that is pertinent to the investigation and the specific site (or place-based research, for example, Church et al., 2014) of inquiry and the research questions:

1. Examining a Linear Brownfield > 0.25ha and Locating CES (January – September, 2009). The brownfield environmental setting was a 6.5 km non-navigable section of the Leeds Liverpool Canal from Sefton to Liverpool, (Fig. 4-2). (I was commissioned by The Liverpool Biennial to explore this stretch of the canal within their nine-month creative programme: *Art for Places, Urbanism 09*, during which seven international artists were commissioned to create new, interactive artwork exploring the regenerative potential of this stretch of the canal).

The research aim of Case Study 1 was to locate tangible CES, survey and record the environmental setting and, gain insights about perceptions of place – sense of place - through conversations with people encountered along this section of the canal. After six preliminary walks with Dr Prowse

(including one walk with the Liverpool Biennial curatorial team) along the entire length of the brownfield corridor, observing, and making notes, and an initial mapping exercise (described in Chapter 4:2), followed by reflecting on observations and encounters, the performative happening was designed. A team - an ensemble - would conduct the investigative research along the canal. To create a performative aesthetic, a uniform/costume of brown warehouse overall coats with *wild and productive* embroidered in green on the back was chosen. The phrase *wild and productive* alludes to unmanaged nature being both wild and productive as an ES provider. From an onlookers' perspective it could have other meanings, for example, the team could be 'wild' and 'productive', or the canal corridor could be wild, and productive. Embroidered in green and standing out on the overall, it was a visual metaphor chosen to spark conversations about the brownfield corridor (Fig. 3-5).



Fig. 3-5. The wild and productive warehouse overall coat, March 2009

All members of the team were tasked with recording the environmental setting and tangible CES observed. The team walked the canal corridor twice a week from March through to September 2009. Each exploratory walk (from a canal entrance point, along the canal, and back to the starting

entrance point) would take approximately eight hours. The performative happening explorations began mid-morning and concluded early evening. Early evening appeared to be the best time to observe teenager and after school activities along the canal. For safety reasons, no investigation was conducted alone, and no investigation carried on into dusk. The canal was unlit. The methods used to record observations and experienced situations – described later in this chapter - required additional materials: cameras, observation logbooks, drawing equipment, survey sheets, and nature identification books. To complete the performative happening aesthetic, a bespoke cart was built to carry all necessary paraphernalia: a portable studio, completed with umbrella should it rain while out. Bespoke and designed to pass through the ‘A’ frame barriers, the portable studio had an unusual, eye-catching, shape (Fig. 3-6). It was gloss painted in green to match the embroidered text. The umbrella was also green.



Fig. 3-6: Portable studio cart passing through ‘A’ frame barrier and set up on the canal corridor with umbrella up, June 2009

What the team does, for example, site surveys and drawings, and what the team looks like as an ensemble of a performative happening, is designed to spark curiosity and generate encounters and conversations which can lead to new and ‘unseen’ discoveries that can be incorporated into the research to expand understandings of CES and CES benefits associated with unmanaged urban brownfields.

2. Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds stepped outside of the brownfield in order to reach a wider demographic and discover more about people's perceptions of, and reactions to, unmanaged nature and so called 'weeds'. Reflecting on the canal corridor experiences and findings, this case study, in two different locations, involved site interventions of letting lawns grow and re-wilden in order to observe people's reactions to, and interactions with, unmanaged nature. These eco-art interventions were designed to be more socially interactive and included equipment for the public to use and investigate the nature in the lawns, including: pooters, sweep nets, petri dishes, microscopes, lenses, measuring equipment, and quadrats. Consequently, the eco-art interventions - described as a method in more detail in the following section - had an altogether more scientific aesthetic. The performative happenings within the site interventions were designed to enhance the aesthetic and promote engagement – conversations - about the re-wilding lawns, in particular, people's reactions to the shift in landscape aesthetics and the changes experienced in CES goods and practices. Having reflected upon the *wild and productive* performative happening and the level of engagement that process generated, a similar approach was taken. Again a portable studio cart was built (Fig. 4-15). The brown warehouse overalls were replaced with white and green lab coats and white aprons to reflect the more scientific feel of the site interventions. The text embroidered on the garments - in green thread on the white, and white thread on the green - read either *alternative views* or *grass is not green*. (Fig. 3-7) The text posed metaphorical questions that, if discussed, could shed light on the investigation.



Fig. 3-7: White lab coat: *Alternative Views*, July 2010; green lab coat: *Grass is not Green* and white apron: *Alternative Views*, August 2010

The ensemble on the first of the study sites for this fieldwork case study investigation – Wiesbaden, Germany (June – August 2010) - was a team of two, a paid landscape architecture student intern and me, although others could and did participate and some donned the spare coats (Fig. 3-7). The team's 'look' was completed with white sun hats, a practical addition for researching outside in heat and in direct sunlight (Fig. 3-7 and 4-25). In the second study site, Salford, England (April – November 2011), I was the lone researcher; the lone performer. I elected to wear only one type of lab coat: the green with *grass is not green* embroidered on the back. I did not interchange garments. I wanted conversations to focus on ecology and urban nature. Both studies are reported in Chapter 4:3 and 4:4.

3. Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha was an investigation to shed light on whether or not small brownfields void of scenic beauty could be CES environmental settings. Over the course of a year (February 2011 – February 2012), Dr Prowse and I explored a small, un-scenic brownfield site as a collaborative inquiry. We took the site to be our brownfield garden. The case study investigations and site context are reported in Chapter 4:5. The performative happening for this investigation was altogether more subtle, yet, at the same time, somehow more absurd (Fig. 4-40). To explicate the site as our garden we brought deckchairs into the brownfield. The deckchairs were our focal point and the place where we sat to talk, discuss our observations, share our experiences, and relax. They were not bespoke designed deckchairs; they were our own personal deckchairs. They were traditional in style: wooden frames with slung canvass. They had a nostalgic look, but were contemporary, designer, Penguin Classic deckchairs. Using these deckchairs transformed the site into 'our' brownfield garden. Having deckchairs in an un-scenic brownfield site created an incongruous look and sparked conversations. The semiotic juxtaposition that gave rise to an absurd looking situation negated the need for performance wear. Moreover, by dressing normally in casual everyday attire the distinction between art and life, reality and performance, was blurred.

The performative happenings enabled chance encounters and un-solicited conversations with whomsoever happened to be around. At no point did any member of the team elicit a conversation with members of the public. People approached us, of their own volition, to ask what we were doing. This shifts the role of the researcher from the one asking the questions to the one being asked the questions. The passer by, the observer of *us*, becomes the initiator of dialogic interaction. As such, that person leads the conversation, thereupon, the balance of power shifts. By-and-large, the person requesting information – from us - has the time and desire to find out more and exchange knowledge and information in relation to our inquiry and their personal experiences of the environment. This opens up the possibility for a long and relaxed conversation about the environmental setting and CES goods, practices, and benefits. The

participants express their views and knowledge and can, through the process of conversation, review their locale.

Performative happenings enable non-didactic conversation to happen. Free flowing conversations allow for the unanticipated to emerge, allowing the researcher to explore the unseen social and environmental connections and *listen into existence* others' perspectives and knowledge (Heim, 2005, p 187). All of the fieldwork case study performative happenings were designed to make visible the processes of data collection and gently interrupt the environmental settings to produce a socializing effect; and engagement and conversations generate and disseminate data.

3:3-ii. Site interventions

Only one of the fieldwork case studies involved site interventions, Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. Reflecting on observations and conversations of and about the wild flora growing along the canal corridor in Case Study 1 raised questions in relation to CES goods - including aesthetics - of unmanaged nature and plants often referred to as weeds. Were so called weeds a barrier deterring access to the CES goods of the canal environment? Or, did wild flora provide additional CES goods, and consequently, CES practices? Observing and surveying the CES beneficiaries of the brownfield canal environment, it became apparent that the canal corridor was used by a skewed demographic: predominantly men. Reflecting on this observation, to investigate perceptions of unmanaged nature that included 'voices' across a wider demographic, site interventions were planned in public green spaces: a public park in Wiesbaden, Germany, and the University of Salford campus, England (Case Study 2 is reported in Chapter 4:3).

An ecological intervention - an eco-art approach - was planned for three managed lawns within the public green space environmental settings: one in Wiesbaden and two in Salford. The lawns would be left to grow unabated to allow a re-wilding process, presenting the opportunity to research and record people's reactions to and perceptions of un-managed nature. The intervention

in Wiesbaden was commissioned as a durational socially engaging eco-art work as part of an international sculpture exhibition: *Wiesbadener Kunstsommer 2010*. The project in Salford was commissioned as an interdisciplinary art-science ecological intervention to support the university's on-going commitment to increase biodiversity within the campus.

The mowing of all three lawns was halted in the autumn prior to the on-site investigations. By the following spring, the lawns were overgrown with wildflowers in bloom. During the summer months the grasses bloomed and the overgrown lawns became alive with insects. By autumn, the overgrown lawns were dying back and the grasses fallen. Both were commissioned as temporary interventions. After twelve months of being left to grow and die back, the lawn in Wiesbaden was cut and brought back into regular lawn management. The overgrown lawns in Salford remain. They are now wild nature features within the campus landscape.

The performative happenings and site interventions were designed to shed light on CES associated with unmanaged brownfields through creating an interactive platform and opportunities for public participation in the research process. Voices were listened into existence, interactions were recorded, and CES were located. Methods used to record the environmental settings, people's voices, nature, and CES for all the fieldwork case studies include: drawing, photography, mapping, site surveys, site users surveys, and diaries: observation logbooks, a blog diary, and a fieldwork research diary.

3:3-iii. Drawing

Drawing has been used as a method to record some of the observations, actions, and encounters. Trained as an artist, drawing to record and represent landscapes, nature, and people, comes more naturally than writing. Drawing is my preferred means of recording my environment and expressing how I see what I see.

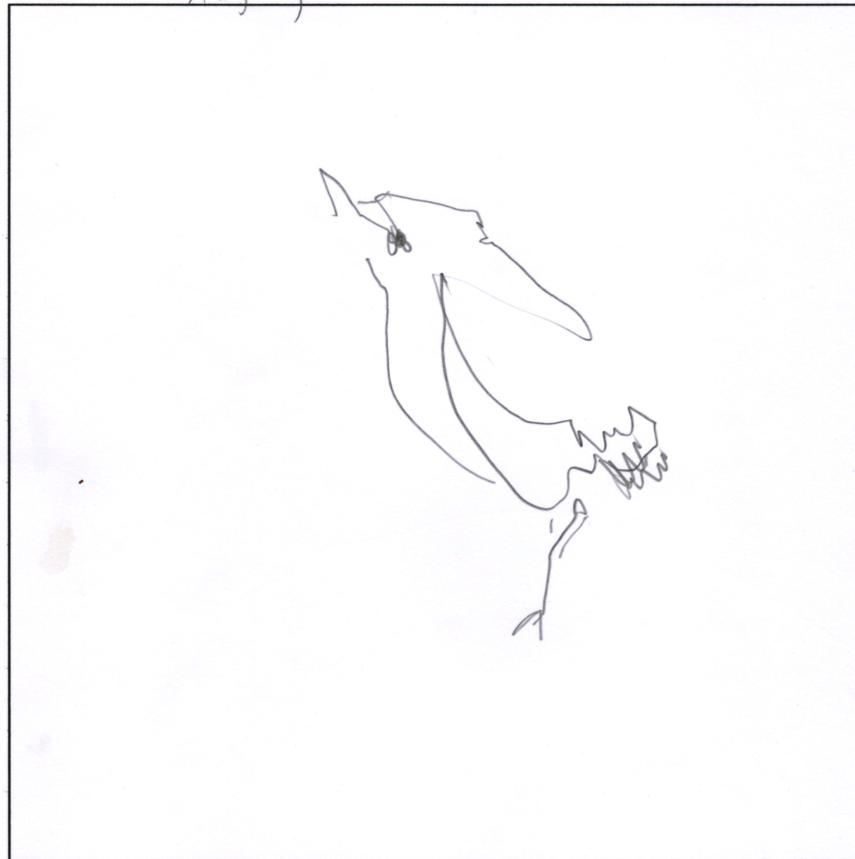
Drawing is not restricted to a single field of vision. Drawings can capture the panoramic width, and height, of a landscape in one illustration, whilst also

focusing attention to detailed specifics within the environment; for example, in Case Study 1, Fig. 4-8 records tall buildings, the curve of the canal, and ivy growing up a building wall. A single photograph could not have recorded this vision of the canal. This particular drawing also functions as a map; it maps a stretch of the canal and the environmental features along that stretch.

Drawing is a tool that can be used to (re)capture a visual memory. It is a method of representing an observed experience. When observing nature in a brownfield environmental setting, or amongst overgrown vegetation, in all likelihood, something will catch your eye; a moment in nature that is compelling. This happened on several occasions, for example: watching blackbirds (*Turdus merula*) fledge (during Case Study 1, Fig. 3-8), watching water voles (*Arvicola amphibious*) munch on fringed water lily (*Nymphoides peltata*) (during Case Study 1), watching young squirrels play around a dray (Case Study 2b, Appendix A2-iv), and watching ink drip from a shaggy inkcap (*Coprinus comatus*) (during Case Study 2a). In those moments I was captivated. However, I was able to (re)capture those moments in drawings from the memory of the lived experience.

date 21st time 14 08 location under the bridge

inquiry/specimen fledgling



reflection there are several - gave the next

observation logbook *wild and productive*
kerry morrison
2009



Fig. 3-8: Drawing of fledgling blackbird from memory of an observation, Case Study 1, 21 August 2009

Drawing is a method that enables expression and re-presentation of observations. Fine details or eye-catching colours can be accentuated, for example, insect eggs on the underside of an ivy leaf (*Hedera* sp.) or the vibrant colours of a witch-hazel stem (*Hamamelis* sp.) (Fig. 3-9).

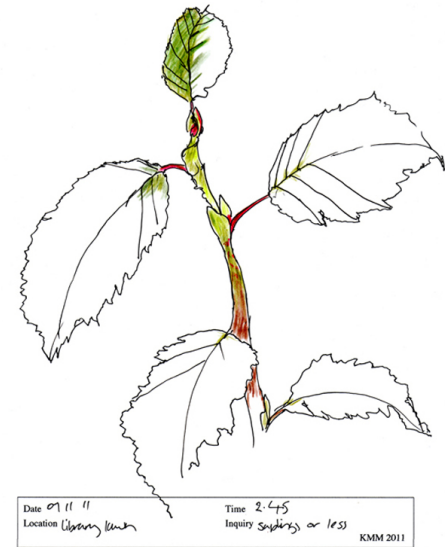
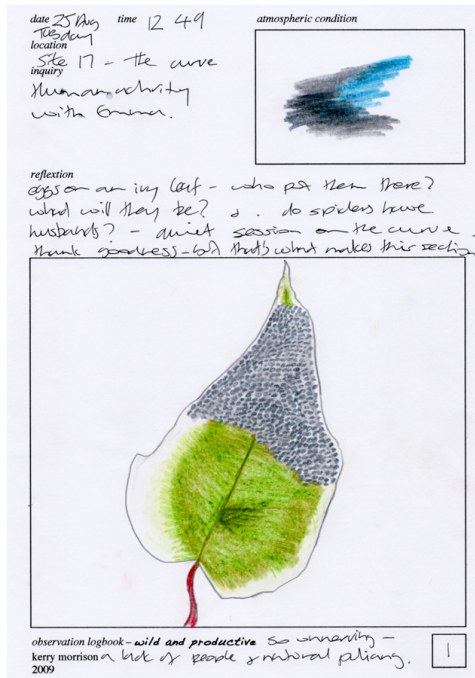
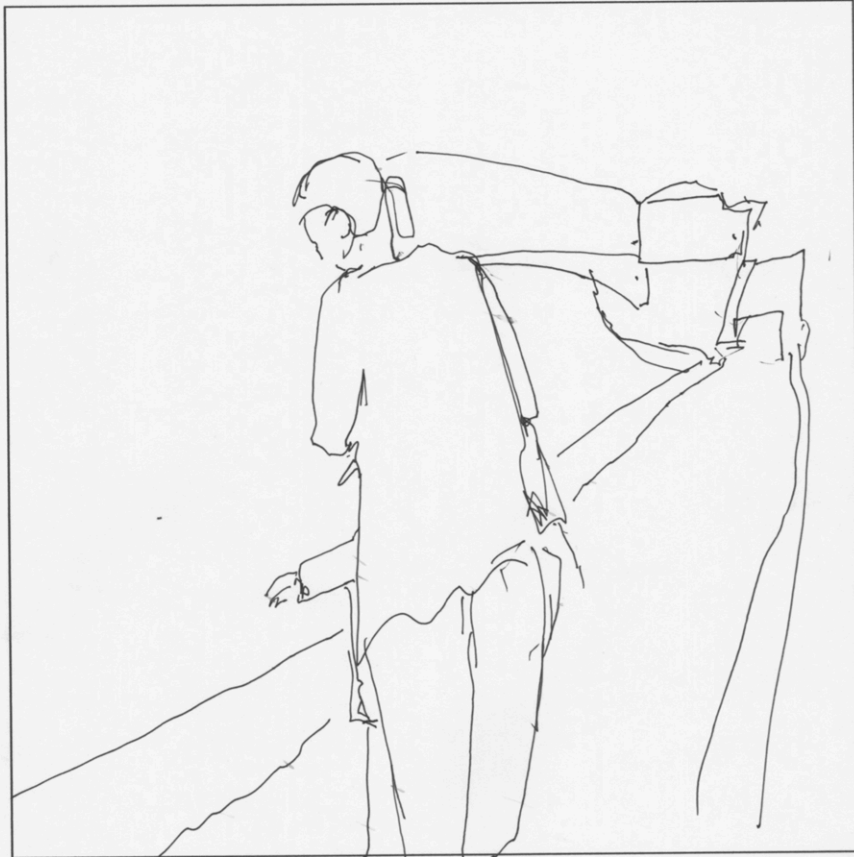


Fig. 3-9: Drawings capturing vibrant nature colours observed during Case Study 1, 25 August 2009 and Case Study 2b, 11 November 2011

Drawing can also be a less intrusive method used to capture CES practices. The activity observed can be recorded without revealing the identity of the people. For example, watching a woman and young child feed geese in Case Study 1 (Fig. 3-10) and boys fishing the canal, again, Case Study 1 (Fig. 3-11).

date 28 July time 14 34 location site 28
Tuesday

inquiry/specimen what in the rain



reflexion complete greyout + rain rushing down in magnitude

red coat - white legging little dog feeding geese on the opposite side
on this side a child takes shelter behind gran & they feed the geese

observation logbook *wild and productive*

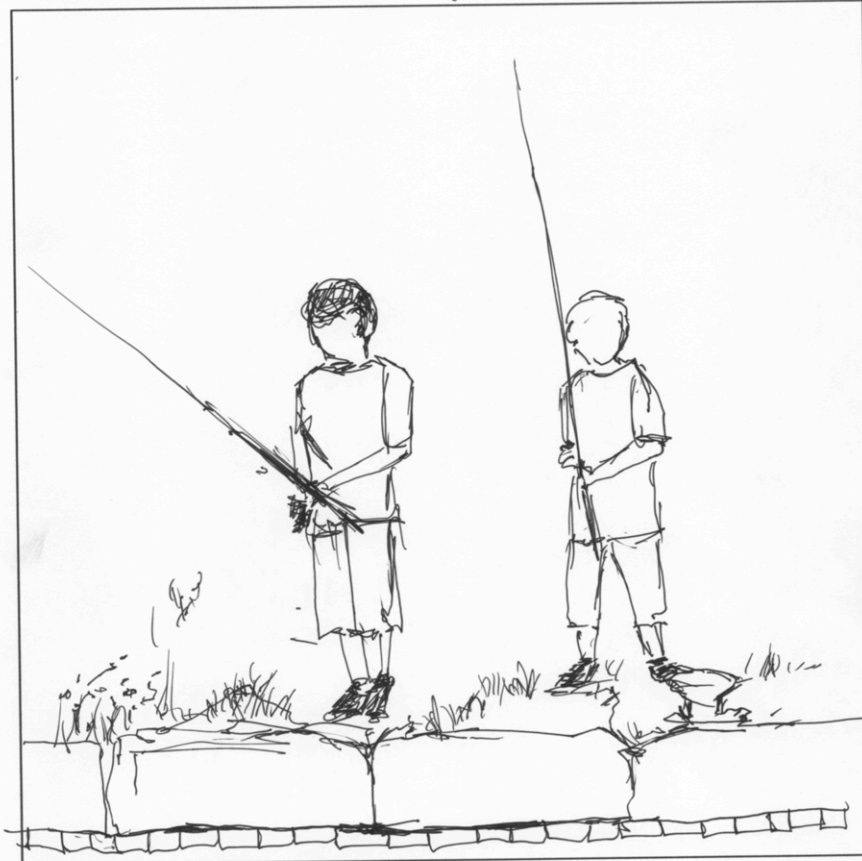
kerry morrison
2009

2

Fig. 3-10: Woman and young child feed geese, Case Study 1, 28 July 2009

date 18 Aug time 16 40 location St Winnies 15

inquiry/specimen human activity with fauna



reflexion of water vole swim across under
the bridge - 2 young lads fish at carolines
wharf - never drawn a young person before

observation logbook wild and productive
kerry morrison
2009

10

Fig. 3-11: Boys fishing the canal, Case Study 1, 18 August 2009

3:3-iv. Photography

Photography has been used throughout the fieldwork case studies. Four different methods of photography have been applied.

One, to map changes over time, for example, recording and mapping how objects move around a brownfield site; as in Case Study, 3 Orientation and

Experience of an Unmanaged Urban Brownfield < 0.25 ha, where photography was used to capture and map the whereabouts of discarded mattresses, tracking their movement across the brownfield until the mattresses were gone: removed from the site (Fig. 4-34; 4-38; 4-39; 4-40; 4-41; and 4-46).

Two, as a method to record:

- Landscape features, for example, the array of surface sealants in the small brownfield investigated in Case Study 3 (Fig. 4-35);
- CES practices or traces of CES practices, for example, the desire line that emerged on the overgrown lawn in Case Study 2b (Appendix A2-iv), or, people engaging in CES, for example, in Case Study 2a: Investigating Perceptions of Unmanaged Nature and CES Connected to Weeds (Fig. 4-21 and 4-24).

Three, to document nature and habitats, for example:

- In Case Study 2a, in Nerotal Park, all of the flowering plants found growing in the overgrown lawn were photographed.
- Spiders, moths and butterflies, and other insects were photographed in Case Study 1, Case Study 2a and 2b, and Case Study 3; for example, Fig. 4-45, and within the fieldwork research diary examples in Appendix A2.
- Dogs, brown rats, water voles, and birds were photographed in Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES.
- Wider, panoramic, shots were taken to document the habitats within each fieldwork case study.

Four, to document the processes of the performative happenings and site interventions, for example, in Case Study 2, the lawns were photographed as they grew and changed over time; and in Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha, the situation of sitting in deckchair and walking through the site were recorded, for example, Figs. 4-34; 4-36; 4-37; 4-40; and 4-43.

The practice of photographic recording differed in Case Study 3 in-so-much-as nothing within the site was interfered with. All photographs taken were of the subject matter as seen. In the fieldwork case studies 1 and 2, when taking pictures of flora, clamps were used to hold specimens still and in good light. Clamps were also used to holdback other matter that would otherwise obscure the shot required.

Photographs were taken using two different cameras: an all-purpose Canon digital camera, and a Canon SLR (Single Lens Reflex) with a 1:1 macro lens. The SLR camera with a 1:1 macro lens enabled close-up, detail photographs of nature. Where appropriate, to illustrate the research reported, photographic images taken during the fieldwork case studies have been included in this thesis.

3:3-v. Mapping

The UK NEAFO, *Work Package Report 5: Cultural Ecosystem Services and Indicators* (Church et al., 2014, p.10), advocates interdisciplinary mapping techniques:

Mapping techniques can provide a platform for bringing together qualitative and quantitative data and exploring views and priorities, particularly through the use of creative, arts-based techniques.

Church et al., (2014) go on to state that mapping techniques from across the arts and humanities provides *a powerful way of developing interpretive and participatory approaches to CES particularly if mapped with community and stakeholder participation.*

All of the fieldwork case studies have incorporated a combination of different mapping techniques. All were conducted within the environmental settings investigated: a place-based approach (Church et al., 2014). The performative happening was the arts-based vehicle used to bring together different qualitative and quantitative methods, generating data including stakeholder voices through a socially engaging art approach.

The first case study, Examining a Linear Brownfield > 0.25ha and Locating CES, began by collating a linear map (using Digimap Data images SJ93NW and SJ39SW) of the 6.5 kilometre section under investigation and dividing the corridor into thirty two sections (Figs. 4-4; 4-5; 4-6; and 4-7). The Digimap images were then stripped back; colours were removed and re-rendered to accentuate the canal. Enlarged and printed on A4 paper, the length of the canal section under investigation spanned seven A4 sheets. This basic map acted as a navigation anchor and a base format upon which to inscribe location specific data (for example, official and unofficial entrance/exit points along the towpath, and paces between these points). Features of interest, for example, places where the air always smelt rank, and places where people reported seeing terrapins, as well as ideas for interventions, for example, an idea for installing bee hives in wildflower rich locations, were added, by hand, to the rendered, printed Digimap sheets. Information was continuously added to the maps throughout the course of the investigation and jotted onto the A4 map printouts as the environmental setting was investigated (Fig. 3-12).

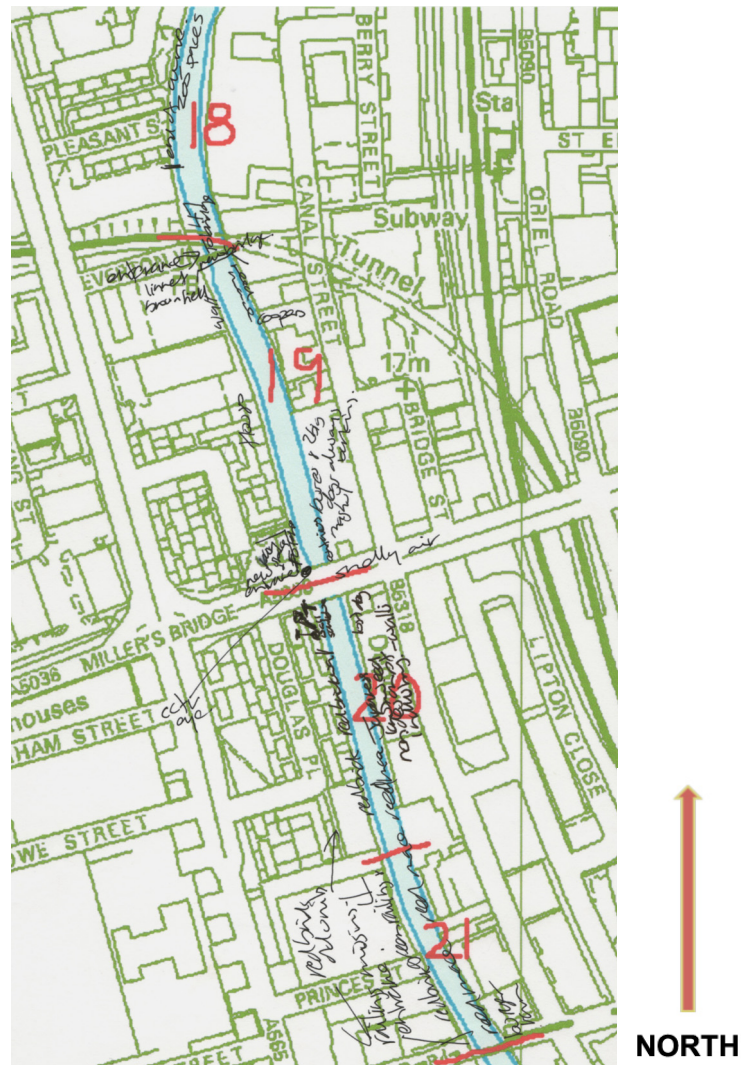


Fig. 3-12: Example of A4 map printout with handwritten notes. From tile SJ3 9SW. Scale at source 1:10000

(© Crown Copyright/database right 2006. An Ordnance Survey/EDINA supplied service)

Fig. 3-12 is a cartographic approach of representing terrain seen as a plan from an aerial view. Drawing the aerial view as a plan was used to map the flora as encountered in the overgrown lawn in Wiesbaden in Case Study 2a (Fig. 4-18). While some drawn maps were plan views detailing nature in a habitat or memorable features, for example, Fig. 3-13: from Litherland Road bridge to Carling Warf, Case Study 1, others were observational drawings that juxtaposed perspectives rendering a map that integrates an aerial view with a pictorial image, for example, and Fig. 4-8: mapping the canal corridor section 23 as experienced on 29 August 2009.

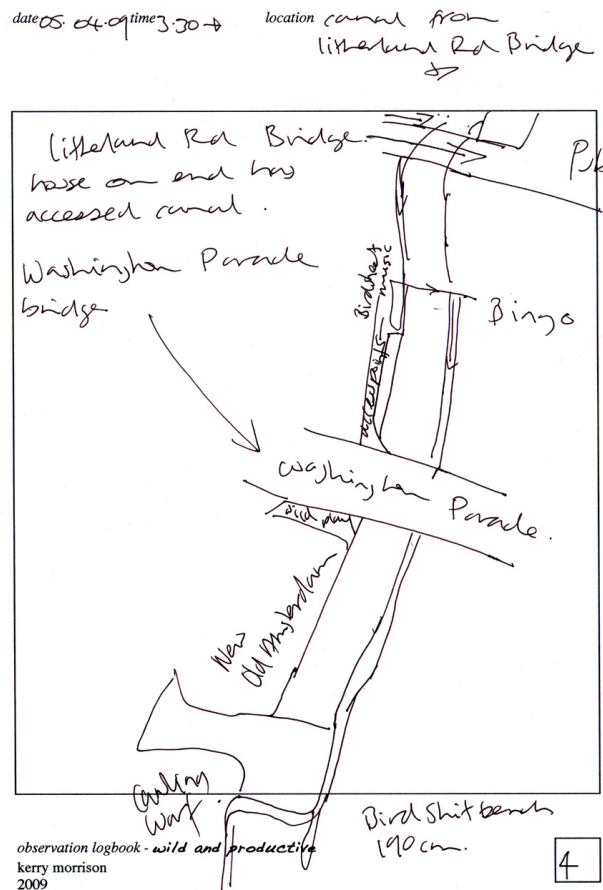


Fig. 3-13: Drawn map of Litherland Road bridge to Carling Warf, Case Study 1, 5 April, 2009

Bar charts are also a form of map. For example, having collated quantitative data recording human activities along the Leeds Liverpool Canal brownfield corridor, and noted where they occur, the bar chart Fig. 4-10: Activities in each section, maps activities observed between June and August 2009 into the thirty-two sections of the canal.

Walking, repeatedly, through an environmental setting, retracing steps and meticulously observing organic and non-organic features, smells, and sounds, also generates a map, a mental map that can be recalled from memory. At the end of the year-long investigation of Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha, Dr Prowse drew a map of the site including features of the site as she remembered them (Fig. 3-14).

Throughout the fieldwork case study investigations, multi-layered complexities within environmental settings have been mapped: the ephemeral, the temporary, and the permanent. A detailed and rich interdisciplinary approach to mapping, locating activities and ecological changes over time, has been conducted. The process of mapping was supported through the performative happening; a method that enabled public participation and conversations; the stakeholder's voices recorded, mapped and retold through diaries, essays, and performed presentations (re)telling the voices heard, and weaving together knowledge of, and experiences in, the environmental settings.

3:3-vi. Site-surveys

The environmental setting is the landscape that provides ES; CES benefits are obtained through interactions between people and nature: the CES practices (Church et al., 2014). To gain a deeper understanding of the nature within the environmental settings explored in the fieldwork case studies, site surveys of flora were conducted. Recording plant species, their frequency, and relative abundance, tells us much about the environmental conditions and general ecology of a site (England Field Unit Nature Conservancy Council, 1990).

Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES and Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha, were investigated in collaboration with Dr Prowse, a trained botanist and expert in the field of plant identification. Flora observed within each environmental setting was recorded as we explored the environmental setting of Case Study 1: the brownfield canal corridor, and Case Study 3: the small, un-scenic brownfield.

In Case Study 1, while slowly perambulating with the portable studio along the towpath between May and August we recorded 138 species of plants. Most species Dr Prowse was able to positively identify at a glance, some required more scrutiny: examining parts of the flower under x10 magnification and referring to *The Wildflower Key* (Rose, 2006). There was only one species that Dr Prowse felt she could not positively identify, a purple fumitory. A specimen was picked and pressed and sent to an expert in the field of *Fumaria* sp. Dr

Tim Rich, Head of Vascular Plants, Welsh National Herbarium, National Museum of Wales; who confirmed the find as purple ramping-fumitory (*Fumaria purpurea*). (A nationally rare species on the North Merseyside Biodiversity Action Plan (BAP) (Hickling, 2008), this find has now been mapped - SJ33433966 – and published on the Botanical Society of Britain and Ireland website). While the plant species observed - and recorded in observation logbooks and photographs - is not a full species list, the abundance of species recorded led us to interpret this brownfield corridor as an ecological gem.

Case Study 3, on the small un-scenic urban brownfield, was similarly surveyed: as we explored the site. During our visits in February, March, April, and May 2011, we recorded, and compiled a table of the plants spotted (Table 4-1). From May onwards plants were identified, photographed, and recorded in the blog diary, brownfieldgarden.blogspot.co.uk/.

Working in collaboration, knowledge and expertise is shared. A broader knowledge of plant species and how to identify flora was gleaned from working with Dr Prowse. In Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, plants found growing in the overgrown lawns in Nerotal Park and the University of Salford, were identified and recorded. Some I was able to positively identify at a glance, most required more scrutiny: examining parts of the flower under x10 magnification and referring to *The Wildflower Key* (Rose, 2006). In Case Study 2a, identifying plants with the assistance of a landscape architecture student intern, forty-six plant species were recorded growing in the overgrown lawn, June 2010 (Fig. 4-17). Plant species identified in all three overgrown lawn fieldwork study sites throughout the duration of the investigations were recorded in observation logbooks - which include drawings - and photographed.

Recording plant species can shed light on the general ecology of a site and CES goods that could be obtained, for example opportunities for education and inspiration. However, a broader field of vision is required to understand the fuller and richer picture of CES associated with unmanaged urban brownfields and brownfields as an environmental settings. Accordingly, drawing,

photography, mapping, note taking, and observation logbooks are used as site surveying methods to record other wildlife, environmental features, landscape characteristics, substrates, and organic and non-organic detritus; and, importantly, site users interactions within the environmental settings and CES practices as observed. Reflecting on our observations and methods of recording the canal corridor as a CES environmental setting, a quantitative site-user survey was formulated to specifically record human activity observed along the brownfield corridor.

3:3-vii. Site-user survey: a quantitative approach

In Case Study 1: Examining A Linear Brownfield > 0.25ha and Locating CES, an additional systematic approach was taken to record human activity along the canal corridor: a quantitative site survey. A site user survey sheet was designed, a Human Activity Record sheet (Fig. 3-15). Precisely thirty-minute periods were spent in each of the mapped thirty-two sections to methodically log all witnessed human activities. Using the site survey Human Activity Record sheets, human activity in each of the thirty-two sections was recorded. Data collection was repeated and all thirty-two sections were surveyed three times, at various times of day, between May and August 2009. The date, time, and location were logged on each sheet.

Tangible CES were recorded, for example, angling as well activities that may or may not be CES practice, for example walking which could be recreational or could be the quickest route to a destination. There was additional space on each sheet to write notes about the activities witnessed and people's reactions to being observed. Site users were differentiated by gender and age approximation to attain a sense of the demographic use of the unmanaged canal corridor. Our assumptions were that this landscape was male dominated. However, we wanted clarification in relation to demographic use to shed light on equalities of access to this brownfield environmental setting.

The human activity data collection method was conducted as part of the performative happening. Working as team enabled a combined approach allowing us to capture information beyond the scope of a single data recording

method. One or more members of the *wild and productive* team would draw, photograph, write, chat with passers-by, or simply experience the environment. Concurrently, one member of the team would strictly, and systematically record: witnessed activities, approximate ages of people, the number of people partaking in activities, and group dynamics, for example if the grouping looked to be family, friends, or a group on an organised event - on a Human Activity Record sheet (Fig.3-15). Dog breed was also recorded as this was to be used in other research to explore the relationship between people's choice of dog breed and feelings of well-being while walking along the canal. That research is not reported in this thesis, which is focused on CES.

Each day's data collected and recorded on the Human Activity Record sheets was collated (Table 3-2). Upon completing the site user survey (August 2009), all data was collated and translated into bar charts to illustrate the spectrum of activities observed between May and August 2009 in each of the thirty-two sections: Fig. 4-9; and, exactly what activities were taking place in each of the thirty-two sections of the canal corridor: Fig. 4-10. Interpretation was not applied to this quantitative data. It was decided among the team that we should simply state what was seen and where, and not make assumptions in relation to, for example, walking.

HUMAN ACTIVITY RECORD
LEEDS LIVERPOOL CANAL – URBANISM 09

| HUMAN ACTIVITY RECORD | | | | | DATE |
|--------------------------------|---------------|-------------|--------------|-----------|-----------|
| WEATHER CONDITION | | | | | |
| SITE NUMBER | | FROM (time) | | TO (time) | |
| No. of people | Relationship* | Gender | Aprox.** age | Activity | Dog breed |
| | | | | | |
| Notes about activity witnessed | | | | | |
| Reaction(s) of passer-by | | | | | |

* Friends, colleagues, couple, parent +

** Toddler (< 5), child (<11) youth (11 – 14) teen (15 – 20), 20's, 30's, 40's, 50's, 60's, 70+

Fig. 3-15: Site survey: Human Activity Record sheet

HUMAN ACTIVITY DATA
LEEDS LIVERPOOL CANAL

| | | | | | | | | | | | |
|---|------------------------|------|-----------------------------------|-----------------------|----------------------|---|--|--|--|--------------------------|--|
| SITES From:- Red Lion Lock To:- Melanear Park | | | | MONTH: May 20/5/09 | | | | DURATION 30 minutes at each site | | | |
| NO ONE COUNTED TWICE | | | | | | | | | | | |
| SITE | NUMBER OF PEOPLE | MALE | AGE | FEMALE | AGE | ACTIVITY | | SHARED ACTIVITIES | | DOG BREED | |
| 1 | 2 | 2: | 1 x 20's 1 x 40's | None | | 2 x cycling | | None. Yellow flag Iris noted | | None | |
| 2 | 18 | 15: | 6x 20's 4 x 30's 5 x 40's | 3: | 2 x 20's 1 x baby | 1 x Couple walking with pram 1 x Dog walking | | Group of males taking lunch break and fishing together. | | Whippet | |
| 3 | 4 | 3 | 1 x 60's 1 x 20's 1 x teens | 1 | 1 x teen | 2 x Friends fishing 1 x Walking with iPod 1 x Walking | | M & F Fishing | | None | |
| 4 | 4 | 3 | 1 x 30's 1 x 60's 1 x 20's | 1 | 1 x 30's | 1 Cycling 1 Walking with dog 1 Walking with i-pod | | Couple walking dog | | Staffordshire Terrier | |

| | | | | | | | | | | | | |
|--------------------|-----------------|-----|-------|------------|----------|----------------|---------|---------|---------|-----------------|-------------------|-------|
| TOTAL PEOPLE 28 | | | | ACTIVITIES | | | | | | | | |
| LONE MALES | LONE FEMALES | MEN | WOMEN | | WALKING | DOG WALKING | CYCLING | FISHING | PLAYING | BIRD FEEDING | HANGING AROUND | OTHER |
| 9 | 0 | 23 | 5 | | 5 + baby | 4 | 3 | 5 | 0 | 0 | 0 | o |
| | | | | | | | | | | | | |

Table. 3-2: Collated human activity data as recorded on 20 May 2009

3:3-viii. The Diaries

Diaries were used as a method to record and reflect upon each fieldwork case study reported in this thesis. There are many, and varied ways of keeping records of fieldwork: logbooks, journals, diaries, field notes, and lab books; are all 'external memory' diary methods (Altrichter and Holly, 2005, p.24). The term 'diary' is used as an overarching descriptor for the external memory. Three methods of keeping a diary to record the fieldwork case studies reported in this thesis have been used: on-site observation logbooks, a blog diary, and a fieldwork research diary. All diary entries are dated; each observation logbook sheet has the time of the inquiry logged. Each diary method is detailed below.

The diary, as a method, is used to capture the melange of a brownfield environmental setting and CES associated with unmanaged urban brownfields, through an array of writing techniques that include prose, poetry, written accounts of observations, and reflexive writing, integrated and illustrated with drawings, maps, and photographs. In words and images the essence of a place and CES and benefits can be expressed. For example, sensory experiences can be recorded; what it feels like to walk on uneven ground, how places smell, the ambient soundscape, and a heightened awareness of weather conditions and how temperature affects perceptions of place. Recording observations, conversations, actions, and reflections (in photographs, maps, illustrative drawings and written notes), and writing descriptive interpretations of encounters lead to a 'thick description': dense descriptions of life from which broader interpretations can be made (Scott and Marshall, 2009, p.761).

A thick description ... does more than record what a person is doing. It goes beyond mere fact and surface appearances. It presents detail, context, emotion, and the webs of social relationships that join persons to one another.

(Denzin, 1989, p.83 in Ponterotto, 2006, p.540)

From an ES perspective, a Thick Description describes the environmental setting, together with CES goods, CES practices, and CES benefits, joining together CES values. Developing Thick Descriptions through reflexive diary

writing has been a method of inquiry used to develop an understanding of CES associated with unmanaged urban brownfields.

All of the fieldwork case study diaries are written in the narrative. Performative social scientist, Kip Jones, argues that *qualitative research is always about story reporting and story making* (Jones, 2004, p.96); and, that the importance of performative research and retelling the story of the investigative processes cannot be overemphasised as a knowledge-generating method particularly when dealing with the unheard voice. A virtue of qualitative research is its inclusionary nature and ability to give a 'voice' to people through the research process and the narration (Jones, 2004). The methods used to record CES associated with unmanaged urban brownfield sites give 'voice' to the beneficiaries together with mapping the CES and brownfields as environmental settings. The voices of CES beneficiaries are retold in the diaries.

(i). The observation logbook

An observation logbook was used to record observations: activities witnessed, visible traces of past CES practices, weather situations, nature encounters, conversations, features in the environment – natural and fabricated - and reflections. Observation logbooks were used in two of the case studies reported: Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES, and Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. These diary accounts are all handwritten, on site, and at the time of the encounter. Sometimes they are written in note form, not in sentences. The handwriting is scruffy, and there will likely be frequent spelling mistakes. When writing thoughts and observations by hand, accurate spelling is not a primary concern; capturing the moment is. Reflection taking place on site is recorded. Illustrations, maps, and diagrams are also used to capture the situation or sights of the moment being recorded. These act as a form of visual note taking. They are ways in which to capture mood and feelings, as well as record visual information (for example, Berger, 1972).

Each observation logbook sheet is fieldwork case study specific. The sheets were designed to aid the process of recording and recalling specifics, for

example weather conditions. In Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES, all logbook sheets were titled *wild and productive* and dated: 2009. The log sheets were all portrait layout and had three formats:

1. The first record sheet of the day's inquiry logged date, time, and location; there is a box in which to draw the atmospheric condition; a larger box in which to draw or write observations; a space to write reflections of the encounter; and a box in which to write the page sequence, for example, Fig. 3-9: Drawings capturing vibrant nature colours, 25 August 2009. If another section along the canal was entered a new blank sheet of this format was used; otherwise, follow-on log sheets were used for the next and subsequent data collection entries and reflections within that numbered section of the canal corridor:
2. A follow-on log sheet with date, time, and location; a large box within in which to draw observations; and a box in which to write the page sequence; for example, Fig. 4-3: Angling with tents on the towpath; observation logbook follow-on sheet, 29 August 2009.
3. Or, a follow-on log sheet with date, time, and location; a large box within in which to draw or write observations; a larger space to write reflections, and again, a box in which to write the page sequence; for example, Fig. 3-8: Drawing of fledgling blackbird from memory of an observation, 21 August 2009; Fig. 3-10: Woman and young child feed geese, 28 July 2009; and Fig. 3-11: Boys fishing the canal, 18 August 2009.

The blank follow on-log sheets were interchangeable. Numbering each sheet formulated a chronological record of the day's inquiry.

The format for the observation logbook sheets was altered for Case Study 2: Investigating Perceptions Of Unmanaged Nature and CES Goods Connected to Weeds. Layout included portrait and landscape and each sheet had only one box, at the bottom, in which to log date, time, location, and inquiry. The rest of the sheet was blank to accommodate any type of freehand data recording: drawing, writing, maps; for example, Fig. 4-17: Overgrown lawn species list.

June 2010; Fig. 4-18: Flora map of case study area; and Fig. 4-31: Bee orchid, drawn on site, 7 June 2011. In addition, a lined observation logbook was formatted specifically for written notes and reflections (Fig. 3-16).

Lydia had a ranting kelly. Totally angry about the meadow - the long grasses - and equally angry that the meadow is not.

I - on the other hand - received only positive comments. Astrid came back and was fascinated to see that grass has flowers and that plantain has purple flowers.

One lady was amazed to hear that we had found 25 different flowers & 12 grasses. She asked for a guided tour around the meadow - to be shown the different flowers. She, like many others of her generation (she told me she was over 60) learnt about wild flowers when she was a child at school and - as with so many others - the meadow reminded her of her childhood. She told me she would bring her 6-year old grandson to the meadow & show him the flowers.

The man who lives in a house next to the park comes into the park every day. He wanted to tell me his comment about Thomas' work - for him it is not worthy enough. It could have been so much more absurd and funny. I asked him what he thought of my meadow - did it upset him. Oh no - on the contrary he is happy to see the grass grow.

Another lady thought the meadow was an experiment by the gardeners. She too really likes it and wants it to remain.

| | |
|---------------------------|-------------------------|
| Date 25 06 10 | Time 5.30 pm |
| Location Nero Park meadow | Who 4 locals |

2010

Fig. 3-16: Reflecting on conversations and encounters with four visitors and Lydia, Case Study 2a, Nerotal Park, 25 June 2010

(ii). The blog diary

This method was used throughout Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha. The blog diary was written after

each site investigation, and on the same day. All diary entries are a personal interpretation of the research experience and written as creative writing. Vivid encounters and experiences are retold in a flow of words streamed on the 'page' without language punctuation, sentence form, or capitals; for example, Fig. 4-34: Her view, my view, mattress view, 17 Feb 2011. The writing method brings together streams of consciousness (for example, Scott, 2013) and poetic techniques (for example, Stockwell, 2002). Streams of consciousness, as a technique, is more often used in novels for example in Jack Kerouac's, *On The Road* (1957) and Toni Morrison, *Beloved* (1987). However, as a narrative device for diary writing in the first person it gives the researcher an active voice within the memory monologues composed after reflexion and without editing, *in which words are poured out without pause for punctuation, spelling, or self-censorship* (Boud, 2001, p.14). (Although, spell check is used and spelling corrected before the blogs are posted: published.) Poetic techniques, in particular, use of repetition, unusual naming, creative descriptors, syntactic ordering, puns, alliteration, and metrical emphasis (Stockwell, 2002, p.14), foreground thoughts; for example, Fig. 4-37: Anyone's brownfield garden pathways, 4 May 2011. Foregrounding refocuses attention on the 'thought' the writer wants to spotlight (Stockwell, 2002). The writing content is punctuated with photographs capturing and mapping: changes over time; landscape features; traces of CES; detritus, waste, litter, and decaying organic matter; flora and fauna; and the situation of sitting in deckchair and walking through the site. All photographs reported in the blog are taken during the site investigation of that day. The images, selected and inserted after the writing, contextualize the narrative within the brownfield environmental setting; and, as with poetic techniques, they foreground encounters and experiences.

The blog, www.brownfieldgarden.blogspot.co.uk/ (which continues to have internet presence (2015)) consists of twenty-four entries recording each investigative inquiry and reflections. A blogged diary was only used in Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha.

(iii). The fieldwork research diary

The fieldwork research diary, as a method, differs from the blog diary and the

observation logbooks. Although it includes element and techniques of the blog diary and scans of observation logbooks entries, it delves deeper into issues raised or insights gained during site investigations. Elements of research diaries include:

- *data obtained by observation, interviews and informal conversations;*
- *additional 'found items', such as photographs, letters, and so on*
- *contextual information about the ways these data were collected;*
- *reflections on research methods; ideas and plans for subsequent research steps.*

(Altrichter and Holly, 2005, p.24)

A fieldwork research diary was kept for only one fieldwork study site, Case Study 2b: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, *Grass is not Green: what lies in lawns*, University of Salford. The diary was begun using the same techniques as the blog diary. However, this case study had more time in between each site visit. An extended length of time between each fieldwork investigation gave additional time to both write and reflect. I was in a position to be able to delve deeper into topics that arose through the fieldwork investigations, for example the water retaining properties of moss species discovered on site, as well as thoughts arising from conversations, for example, nature aesthetics. Writing a diary that connected the investigation to existing research and literature expanded my understanding and knowledge of the data collected, in connection to species, habitat, and CES practices.

The research diaries include photographs recording species and the environmental setting. As with the blog diary, the photographs - taken during the site investigations – illustrate the narrative in the diary and foreground encounters and experiences. Excerpts from the observation logbooks are included, again to illustrate the narrative and foreground encounters and experiences. In addition, scans of the observation logbooks are integrated within the text. This adds another layer of information and data to the research

diaries. The drawn illustrations and handwritten notes add a visual quality; the artist's rendering. Further, the unedited logbook reflections provide insight to the immediate experiential nature of the research process. Four research diary accounts are in Appendix A2. To include them in the body text of the research reported would distract the flow of writing.

3:4. Summary

A place based and collaborative inquiry has been conducted from an epistemological stance of Constructivism and from a theoretical perspective of Interpretivism. Research was conducted in the field, the researcher immersed in the environmental settings and sharing experiences of the situations encountered with member of the team and with members of the public, in other words, the site users and CES beneficiaries. The methods used: performative happening, site interventions, drawing, photography, mapping, site surveys, site user surveys, observation logbooks, diary blogging, and a fieldwork research dairy, have brought together quantitative and qualitative approaches. An interdisciplinary approach has generated data that illuminates breadth of social situations within unmanaged brownfield environmental settings: CES goods, CES practices and beneficiaries, and CES benefits.

Action research approaches have been used to validate the research. The researcher engaged in, and committed to, a continuous process of reflexive and critical inquiry have repeated AR phases and process of investigation in order to validate research and findings (Gray, 2009). Informally, the research methods and findings have been self-validated through an AR approach. Formally, the process as well as the outcomes of the fieldwork research processes have been scrutinized by supervisors; research participants: collaborative partners; colleagues, for example, professional artists exhibiting in the Liverpool Biennial *Urbanism 2009* and *Wiesbadener Kunstsommer 2010*; and by international art curators: the Liverpool Biennial curatorial team and the curators of the *Wiesbadener Kunstsommer 2010*.

All data collected has been analysed and reported to shed light on CES associated with unmanaged urban brownfields, link the environmental settings and nature of unmanaged brownfields to cultural practices, benefits, and values, and develop new knowledge on brownfields as CES environmental settings.

CHAPTER 4

FIELDWORK CASE STUDIES

4:1. Introduction

In this section the three fieldwork case studies designed to explore and locate CES associated with unmanaged urban brownfield sites are outlined. The relationship between the three fieldwork case studies and the main attributes of each are shown in Fig. 4-1.

The aims of each Fieldwork Case Study are described in detail in this Chapter: sections 4:2-i, 4:3-l, and 4:4-i. A detailed account of the methods used and a summary table of the methods for each case study (Table 3.1) are set out in Chapter 3. Methodology.

Each case study is summarized in Table 4-1. Detailed accounts of the three fieldwork case studies and findings follow in subsequent sections reported in this Chapter.

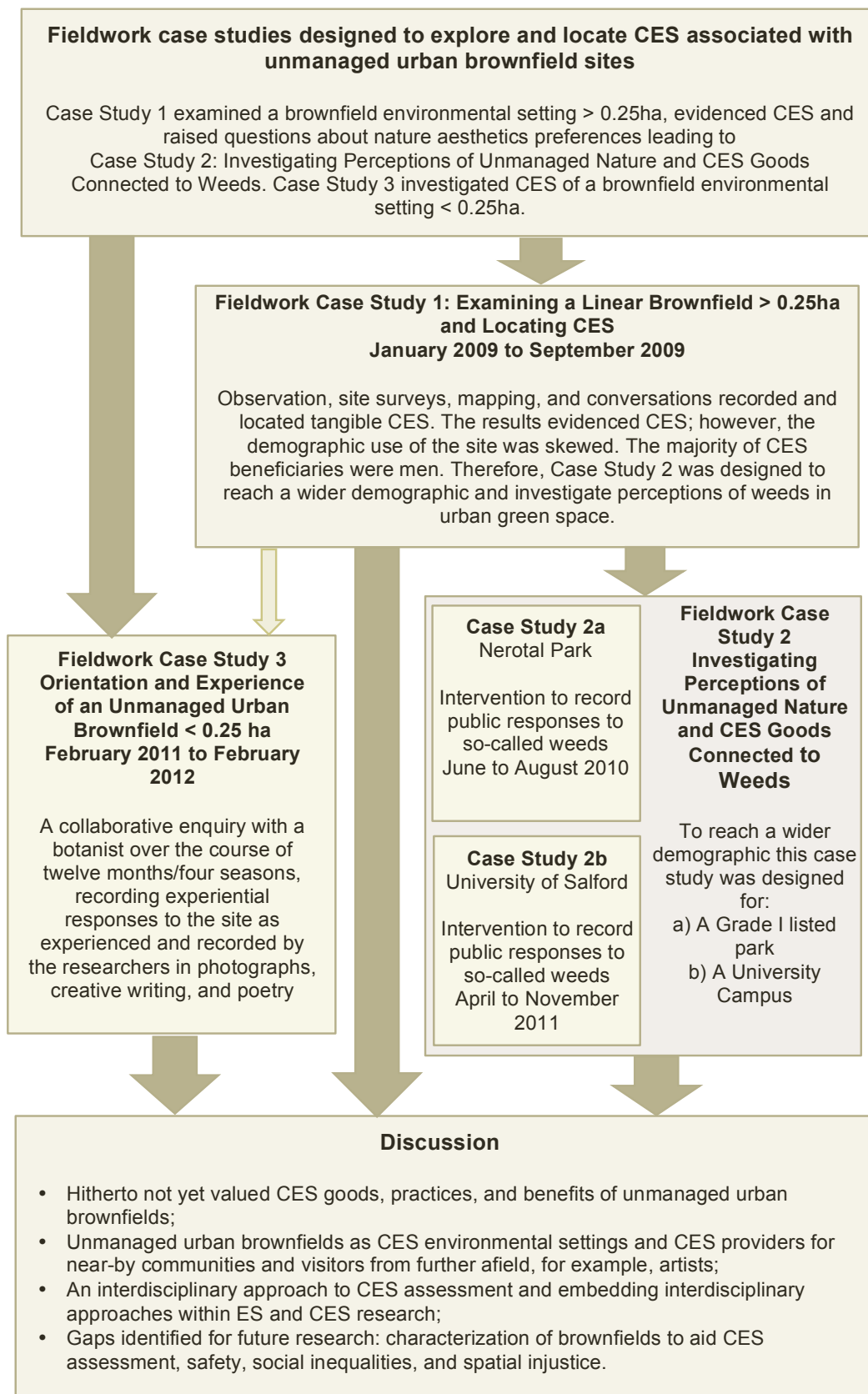


Fig. 4-1: Fieldwork case study overview

Table: 4-1: Summary table for the Fieldwork Case Studies

| CASE STUDY | SUMMARY |
|--|--|
| Case Study 1 Examining an unmanaged urban brownfield > 0.25 ha. | Examining a Linear Brownfield > 0.25ha and Locating CES was designed to uncover, record, and evidence tangible CES goods and practices along a 6.5km non-navigable brownfield stretch of the Leeds Liverpool Canal from Litherland to Stanley Dock. Observations and surveys evidenced CES; and revealed a skewed beneficiary demographic: a male dominated environment. Three possible barriers deterring a wider demographic use and access to CES goods were identified: physical barriers such as fencing; psychological barriers, for example fear of being attacked; and nature aesthetic preferences, for example, a possible dislike of untamed, unmanaged nature and 'weeds' |
| Findings from Case Study 1 raised questions about access to CES of unmanaged urban brownfields. In response to the findings, yet faced with the challenge of engaging with a more diverse demographic Case Study 2 was designed. In examining the CES of brownfields, people's relationship with unmanaged nature, so-called 'weeds', and nature aesthetic preferences, were the most germane questions to pursue. | |
| Case Study 2 Simulating the nature of unmanaged brownfields through natural re-wilding processes in public green spaces, in order to reach a wider demographic. | Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds was designed to observe and engage with the demographic missing from Case Study 1 and record reactions to, and perceptions of, unmanaged nature and so-called 'weeds'. The managed landscape aesthetics of a park and a university campus were interrupted through an eco-art intervention of removing lawn management to allow unmanaged re-wilding. Lawns ceased to be areas of <i>grass-covered ground which is kept mown and smooth, in a garden, park, etc.</i> (Shorter Oxford English Dictionary, Fifth Edition, 2002, p.1553) and began to simulate brownfield land: seemingly abandoned, and no longer in use as originally intended. Observations, surveys, and conversations revealed CES connected to weeds and aesthetic appreciation of unmanaged nature within an urban (green space) landscape. |
| Case Study 3 Examining an unmanaged urban brownfield < 0.25 ha. | Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha was designed to investigate a small, un-scenic brownfield < 0.25 ha; a site with mixed surface sealants, debris, litters, dereliction, and pioneer ruderal species. Brownfield sites < 0.25 ha are likely to be overlooked as sites of biodiversity and therefore will seemingly struggle to meet any ecosystem service provision. The questions this case study set out to investigate were: can small, littered, brownfields, void of scenic beauty, provide CES? And, if so: what is the CES provision of such a site? Differing from the other two case studies, this study records the researchers' experiential responses and investigative methods which, uncovered less tangible CES goods, practices, and benefits, for example: inspiration, relaxation, creating and expressing, negative aesthetic allure, and discovery. |

4:2. Case Study 1: Examining A Linear Brownfield > 0.25ha and Locating CES

4:2-i. Introduction

Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES was designed to locate tangible CES and record the environmental setting of a non-navigable section of the Leeds Liverpool Canal, from Litherland, Sefton, to Stanley Dock, Liverpool (Fig. 4-2). The Liverpool Biennial commissioned it as a socially engaging artwork with the aim of uncovering relationships between people and place along this section of the canal.

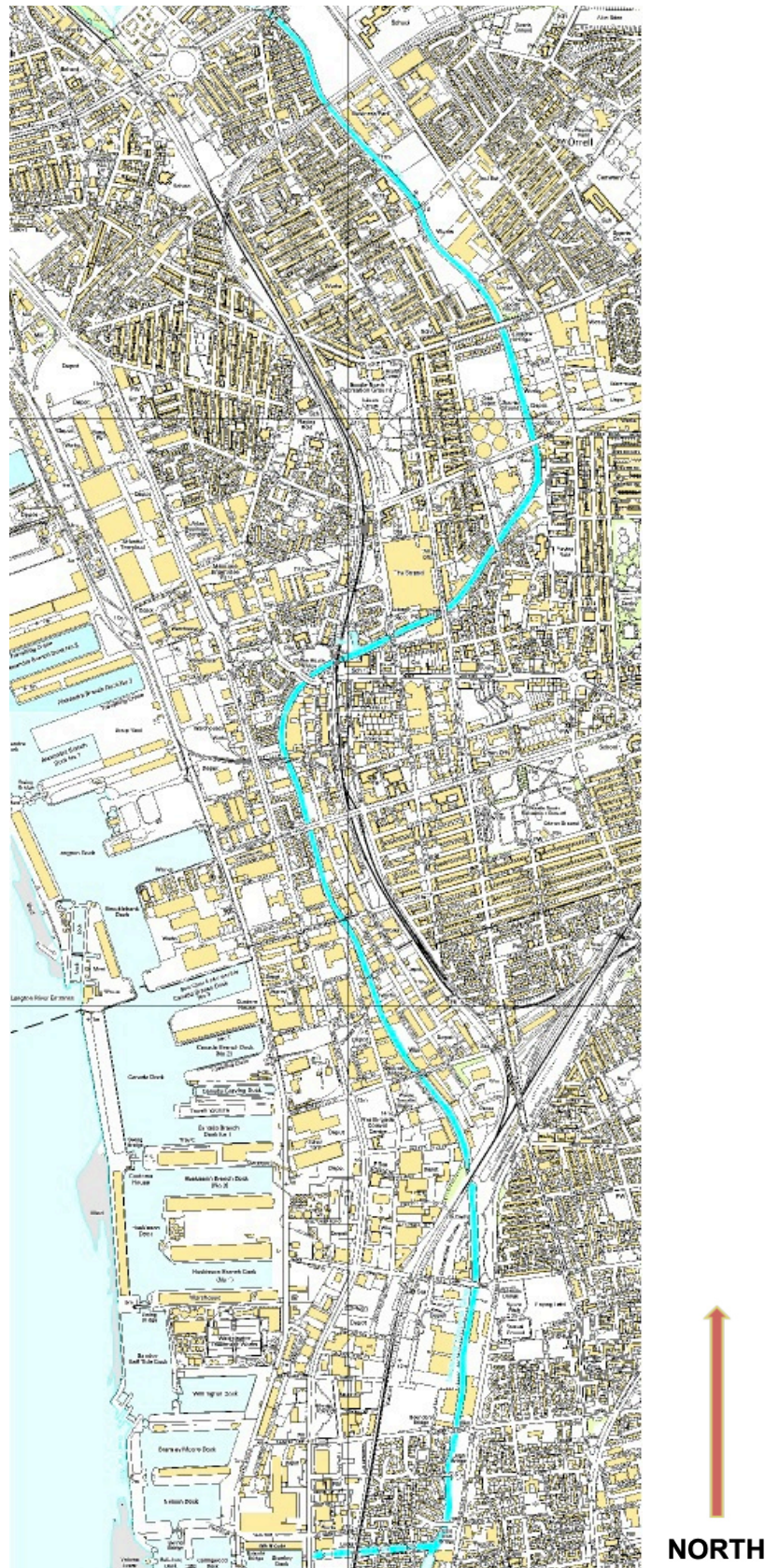


Fig. 4-2: Leeds Liverpool Canal from Litherland to Stanley Dock. From tile SJ3 9SW and SJ3 9NW (© Crown Copyright/database right 2006. An Ordnance Survey/EDINA supplied service). Scale at source 1:10000

Following half a century of post-industrial decline this 6.5 kilometer section of the canal had become an underused wasteland, with the adjacent neighborhoods, British Waterways, and the local authorities turning their backs on a space where, in the interim, wildlife had flourished (Liverpool Biennial, 2009a). At the time of the investigation, this stretch of the canal was officially non-navigable and met the criteria of a brownfield:

... land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilized. It may also be vacant, derelict, or contaminated (Alker et al., 2000, p.2).

This fieldwork case study was part of a larger initiative commissioned by The Liverpool Biennial comprising of a series of creative interventions centering along the Leeds Liverpool Canal from Litherland, L21, along the 6.5 kilometer canal corridor to Stanley Dock, L3, which is the beginning of the Liverpool Maritime Mercantile City UNESCO World Heritage Site. (UNESCO World Heritage Sites attract a *distinct type of tourism known as geo-tourism; they also provide object lessons in earth history* (Coates et al., 2014 p.20). The nine-month creative programme: *Art for Places, Urbanism 09*, was a partnership project between The Liverpool Biennial; the HMR Pathfinder; New Heartlands; British Waterways (now the Canal and Rivers Trust); Places Matter! (an architecture and built environment centre for the North West); the local authorities of Sefton Borough Council and Liverpool City Council; and three registered social landlord housing associations (RSL's).

Seven artists were commissioned to create new work to explore the regenerative potential of the canal and adjoining neighborhoods, with the aim to transform a backwater into a 'frontwater'. It is widely believed that art and creative community engagement as part of a regeneration programme will contribute to a number of urban issues including creating a local distinctiveness; improving urban spaces and public use of space; a reduction in vandalism and anti-social behaviour; renewing citizenship; and an increase in cultural tourism with a knock on effect of increased local employment and subsequent increases in land values (Landry et al., 1996; Hall, 2001; Arts

Council of England, 2006; Thompson et al., 2005; Sharp et al., 2005; Tornaghi, 2007; Cumberlidge, 2008). At the time, neighborhoods within this part of north Liverpool were undergoing a major regeneration programme, and this stretch of the Leeds Liverpool Canal lapped its way through the Pathfinder Housing Market Renewal area of New Heartlands, a landscape with abandoned properties and derelict buildings awaiting demolition and new build. Concurrently, a new link to the Leeds Liverpool Canal, from Liverpool's South Docks into Canning Dock, was all but complete - passing through *the newly landscaped Pier Head, complete with jaunty new buildings housing the Mersey Ferries terminal, '3X Architects' Liverpool Museum and the Mann Island residential development* (Lloyd, 2009, no page numbers). In his article for The Liverpool Biennial, Lloyd continues: *Retrace your route a scant four miles towards Bootle and you're taking a journey back in time, as fifty years of neglect hides behind towpath and footbridges. A tale of two cities, one canal* (Lloyd, 2009, no page numbers). Recognising the potential of the canal as an open green/blue space that could have a transformative effect on the neighbourhoods, socially and economically, as well as health and well-being benefits for nearby communities, *Art for Places: Urbanism 09* was initiated to unlock the potential of this stretch of the Leeds Liverpool Canal using art as a catalyst to create renewed links with the immediate communities and the canal corridor (Liverpool Biennial, 2009a).

The focus of fieldwork Case Study 1 - Examining a Linear Brownfield > 0.25ha and Locating CES - was to uncover CES goods and locate tangible CES practices along this linear brownfield landscape, specifically, recreational and social practices. The investigation was conducted in collaboration with botanist Dr Alicia Prowse between January and September 2009. This allowed for combining objective data collection stemming from an environmental science paradigm with social science approaches, and creative enquiry and performance techniques stemming from the Fluxus art movement and Happenings in non-gallery spaces and everyday situations. An interdisciplinary performative happening was designed. Recreational practices along the canal corridor were recorded and mapped. Through this interdisciplinary process themes emerged, triggering additional investigations within the fieldwork case

study that revealed a richer picture of the environment and possible barriers to obtaining cultural services goods.

In this fieldwork case study it is argued that, while data collection records occurrences of practices that may align with tangible CES good, and practices such as play, exercise, angling, and socializing, the ambience and voices of those who use the space – including the reflections of the team - reveal a richer picture that leads to a deeper understanding of the CES of unmanaged brownfield sites and of the barriers that may deter some people from accessing them. For example, a conversation with a woman who was on the towpath angling with male friends revealed that she would be too nervous to come down to the canal alone (Fig. 4-3).

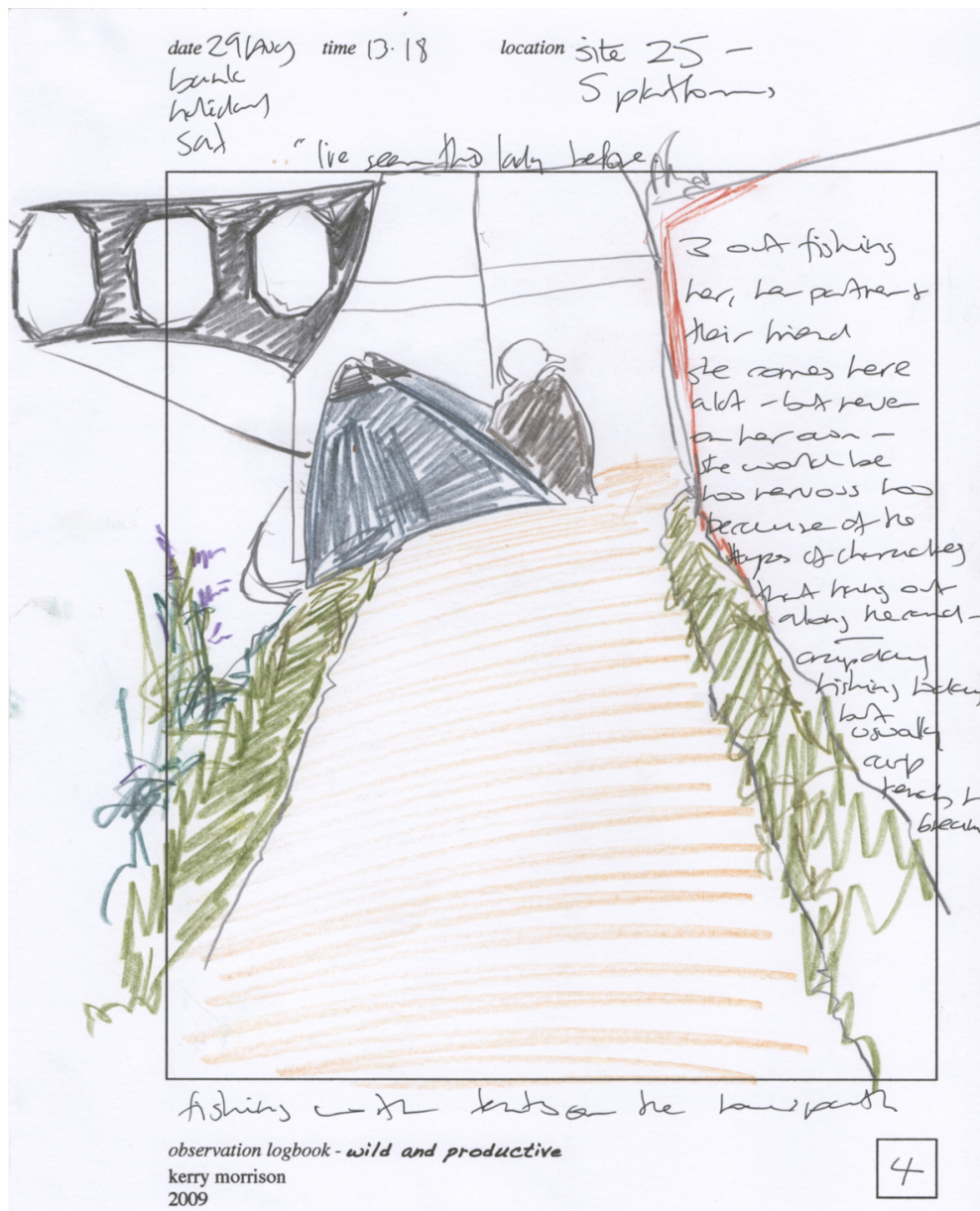


Fig. 4-3: Angling with tents on the towpath; observation logbook follow-on sheet, 29 August 2009

Engaged in conversation with the woman, other activities happening concurrently were not recorded on the observation log sheets, however they were recorded on the Human Activity sheets (Table 4-2). A team approach and combined data collection methods records voices and activities concurrently, generating a thick description of the canal corridor as a CES environmental setting.

Table 4-2. First page of data collated from Human Activity survey, 29 August 2009.

HUMAN ACTIVITY DATA
LEEDS LIVERPOOL CANAL URBANISM 09

| | | | | | | | | |
|---|---|------|-----------------------------------|---|-----------------------|---|--|------------------------------------|
| SITES From:- Site 23 To:- Site 32 | | | | DATE 29.08.09 DURATION : 5hours of survey time during 11.25- 5.20 | | WEATHER CONDITION cloudy, cold wind but warm in sunny patches. | | |
| NO ONE COUNTED TWICE | | | | | | | | |
| SITE | NUMBER OF PEOPLE | MALE | AGE | FEMALE | AGE | ACTIVITY | SHARED ACTIVITIES | DOG BREED |
| 23 (30mins) | 8 (3canal boats) | 6 | 1 x 60's 2 x 50's 3 x 40's | 2 | 1 x 60's 1 x 50's | 2 x cycling 2 x walking dogs | 2(M+F in 60's) walking 2(M+F in 50's) cycling- 1 very squeaky bike | golden- retriever mongre |
| 24 (30mins) | 8 (1 beautiful young kingfisher) | 5 | 1 x 50's 2 x 40's 2 x child | 3 | 2 x 30's 1 x child | 1 x walking dog | 7 (2D+2M + 3 children) walking- going to Water activities at St. Winnies | bulldog type |
| 25 (30mins) | 6 | 4 | 2 x 50's 2 x 40's | 2 | 1 x 50's 1 x 30's | 1 x walking (really smelt of smoke) | 3 (2M+1F) Fishing with tents. female very attentive* 2 (M+F) walking looked serious and avoiding confrontation with us. | |
| 26 (30mins) | 5 | 3 | 1 x 50's 1 x 40's 1 x 20's | 2 | 1 x 40's 1 x 20's | 1 x walking dog | 2 (M+F) cycling 2 (M+F) cycling to Water activities | little mongrel |
| 27 (30mins) | 3 | 3 | 3 x 50's | 0 | | 1 x cycling (leisure- does it twice a week from Crosby)** | 2M jogging | |
| | | | | | | | | |

At the time of this fieldwork case study, the primary reference for CES was the Millennium Assessment 2005. The Millennium Assessment contained only scant details for the subcategories of CES (see Chapter 2). I wanted to discover what tangible CES were being obtained from this 6.5 km urban brownfield canal corridor: recreation and leisure time spent in the environment. I also wanted to gain an understanding of the sense of place: what was the *setting, in and of itself?* (Fredrickson and Anderson, 1999, p.1). In the paper, *A Qualitative Exploration of the Wilderness Experience as a Source of Spiritual Inspiration* Fredrickson and Anderson (1999, p.1), state that *most research on recreation has focused primarily on specific activities rather than the recreational setting in and of itself*. To attempt to gain an understanding of the environment seemed relevant, providing context to the investigation of CES, and gaining a deeper understanding of brownfield landscapes in relation to CES (for example, as revealed in the conversation noted in Fig. 4-3).

To begin the investigation, during January 2009 Dr Prowse and I walked the entire 6.5 kilometre canal corridor over six days. During each day's walk we

covered roughly 2 kilometres: a kilometre section there and back. As we walked, we talked and shared ideas. Within this non-navigable stretch of canal there was a wealth of sensory stimuli for the artist and ecologist. Initial observations (in winter) along the canal revealed that links between the local communities and the canal corridor already existed. Initial observations pointed towards this space being used for feeding the birds, cycling, dog walking, and a space for teenage retreat. Observations leading to this conjecture included a woman throwing bread into the water, snaffled up by ducks, coots, and moorhens, and near-by, a host of empty bread bags tied to an 'A' frame barrier; cycle tracks in the mud along the tow path interspersed with footprints and dog muck; a (secondary) schoolgirl – black skirt and blazer – crouching under a railway bridge during school hours; and graffiti on the bridge support-walls:

LOVE. LIFE! TILL THE END AN WE WILL

And across the canal, on the opposite side of the bridge:

YES. LIVE LIFE TO THE MAX

Observations signified public use that could align to the cultural services. With open access at specific locations along the canal, people could gain access to this environment to obtain CES goods. From initial observations along with anecdotes recounted from The Liverpool Biennial team, which included teenagers seen using panel boards salvaged from adjacent derelict buildings to raft along the canal, we knew that recreation activities were taking place; yet, the scope of activities and who was accessing CES goods was unknown. Preliminary observations also pointed to a disregard for the environment; litter and dumped waste was rife, particularly in the canal water.

We needed methods to enable us to capture recreational activities throughout the corridor, but we also wanted to record the environmental setting and a sense of the place. Drawing, photography, mapping, site surveys and habitat surveys, observation, writing, and conversations were considered viable and robust methods to illustrate the environmental setting and capture a sense of place and CES of place. These methods were completed between February and September 2009.

To extrapolate tangible CES in tandem with local distinctiveness, while retaining a sense location within the 6.5 kilometre canal corridor landscape, we decided to divide the canal into sections that could then be examined in detail. Each section was defined by sightlines: how far we could see into the distance before the towpath became obscured. As bridges or bends in the canal obscured the vista, another section was started, visually punctuating the corridor. Using this visual method to map the canal, the canal stretch divided into thirty-two sections (Figs. 4-4; 4-5; 4-6; and 4-7). The section mapping was completed in February 2009.

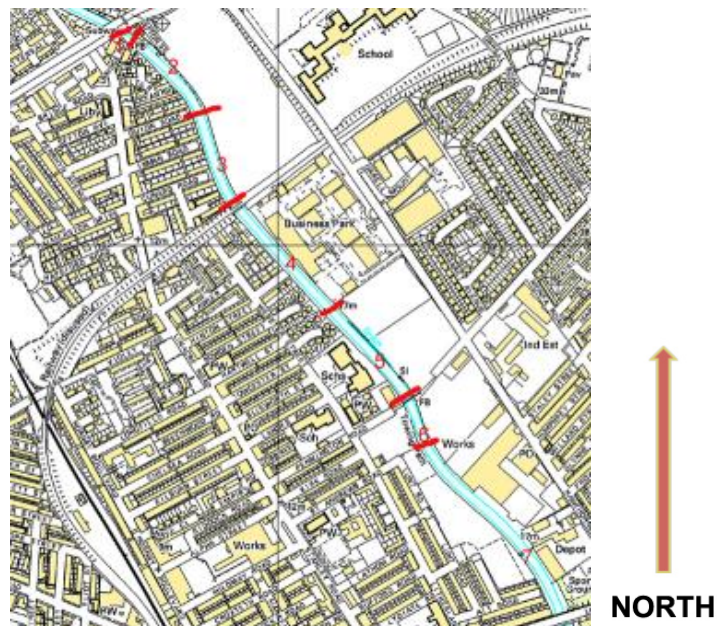


Fig. 4-4: Sections 1 - 7: from the Red Lion, Bridge Street to Linacre Lane bridge. Scale at source 1:10000

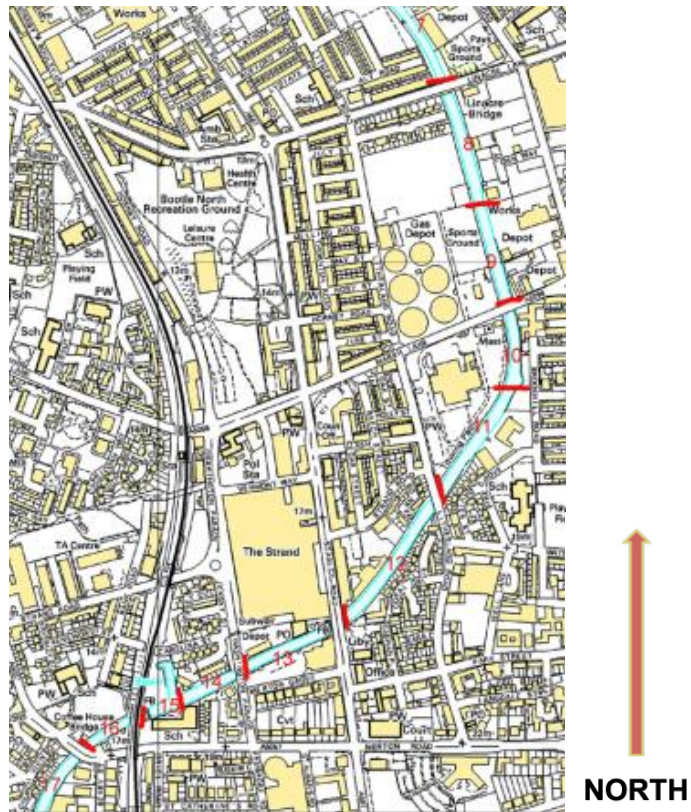


Fig. 4-5: Sections 8 – 17: from Linacre Lane bridge to the Warf Inn, Merton Road. Scale at source 1:10000

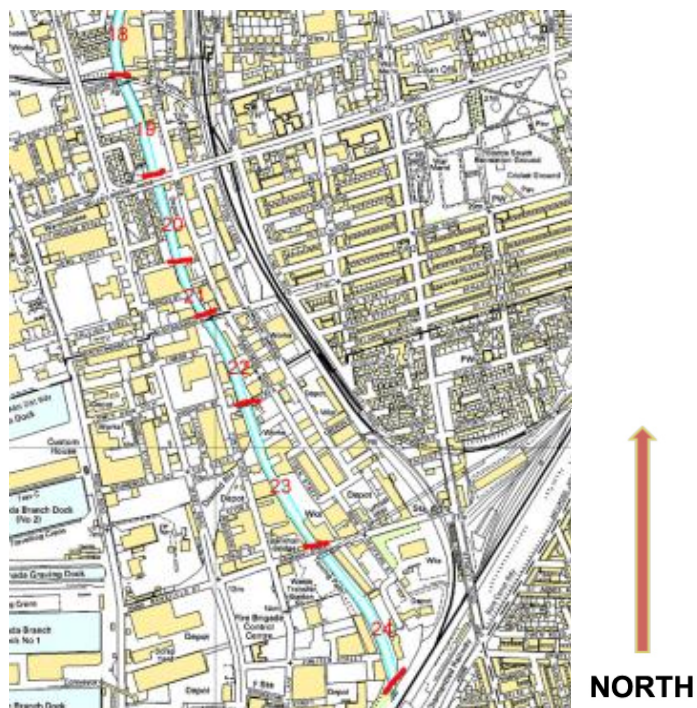


Fig. 4-6: Sections 18 – 24: Canal Street works to Railway Bridge. Scale at source 1:10000

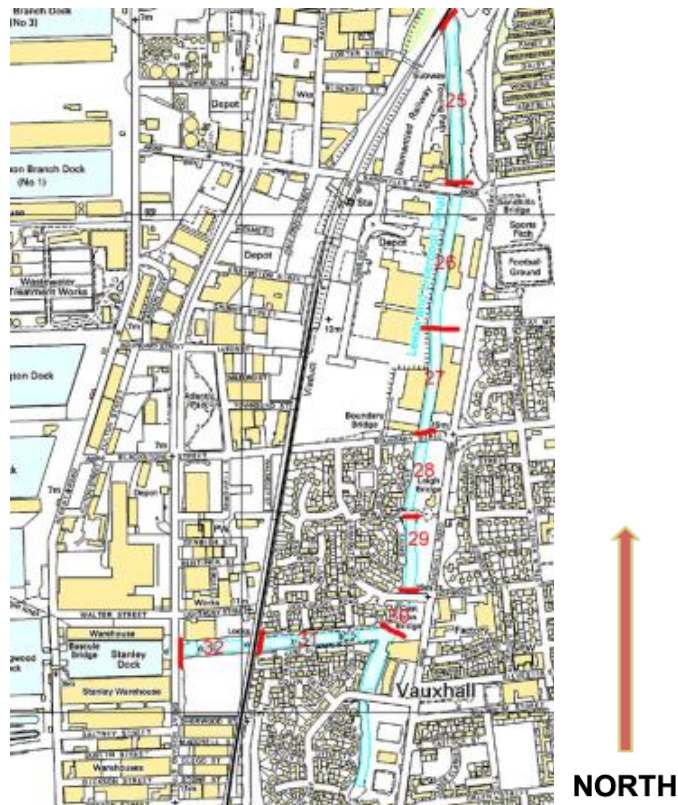


Fig. 4-7: Sections 25 – 32: from Railway Bridge to Stanley Dock. Scale at source 1:10000

4:2-ii. Recording life along the canal as a performative happening

An interdisciplinary method, a performative happening, was designed to investigate the canal corridor and trigger social engagement: *engagements that are contextual, kinaesthetic and sensual: that live* (Halford & Knowles, in Jones 2005, pp.4). Two assistants – Emily Fellows, a geography undergraduate student and Emma Kemp, a fine art recent graduate (2008) - were recruited to record CES practices and become part of a performative happening research ensemble. To set the team apart from the everyday life along the canal, we all donned brown warehouse overall coats – a practical garment with a work wear semiotic - with *wild and productive* embroidered in green on the back (*wild and productive* was the title given to the investigation as an artwork commissioned by The Liverpool Biennial). To cart equipment, tools and paraphernalia possibly required on long days out along the towpath, a portable studio, bespoke to pass through the 'A' frame barriers, was designed and built. The performative happening spectacle was completed with my poodle trotting alongside, also clad in a in a brown jacket with *wild and productive* embroidered on the back.

Considering how we looked while examining the linear brownfield and locating CES was significant. To attract attention and spark curiosity that could act as a trigger for conversations about the environment the team needed to be distinguishable from the everyday occurrences of the canal corridor. The performative happening enabled the team - the ensemble - to connect to communities using the corridor. Creating a spectacle sparked curiosity in some onlookers, which led to conversations about the environment and open-ended dialogic conversational drift that shed light on sense of place. Contemporary art and performative techniques intertwined with site surveys locates the research as interdisciplinary. From a social science perspective, performative research action presents an: *overarching intellectual prowess, strategies and methodological and theoretical bases to engage and unite scholars across disciplines and, in turn, connect researchers' endeavours with communities and stakeholders* (Jones, 2012, pp.2).

The team ensemble began by recording section 1 of the corridor using Phase 1 Habitat Survey (England Field Unit Nature Conservancy Council, 1990). However, it soon became apparent that the Phase 1 Habitat Survey method blinkered our vision of a wider and social environment. Sticking to the rigor of identifying and mapping habitat structures and species gave little insight into the built environment character and ambience of the corridor. More importantly, it was not shedding light on CES. In spending time on the Phase 1 Habitat Survey we were overlooking the recording of social activities, for example, people feeding the ducks and people hanging out in groups and chatting; and, features such as palisade fencing and graffiti. More, we were denying a range of emotional, intuitive and aesthetic inquiries that could, perhaps, be insightful. More interdisciplinary and responsive methods of recording the environment were developed. We began to re-imagine the corridor as a piece of 'human habitat': a natural green space inclusive of humans. Aware that the CES only manifests if people are around to experience nature (Fisher et al., 2009), the revised approach, which began in March 2009, was to spend long days along the corridor using observation log sheets to map and record information and data relating to the environmental setting: habitat, flora and fauna, build

features, community's interactions with the environment; atmospheric conditions; and our reflections.

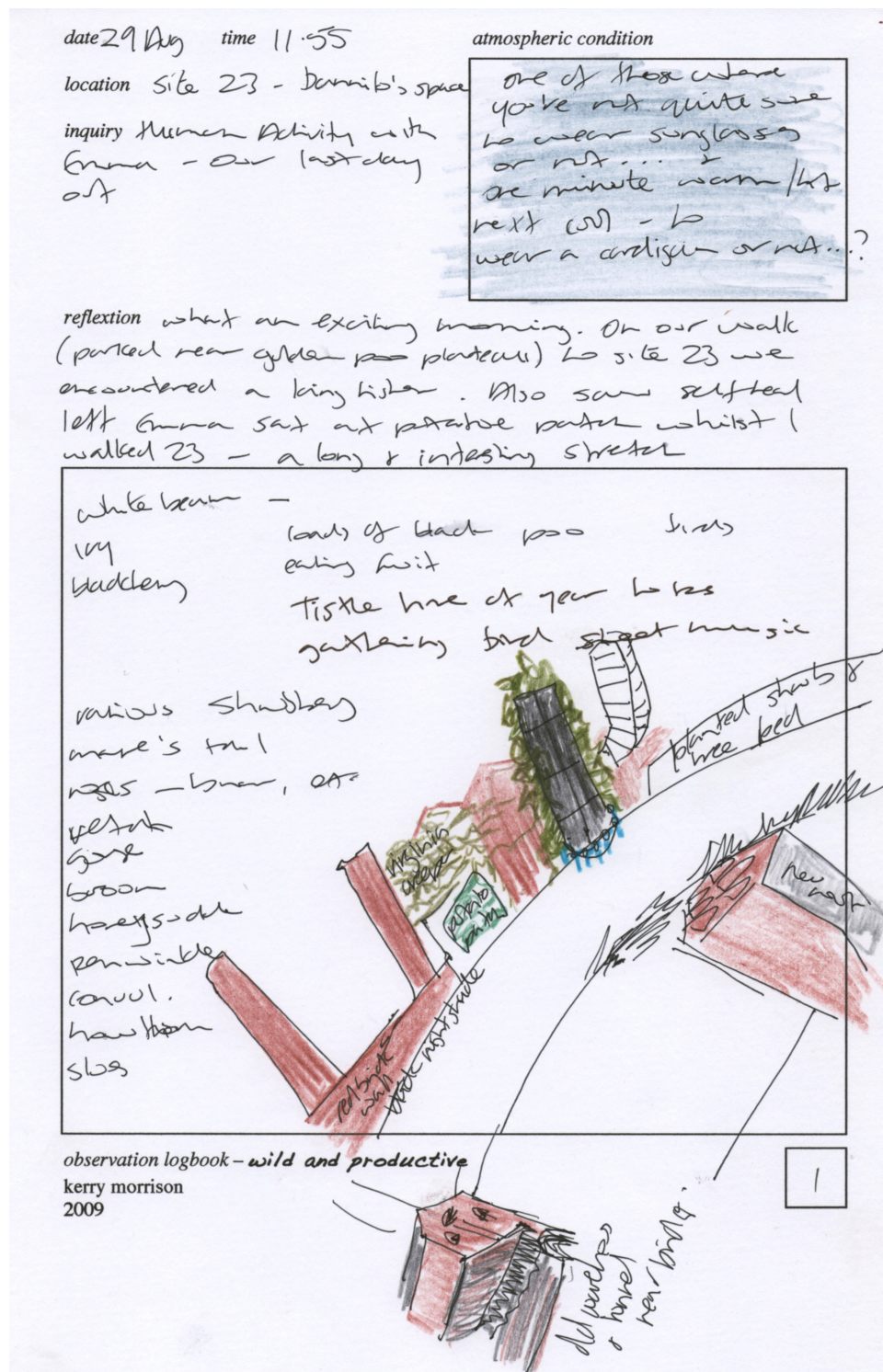


Fig. 4-8: The first sheet of the observation logbook recording the environmental setting of section 23 on 29 August 2009

We trundled at a botanist's pace – which is extremely slow – perambulating the green cart containing cameras, logbook sheets, drawing materials, identification books, and refreshments. As we moved through the landscape, we took photographs of the canal, the towpath, bridges, walls, fences, flora and fauna, litter, our activities, and traces of CES: *temporary signs of non-material uses* (Coates et al., 2014, p.17), for example empty bags used to carry bread to feed ducks, tied to barriers. Where permissions were given, we also photographed people. We drew canal scenes, flora and fauna, and observed activities such as angling. Plants were identified. We kept notes relating to observations and conversations, for example, the fledging blackbirds; a man who had stopped to talk with us wanted to share his experience of just watching blackbirds fledge the nest. He told us where they were, indicating they were *past the elder tree, in amongst the ivy*. A brief exchange, yet, one that highlights an awareness of the environment and an attention to nature. We went to find and watch the blackbirds (Fig. 3-8). We also recorded how we felt as we moved through the landscape. Using these methods we mapped the life and character of the canal corridor, as witnessed and experienced. Focusing in on elements through these different methods of recording was the beginning of a cycle of activity and reflection that enabled us to develop – and integrate - multiple methods to record and evaluate use by humans and other organisms; as well as discover issues connected to access that restrict public use of this natural green space.

Photography, drawing, and writing were continuous methods used to record life and activities along the canal, capturing things that caught our eye or imagination, as well as anecdotes and snippets of conversation; all in all, contributing to a rich picture of the 'human habitat'.

4:2-iii. Encounters and observations

Within the four major phases of Action Research: 'planning', 'acting', 'observing' and 'reflecting' (Masters, 1995), 'observing' and 'reflecting' were necessary to begin to 'plan' the investigative processes of Examining a Linear Brownfield > 0.25ha and Locating CES that would uncover the existing cultural services value of this linear urban brownfield in 2009.

Over time, through investigating the environment as a performative happening, we became a familiar sight to the towpath users. Not everyone engaged with us. Some simply clocked what we were doing, performativity creating the foci of our investigations. One early evening, under the footbridge near the entrance into section 5 and 6 where a group of teenagers were hanging out, a lad loudly asked:

Ay, ooze she un what's she up to?

To which a girl answered:

Ar, she's alright. She's the lady that takes photos of flowers n stuff.

This brief exchange illustrates a moment in time where individuals occupy the same space at the same time but for differing reasons, and where the actions of one is acknowledged by the other giving rise to interpretations of the space they occupy; the girl labelled me “the woman who takes pictures of the flowers and stuff” (in their environment), and I see them as young people who congregate here because it is a space offering some kind of sanctuary - a space where they drink and smoke without being ‘caught’. Both the girl and I have made assumptions of the other. However, this loose social interaction allows those involved to broaden perceptions of place: what’s in it, and who has access to it. More, it demonstrates a shared space; the same space being used to different ends. Moreover, it also demonstrates that what the group of young people are doing and what I am doing can co-exist without conflict.

Through the process of a performative happening - that engaged people - and observation, we uncovered – in images, tales, and data – an ecological gem and cultural service provider. Perambulating between May and August, we recorded 138 species of plants, including some national rarities such as Purple Ramping Fumitory (*Fumaria purpurea*) - a plant that is on the Biodiversity Action Plan (BAP) for the area. Along with the nationally scarce, there was an abundance of species typical to waterside habitats running through post-industrial landscapes, for example: Skullcap (*Scutellaria galericulata*), Hemp Agrimony (*Eupatorium cannabinum*), Annual Woundwort (*Stachys annua*) Southern Marsh Orchid (*Dactylorhiza praetermissa*), and Fringed Water Lily

(*Nymphaea peltata*). On numerous occasions we watched water voles (*Arvicola amphibious*) (a Priority Species in the UK BAP) munching the lily's leaves. Within the same time frame, we also recorded 21 species of birds including coots (*Fulica atra*), moorhens (*Gallinula chloropus*), mute swans (*Cygnus olor*), mallards (*Anas platyrhynchos*), and a kingfisher (*Alcedo atthis*). And, through conversations with regular canal users, discovered the whereabouts of unexpected species, namely terrapins (*Trachemys scripta elegans*) and potatoes (*Solanum tuberosum*). In many respects, enumerating species is the straightforward bit and serves to endorse this corridor as a biodiverse natural green space. However, casual conversations with people we met, combined with our observations of human use, led us into a much more complex area: human activity along the canal.

Reflecting on our observations and methods of recording the environmental setting, CES goods, and sense of place, a more specific survey sheet was developed to record and map human activity along the canal that align with leisure and recreational CES (Fig. 3-12). The systematic approach described in Chapter 3:3-v recorded human activities and tangible CES observed between March and August 2009. There was an attention to detail. For example, the act of walking is differentiated. If someone was observed walking with shopping bags this was recorded. The shopper may be taking a preferred route to and from the shops, while someone without shopping bags may be simply taking a walk; separating an action that could be linked to shopping (the motive of the act of walking being to shop) from a walk that could have been solely for recreational purposes – a CES. In this vein, walking was scrutinized. Walking and looking at wildlife indicates that the act of walking along the canal corridor might be a means to access and appreciate nature along the canal, likewise, walking to feed the ducks. The ducks might be the attraction: CES goods. Further, where possible, additional information was included. For example, in section 19, cycling was observed, however, the behaviour of the cyclist was menacing leading us to believe that something suspicious was going on. People we had met along the corridor had told us that this section was 'known' for drug dealing. The young man on the bike cycled passed us repeatedly, each time slowing down to stare us in the eye. His actions felt threatening. This

was recorded as 'cycling and behaving suspiciously'. It was recorded in more detail in the observation logbook. We did not witness actual drug dealing.

Data collation revealed the main activities as walking (with and without dogs) and cycling (Fig. 4-9).

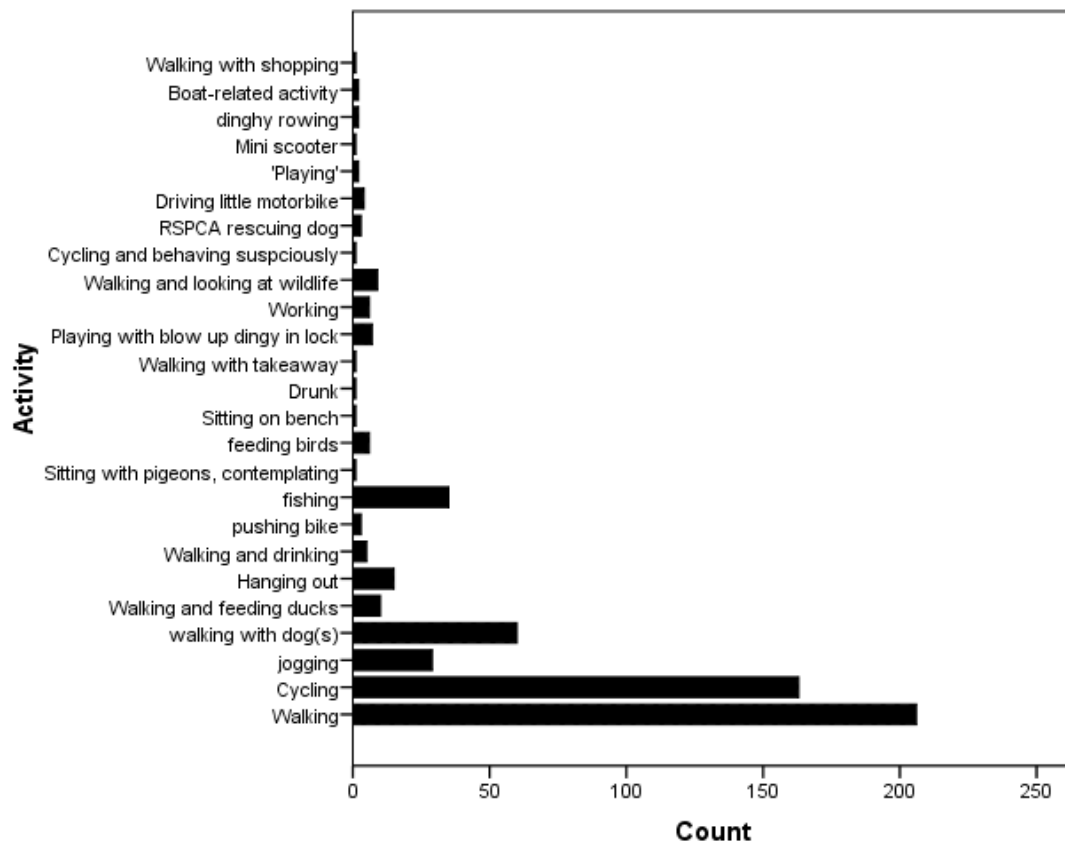


Fig. 4-9: Frequency of activities observed between May and August 2009 in each of the thirty-two sections

The occurrence of activities within in the thirty-two sections was collated into a bar graph. This enabled us to see what activities were happening in which sections and highlighted the most and least used sections (Fig. 4-10).

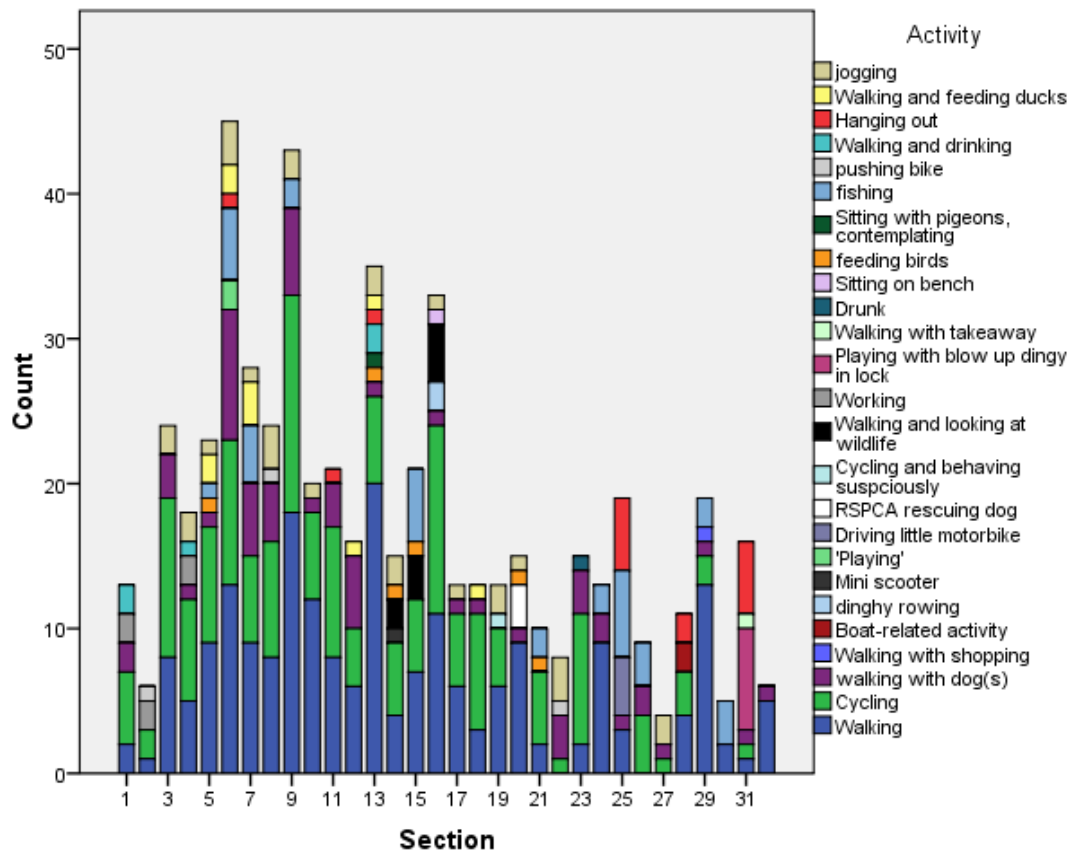


Fig. 4-10: Activities in each section between May and August 2009

The data collected also revealed that mainly men used the canal corridor. Of 574 records only 22% of all activity was undertaken by women. A further 20% of activity was carried out in groups of two or more. Nearly 50% of all activity recorded along the canal corridor was by adults who did not appear to be middle aged or elderly. The demographic groups under-using the canal included lone women of any age, the elderly, and children. It also revealed sections of the canal that were the least used. Among those sections least used were sections where I, and members of the ensemble team experienced feelings of trepidation, in particular, sections 17 through to 27 (with the exception of section 25). This long stretch of canal and the canal towpath is edged with high walls and security fencing (with the exception of section 25 which has an open public green space of mown lawns and footpaths on the off-towpath side of the canal). In sections 17, 18, 19, 20, 21, 22, 23, 24, 26, and 27, the near proximity of so much security fencing appeared to affect our sense of personal security. Feelings of trepidation in connection to security fencing

and high walls and were discussed with the *wild and productive* team. Because we had been exploring the canal in sections, we were able to convey which sections evoked such feelings.

In thinking about the canal as a human habitat, investigations lead us to explore instinctual or primeval elements that might affect how we interact with environments. In delving into literature it became evident that studies during the 1970s and 1980s (e.g. Appleton, 1975; Kaplan, 1985; Ulrich, 1986; Kaplan and Kaplan, 1989) led researchers to conclude (for example, Ruso et al., 2003) that there are several features relating to landscape appreciation that are universal. For example, a seminal work proposed the prospect-refuge theory, whereby human habitat preferences are driven largely by the ability to see distances to spot resources and the opportunity to anticipate and escape from danger (Appleton, 1975). This work is also cited in the UK NEAFO Work Package 6: Shared, Plural And Cultural Values Of Ecosystems (Kenter, et al., 2014): *...quantitative research shows an evolutionary, systematic, cross-cultural basis for our aesthetic preferences in respect of particular kinds of natural or semi-natural landscapes, e.g., savannah-like landscapes of parks, because they provide feelings of safety or 'prospect and refuge' (Appleton, 1975; Porteous, 1996) (Kenter, et al., 2014, p68)).* Further research attempted to measure landscape preferences and categorise preferences (for example, Kwok, 1979; Ulrich, 1991; Voland and Grammer, 2003); across different cultures it was identified that landscapes with open vistas – an open prospect – with opportunity for refuge, and landscapes with water were most preferred. Water provides many positive stimuli, including: interest, improved quality of social interaction and *positive feelings such as tranquillity* (Ruso et al., 2003 p.285). Along the brownfield stretch of the canal edged with high walls and security fencing, there was no prospect of a safe refuge. This effected how we felt, and is perhaps an indicator of landscape preference and a possible reason why these sections were less used – even if next to water.

Canals lend themselves to open vistas with long straight sections providing open vistas that humans tend to rate as positive features (Voland and Grammer, 2003). However, with thirty-two sightline breaks, this 6.5 kilometre

stretch of canal lacked vast open vistas. Also, traversing through a built environment, the canal is bounded by premises including in-use and abandoned industrial units, warehouses, residential premises and boarded up houses and pubs; as well as car parks, gas works, an assortment of brownfield sites and fenced off open green space; all detached from the towpath with walls, barriers, or fencing. The feelings the team were experiencing appeared to chime with the prospect-refuge theory, only in reverse; we were not in a savanna type landscape, the landscape we were walking through felt like a narrow passageway with murky water on one side and built structures on the other. In addition - and importantly - exit points are few and far between; should something untoward occur, there would be no easy escape route. Sections of this landscape appeared to offer neither prospect nor refuge for us. Seen like this, we might be able to interpret human activity patterns in these terms.

Yet, the canal as a watercourse did appear to be attractive to some, providing interest and opportunity for social interaction. On 5 Jun 2009, an elderly couple walking along the canal stopped to chat with us. They wanted to see our drawings. She was 65 he was 73. He spoke of his childhood, growing up in Liverpool, and his sense of belonging and rootedness. Equally important in relation to shedding light on CES benefits is when she turned to me and whispered:

He's got Alzheimer's. And if you're taking notes about canal use I really want you to note that walking along the canal is one of the only activities that we can now both enjoy. It's really important. I can take him out along the canal and we both have lovely day. Walking is so important for me, and I think it's really important for many Alzheimer sufferers and their carers

Walking along the towpath was the most frequent of activities observed between May and August 2009. There were people who walked it regularly and who we encountered more than once. For example, on the 25 August 2009, the man who had told us about the blackbirds stopped to tell us about the linnets and the terrapins. Alicia and I had observed linnets (*Carduelis cannabina*) in

section 18 of the canal, in May, but we had not observed terrapins. He went on to tell us exactly where they basked on a sunny day in section 2 of the canal. This regular walker of the canal appeared to have detailed knowledge of the whereabouts of nature along the canal corridor, indicating CES goods: ecological knowledge and leisure; practices: socializing and exercising; and benefits: belonging, discovery, and a sense of place.

People were also observed at the water's edge. For example, two men, thigh high in reeds on the opposite side of the canal shouted across the water that they love being at the water edge, so every sunny lunch break they squeeze through the railings to be at the water's edge (Fig. 4-11).



Fig. 4-11: Factory workers on a lunch break making their way to the water's edge

An older man told me, having recently been rehoused as a result of the Housing Market Renewal Programme, the first thing he did when he moved into his new home was cut a gate into the wooden fence that separated his garden from the canal bank. He wanted to be able to get down to the water to fish: *...the gate went in before the curtains went up*. We conducted our conversation across the canal: me on the towpath, he in his back garden, leaning over his wooden fence. Klondyke born and bred, he grew up with the

canal when the stretch was - as he recalled – *industrial, and effluent from the factories flowed directly into the canal*. (Klondyke is a neighbourhood area of Bootle, Sefton, and the canal edges its border). He and his mates always used to lark about on it and in it, this canal is where he learnt to fish and swim (extract from *observation logbook – wild and productive*, time: 14.52, date: 31 August 2009, location: section 6, weather: overcast).

4:2-iv. A sign of neglect

Examining a Linear Brownfield > 0.25ha and Locating CES drew to a close as the canal was brought back into use. The waterway was once more navigable and the towpath was brought back into a full management programme. This included herbicide applications and hard mowing of green verges. In a conversation with the British Waterways management team in September 2009 – facilitated by the Liverpool Biennial – questioning the management of wild flora along the canal towpath, it was explained that herbicides are applied and verges are mown because ‘weeds’ look ‘untidy’. Re-opened as a navigable canal, British Waterways were concerned that, without weed management, the general public would think the towpath was being neglected. This led to questioning our relationship with weeds as a sign of neglect in cityscapes and whether unplanned nature could be a barrier to accessing unmanaged urban brownfields. Further, I was left questioning the CES values of so-called weeds.

4:2-v. Thoughts to carry forward to the final discussion

Examining a linear brownfield > 0.25ha shed light on CES within one brownfield environmental setting. This brownfield did provide CES and CES benefits. However, demographic use was skewed. The majority of CES beneficiaries were male. It was a male dominated environment. It is possible that the prospect-refuge theory affected ingressions. However, it was also possible that lack of management and a dislike of weeds are a deterrent. From Case Study 1 it was not possible to ascertain CES value of unmanaged nature across demographics. To discover more about nature aesthetic preferences, in particular, perceptions of weeds, and find out how the missing demographic interact – or not - with unmanaged nature presented a challenge.

4:3. Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds

4:3-i. Introduction

Natural succession and re-wilding is an ecological phenomenon that unites all unmanaged brownfields resulting in unplanned ecosystems with plants that some regard as weeds. It is not uncommon for weeds to be vilified, as exemplified by Dwyer in his paper, *Messages and Metaphors: Is It Time To End The 'War On Weeds'?* (2012, p.297):

Weeds attract adjectives such as 'ugly', 'pernicious', 'hateful', and 'noxious'; expressions of the emotions aroused by the threat to good order that they represent. Weeds growing on wasteland, roadsides, ruins, rubbish heaps, and other uncultivated areas, where they might merely be thought untidy, attract these epithets as readily as weeds of farms and gardens.

Case Study 1 - Examining a Linear Brownfield > 0.25ha and Locating CES - raised questions connected to unplanned wild flora commonly referred to as weeds. To shed light on perceptions of weeds – as might be experienced in unmanaged urban brownfield sites - investigate their CES value, and determine whether or not weeds are a barrier affecting ingress into unmanaged brownfields necessitated an environment that was accessed and used by people from all demographics. However, investigating within a brownfield environmental setting – according to one of the findings of Case Study 1 – may exclude opinions and perceptions of women, children, and older people as the physical and psychological barriers may deter members of these groups from entering brownfields. This presented a challenge in learning more about perceptions of unplanned ecosystems and so-called weeds found on unmanaged urban brownfield sites.

Addressing this challenge, Case Study 2 was purposely designed to illuminate attitudes across demographics towards unmanaged nature in an urban landscape. Investigating Perceptions of Unmanaged Nature and CES Goods

Connected to Weeds took place in two different sites, in two different cities, in two different countries: a Grade 1 listed park, Nerotal Park in Wiesbaden, Germany and a university campus in Salford, England. The case study was designed to naturally disrupt the nature and landscape aesthetic of managed green spaces by allowing sections of established lawn to grow unabated to discover more about people's perceptions of, and reactions to, an area of unmanaged nature. As a concept, removing management and allowing nature to take its course contains the potential to explore perceptions of unmanaged nature and CES goods connected to 'weeds'. It also presented the opportunity to delve deeper into landscape and nature aesthetics.

4:3-ii. Rationale for stepping outside of brownfields and into managed green spaces

Given my research question, stepping out of the brownfield and into a managed landscape might seem like a deviation. Reflecting on the finding of Case Study 1 led to planning an intervention that could explore people's reactions to the weedy and the unkempt. Disrupting the status quo of a landscape by introducing a deliberate absence of management may be likened to a brownfield plot in a cityscape. Unlike a brownfield, Nerotal Park in Wiesbaden and the campus in Salford are not abandoned spaces as they are; they are in use as intended. Further, they have governance and rules; wardens patrol the park, and security staff patrols the campus. They are, ostensibly safe spaces where mainstream recreational activities can take place. Nerotal Park and the university campus, each has a look, a design, an aesthetic, with which they are familiar. So, would the introduction of a different aesthetic – a weedy unkempt aesthetic – in a prominent location, change the way people engage with the environment? Would people avoid entering an area of long grass and weeds? And, would disrupting the established, managed landscape aesthetic alter the provision of CES? These are questions that are pertinent in relation to re-wilding brownfield spaces and maintenance free CES of unmanaged urban brownfields.

The rationale behind taking the exploration out of brownfields and into managed urban green spaces was twofold. Firstly, in order to observe and

experience perceptions, across demographics, of unmanaged nature and CES goods connected to weeds, study sites free of potential barriers such as fencing, fear of attack, and excess litter and which were used by a wide range of people including children, women, and the elderly were required. Establishing a study site of unkempt, unmanaged nature in a managed green space environmental setting presented the opportunity to observe what happens when nature is left to flourish unabated. For example, would the unmanaged area become an abandoned space, void of human activity, and consequently void of CES? Secondly, by initiating the creative intervention of a re-wilding lawn, and exploring the site through performative happenings, site surveys, and social engaging art practice, voices least heard in Case Study 1 could be recorded.

4:3.2a: Case Study Nerotal Park, Wiesbaden, Germany. *Garten - Wiesbadener Kunstsommer 2010*

4:3.2a-i. Introduction

In the summer of 2010, Nerotal Park was the venue for an international sculpture exhibition: *Garten - Wiesbadener Kunstsommer 2010*. I was invited to exhibit. A site visit (prior to accepting the invitation) revealed a beautifully maintained, Grade I listed Romantic park, overlooking the town and edged on two sides by grandiose homes. The park has swaths of rolling lawns encircled by wide promenades, a (man-made) babbling brook that cascades over rocks, rustic wooden bridges, and a wooden building with thatched roof. The vegetation comprises established native and exotic trees, banks of rhododendrons, rose beds, and formal annual flower beds. A magnificent backdrop to an exhibition of out-door art.

Opened in 1898, Nerotal Park was designed in the tradition of the Picturesque and the Romantic as exemplified in British Victorian parks and gardens of the time. A classic example being Birkenhead Park, designed by Joseph Paxton (opened in 1847) with hard and soft landscaping designed to be admired as a series of pictorial views observed while promenading along the pathways.

The Picturesque and the Romantic are popular notions of beauty embedded in our perception of landscape and nature aesthetics (for example, Porteous, 1996; Carlson 2010; Saito, 2007; & Parsons, 2008). Professor Bill Adams (geographer and conservationist) commented on the BBC Radio 4 programme: *when we think about nature in the UK, we think about Wordsworth's nature* (BBC Radio 4, 2013, 2 July).

This is a generalization of nature aesthetics that is not entirely true; different people will conjure up images of nature that appeal to them. That Western nature appreciation is rooted in art aesthetics and movements such as The Picturesque and Romanticism is widely debated within landscape and nature aesthetic philosophy (for example, Porteous, 1996; Carlson 2000; Brady, 2003; Saito, 2007; Parsons, 2008). Aesthetic Philosopher Douglas Porteous describes Romantic and Picturesque tastes in landscape aesthetics as *bucolic* (Porteous, 1996, p.101), favouring tamed landscapes where nature has been modified to resemble art as portrayed within these movements; where the *elegant rolling landscape, grassy downs, grazing animals, are composed with the rustic, thatched cottages, rutted lanes, and rounded trees* (Porteous, 1996, p.101). This description – excluding the grazing animals - epitomizes the vista of Nerotal Park in 2009; scenery and managed gardens far removed from the chaotic and edgy aesthetics usually associated with unmanaged urban brownfields. Amid this landscape, revered through a Heritage Listing, I found myself confronted with a unique opportunity: I had been officially invited to propose a creative addition to the landscape.

Walking the promenades around the lawns I saw the lawns in painterly terms as a swath of complimentary greens. The lawns are a design feature. They have an aesthetic purpose complementing an idealized (Romantic) view of nature. They also have an anthropocentric function via the inclusion of clear open spaces where recreational activities can take place, for example, ball games.



Fig. 4-12: A lawn in Nerotal Park as photographed from one of the pathways, September 2009

From the distance of the pathways, I could not tell what species of grass made up the lawns. The lawns are green grass, but the grass is not allowed to bloom, or seed. Grass lawns are not 'Green' in the sense of nature centric political ideology and environmentalism (even though, ironically, modern environmentalism has been reported to be born out of the Romantic movement, for example, Gould, 1994). Upon closer inspection – on bended knee - I was able to see, and identify – not the cropped grass species – but nine wild flower species. I noted the species, when they flower (Rose, 2006), and the colour of the flowers (from personal observations) (Table 4-3).

Table 4-3: Flowering species identified in two grassy areas of Nerotal Park during September 2009.

| Common names | Scientific name | Flowering period | Colour |
|------------------|--------------------------|-------------------|-----------------------|
| Daisy | <i>Bellis perennis</i> | March to October | White & yellow & pink |
| Dandelion | <i>Taraxacum</i> | March to October | Yellow then white |
| Speedwell | <i>Veronica</i> sp | April to July | Pale blue to violet |
| Mouse-ear | <i>Cerastium</i> sp | April to July | Creamy white |
| Ribwort Plantain | <i>Plantago</i> sp | April to October | White & brown |
| Buttercups | <i>Ranunculus</i> sp | May to August | Yellow |
| Clover | <i>Trifolium</i> sp | June to September | White & red |
| Selfheal | <i>Prunella vulgaris</i> | June to October | Purple |
| Broadleaved dock | <i>Rumex</i> sp | June to October | Burnt red |

One distinguishing feature of a brownfield site is re-wilding. An abandoned site where management has ceased will either be colonized by nature, or, if plants already exist, grow wild. My proposal for Nerotal Park was to allow a re-wilding to happen and observe what occurs to the nature of the lawn, and people's reaction to it.

A stand-alone lawn; an island of green grass defined by pathways, less than 0.25 hectares in size (corresponding to the size of ecologically overlooked brownfield sites), was chosen for the non-management intervention. It held a commanding position within the Nerotal Park, near the main entrance with the pathways taking visitors around the lawn. Further, the pathways created an edge that would contain and frame the unkempt nature, which would assist in defining it as art within the context of *Garten - Wiesbadener Kunstsommer 2010*.



Fig. 4-13: Nerotal Park Lawn selected for intervention, photographed September 2009

The Culture Department negotiated the concept of leaving the lawn to grow wild with the Parks Department. Mowing ceased in the autumn of 2009. Arriving in Wiesbaden in mid-June 2010 (for the opening of the *Garten - Wiesbadener Kunstsommer 2010*) the left lawn was a picture of long, yellowing grasses with weeds intermingled (Fig. 4-14).



Fig. 4-14: Nerotal Park overgrown grass lawn, June 2010

Plants become weeds when they are out of place in a garden, park, or agricultural settings; they also become weeds when they disrupt an inherent order (Gissen 2009). In contrast to the rest of Nerotal Park, the long lawn looked messy and unkempt with lots of long, taupe tipped grasses bending scraggly. It no longer resembled the surrounding mown lawns. It was overgrown. An artistic intervention of 'doing nothing' had 'created' an area that some might view as weeds or nature out of place. Nature out of place and weeds can be considered as *blots on the landscape and ridicule the prevailing botanic order imposed by landscapers and gardeners* (Edensor, 2005, p.45); and Nerotal Park had a strongly defined, designed and gardened, botanical order. 'Non' intervention had generated what could be a challenging project. I did not know how people would react to the long lawn, whether they would view it as nature and out of place in their park, or embrace it as an alternative green space; but I was about to find out.

4:3.2a-ii. Recording life in the overgrown lawn as a performative happening

Performative happenings, site surveys, and social engaging art practice were used to investigate and explore the unmanaged overgrown lawn. Exploration of the overgrown began with a daily routine of identifying and cataloguing the flora and the grasses, conducted as a performative happening, dressed in white overalls with *alternative views* and *grass is not green* embroidered on. To assist with site investigations and conversations with passers-by, landscape architecture undergraduate student and native German speaker, Lydia Gilbert, was employed on a placement internship (Figs. 4-15 and 4-16).



Fig. 4-15: Performative happening in the overgrown with Lydia Gilbert, Nerotal Park, June 2010



Fig. 4-16: Performative happening plant identification with Lydia Gilbert, Nerotal Park, June 2010

For six days in June we rummaged in the long grasses, picking out species, identifying them, cataloguing them, mapping them, photographing them, and pressing them into a herbarium. In total we discovered thirty-five wild flower and eleven grass species (Figs. 4-17 and 4-18).

| ENGLISH NAME | | LATIN | |
|--|-----------------------------|-------|-----------------------------|
| FLORA | Daisy | 1 | Bellis perennis *p |
| | Oxeye Daisy | 2 | Leucanthemum vulgare *p |
| | Dandelion | 3 | Taraxacum officinale *p |
| | Creeping Buttercup | 4 | Ranunculus repens *p |
| | White Clover | 5 | Trifolium repens *p |
| | Broad leaved Dock | 6 | Rumex obtusifolius *p |
| | Curled Dock | 7 | Rumex crispus *p |
| | Small Flowered Crane's Bill | 8 | Geranium pusillum *p |
| | Black Medic | 9 | Medicago lupulina *p |
| | Mouse ear | 10 | Cerastium fontanum *p |
| | Wood anemone | 11 | Geum urbanum *p |
| | Selfheal | 12 | Prunella vulgaris *p |
| | Slender Speedwell | 13 | Veronica filiformis *p |
| | Greenfield Speedwell | 14 | Veronica agrestis *p |
| | Yarrow | 15 | Achillea millefolium *p |
| | Shepherd's Purse | 16 | Capsella bursa-pastoris *p |
| | Lesser Stitchwort | 17 | Stellaria media graminea *p |
| | Black hockweed | 18 | Ballota nigra p |
| | Wood Dock | 19 | Rumex sanguineus p |
| | Smooth Saw Thistle | 20 | Sonchus palustris p |
| | Common field Speedwell | 21 | Veronica persica p |
| | Daisy Fleabane | 22 | Eriogonum annuus p |
| | Greater Plantain | 23 | Plantago major *p |
| | Common chickweed | 24 | Stellaria media *p |
| | Creeping Jenny | 25 | Lysimachia nummularia *p |
| | Hoary Plantain | 26 | Plantago media *p |
| | Creeping Thistle | 27 | Cirsium arvense p |
| | Autumn Hawkbit | 28 | Leontodon autumnalis |
| | Hedge bedstraw | 29 | Gallium mollugo *p |
| | Stinging nettle | 30 | Urtica dioica *p |
| | Fisheye goosefoot | 31 | Chenopodium ficifolium p |
| | Smooth hawkweed | 32 | Crepis acillaris *p |
| | Common Ivy | 33 | Hedera helix |
| | Red clover | 34 | Trifolium pratense p |
| | unknown name | 35 | Stellaria sp. p |
| GRASSES | Barn Brone | 1 | Bromus sterilis *p |
| | Cocks foot | 2 | Dactylis glomerata * |
| | Perennial Rye Grass | 3 | Lolium perenne * |
| | Meadow fescue | 4 | Festuca pratensis |
| | Smooth Meadow Grass | 5 | Poa pratensis * |
| | Narrow leaved Meadow grass | 6 | Poa angustifolia |
| | Tall fescue | 7 | Festuca arundinacea |
| | Great Crested Dog's tail | 8 | Cynosurus cristatus *p |
| | Wall Barley | 9 | Hordeum murinum *p |
| | Annual Meadow Grass | 10 | Poa annua |
| | Yorkshire fog | 11 | Molcus lanatus p |
| Date 19 June + 20, 21, 22, 25 + 28th Time Always after 11.00am Location Nero Park Meadow Who K.M. + L.G. Wiesbaden Germany - MEADOW FLORA & GRASS 2010 | | | |
| * herbarium pressed p photographed | | | |

Fig. 4-17: Overgrown lawn species list, June 2010

Identifying and recording species growing in the overgrown lawn and recording where the plants grew resulted in being able to map the flora of the overgrown lawn.

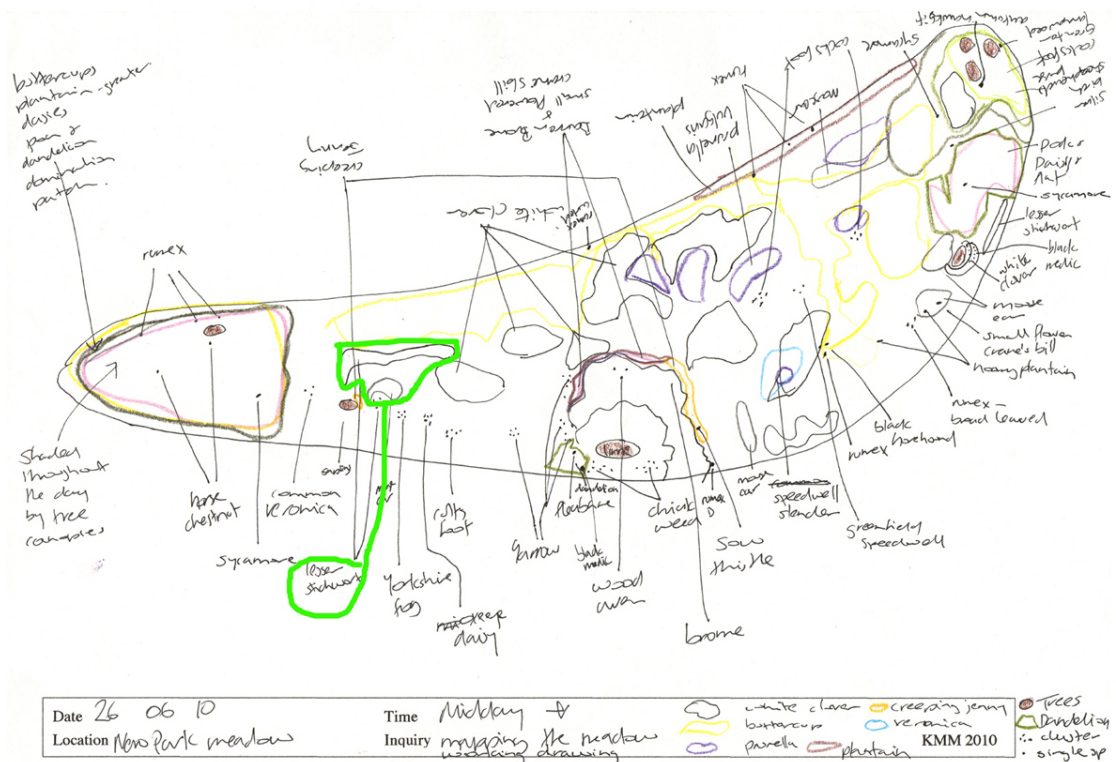


Fig. 4-18: Flora map of case study area, June 2010

4:3.2a-iii. Encounters and observations

During our performative happening practice of rummaging, whenever Lydia and I crouched in the overgrown lawn people would inevitably approach us to ask what we were looking for (Fig. 4-19).



Fig. 4-19: Attracting visitors and conversations, June 2010

We were not looking for anything in particular; we were simply looking to seek out what was there. A reaction to this action was that some people wanted to help us and joined in our hunt (Fig. 4-20).



Fig. 4-20: A participant rummaging for aphids, July 2010

This was not a prescribed activity, and it was not didactic, as such, investigations responsively broadened to include bug hunting and identification, drawing, storytelling, and conversations. The overgrown lawn and actions performed (June to August 2010) were a socially engaged art practice that created an environment for participation and ‘conversational drift’.

‘Conversational drift’ is a term coined by the ecological artists, Helen Mayer Harrison and Newton Harrison (The Harrisons), to describe a situation that is created, focused on a given ecosystem that has a potency to prompt self-generating dialogue about issues connected to the ecosystem in question (Haley, 2009).

As well as participants joining in rummaging for bugs Case Study 2a: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds in Nerotal Park was generating discussions about unmanaged nature and ‘weeds’. I was able to engage with a wider demographic than in Case Study 1, and spoke with older people, lone women and women of all ages, families, and children. Conversations I had, and conversations Lydia and I were

privy to, frequently revolved around the amount of wild flowers and grasses that made up the overgrown lawn. No one we encountered had expected so many; and our plant count did not take into account spring blooms. One woman, who lived locally and visited the park regularly, told us of the joy she felt when she noticed cowslips and primroses in the lawn in the spring; commenting that it was the first time she had ever seen them growing in the lawns in the park.

Along with the flowering grasses and flora, came insects. The presence of insects triggered additional activities in the overgrown lawn, for example using sweep nets to catch insects (Fig. 4-21). Children playing in the overgrown lawn triggered conversations about wild play, access to nature, and debate about local green space issues: a lack of wild nature spaces within the city; and governance: questioning the need for weed management in parks and verges, and questioning the need to keep all lawn areas in the park and around the town short mown.

On 12 August 2010, a woman with five children joined us. We began to talk. As we talked the girls played in the overgrown lawn and tried to catch bugs with sweep-nets (Fig. 4-21). She said:

I wonder why grass is always cut so short? Who likes it like that and why? Who makes the decision to cut it? It's such a waste. I don't understand why all grass areas are not left to be like this. Your meadow is so much more beautiful and interesting than the lawns. Look at how the girls are playing it. They are so interested. Perhaps they are the right age. They are ten years old: a good age for nature investigation I think.

Extract from observation logbook, 12 August 2010



Fig. 4-21: Use of sweep-nets by four girls, August 2010

On 19th August I spoke with a woman who was with a teenage boy. She told me she was a private tutor and that she comes to the overgrown lawn most days with a different young person. Together, they collect things from the overgrown lawn, look at them under microscopes (provided as part of the intervention), and try to identify what they have found. Another woman told me she brings her children here every day after kindergarten. For her, the overgrown lawn provided a space where her children could explore wild nature. Through her eyes the overgrown lawn is not weedy or out of place, but an additional nature resource within the park, and within the city.

People were free to come and go as they wished in the overgrown lawn. On occasion, if something was discovered that interested the person who found it, we would place a quadrat around the 'find'. Photographs were taken of people peering into the quadrat sections (for example, Figs. 4-22 and 4-23), as well as a teenage boy drawing one of the 'finds': a wasp spider (*Argiope bruennichi*) (Fig. 4-24).



Fig. 4-22: Lydia assisting a child spot insects within a quadrat, August 2010



Fig. 4-23: People using quadrats, August 2010

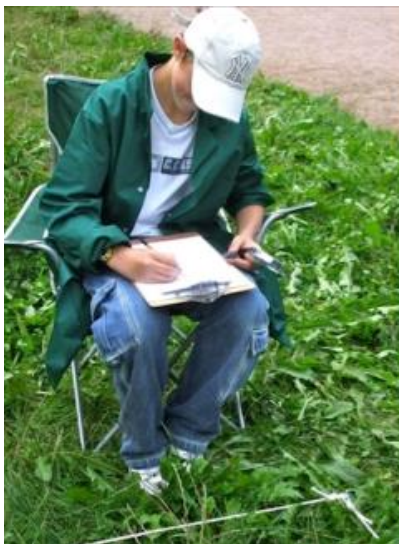


Fig. 4-24: Boy drawing a wasp spider inside a quadrat, August 2010

The overgrown, unkempt, lawn was generating interest, self-generated play, and discussion. The Cultural Department of the City asked me to conduct a tour as a one-off event to show people what was growing and where. It was well attended (Fig. 4-25).



Fig. 4-25: One-off tour of the overgrown lawn, July 2010

The 'tour' had a role within the exhibition and the cultural offering of *Garten - Wiesbadener Kunstsommer 2010*. However, I was more interested in encounters with people who came into the lawn by chance. Daily, people were entering the long grasses and wild flora without an incentive ordained by another. I observed people wandering into the overgrown lawn to pick dandelions. Some picked dandelion leaves for their pet rabbits; one woman collected dandelions to eat as salad leaves. As a child, during World War II, she had foraged for wild food. The social situation created with the overgrown lawn and performative happening gave rise to her re-telling her memories of being a child during those war years. Young and old were interacting with the overgrown lawn. I watched children running through the overgrown lawn and dog walkers walking their dogs through it. Three young boys became regular visitors, (visiting the long lawn most week days in June after school) interacting and playing in the overgrown lawn in a variety of ways: bug collecting, hunting games, stick collecting and whittling, and board games (which they brought with them). I observed picnics taking place. One morning I arrived in the park to

find a tent pitched in the overgrown lawn. And, one man came regularly to practice his Tai Chi; he told me he always comes to the park on fine days to practice Tai Chi on the lawns, but this lawn, with the long grasses, wild flowers, and the sound of insects, enhanced his connectedness to nature and Tai Chi as a spiritual art. There always seemed to be somebody doing something in the long lawn. Activities observed were recorded in photographs, a selection illustrated below (Fig. 4-26).



Fig. 4-26: Recreational, leisure, and spiritual CES captured in photographs, summer 2010

4:3.2a-iv. Public perceptions: Weeds or a Wild Flower Meadow

As the season progressed, the appearance of the 'lawn' changed further; the area became flattened by feet and by the natural process of the grasses and flora going to seed and dying back. The emergence of scraggy grasses intermingled with what some may call weeds, followed by seeds being distributed through the park, and vegetation dying back, could have been widely met with disdain: the seeds contaminating the well-kept areas of the park. The presence of so-called weeds can be seen as a sign of disorder and neglect; they can be considered unsightly, even ugly, and contaminants that disfigure landscapes (Dwyer, 2012). As the artist of the commissioned 'artwork' intervention I had not envisaged that the overgrown lawn would stay long. The agreement was that at the end of *Garten - Wiesbadener Kunstsommer 2010* exhibition the lawn would be cut and returned to a short mown lawn in keeping with the other lawns in Neortal Park. However, people appeared to be becoming attached to the nature of the lawn: the flora and the fauna (which, by late summer included toads), and began to ask if it could stay. Moreover, the staff and curators at the City's Cultural Department began to wonder if the 'artwork' could remain as permanent park feature.

It would be amiss to omit voices that expressed a dislike of the overgrown lawn; it would present a skewed account. There were, of course, people who did not like the overgrown lawn. While some people asked if it could remain as a wild area in the park, others wanted to know when it was going to be cut and returned to normal. Lydia was approached by one woman who was very angry about the introduction of weeds and mess into her park; and even angrier that this had been allowed to happen with the endorsement of the City's Cultural Department. One teenage boy I spoke to refused to enter the long lawn because he feared there might be 'ticks' for example, *Dermacentor reticulatus* or *Ixodes* sp. which are present in the region of Hessen, though not common in cities. Another teenage boy told me he disliked the long lawn because it was impossible for him to play football on.

Different people expressed different opinions. Most people that spoke to me expressed their appreciation of the overgrown lawn. Listening to the voices I

decided to create an opportunity for people to comment anonymously. Towards the end of the exhibition I put pens, pencils, paper bags, and manila tags on the portable studio cart next to the lawn. With no more prompt than that people began to write on the tags and on paper bags, unsolicited. Some tags were tethered to the long grasses others were hung on the cart (Fig. 4-27).



Fig. 4-27: Comments of tags in the grass and on the portable studio cart

A written conversation emerged. People were reading the tags and the bags and appeared to be writing in response to others' comments. Non-directed, a

prominent debate emerged: should the grass be cut, or should the long lawn be left. Moreover, some people were suggesting the overgrown lawn could stay as a nature feature in the Park, for example, one comment read:

The 'meadow' sits well within the landscape of the park. To have one area left as the Meadow brings another aspect that complements what is already here. (Amy, 28 June 2010)

During the last weekend of the *Garten - Wiesbadener Kunstsommer 2010* sixty-three comments were made (Table A-1 and A-2, Appendix A3). Of those sixty-three comments six expressed a dislike - five wanting the long lawn to be cut. Fifty-seven explicitly stated that it should be left to grow. Within these fifty-seven comments:

- Six used adjectives connected to feelings of well-being, for example: happy, inspirational, and pleasure;
- Six used the words attractive or beautiful, and one used the word masterpiece;
- Eleven referred to the educational element: the wild nature of the lawn being a valuable learning resource – in particular, for children;
- Five wanted to see more accessible wild nature habitats throughout the city, and not just in the park;
- Nine expressed the intrinsic nature value, for example: let it be for the insects, or let nature be.

Over ninety per cent of the written comments expressed an appreciation for the overgrown law. In addition to the tags and bags, one man wrote to the City Officer for Parks and the City Officer for Historic Monuments expressing his appreciation of an artwork that brought botany and urban wild nature to his attention. In his letter he proposes that the lawn be left and managed as a wild nature asset for the park and for the people of Wiesbaden. While it could be agreed that the overgrown lawn had a messy aesthetic, as one comment stated: *it just looks a mess* (Table A-2, Appendix A3); the wildness appears to

be an attraction in the majority of recorded voices, presenting park users with an opportunity to engage with nature: *this part of the Park should stay, as naturally growing as it is, because the children can learn much about different plants and animals here* (Table A-1, Appendix A3). The re-wilding of a lawn presented a lure that the managed lawns and horticultural garden nature lacked. As one comment noted of the overgrown lawn: *the diversity of nature becomes visible here* (Table A-1, Appendix A3); another stating: *we think the meadow should stay as it is and thus the Park gets a bit 'wilder'* (Table A1, Appendix A3).

A large percentage of voices expressed appreciation for the unkempt, overgrown lawn, complete with species that are considered by some to be weeds and vilified, for example, dandelions (*Taraxacum officinale*): *do not cut, under no circumstance – next spring we can get dandelions from here* (Table A-1, Appendix A3). Such appreciation of wild and ruderal species goes against the presumption that ruderal plants, commonly regarded as weeds hold little aesthetic value (Kazimierska et al., 2009).

4:3.2a-v. Thoughts to carry forward to the final discussion

The intervention of letting a lawn grow unabated in Nerotal Park, Wiesbaden shed light on perceptions of, and reactions to, unmanaged nature and so-called weeds. The overgrown lawn attracted people, including children, young people, lone women, and older people – the demographic least observed in the brownfield environmental setting of Case Study 1 – who engaged with the nature found in the re-wilding lawn. Testimonies recorded on the tags indicate that the overgrown lawn was an oasis amid the managed park environment, offering an opportunity to connect with nature and learn about grasses, wild flowers, insects and bugs (Table A-1, Appendix A3). The overgrown lawn was a CES provider, the CES goods being: educational and ecological knowledge, recreation, leisure, spiritual, inspiration, social relations, and aesthetic allure. However, physical barriers were not preventing access to this re-wilding lawn, it was an open public green space and the larger environmental setting of the park was clean and tidy. Litter was at a minimum. Non-the-less, this case study

indicates that unplanned ecosystems in an urban landscape offer great potential for CES.

4:3.2b: Case Study University of Salford: *what lies in lawns*

4:3.2b-i. Introduction

I was invited to propose an intervention similar to the Nerotal Park lawn for the campus grounds of the University of Salford. The University of Salford campus is a very green looking estate. The soft landscape design of the campus includes large swaths of lawns, formal flower beds, planted containers, trees and wooded areas, memorial gardens, and a planted, gardened, wildflower area. The campus adjoins Peel Park, a Victorian park, designed in the Romantic tradition and opened 1846 – fifty-two years prior to Nerotal Park, and one year after the acclaimed Birkenhead Park. Unlike Nerotal Park, Peel Park has fallen into decline, and is considered an underused public park (Salford City Council, 2013).

I submitted a proposal for consideration. Like the lawns of Nerotal Park, the lawns on the university estate are more diverse than they appear at first glance. A close look – on bended knee - revealed they are not turf monocultures but areas containing wild flowers that never come to fruition because of the mowing regime. Upon closer inspection, no fewer than thirteen flowering species were identified in two lawn areas, in January 2011 (Table 4-4).

Table 4-4: Flowering species identified in two lawns at the University of Salford in January 2011.

| Common names | Scientific name | Flowering period | Colour |
|--------------------|-----------------------------|---------------------|-----------------------|
| Daisy | <i>Bellis perennis</i> | March to October | White & yellow & pink |
| Dandelion | <i>Taraxacum</i> | March to October | Yellow then white |
| Speedwell | <i>Veronica</i> sp | April to July | Pale blue to violet |
| Mouse-ear | <i>Cerastium</i> sp | April to July | Creamy white |
| Creeping buttercup | <i>Ranunculus</i> sp | May to August | Yellow |
| Clover | <i>Trifolium</i> sp | June to September | White & red |
| Ribwort Plantain | <i>Plantago</i> sp | April to October | White & brown |
| Selfheal | <i>Prunella vulgaris</i> | June to October | Purple |
| Yarrow | <i>Achillea millefolium</i> | June - August | White/Pink |
| Thistle | <i>Cirsium</i> sp | July - October | Purples |
| Thale cress | <i>Arabidopsis thaliana</i> | April to July | White |
| Groundsel | <i>Senecio vulgaris</i> | January to December | Yellow |
| Common ragwort | <i>Senecio jacobaea</i> | June to October | Yellow |
| Willowherb | <i>Epilobium</i> sp | July August | Purples |

As with Nerotal Park, letting the lawn grow had to be negotiated with the ground's management team: Estates and Property Services. Sites had to be identified before the proposal could be agreed. Two sites were selected based on:

- Flora: identified from rosettes of leaves in the short mown lawns
- Visual impact: could the long lawns stand-alone as intervention artworks.
- Positioning within the campus: visibility and opportunity for visitor interaction in the overgrown lawn areas.

Both lawns selected contained a variety of wild flower species identified from leaves and rosettes. One of the lawns contained less than 30% perennial grass coverage, which suggested that this 'lawn' could support a diversity of wild flower growth. This was a strip of lawn that overlooked Peel Park and adjoined the Library. Both lawns had clearly defined parameters, which could assist the framing of the interventions as stand-alone artworks. The strip of lawn next to the library was framed with a box hedge, and the other lawn, like the Nerotal lawn, was an island lawn with a circumference of tarmac paths. This 'island' lawn was on a main thoroughfare route through the campus, positioned between the student services building, the main library building, and halls of residence. Although a box hedge and library wall partially obscured the strip of lawn, the strip of lawn was beside the library, a building (supposedly) used by students from across the campus. It also had pathways on three sides.

As a site for Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, management readily accepted the partially concealed strip of lawn overlooking Peel Park. Situated at the side of the library, this lawn became referred to as 'library lawn'. The island lawn, a self-contained triangle shaped lawn, proved to be more of a sticking point. In his writing about weeds, Gissen (2009, p.150) suggests unkempt nature and weeds *get in the way of the programs, agendas, or desires that we project into spatial constructs*. What I was proposing would disrupt the maintained - therefore desired - spatial design and the managed green space order of the campus. In a prominent position on campus, there was concern that visitors, staff, and students may not understand the intent of the project, and perceive an unmanaged lawn as neglected by grounds maintenance staff. Negotiations with the management and Vice Chancellor resulted in a resolution to this dilemma:

- An interpretation board explaining the project had to be created and erected;
- A strip around the edge of the lawn would continue to be cut short as a signifier that this lawn was still being managed.

Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, evolved on the two lawns from March 2011 (Figs. 4-28; 4-29; and 4-30).



Fig. 4-28: Triangle lawn photographed in January 2011



Fig. 4-29: Library lawn photographed in January 2011



Fig. 4-30: Triangle lawn and Library lawn from above

4:3.2b-ii. Recording life in the overgrown lawn as a performative happening and reflexive writing

Performative happening, as an overarching method, was used to investigate the overgrown lawns on the university campus. As in Nerotal Park, dressed in the same overall outfits and with a portable studio containing nature identification books, drawing equipment, cameras, and microscopes, the overgrown lawn areas were surveyed: plant and insect species, human activities, and conversations recorded in drawings, photographs, and writing.

Between April and November 2011 I spent a total of ten days investigating the changing environment of both lawns: the flora and fauna, and the reactions of the university community passing by or interacting with the lawns. Time spent exploring the campus lawns was far less than in Nerotal Park, as such I did not observe activities in the overgrown lawn on a day-to-day basis. In Nerotal Park I surveyed the site daily. This shift in time spent investigating the sites presented the opportunity for another method to be integrated into the study of Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. With the university case study, I had more time to reflect between site visits. This allowed time for writing a fieldwork research diary account for each day spent on the Salford sites. The diaries form a large part of this case study, recording in detail encounters with people. For example, on the afternoon of the 7 June 2010 on the overgrown library lawn I had a long conversation with five art students about art and nature aesthetics. The conversation spanned from Immanuel Kant, who laid the foundations for modern aesthetics in *Observations On The Feeling Of The Beautiful And Sublime* (1764), to nature aesthetics philosophy and the positive ('beauty') and negative ('ugly') nature aesthetic theories of Holmes Rolston III and Allen Carlson, who both argue that all nature has - by virtue - beauty, including visually challenging landscapes, the rotting, and the mouldy (Carlson, 1984; Rolston, 1995). The full encounter as recorded in the fieldwork diary would detract from the flow of the text, hence, the entry: An afternoon on the library lawn, 7 June 2011, is in Appendix 2.2-ii. Likewise, the nature in the overgrown lawns - the flora and fauna species - was recorded and captured: illustrated in drawings, photographs, and writing; and, discussed within the context of the nature on campus and a broader urban

nature context. For example, the first journal entry (13 April 2011, Appendix A2-i) noted a noticeable change in local authorities' parks and verges general management brought about by government cuts. Long grasses and 'weeds' were becoming a more familiar sight in the towns and cities of the north that I frequent, as a consequence, allowing two lawns on the university campus to grow unmanaged was less of a phenomenon. Nonetheless, the re-wilding lawns provoked reactions that resulted in debates including the place of wild nature in our urban landscape and parks, biodiversity, 'weeds' or 'wild flowers', gardening practice, landscape management, and governance. The reflexivity of the diaries annotates conversations, illustrates observations, and contains additional research prompted through encounters. The diaries are analysed to shed light on perceptions of unmanaged nature and CES goods connected to weeds. Examples of four (13 April, 7 June, 15 June, and 15 September, 2011) are included as appendices.

4:3.2b-iii. Encounters and observations

The community I was engaging with on the campus differed from the park community of Wiesbaden. On the university campus I was mainly talking with adults involved in academia, and fellow English speakers from the same (British) cultural background as myself. This enabled more in depth conversations about nature, for example, nationally scarce wild flowers (species frequency in Germany and England are not the same; what may be considered scarce in one country may be frequent in the other) and plant species considered as weeds in lawns, in particular, Ragwort (*Jacobaea vulgaris*), an injurious weed noted in the 1959 Weed Act (UK Legislation, 1959).

The removal of the language barrier enabled me to engage more freely in conversations, and, in turn, expand my knowledge about species inhabiting the overgrown lawns. In April 2011, a young man approached me, attracted by the spectacle of the performative happening. A conversation ensued. He was a post-graduate student studying arachnology at Manchester Metropolitan University and he spoke of the 'architecture of grass', a term I had not heard before, but, according to him, a term used in referring to grass habitat types of

ground dwelling spiders. Our 'conversational drift', recorded in the diary (13 April 2011, Appendix A2-i) also touched on how ground dwelling spiders move to fresh habitat by casting a thread of web into the air enabling them to float off like balloons to new grassy pastures. This encounter highlights CES good of educational and ecological knowledge shared through social relations – also a CES. It was not a lone example of educational and ecological knowledge shared through social relations on the overgrown lawn. Conversations with other students touched on moth, butterfly, and bumblebee species they had observed in the overgrown lawns.

Adopting a social engaging art method for site investigations and place specific research allowed for knowledge to be shared and insights to be gained, for example – and as experienced in Nerotal Park - with re-wilding and ruderal plant species comes insects, which also have CES value. The 15 June research diary (Appendix A2-iii) is an account of an educational day spent in the overgrown lawns with pupils from a near-by primary school, recording the children's playful fascination for spiders, bumblebees, and moths, and desires to learn more about insect species. The unmanaged nature was a rich educational resource.

Invertebrates in the overgrown lawn were generating attraction, knowledge exchange and inspiring creativity. The diary entry on the 15 September (Appendix A2-iv) references a short story inspired by the overgrown cherry tree triangle lawn. The story, told from the perspective of a male beetle inhabiting the overgrown lawn, won a creative writing competition to describe feelings provoked by *what lies in lawns*. The competition was run by the Estates Department of the University of Salford.

Perspectives of wild, unplanned nature appeared to shift as different plant species materialized. For example, during a conversation, one man revealed:

The more I see this lawn [cherry tree triangle], and look into it, the more I love it. When I first heard about this project I was sceptical, I wasn't sure if I wanted to see an un-mown lawn on campus; I thought it would just

look out of place and messy, but actually, now it's here, I really like it. And it's in a perfect place, right next to one of the main thoroughfares, as well as being overlooked by the halls of residence.

(Fieldwork diary extract, 10 June 11)

In June, amid the common flora that you may expect to find in any unmanaged lawn (for example: Daisy (*Bellis perennis*), Dandelion (*Taraxacum officinale*), Speedwell (*Veronica* sp), Mouse-Ear (*Cerastium* sp), Creeping Buttercup (*Ranunculus* sp), Clover (*Trifolium* sp), Selfheal (*Prunella vulgaris*), Speedwell (*Veronica* sp), Yarrow (*Achillea millefolium*), Thale Cress (*Arabidopsis thaliana*), and Groundsel (*Senecio vulgaris*), a less expected species was discovered: a Bee Orchid (*Ophrys apifera*) (Fig. 4-31). This was significant as the presence of a Bee Orchid appeared to increase interest in the overgrown library lawn.



Fig. 4-31: Bee orchid, drawn on site, 7 June 2011

The opposite could be said of the cherry tree triangle lawn where Ragwort (*Jacobaea vulgaris*) was growing and causing debate: to pull it out because it is listed as an injurious weed (UK Legislation, 1959; UK Legislation, 2003; CEH, 2004), or leave it to grow and seed, as was the intent of my project. Ragwort appears in the 1959 Weed Act (UK Legislation, 1959) and the Ragwort Control Act of 2003 (UK Legislation, 2003). It contains toxins that are poisonous to cattle and other grazing animals, and as such, it is considered an injurious weed. During a fractious moment I managed to persuade a tutor from ripping the Ragwort out of the lawn; he had the plant in his grasp and was tugging at the time. The following day the Ragwort was gone. A clear value judgment that determined the Ragwort as a weed was made by the person who pulled the Ragwort; a value judgment that is contentious, for without Ragwort there would be a scarcity Cinnabar moth (*Tyria jacobaeae*) (15 June Diary, Appendix A2-iii).

Value judgements of nature can shift according to what we know, or don't know (Rolston, 1998). After a full day of nature educational activities on the cherry tree triangle lawn with primary school pupils, I asked one pupil what her favourite nature specimen was. She picked up a Perspex pot containing a small red and grey moth, a Cinnabar moth (*Tyria jacobaeae*). This species is almost totally dependent upon Ragwort for its survival: the yellow and black caterpillars feed upon Ragwort leaves. While the presence of the Bee Orchid created an additional interest for those acquainted with botany and wild flora, people I spoke with who were less familiar with wild flowers were more attracted to, and inspired by, the common Selfheal (*Prunella vulgaris*) (as recorded in the diaries 7 and 15 June, Appendix A2-ii and A2-iii).

Each lawn contained wild flora, only the cherry tree triangle lawn contained flora that is officially considered a noxious weed, and only the library lawn contained orchids. However, regardless of the specific assemblages of wild flora and value judgments attributed to some species, both overgrown lawns were shown to be CES providers. Both have remained as wild nature features on the university campus, fulfilling the University's commitment to increase biodiversity and nature conservation across the university estate, and increase feelings of well-being within the campus grounds. Within the University's

Biodiversity Management Strategy (Bennett, 2014, p.1), objectives include:

- *To increase the potential of existing, and create new habitats.*
- *To promote the inclusion of habitats into active learning environments, where staff, students and the local community can learn about and enjoy local biodiversity*
- *Utilise and promote the human health and well-being benefits gained from a healthy bio-diverse environment*
- *Look for innovative ways of enhancing biodiversity within urban environments, furthering the university in new ways.*

4:3.2b-iv. Thoughts to carry forward to the final discussion

In the UK NEAFO (2014), Kenter et al., (2014, p.68) state that to understand the aesthetics of an environmental setting and aesthetic CES value, discursive engagement is required, supported *through forms of testimony and proof anchored in the perception of aesthetic qualities*. Conducting similar investigations in two locations, Wiesbaden and Salford, both as creative interventions and performative happenings – a method used to spark conversations - testimonies were gathered that were specific to the aesthetics of each environmental settings. This revealed that the aesthetic of unmanaged and re-wilding nature provides CES. More, unplanned ecosystems, weeds and insects are clearly CES providers. This is captured in the Salford diaries and the photographic and written data collected in Wiesbaden.

Overall, the unkempt, wild, and ‘weedy’ aesthetic of the overgrown lawns were not considered a blight on the landscape; on the contrary, in both locations they were perceived as adding value to the managed green space environments.

Some genuinely loved having an unmanaged wild area in their neighbourhood and took full advantage of the unplanned ecosystem through engaging in different activities that align with CES goods and practices: sharing of knowledge about plants insects, and nature; taking time to discover and learn about different species and the emerging habitat; taking time out to sit or relax in the long grasses; taking inspiration from nature: drawing and writing; spiritual

connectedness, and social interactions, which included picnics and playing of games. Many of the wild flowers emerging within the lawns were plants that are commonly referred to as weeds, for example, Dandelions (*Taraxacum officinale*), Creeping Buttercups (*Ranunculus repens*), and Ragwort (*Jacobaea vulgaris*). Yet, while the Ragwort did upset at least one visitor, the Cinnabar moth (*Tyria jacobaeae*) was a source of joy for another. These Ragwort connected encounters raise questions about weed management: management for the benefit of whom; and, equality of access to nature.

These reflections are pertinent in relation to unmanaged urban brownfield sites, and brownfields as environmental settings with maintenance free CES. Case Study 2 illuminates so-called weeds as CES providers suggesting that unplanned, weedy, natural succession stages are not a barrier to brownfield ingress. Brownfield ecosystems clearly have CES potential and perhaps could provide CES to a wider demographic if the barriers affecting brownfield ingress were more understood.

4:4. Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha.

4:4-i Introduction

Brownfield sites that do not meet the criteria for Open Mosaic Habitats on Previously Developed Land (OMH PDL) due to their small size are numerous in our cities, yet from the literature review conducted for this research it is clear that they are not well understood in the context of being CES providers. Negative connotations are often attributed to small brownfield sites, particularly sites that are unmanaged, littered, contain remnants of buildings, walls, and fabricated surfaces, and attract unsanctioned youth activities (all discussed in Chapter 2: Literature Review). These smaller sites are considered by many to be eyesores and indicators of deprivation (Chapter 2:7). The questions this third case study set out to investigate were: can small brownfields, void of scenic beauty, be CES environmental settings? And, if so: what is the CES provision of such a site?

To complement and add to learning from the first two case studies this third case study is a deeper, experiential study of a small, scenically challenging, ugly site. Aesthetic Philosopher, Emily Brady, describes 'ugly' in nature and landscape as being associated with qualities like: *decay, disorder, messiness, distortion, grating sounds, defiled, spoiled, defaced, dirty, muddy, slimy, greasy, foul, putrid, and so on* (Brady, 2011, p.7). In this case study Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha, records of subjective experiences of orientating an unmanaged, ugly, urban brownfield site were made in order to discover, at first hand, the CES value of the site.

In his book, *Industrial Ruins*, Tim Edensor (2005) writes about the underlying fear of attack, of the risks of being an urban explorer in abandoned, derelict, places and the thrill that this incites. I was seeking an immersive brownfield experience, interested to discover the emotions (positive or otherwise) an eyesore site might evoke but one where personal safety was not a major issue. I required a site with an open aspect that chimed with the prospect and refuge theory of being able to see danger approaching, and being able to retreat from the situation to a place of refuge (Appleton, 1975; Kaplan, 1988).

The chosen brownfield was a corner of a larger abandoned site in Salford. The remainder of the site was in interim use as a car park; during working hours full of cars, after working hours a gravel expanse with potholes and puddles after rain. It was not a hidden or barricaded site and as such I did not feel that I would be putting myself in a position of risk of attack. I could see out, I could easily get out, and, importantly, I could be seen. The site was an open aspect site.



Fig. 4-32a. Red line defining area of investigation



Fig. 4-32b. Wider context of the case study site

Fig. 4-32a and 4-32b site maps captured on Google Maps. Map data ©2015 Google Imagery ©2015 DigitalGlobe, Infoterra Ltd & Bluesky, The GeoInformation Group.

On the western and on southern perimeters of the site were highways: one, to the west, a busy road, the other a side street. To the north, the interim car park, and beyond the car park a three-storey, occupied, Victorian building. To the east, adjoining the site, were wooden - back garden - fences. The site was scenically challenging. It lacked any Picturesque or Romantic references: the landscape and nature aesthetic ideals of tourists who pursue scenery and nature in places like the Lake District (Carlson, 2010). The site contained no reference to *the natural world as it is represented in the depictions found in travel brochures, calendar photos, and picture postcards* (Carlson, 2010, no page numbers); the nature it contained was scraggy and weedy. When the investigations began in February 2011 very little appeared to be growing on site. There appeared to be more fabricated features than nature. This site was also heavily littered.

Nothing about this site had the composition or subject matter of a scenic landscape or scenic nature. It had two soggy mattresses, shards of rusty metal, broken glass, plastic containers containing goodness knows what, plastic pop bottles, glass beer bottles, lumps of concrete, broken paving, uneven surfaces, smashed walls, skanky piles of discarded clothing, and a dead tree. I looked at other sites within the Cities of Salford and Manchester (within easy walking distance of the University of Salford), but this site held the greatest sensory appeal: the antithesis of 'easy beauty' (Brady, 2011). It was a site that could be considered as 'ugly'.

4:4-ii. Orientation and experiencing of an unmanaged urban brownfield < 0.25 ha over twelve months

Exploration of the site began February 2011: a collaborative enquiry with botanist Dr Alicia Prowse. We decided to adopt this ugly site as our garden. In her book, *A Little History of British Gardening*, Uglow (2004) divides gardens into two main categories: the vegetable garden, which includes herbs and fruit, and the pleasure garden that consist of flowers, lawns, and trees. In both categories the gardener nurtures the plants while the plants nurture the gardener: physical and spiritual well-being. We were not interested in gardening a brownfield site, but we were interested to discover if an ugly

brownfield could be experienced as a garden and a sanctuary that nurtures physical and spiritual well-being. As children, Alicia and I both read the classic children's novel *The Secret Garden* by Frances Hodgson Burnett. Frances Hodgson Burnett (1849-1924) spent her childhood in Salford during the time of the Industrial Revolution, living a few streets away from the brownfield we were about to investigate. *The Secret Garden* is a story of two sickly children growing strong, happy, and healthy from contact with wild nature in a brownfield garden. The central character, Mary, 'stole' and shared a garden abandoned for ten years - neglected, overgrown and unmanaged:

I've stolen a garden... it isn't anybody's. Nobody wants it, nobody cares for it, nobody ever goes in it. (Hodgson Burnett, 1974 ed. p.88)

Mary shares this brownfield garden with her two friends, Colin and Dickon.

Don't let us make it tidy...it wouldn't seem like a secret garden if it was tidy (Hodgson Burnett, 1974 ed. p.94).

Unlike the secret garden, the space that Alicia and I took as our *brownfield garden* had never been a garden of any description since it was the site of a demolished industrial building. Yet, Alicia and I wanted to explore this scenically challenging, ugly brownfield site as a garden. The emphasis for our investigation was sensory perceptions and creating a place to relax and unwind, as opposed to a garden defined by plant design, management, and gardening techniques. In order to help us relax and unwind we brought in deckchairs, which we sat on in all weather (Fig. 3-34; 4-36; and 4-40). More, we took a conscious decision not 'to garden'. To garden, the verb, is: *to cultivate a garden; work in the garden as a gardener*, and a gardener is: *a person who tends, cultivates, or lays out a garden; a person employed to tend and cultivate a garden* (Shorter Oxford English Dictionary, Fifth Edition, 2002, pp.1069-1070). Gardening is considered to be a CES (for example, Church et al., 2011; Dudley and Coates, 2014), however, the research reported in this thesis investigates unmanaged brownfields; unplanned ecosystems and

unmanaged nature, for us to garden the site would be introducing a form of management. Therefore, we would:

plant nothing
weed nothing
prune nothing
no digging no harvest
no killing
absolutely no nurturing

don't water
don't feed
don't tidy
sit in deckchairs
drink coffee
watch
listen
sniff
explore
wander & wonder
reflect
talk a lot –

to anyone

Although we would not garden, this site could be anyone's garden since it was easy to access and there were nearby homes. Any observations or traces of others' gardening would be recorded as an observed CES. Our subjective experiences would focus on the *tough-to-test-or-quantify matters like complicated human emotions, attitudes, values, languages, cultures, imaginations, and creativities* (Coates et al., 2014, p 57). Removing any temptation 'to garden' enables a focus on the less tangible CES goods: inspiration, aesthetics, and spiritual; those considered the most difficult to assess (MA, 2005; UK NEA, 2011; Church et al., 2011; Haines-Young and Potschin, 2013; UK NEAFO, 2014; Dudley and Coates, 2014).

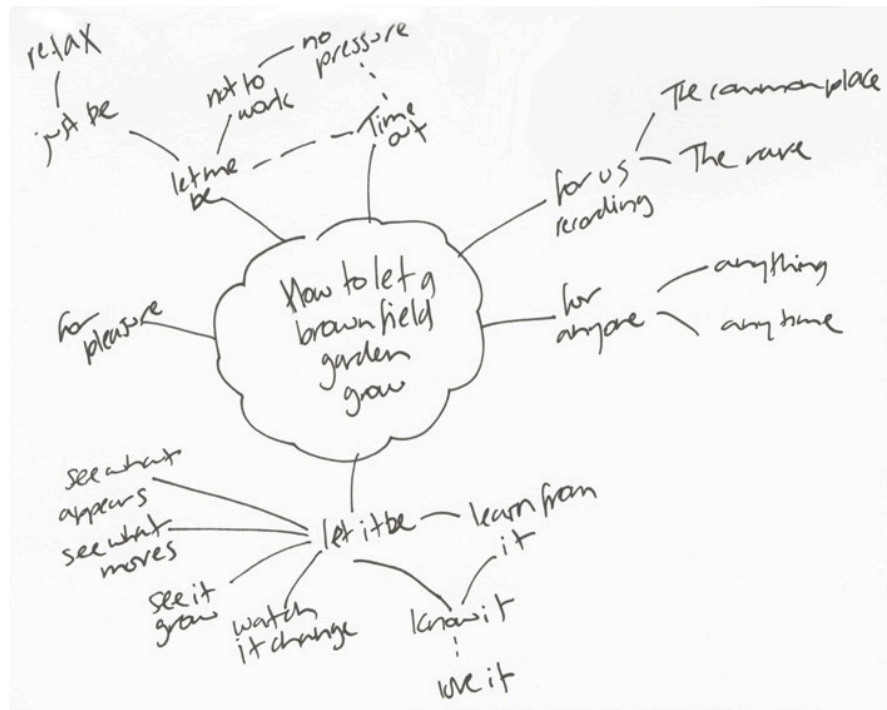


Fig. 4-33: Imaginings of a brownfield garden

We set out to explore the site as a subjective and reflexive investigation: sensory experiences and cognition, as well as how others interacted with the site (Fig. 4-33). Over the duration of one calendar year we spent time every month in *anyone's brownfield garden*; our encounters and shared experience of each visit recorded in a diary and blogged: www.brownfieldgarden.blogspot.co.uk

4:4-iii. Encounters and observations

Exploration and encounters of this site began in February 2011. There was little vegetation at this time of year and all the fabricated and manufactured materials starkly stuck out. The site was partially edged with a low redbrick wall, coping stones missing, on the other side of the wall, pavements. A gap in the wall created a pedestrian entrance into the site, and a desire line was clearly visible. The site was easily divisible into sections and had landmark characteristics such as herring bone brick flooring, trees, an electric substation building, a large mound of rubble and litter, stone boulders, and mattresses. It was what environmental psychologist Stephen Kaplan might describe as a *highly legible scene*: [...] a well-defined space [...] which one can perceive as

divided up into subareas or regions [...with] distinctive elements well distributed throughout the space that can serve as landmarks [...and] one that is easy to oversee and to form a cognitive map of (Kaplan 1988, p.245). These are components that Kaplan believes make an environmental scene coherent in reference to the visual array of matter that make up the scene: the *making sense* of a scene (Kaplan, 1988, p.245).

At the centre of our making sense of the site as a CES environmental setting was our resting and contemplating point: the deckchairs. We sat on the deckchairs and looked out upon what could be anyone's brownfield garden. From this seated position, we aired our views of the garden (while drinking coffee from a flask). Then we would pace the space peering intently for life amid the visual array that made the site the place it was, before returning to the deckchairs to talk about and reflect upon our discoveries. Reflexive writing of the first day in *anyone's brownfield garden*, an extract from the first blogged diary entry reads:

*In anyone's brownfield garden
given our gardening principles, there's not a lot for us to do in terms of
'gardening'
so we sit...
and enjoy our garden
and enjoy it we do
next to each other in deckchairs*



this is her view



*and
this is my view*



*so, quite contrary, how does the garden grow?
with tufts of grass*

*and cushions of moss
and mattresses all in a row –
it's february – and fair to say that not much is blooming just yet
and we don't quite know what the garden will beget amid the strange
surface sealants of man-made fabrics....*

Fig. 4-34: Her view, my view, mattress view, 17 Feb 2011

The surface sealants on site were varied: remnants of internal floor coverings, brick walls, and paved areas from the building(s) that once stood here (Fig. 4-35).



Fig. 4-35: Variety of surface sealants (Photographs taken February 2011)

Grey concrete, yellow concrete, areas stained with paint, gravel chips, herringbone bricks, decaying linoleum, slate tiles, bricks, smashed terracotta flooring, tarmac, and embedded timbers; the surface sealants were striking. They were an integral part of the environmental setting, adding additional texture and colour and distinctively defining specific areas of the site: orientation markers. Attracted by the colour and solid surface that appeared to support little life - so we were less likely to crush vegetation - the yellow area became the most favoured place for placing the deckchairs,



Fig. 4-36: Sat in deckchairs placed on the island of yellow concrete. 21 April 2011

By May 2011, the site was awash with vegetation and the solid surfaces provided pathways. The blogged diary of the 4 May 2011 records:

*she like this garden
because she can walk
on hard surface sealants
a void of flower life
avoiding flower life*



*up a garden path
fringed with
crunchy cushion moss*



Fig. 4-37: Anyone's brownfield garden pathways 4 May 2011

The surface sealants - subareas or regions that make an environmental scene (Kaplan, 1988) - aided our mapping of this brownfield environment, including mapping the movement of litter and dumped household waste that contributed to the array of visual matter within the site. We did not move anything: no glass shards, no twigs, no crisp packets - not even when taking photographs. But, *anyone's brownfield garden* was a space for anyone, and the visual array of the environment frequently changed. We never witnessed the re-arrangement of objects, so never knew what motivated people to interact with objects, but we could record the movement of them around the space. The mattresses, in

particular, became objects of intrigue; they were by far the largest discarded items in our garden, and the most awkward to move, yet, they moved. Illustrated in Figs. 4-34; 4-38; 4-39; 4-40; 4-41; and 4-46.



Fig. 4-38: traffic cone under mattress, 31 March 2011



Fig. 4-39: Mattresses and flora, 18 May 2011



Fig. 4-40: Sat in deckchairs overlooking a mattress, 5 June 2011

In October we discovered that the mattresses were brought onto the site as props for an outdoor performance:

*Ironically, artists transported them, on a shopping trolley, in the rain,
from another brownfield, to this one
but we have no idea who's moving them around anyone's garden, or
why – but moving they are*



*so while we may not have witnessed many
human interactions in anyone's garden
it's most definitely occurring.*

Fig. 4-41: How the mattresses arrive on site 9 October 2011

Tracking and mapping moving detritus was a means to record unseen human activities on site. Further, perhaps if we had not been so fascinated by the mattresses and talked about them to artists based in a local studio group, we may never have discovered that this brownfield was the site of arts cultural activity; the site of a live performance with an audience.

In 2010, as part of Sounds From The Other City - Salford's annual celebration of new music and performance, two female artists performed repetitive, domestic tasks around the mattresses for half an hour. Their performance, *House* (anonymous artist, personal communication, 2010), was *a tribute to the fact that nothing happens for a lot of the time, and how the weight (wait?) of the*

everyday, shapes our lives as much as the fleeting, memorable life-changing moments do (anonymous artist, personal communication, 2010). This brownfield had been transformed, for an evening, into a theatrical setting. The audience watched from the pavement (Fig. 4-42).



Fig. 4-42: Audience watching *House*, 2010. (Image courtesy of the artists)

This brownfield offered more than the mass of fabricated objects and textures. It was recolonizing through natural succession. On each visit, Alicia and I would retrace our steps across the pattern of surface sealants to see what was different and what was the same. What had arrived, grown, or died. What had been removed, or cut (Fig. 4-43).



Fig. 4-43: Checking on each visit, photographed 3 April 2011

By mid-May, *anyone's brownfield garden* was a blooming spectacle. Pioneer ruderal plant species colonising the cracked and loose brownfield surfaces (Fig. 4-44).



Fig. 4-44: Pioneer ruderal plants colonizing the small brownfield

We recorded the plants we spotted on our visits in February, March, April, and May 2011 (Table 4-5).

Table 4-5 Flowering plants species seen in February, March, April, and May 2011

| Flowering plant species seen and recorded in February, March, April, and May 2011 | |
|---|-------------------------------|
| Latin names | Common English names |
| <i>Salix caprea</i> | Goat willow |
| <i>Buddleia davidii</i> | Butterfly Bush |
| <i>Taraxacum officinale</i> | Dandelion |
| <i>Agrostis stolonifera</i> | Creeping bent |
| <i>Betula pendula</i> | Silver birch |
| <i>Populus</i> sp. | Poplar |
| <i>Acer pseudoplatanus</i> | Sycamore |
| <i>Aster novae-angliae</i> | Michaelmas daisy |
| <i>Tussilago farfara</i> | Coltsfoot |
| <i>Cirsium arvense</i> | Field thistle |
| <i>Trifolium repens</i> | White clover |
| <i>Chamerion angustifolium</i> | Rosebay willowherb |
| <i>Fraxinus excelsior</i> | Ash |
| <i>Senecio jacobea</i> | Ragwort |
| <i>Artemisia vulgaris</i> | Mugwort |
| <i>Cerastium holosteoides</i> | Common mouse ear |
| <i>Plantago lanceolata</i> | Ribwort plantain |
| <i>Rubus fruticosus</i> | Bramble |
| <i>Ranunculus repens</i> | Creeping buttercup |
| <i>Alchemilla</i> sp. | Lady's mantle |
| <i>Plantago media</i> | Broad leaved plantain |
| <i>Trifolium pratense</i> | Red clover |
| <i>Lysimachia nummularia</i> | Creeping Jenny |
| <i>Rumex obtusifolius</i> | Broad leaved dock |
| <i>Sorbus aucuparia</i> | Rowan |
| <i>Eupatorium cannabinum</i> | Hemp agrimony |
| <i>Leucanthemum vulgare</i> | Oxeye daisy |
| <i>Lotus corniculatus</i> | Bird's foot trefoil |
| <i>Geranium robertianum</i> | Herb Robert |
| <i>Medicago lupulinus</i> | Black medic |
| <i>Vicia</i> sp. | Vetch |
| <i>Quercus</i> sp. | Oak |
| <i>Equisetum sylvatica</i> | Wood Horsetail |
| <i>Rhytidiadelphus triquetrus</i> | Moss |
| <i>Galium aparine</i> | Goose grass |
| <i>Cardamine flexuosa</i> | Wavy bitter cress |
| <i>Sonchus oleraceus</i> | Common sow thistle |
| <i>Rumex acetosella</i> | Sheep's sorrel |
| <i>Sedum</i> sp. | Stoncrop |
| <i>Sambucus nigra</i> | Elder |
| <i>Heracleum mantegazzianum</i> | Giant hogweed |
| <i>Dactylorhiza fuchsia</i> | Common spotted Orchid |
| <i>Vicia tetrasperma</i> | Smooth tare |
| <i>Dactylorhiza</i> sp. | Orchid |
| <i>Ophrys apifera</i> | Bee orchid |
| <i>Pilosella aurantiaca</i> | Fox and cubs: orange hawkweed |

By mid-May, orchids (*Dactylorhiza* sp.) were in bloom, by June, Bee Orchids (*Ophrys apifera*) were profuse in one four-meter square section (Fig. 4-45).



Dactylorhiza sp. Photographed in May 2011



Ophrys apifera photographed in June 2011

Fig. 4-45: Orchid species growing on the Salford brownfield

Before we took our routine strolls around the site taking in the sights, smells, and sounds, we would choose a position for our deckchairs, sit down, and take in our views whilst talking and drinking coffee, and eating cake. The coffee and

cake conversations were usually catch-ups: what she'd been up to, what I'd been up to. On reflection, these catch-ups were an important part of cementing our relationship within the brownfield, transforming it from any old grotty brownfield into our brownfield garden. How we used this space for sitting in deckchairs and chatting was how we each used our own back gardens. However, we both gardened and tidied our own gardens. The gardening principle here was to leave things as they are and observe. At times this felt contrary. We observed *Dactylorhiza* sp. wither, shrivel, turn black, and die through lack of water. It felt counterintuitive to sit amongst litter that could easily be swept clean. It was difficult resisting the urge to play and be creative with the rubbish and rubble, for example, arranging and displaying it in sculpted piles - a method used by artist Lara Almarcegui. However, by not interfering, grasses colonized inside rotting canvas shoes, transforming them into plant pots, plastic containers filled with water which hosted freshwater organisms, molds and fungi grew on piles of rotting paper, a dismembered rat's leg infested with maggots rotted away, ants colonized fizzy drink cans, and as autumn drew in mosses began concealing concrete lumps, glass bottles and polystyrene cups. Observing these processes shifted our aesthetics perceptions and chimed with the nature aesthetic theory of Holmes Rolston III who argues that a rotting carcass, infested with maggots, has positive aesthetic value when seen and understood as a vital process within the bigger picture of a sustainable, healthy ecosystem: *...the ugly parts do not subtract from but rather enrich the whole. The ugliness is contained, overcome, and integrates into positive, complex beauty* (Holmes Rolston III in Brady, 2011, p.87). The non-biodegradable components were also being drawn into the complex beauty of the brownfield habitat as we observed living organisms within and around them.

Habitat features, organic or otherwise, were mentally mapped, photographed, and discussed. The largest, and most distinctive landmarks in our brownfield garden were the mattresses and a few trees. The first of these to be removed from the site were the mattresses, sometime in October (Fig. 4-46).



Fig. 4-46: Mattress gone, November 2011

The sub area, or region, that was defined by the mattresses was gone. Without them, the space felt less defined, and we felt a sense of loss. We had come to view them as garden features: ornaments. The trees were removed the following year, 2012.

4:4-iv. A Year in *Anyone's Brownfield Garden* draws to a close

February 2012 marked the end of twelve months observing *anyone's brownfield garden*. It might be fair to say that our connectedness to the site could have deepened further if we had continued our experience and observations. Alicia and I seriously considered taking our time in *anyone's brownfield garden* to another level. This brownfield site oozed with pioneering species from slime moulds and mosses to revered bee orchids. It had all the makings of a study site for undergraduate students studying, for example, a module in BSc Biology. Further, this site, like the lawn sites in Case Study 2b: Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, could fulfil criteria for the university's on-going commitment to increase biodiversity within the campus. We bandied about the idea of cleaning it up and making it a safe place for students to study: to remove the broken glass, plastic bottles, noxious materials, shards and sharps, and rotting shoes; in short to take away all the litter and detritus. Plus, in addition, place the boulders in strategic places about the site for students, and other visitors, to sit upon, shaping and sanitizing it into a safer, cleaner, garden for anyone. However,

such an act would remove the qualities that initially drew us – and artists - to this site, Perhaps too, it would remove attraction for the unseen visitors who moved things around in the site. We pondered, at great length, how we felt about this brownfield. This site was not – as we originally thought - an overlooked corner of an interim parking lot. This site was a site of inspiration for artists and an art venue: a theatre for a night. Further conversations with artists working in and around Salford revealed the site to be a loci for artistic – creative - activity. It had been used for fashion shoots, and was a site of inspiration for art projects (by students studying BA (Hons) at the University of Salford: Fashion Design: Image Making and Styling, and Visual Arts and Culture). Moreover, it was used by Manchester and Salford based artists as a site for photographing urban sunsets. Artists using the site as a panoramic backdrop or inspiration for new artworks were not the only beneficiaries of this environmental setting. From the movement of detritus we knew others were interacting the site. Discarded objects that adults may see as dumped waste can initiate imaginative play and invention in children, found objects transformed, through interpretive skills, into toys and tools (Mugford, 2012); for adults too. We also observed that the site was part of a walking route, or routine; used by - what Tim Edensor describes as - ‘casual users’: people who repeatedly wander through a site as a part of a daily routine (Edensor, 2005). Most people we observed did not deviate from the desire line. Some did, to pick the ox eye daisies or blow the dandelion clocks. This brownfield, as it was, was a CES provider.

The allure of this small brownfield as a CES environmental setting lays as much in the debris and the cast off discarded waste as in the nature, with nature, everyday, and built environment aesthetics combined. The experience and orientation of this brownfield as our garden presented us with an alternative way of seeing and knowing an ugly habitat. The more we discovered, the more we knew it cognitively – and shared expressions through reflexive dialogue and writing - the more our outlook changed. Ugly dissolved into a scene that made sense, in its entirety. This brownfield was ugly and littered, none-the-less it was a source for inspiration, a natural green space with an unplanned ecosystem providing CES. The site provided scope for

developing ecological knowledge and a deeper connectedness with nature. It was a place for where we set time aside for relaxation through social connections, play, and aesthetic appreciation. Sensory experiences, cognition, observations, and conversations deepened our understanding of the brownfield as a CES environmental setting, and also resulted in an unexpected CES 'outcome': a poem.

ANYONE'S BROWNFIELD GARDEN

anyone's brownfield garden
manifested
as art
through processes performed
by artist and ecologist
the site, the terrain, will continue
to evolve
or
change suddenly
regardless of disciplines
regardless of name

it
the site
through processes
of art combined with ecology
became
anyone's brownfield garden
an holistic eco/art work
the map, the text, the story, the images, the blog
are not the territory
the entirety of the site is the essence
the quiddity

we
artist and ecologist
came to know it's forms and colours
its smells and sounds
- hylomorphism -
together
we focused in
we stepped back
pondered and reflected
repeatedly
until
we knew
that *it*
our work
was finished

complete
there was no more we wanted to do
or felt needed to be done
we came to understand
the terrain
the essence
the quiddity

it took one year to appreciate the essence
one year to realize
that nothing needed to be added
or taken away
from the terrain
the flora
the fauna
the organic
the inert
the detritus
- man made and natural -

its dynamics
its context
weather
seasonal changes
All
the patterns that connect
anyone's brownfield garden

Recording subjective experiences of an unmanaged urban brownfield site was a new collaborative departure for Alicia and me. To study a site without filling in survey sheets or observation logbooks gave us a freedom to engage, in new ways, with the environment: to experience the site in its totality and reflect upon those experience. This resulted in an unexpected, unplanned, outcome, a poem. Through experiential cognitive processes we learned much about the brownfield as an environmental setting as well as a broadening our spectrum of aesthetic appreciation. We developed a connection to, and an aesthetic appreciation of, the environmental setting, which, in this brownfield included the rubbish and remnants of the demolished buildings. Moreover, we began to make sense of the brownfield within the context of this part of Salford: the local arts scene, the university community, the urban matrix. We began to experience what anthropologist Gregory Bateson describes as the patterns that connect; patterns connecting us to nature, and nature to the urban environment we have constructed; a sense of the wholeness of nature and culture, rather than a reporting of particular facts attaining to either (Bateson, 1972).

4:4-v. Return visit to *Anyone's Brownfield Garden*

A return visit to *anyone's brownfield garden*, on 21 June 2012 starkly presented another way of viewing brownfield land. The site had been purged of vegetation and litter; a brownfield garden no more. The unplanned brownfield ecosystem that had been a CES environmental setting was being made ready for incorporation in to the wider site that was to be used as a car park for the foreseeable future.



Fig. 4-47: A brownfield garden no more, June 2013

4:4-vi. Thoughts to carry forward to the final discussion

An unmanaged and scenically challenged urban brownfield <0.25 ha provided CES that are less tangible: inspiration, aesthetic appreciation, and spiritual enrichment. Orientation within the site brought about knowledge of the space as an environmental setting. The entirety of the site, the mélange of fabricated and natural matter, was its quiddity, its distinctive feature as an environmental setting. And, in its entirety it was a CES provider. Orientation developed further through cognition into a subjective understanding and making sense of a scene (Kaplan, 1988). We developed a sense of place, a 'located—ness' and 'at-home-ness' (Coats et al., 2014, p.31). Amongst the litter and the re-wilding nature, aesthetic perceptions shifted, and what was initially viewed as an ugly site evolved into a site of awe and complex beauty (H. Rolston III in Brady, 2011, p.87). Perhaps the more we experience brownfields, regardless of size, the more we can come to know and understand them as CES environmental settings. More, we can begin to differentiate between brownfields. The study site for Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha was an open aspect site that offered prospect and refuge. The canal corridor linear brownfield in Case Study 1 was not. This appears to affect ingress, however, both brownfield environments were CES providers. The size of brownfield and number of habitat types within one site may result in a reduction of CES goods, for example, the spectrum of potential recreational practices are reduced if a site does not contain water courses as well as disturbed grounds. Yet, this case study has illuminated the spiritual, aesthetic, and inspiration goods, as well as recreation, education, and knowledge forming goods, attainable in a single habitat type.

CHAPTER 5

DISCUSSION

5:1. Introduction

When I began my research, as reported in the Chapter 1:2, brownfields as a CES (cultural ecosystem services) environmental setting were not considered within the ES framework (MA 2005; followed by TEEB, 2010; and UK NEA, 2011).

The research reported in this thesis has explored the CES associated with unmanaged urban brownfield sites through an interdisciplinary lens to add another layer of knowledge to the more scientific debates about brownfields and the CES they provide. In this final chapter, referencing the research and findings reported, I will draw out what has been revealed about unmanaged brownfields and the CES they provide; and, discuss what the results suggest in the context of my inquiry and the wider body of literature and research. I will discuss what exploring unmanaged urban brownfields through an interdisciplinary lens has added to knowledge and understanding about brownfields as CES environmental settings: the CES goods they provide, CES practices, and CES beneficiaries; and, where my findings concur with – or depart from - existing knowledge.

Prior to undertaking this PhD research, I investigated 124 brownfield sites (from 2006 to 2009). Appendix 1: Journeying Into Brownfields describes the methods I initially used to appraise urban brownfields for their potential for experiencing nature. For 23 of the 124 sites I was commissioned to design meanwhile uses: managed, temporary community gardens and green spaces. The commissioners - the decision makers - were not concerned with how these naturally re-wilding urban environments were being used and valued in their existing state. This led to questioning the existing CES values of unmanaged urban brownfields. A new line of enquiry emerged. I also began to question the effectiveness of a single discipline approach to addressing complex issues

relating to CES and brownfield assessment. Keeping discourse within disciplines generates a divided debate, mute of joined up thinking (Sterling, 2003). Knowledge is (sub)divided. As a consequence, the full breadth of knowledge is, by and large, disconnected. I wanted to connect my eco-art led practice with a broader world of knowledge. For the purpose of investigating CES associated with unmanaged urban brownfields, the bringing together of different knowledge and approaches from across the arts and sciences was germane.

5:2. Summation of the literature review and gaps identified for further research.

As reported in the Literature Review, Chapter 2:4, ecosystem services (ES) is a framework that articulates ecosystems 'services' and 'goods' that support human health and well-being, and places value on these services (MA, 2005; UK NEA, 2011). Ecosystem services consist of four categories: supporting, provisioning, regulating, and cultural; each framed within biodiversity and life on earth (MA, 2005, in Rodríguez et al., 2006). Within the UK NEA (2011) ecosystem services assessment is described as: *a science and economics based assessment of ecosystems and the services they provide to humans* (Church et al., 2011, p.643). A CES literature review by Milcu et al. (2013 p.34) lists the disciplines of all first authors of the 107 publications reviewed: *biodiversity conservation and ecology; environmental management and policy making; geography, social sciences, engineering, chemistry; agriculture and forestry; and economics*. The bulk of research within the ecosystem services framework has been science and economics led. Accordingly, the ecosystem services research appears unbalanced: analysed with emphasis weighted towards the sciences, economics, and quantifiable values (Milcu et al., 2013).

Further, the CES is the least examined within the ecosystem services framework (MA, 2005, TEEB, 2010; Church et al., 2011; Haines-Young and Potschin, 2013). Upon commencing the research reported, literature and research pertaining to CES was thin on the ground (for example Milcu et al., 2013; Kenter et al., 2014), and remained so throughout most of the course of

this study until the UK NEA published the follow-on report (UK NEA FO, 2014) *Work Package 5: Cultural Ecosystem Services and Indicators* (Church et al., 2014) and *Arts & Humanities Perspectives on Cultural Ecosystem Services (CES) Arts & Humanities Working Group (AHWG): Final Report* (Coates et al., 2014); both discussed in 5:7-i. of this chapter. Furthermore, as reported in Chapters 1:4 and 2:4, literature on CES environmental settings was predominantly focused on charismatic landscapes and habitats, for example: areas of scenic beauty, tourist destinations, parkland, coastal areas, heritage sites, places of worship, and national designated areas such as Areas of Outstanding Natural Beauty (AONB), Nature Reserves, Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC); and, environmental settings that have potential to attract an income from recreational and leisure activities such as skiing and angling (for example, Albon et al., 2011; Church et al., 2011; Pennine Prospects, 2011; Gibson et al., 2011; Klain and Chan, 2012; Norton et al., 2012; ODEMM 2013; Plieninger et al., 2013; Schirpke et al., 2013; and Satz et al., 2013). Seemingly less attractive nature and landscapes were latent. Consequently, biota, nature, habitats, ecosystems, and landscapes that did not have an ES economic blanket wrapped around them were being overlooked (BBC Radio 4, 2013). As David Haley points out in his PhD, quoting painter David Hockney: *the way we depict space determines what we do with it* (David Hockney, in Haley, 2009, p.33). It also determines how we value it. A quantitative and science and economic research focus within ES research has given rise to a skewed understanding of CES, particularly in relation to ugly nature and un-scenic landscapes and the aesthetics, inspirational, heuristic, and recreational values they hold for some. Consequently, CES of unmanaged urban brownfields (that do not meet ecological criteria such as OMH PDL) appear to be latent. Hitherto, as reported in Chapter 2:7, CES associated with unmanaged brownfield environments, and the lure of wild nature, muck and grime, and modern ruins - are missing from UK CES goods, value, and benefits (for example: M.A. 2005; Albon et al., 2011; Church et al., 2011).

Reported in Chapter 1:3, our urban landscapes are strewn with brownfields (Herbst, 2003; Homes and Communities Agency, 2009; Sinnett et al., 2014). In

exploring brownfields through the lens of ecosystem services (Chapter 2:5.), unmanaged brownfields can be described as natural green space (Harrison et al., 1995). However, small pockets of unmanaged urban brownfield land (less than 0.25 hectares) are by-and-large overlooked within natural green space frameworks and the nature conservation perspective of Open Mosaic Habitat on Previously Developed Land (OMH PDL); discussed in Chapter 2:5 of the literature review. To meet the criteria required for OMH PDL nature conservation value, brownfield land must be in excess of 0.25 hectares (Chapter 2:5, Table 2:1) and contain certain - specified - species and assemblages of species (Lush et al., 2013). Strategies designed to deliver ANGSt and benefits of Green Infrastructure appear linked to sites in excess of 0.5 hectares because, and in relation to the OMH PDL criteria and rationale, larger sites are likely to contain more than one habitat type, therefore, the visitor experience and benefits gained could be greater (Harrison et al., 1995; Handley et al., 2003; Forestry Commission, 2010). As discussed in Chapter 2:7, smaller unmanaged brownfield sites are overlooked as natural green spaces. The potential they hold as they are - without management or landscaping intervention - for experiencing wild nature within an urban context, and reaping the benefits from the CES they provide, is hitherto under examined in prevailing science and economics led research into brownfields and ecosystem services (for example, Box and Stanhope, 2004; MA 2005; Angold et al., 2006; Bug Life, 2009; Riding et al., 2009; Sixsmith et al., 2009; Church et al., 2011; ADAS UK, 2010; Natural England, 2008 and 2013; Web et al., 2010, Norton et al., 2012; Milcu et al., 2013). Currently, there are habitats that some science led research is not covering because it lacks biodiversity.

In reviewing brownfields through the lens of ecosystem services, the Literature Review (Chapter 2:5) moves on to elucidate ways in which artists (from across the arts disciplines) are reaping CES goods from brownfields, regardless of size or species distribution. There is evidence to illuminate the aesthetic appeal of unmanaged brownfields. Moreover, the brownfield inspired work of artists is exhibited in major, international art events, for example, the international Skulptur Projekte Münster 1997 and the Venice Biennale 2013; and in published works, for example, *The Unofficial Countryside* (Mabey, 1973) and

Edgelands: Journeys into England's True Wilderness (Farley and Symmons Roberts, 2010), inclusive of children's literature, for example, *The Secret Garden* (Hodgson Burnett, first published 1911) and *Stig of the Dump* (Clive Kings, 1963). These literary examples also illuminate the multiple textures, natural and non-organic, of brownfield landscapes, which inspire creative play, wild adventures, and connectivity to nature. The allure of unmanaged brownfields with all their muck, wild nature, and decay, is evident and manifest in literature and contemporary art. It is also evident in literature examining the health and well-being benefits of children's wild play and play without supervision in natural and semi-natural environments (for example, Louv, 2005; Natural England, 2009a and 2011; Edensor et al., 2012; and reported in Chapter 2:5).

By adopting an interdisciplinary arts and sciences approach, linking research and thinking together, the Literature Review (Chapter 2:1 – 2:6) draws on research from across the sciences and the arts to present accounts of brownfield environments:

- Scientific and environmental knowledge, for example: Prentis and Norton, 1992; Smith, 2002; Reynolds et al., 2003; Angold et al., 2006; Roberts et al., 2006; Riding et al., 2010; Pankhurst, 2010; Barton et al., 2011; Kattwinkle et al., 2011; Macadam and Bairne, 2012; Lush et al., 2013; Plieninger, 2013;
- Subjective and experiential accounts of exploring and enjoying nature found in unmanaged brownfield sites, for example: Mabey, 1973 and 2010; Edensor, 2005; Jorgensen and Tylecote, 2007; Gissen, 2009; Almarcegui, 2010; Foster et al., 2011a and 2011b; Farley and Symmons, 2011; Jorgensen and Keenan, 2012; Mugford, 2012; and Chell, 2013;
- Wild and unsupervised play, for example: Cobb, 1977; Pyle, 2003; Ross, 2004; Louv, 2005; Ward Thompson et al., 2006; Gill, T., 2007; Maudsley, 2007; Lester Russell, 2008; Natural England, 2009a and

2010; Wooley et al., 2009; RSPB, 2010; Edensor et al., 2012; Ward Thompson, 2012, Wells and Lekies, 2012.

Also, the health and well-being benefits of nature are reviewed (Chapter 2:5), for example: Ulrich et al., 1991; Corvalan et al., 2005; Louv, 2005; Groenewegen et al., 2006; Mitchell and Popham, 2008; Pretty et al., 2009; Stephan Mayer et al., 2009; Faculty of Public Health, 2010; Forest Research, 2010; Jorgensen and Gobster, 2010; Barton and Pretty, 2010; Barton et al., 2011; Natural England, 2012.

5:3. A summary of the gaps identified and investigated in the research reported

Through the literature review gaps for further investigation were identified. Chapter 2:7). They are summarised here as:

- CES is the least understood ES. There is a lack of empirical and qualitative research to illuminate the breadth of CES goods and values;
- Aesthetics and inspiration are considered to be incommensurable and beyond the scope of the UK NEA (2011), and, hence, are omitted from CES assessment;
- Brownfields are not considered as CES environmental settings, consequently;
- CES goods and practices in brownfields are overlooked, along with the voices of the CES beneficiaries;
- Brownfields less than 0.25 ha are overlooked in literature pertaining to wildlife conservation, OMPH PDL, and ANGSt;
- The existing CES values of unmanaged brownfields to near-by and visiting communities (stakeholders) is not taken into account by decision makers;
- Knowledge and learning in relation to brownfields – and their value – is subdivided, governed by professional framings and understood primarily in the canons of disciplines and professions.

5:4. Summary of research aims

Identifying gaps for further investigation, an interdisciplinary inquiry was designed to explore the CES associated with unmanaged urban brownfields. The research aims: to examine unmanaged brownfields as CES providers and explore the associated CES; and develop an interdisciplinary arts and sciences approach to illuminate brownfields as CES environmental settings and shed light on CES value are described in Chapter 1:2. Aims of this Research.

With an interdisciplinary approach, knowledge and learning from the sciences and the arts have been integrated to illuminate the CES of unmanaged urban brownfields. Interdisciplinarity is a complex, challenging, and methodologically tricky space in which to uncover multiple interpretations and truths of the subject under investigation (for example Soja, 1996; Sterling, 2003; Kershaw, 2009; Hope, 2011). Accordingly, methodologies and methods from the arts and sciences were appropriated and integrated to uncover multiple perspectives of, and new insights into, CES associated with unmanaged urban brownfields. The breadth of the interdisciplinary approach is reported in Chapter 1:5. Interdisciplinary Approach, and Chapter 3. Methodology.

5:5. Summary of research questions investigated through three fieldwork case studies

The research reported has been undertaken to contribute to original knowledge within the ecosystem service framework, specifically, CES assessment from an interdisciplinary perspective incorporating approaches and methods from the arts; and, illuminating CES goods and practices in unmanaged urban brownfields, which are hitherto under examined environmental settings for CES. To investigate CES associated with unmanaged urban brownfield sites, three interdisciplinary, durational, fieldwork case studies were undertaken. They are summarised here as:

4. Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES, conducted over an eight-month period (January 2009 to

September 2009). The aim:

- a. To locate tangible CES;
- b. To record the environmental setting;
- c. To uncover relationships between people and place to shed light on sense of place.

5. Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds. This case study was conducted in two study sites in different locations – one in Wiesbaden, Germany (June to August 2010) and the other in Salford, England (April to November 2011). The aim:

- a. To shed light on people's perceptions of, and reactions to, unmanaged nature;
- b. To ascertain if weeds are a barrier to CES of urban green space or an invitation to explore nature;

6. Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha. Conducted over twelve months (February 2011 to February 2012). The aim:

- a. Explore the potential CES value of a small, un-scenic brownfield site.
- b. Record the environmental setting and subjective experiences of the researchers to shed light on small ugly brownfields as CES environmental settings.

5:6. Discussion of case studies

Through an interdisciplinary approach integrating methodologies and methods from across the sciences and arts (reported in Chapter 3.2 and 3.3) and processes of collaborative inquiry, perspectives of unmanaged urban brownfields that could easily be overlooked by more conventional methods of landscape and CES assessment were uncovered. Socially engaged and participatory mapping approaches gave voice to the beneficiaries of CES

associated with unmanaged urban brownfields, inclusive of the research team's inputs.

5:6-i. Case Study 1: Examining a Linear Brownfield > 0.25ha and Locating CES.

Each member of the investigative teams - the ensemble - had ways of seeing the world *entrenched in a particular professional culture* (Waterton, 2003, p.116). Botanist, Dr Alicia Prowse, and geography undergraduate student, Emily Fallows, had a way of seeing and assessing an environment from a more quantitative perspective; that is to say, perhaps more cautious, measured, and objective in comparison to the more intuitive, experiential, and subjective approaches of the team coming from an arts background: Emma Kemp and me. Being in the same place, at the same time, allowed for a combined inquiry of data collection and observation of the 'world' from different disciplinary perspectives, while, at the same time, creating a dynamic space where cross-disciplinary learning and inquiry could occur through conversations and the sharing of reflections. Engaged in performing the research as a collaborative inquiry, we were all active participants and our voices became integrated into the unfolding story of the canal brownfield corridor; as reported in 4:2-ii and 4:2-iii.

Through conversations and questioning within the team, our fields of vision expanded and we began to construct meaning from our collective experiences. For example, the quantitative data collection of logging human activity witnessed along the brownfield corridor on a formulated Human Activity Survey sheet (detailed in Chapter 3:3-vii) shed light on distribution of activities along the 6.5 kilometre stretch and specific activities in each of the thirty-two sections (Figs. 4-9 and 4-10), as well as gender of the users together with approximate ages, and whether or not beneficiaries were alone or in groupings. These data could then be layered with observations and conversations as recorded by the accompanying member of the team to reveal a richer picture of the canal environment as a CES provider. For example, both members of the team recorded angling activities on 29 August 2009 in section 25 of the mapped canal corridor (Fig. 4-3 and Table 4-1). The researcher drawing, then talking,

discovered that the woman who was angling with male friends would not come down to the canal alone. However, engaged in conversation, other concurrent activities were missed, and subsequently not recorded in the observation logbook; although, they were recorded by the member of the team engaged in the Human Activity survey (Table 4-1). Having time to talk to people and listen to their experiences sheds light on perspectives of sense of place. Meticulously recording activities locates CES practices. A combined approach expanded our vision of CES practices and understandings of feelings of personal well-being connected to CES and connected to a sense of place (reported in Chapter 4:2-ii.)

Conversations revealed a sense of place where wild nature and non-governance held an allure for some. Through conversations we learnt that some people walked along the canal because of the nature: the flora and the fauna, and the water; for example, the man who told us about the fledgling blackbirds (Chapter 4:2-ii.). For others, the canal environment provided a setting for leisurely walks or space to hang out (Chapter 4:2-iii.). While for some, the canal corridor engendered feelings of trepidation, for example, the lady with the anglers, and also, at times, for members of the team (Chapter 4:2-i and 4:2-iii).

The story of the canal - as a linear brownfield – that unfolded through our collaborative inquiry and dialogic methods extrapolated CES beyond the tangible recreational activities (methodically counted, and collated). We had experienced that the canal corridor was a social space, with people willing to stop and talk – at times in length and great detail. Occasionally, conversations centered on growing up near the disused canal with boys and girls alike playing by the water's edge. In a conversation reported in Chapter 4:2-iii, a man told me of the local traditions of learning to fish and learning to swim in the canal. No swimming activities were recorded during the fieldwork case study, but angling was, as recorded in the observation logbook sketch (Figs. 3-11 and 4-3).

Addressing the aim of examining unmanaged urban brownfield as CES providers, Case Study 1 has evidenced that this brownfield environment provided CES goods and had CES beneficiaries. The CES practices observed and recorded along this brownfield corridor between January and September 2009 align to the MA (2005) CES categories of cultural identity and recreation, and the UK NEA (2011) categories of: leisure and recreation; health goods; and educational and ecological knowledge goods. More, through open-ended conversations, we discovered that there was knowledge of the natural environment, with locals being able to pinpoint nature in the landscape to guide us to sites of interest, for example, the blackbird nest and the terrapins. Even though the canal corridor was aesthetically challenging with all its muck and litter (and according to a man who grew up in the neighborhood had seen much more polluted times: reported in Chapter 4:2-iii), it did have an intrinsic nature value; and some of the voices we heard expressed appreciation for wild nature.

To explore and assess the brownfield environmental setting of Case Study 1, knowledge and learning from the arts and the sciences were brought together. In addressing the second – but equally as important - aim of this research, novel approaches integrating performativity, mapping, and site surveys shed light on a breadth of CES as well as brownfields as environmental settings. A full and comprehensive assessment of the CES requires more than just counting activities. Conversations are imperative to reveal a sense of place, a sense of belonging, and connectedness to nature. Likewise, an assessment of an environmental setting requires more than just recording plants or water voles to map biodiversity. Environmental settings assessment also requires listening to the voices of the users: the CES beneficiaries. Through conversations knowledge and understandings of nature and place are shared. The researcher gleans insider insight that observations alone might not reveal. More, conversations shed light on CES value. In the same vein, conversations alone would not reveal, for example, an ecological gem. An expert, for example a botanist, can record and evidence biodiversity. Combined approaches and interdisciplinarity can illuminate CES goods and non-monetary values of an environmental setting. As a result, a thick description helps inform others: decision makers. In the case of the seemingly underused ‘backwater’

brownfield canal corridor, we could report back to the decision makers - British Waterways, the local authorities (Sefton and Liverpool), and The Liverpool Biennial team – with evidence that this 6.5 kilometre stretch of the canal was a biodiverse environment containing BAP species (for example, water voles (*Arvicola amphibious*) and purple ramping fumitory (*Fumaria purpurea*)) and that the corridor had existing CES value; there was a host of CES goods already on the doorstep, along with CES beneficiaries.

Case Study 1 located tangible CES, recorded the environmental setting, and uncovered relationships between people and place that shed light on a sense of place and sense of belonging.

In calling for regeneration of the canal corridor, existing inherent values were not taken into consideration, both the abundance of wild nature and the CES practices derived from the environmental setting. Prior to, and during the course of the investigations, the project partners had made an assumption that weeds and lack of nature management was an overarching problem that put many people off visiting the canal and using the towpath. We were unable to categorically corroborate this. Through observation, site surveys, and talking to people, we discovered that those using the canal genuinely appreciated it, weeds and all. However, we were also able to report that the primary user group was male; areas along the stretch evoked feelings of trepidation; and, at least one woman we encountered would not risk coming down to the canal alone.

Nearing the end of the investigations – in preparation for the canal re-opening - British Waterways and the local authorities began a landscape management programme that involved removing weeds through strimming and herbicide applications. As the habitat was eroded – plants killed and cut – the voices of the users along the canal began to express concern. The concerned voices were reporting more than missing the wild flowers. They also spoke of the plight of the bees and other pollinators: a knock on effect of loss of habitat. We took this anecdotal information to the project partners, along with our flora records, which included the purple ramping fumitory (*Fumaria purpurea*) find; a

nationally rare species (Rose, 2006) and listed in the North Merseyside Biodiversity Action Plan (BAP) (Reported in Chapter 3:3-vi). British Waterways listened. Moreover, they took action, dramatically reducing the maintenance regime. The revised canal management was to trim only thirty centimetres in from the towpath, leaving flora at the edges of the water and corridor to grow wild.

While I was confident that barriers preventing a wider demographic access to the CES of this linear brownfield included a so-called tunnel effect – informed through personal experience, the experiences of the team, and supported by the literature review (prospect refuge theories, for example, Appleton, 1975; Ruso et al., 2003) - created, in part, by zealous security fencing, I could not be sure that unkempt nature was not also a contributing factor. The data collected evidenced a skewed demographic use of the corridor; the voices we were hearing that championed wild – unkempt – nature were predominantly male voices. In the Human Activity Survey, of 574 people observed, only 22% were women (reported in Chapter 4:2-ii). Leaving this investigation left me wanting to understand more about nature and landscape preferences and aesthetics; in particular, landscapes that do not confirm to the ideals of scenic beauty or neatly managed (urban) parkland.

Plants become weeds when they are out of place in agricultural settings, but they also become weeds in other non-natural settings when they disrupt an inherent order. For example, weeds are those plants that get in the way of the programs, agendas, or desires that we project into spatial constructs (Gissen, 2009, p.150). Perhaps some of the activities observed and recorded in Chapter 4:2, for example, the teenagers hanging out on the towpath, smoking cigarettes and drinking alcohol, could be likened to weeds, in so much as they occurred precisely because there was no governance. Practices that elsewhere might be deemed 'out of place' but which here, along the hidden 'backwater', unobserved and not controlled, can flourish. As reported in the literature review (Chapter 2:5, for example, Edensor, 2005; Natural England, 2010; Farley and Symmons Roberts, 2011; Edensor et al., 2012; Ward Thompson, 2012) and evidenced in this case study, brownfields can, and do, provide counterculture

havens; and, existing CES connected to unmanaged urban brownfields should not, necessarily, be weeded out. Regardless of the specifics of the recreational activity, exposure to the natural environment has positive effects on health and well-being (Mitchell and Popham, 2008; Barton and Pretty, 2010). A mere fifteen minutes amid nature increases feelings of well-being, as well as increasing a connectedness to nature (Mayer et al., 2009). When considering CES assessment, the health and well-being benefits of more counterculture activities should not be overlooked, nor dismissed. Access to nature to support human health and well-being should extend to all user groups. Although, unfortunately, what may attract one user group may be the very reasons that deters others.

5:6-ii. Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds.

In fieldwork Case Study 2 (reported in Chapters 4:3.2 and 4:3.2b) I set out to discover attitudes to weeds and unkempt nature: nature out of place in urban landscapes. To reach a wider demographic, the fieldwork for this case study was conducted in two public green spaces where selected lawns were left to grow and re-wilden; interrupting the managed landscape aesthetic. I was curious to discover if wild nature and so-called weeds would be considered as an unwelcome intrusion in orderly and managed environments and if unkempt nature was a barrier discouraging women and children – the least represented demographic in Case Study 1 - from accessing CES goods in an urban brownfield environment. In both study sites, Nerotal Park, Wiesbaden, and the University of Salford campus, Salford, I observed that for a majority of users of the parks, the wild nature of the lawn did not create a barrier; the lawns did not become spaces abandoned by people (for example, Figs. 4-20 and 4-26). On the contrary, the overgrown lawns added to the nature of the managed landscapes. The growing and blooming of grasses and wild flowers – that in turn attracted insects, and later in the summer in Nerotal Park, toads – had textures, scents, colours, and life that the mown lawns in the managed landscapes lacked. This, in turn, generated CES goods that affected how people played on or interacted with the overgrown lawns. On the whole, it served as an invitation to explore nature. People of all ages interacted in the

overgrown lawns, from gentle recreation and strolls through the grasses, to more energetic playing, and games that generated ecological knowledge (for example, the children's games and investigations reported in 4:3.2b-iii and recorded in the research diary, Appendix A2-iii). Knowledge was shared, for example, names of species, food chains (ladybirds eating aphids, wasp spiders eating wasps, and toads eating insects); foraging, including dandelions for food and seed collecting to re-sow; and cultural traditions, for example, flower pressing and making daisy chains. Plants growing in the overgrown lawns generated connections to the past shared through the telling of oral histories, for example, foraging for food during World War II (4:3.2a-iii.). Without doubt, the overgrown lawns became a social space where people could get up-close and personal with the nature and with one another (for example, Figs. 4-20; 4-21; 4-23; and 4-26).

Re-wilding occurs on unmanaged brownfield land, consequently, so-called weeds are associated with unmanaged urban brownfields. One aim of this case study was to ascertain if 'weeds' repel people and act as barriers to CES goods such as recreation, or, if weedy and unkempt wild flora creates an invitation to access other CES. The array of self-directed CES practices that happened over the summer months in Wiesbaden and throughout the course of the overgrown lawn studies in Salford demonstrated that 'weeds' in a managed landscape, or unmanaged nature in a managed park, do not – for most people – act as a barrier. For some, they add another layer of intrigue, adding to the overall nature and landscape appeal and CES provision. Peoples' perceptions of, and reactions to, the overgrown lawns were, by and large, positive (for example, as captured in the comments in Table A1).

Novel methods, which included ecological site interventions that enabled plants to grow unabated, were used to engage in conversations and listen to opinions about re-wilding nature. Recording the overgrown lawns as part of a performative happening enabled dialogic encounters and conversations about nature, landscape preferences, and aesthetics. Voices expressing appreciation of the re-wilding nature were in a majority (for example, Table A1 compared to Table A2 and recorded in the fieldwork diaries, Appendix A2-iii and A2-iv).

More, this case study evidenced that small patches of unmanaged land provide CES goods (reported in Chapters 4:3.2a-iii. and 4:3.2b-iii; illustrated in Figs. 4-20 to 4-26 and the fieldwork research diaries of 15 June 2011 and 15 September 2011, Appendix A2-iii and A2-iv)

At the University of Salford, in light of the case study results reported back to the campus ground decision makers, the overgrown lawns were left to grow, seed, and die back as a continuous cycle. The increased biodiversity the overgrown lawns brought to the campus was in line with the university's commitment to increase biodiversity and nature conservation across the university estate and feelings of well-being within the campus grounds (Bennett, 2014), reported in Chapter 4:3.2b-iii. Consequently, the library lawn and cherry tree lawn have been retained. Yet, despite all the recreational activity, positive comments (aesthetic and wild nature appreciation, habitat creation, and nature conservation), and additional CES provided by the overgrown lawn in Nerotal Park, the overgrown lawn was cut. The reasons given for cutting were that the art exhibition was over and to leave the lawn overgrown would affect the historic monument Grade 1 listing of Nerotal Park. As an exemplar of nineteenth century traditional Romantic Park design in Germany, the decision makers determined the lawns needed to be managed. However, the eco-art intervention of re-wilding and the social interactions occurring in and around the overgrown lawn inspired two regular visitors to initiate two, independent, wild nature CES projects in Wiesbaden. Firstly, observing CES associated with 'weeds', a near-by resident - who brought his two-year old son to play in the long lawn most days – negotiated with the landlord of his apartment block to allow their communal garden of mown lawns and trees to grow wild and for the residents to utilize and nurture the space as a forest garden (N. Berdellé, personal communication, 10 April 2011). Secondly, a youth worker, recognizing the leisure, recreational, educational, and inspirational goods provided by the lawn's wild nature, and the CES benefits, in particular, experiences and capabilities, initiated Wiesbaden Survival Camp. Throughout the summer months of 2011, he ran weekend activity camps for young people with bug collecting, tree climbing, wild

swimming, foraging, campfire cooking, den building, and camping (L. Peter, personal communication, 15 February, 2012).

I had hoped that Case Study 2 would ignite debates about aesthetics. In Wiesbaden it was difficult to discuss aesthetics in any depth; as a foreign speaker, language was a barrier. However, in Salford, I was able to engage in aesthetic debate. Five students studying fine art at undergraduate level wandered into the library lawn and began talking to me about aesthetics (reported in Chapter 4:3.2b-ii and recorded in detail in the fieldwork diary, Appendix 2.2-iii: An afternoon on the library lawn 7 June 2011). Intrigued by the project they initiated the conversation about aesthetics. Our conversation spanned from the Sublime (Kant, 1764 and 1790) to nature aesthetics of beautiful and scenic landscapes, and ugly nature. Nature aesthetic philosophers, Holmes Rolston III and Allen Carlson, both argue that all nature has beauty, including rotting and decaying matter (Carlson, 1984; Rolston, 1995). Such aesthetic opinions continue to be upheld in contemporary debate, for example, Brady argues for the value of *terrible beauty, ugliness, and negative aesthetics* (Brady, 2013). Not everything in nature is beautiful, but this does not mean that the non-beautiful lacks aesthetic allure (Eco, 2007; Brady, 2011). The art students told me that they are attracted to decay, mess, and abandoned places because the ugly, neglected, and disorderly stimulate their creativity and evoke strong emotional and sensory responses (Appendix 2.2-iii). Landscapes that are not beautiful - challenging landscapes - can be highly evocative (Brady, 2011, 2013; Eco, 2007; Saito, 2007; Parsons, 2008). However, aesthetic taste is fluid and can readily shift: weather conditions, light, mood, and ambient smells, can all affect aesthetic appreciation (Carlson, 2000; Saito, 2007; Parsons, 2008). In different weather conditions a landscape can shift from romantic - on a warm summer's day - to sublime - in freezing weather and blizzards (Porteous, 1996). We also discussed aesthetic indifference. If aesthetics were on a sliding scale, with 'ugly' at one end and 'beauty' at the other, the centre point of the scale would be a feeling of indifference, possibly described using an adjective like: bland, ordinary, uninteresting, and undistinguished (Moore, 1998) (reported in Appendix 2.2-iii). The discussion with the students concluded that, while different people may have different

aesthetic tastes, the least desired perception for a work of art, or nature, would be aesthetic indifference: a territory that evokes no passion.

In both locations - in Wiesbaden, Germany, and the University of Salford, England - Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, demonstrates that for many users of the park and University public green space, the unkempt nature was welcomed. In both locations the wild nature attracted people, in both locations the overgrown lawns were described as beautiful, and in both locations requests were made to the decision makers to keep the areas wild. However, I was acutely aware that both fieldwork case study sites of Case Study 2 - reported in Chapter 4:3. 2a and 2b - were located within public green spaces designed and managed for public recreation. While selected areas were left unmanaged (that is to say, the management regime of lawn mowing was abandoned) the rest of the park's landscapes were continuously managed; the other lawns were mown, plants pruned, weeds in beds and borders removed, and detritus, waste, and litter, were also routinely removed. Despite this, listening to a diverse demographic of voices gave an insight to attitudes towards wild nature in an urban landscape. What I discovered was:

- The emergence of long grasses and wild flora affected the way people used the lawns: people deliberately wandered into the overgrown lawn areas specifically to interact with the nature in the lawns, or to engage in a sensory experience of some kind.
- The change in aesthetic was welcomed more than it was objected to (Table A-1 and Table A-2)
- Unmanaged, unkempt nature (in a public green space) did not appear to create a barrier, on the contrary, an area of unmanaged nature appeared to create additional CES goods offering increased opportunities for people to explore and connect with nature.

These findings shed light on people's perceptions of overgrown nature in an otherwise managed urban environment, and in doing so, indicated that so-

called weeds would not act as a significant barrier preventing access into unmanaged urban brownfields.

Having addressed the aims of this case study: to shed light on people's perceptions of and reactions to unmanaged nature and ascertain if weeds are a CES barrier, the findings from Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds, suggest that plants commonly referred to as weeds, for example dandelions, are not necessarily experienced as plants in the wrong place and nature out of place that should be eradicated. The so-called weeds naturally occurring in lawns, if left to grow and bloom can deepen our experience of nature and through an array of CES practices can lead to learning about ecosystems. Weeds, perhaps, should not be automatically considered as barriers to experiencing 'beauty' in nature. What some people may consider as weeds can be an attraction for others who may view and experience them as wild flowers and flora in the right place, whether that place is in a town park, on a university campus, or in a brownfield landscape. However, some interactions that occurred during Case Study 2, both in Wiesbaden and in Salford, were facilitated through interdisciplinary approaches and engagement: eco-art, drawing, performative happenings, plant identification, mapping, and participatory site surveys. The interdisciplinary approach was socially engaging and dialogic, as such, interactions within the environmental settings created through the eco-art interventions, and conversations about the species in the overgrown lawns, wild nature, and aesthetics, may have altered, or even influenced, peoples' perceptions of so-called weeds and their experience of the overgrown lawns. In a conversation, reported back to me by the curator of *Wiesbadener Kunstsommer 2010*, discussing the future of the overgrown lawn with the Wiesbaden Town Council Parks Department, the fact it was commissioned as a part of an international outdoor sculpture exhibition and created as an eco-art installation was a cause of concern. The decision makers for Nerotal Park - the Parks Department - were concerned that without the other artworks, and without the accompanying performative happening animating the nature and engaging the public, the public might cease to interact with the overgrown nature resulting in an abandoned and neglected space. It was concurred by the Parks Department

that the performative happening was an essential component of the success of the project and without that people would cease to engage in the way they had during the exhibition. In Salford, it was concurred by the estate's management team that, without a regular performative happening, information panels were necessary to inform the public why the lawn was uncut.

5:6-iii. Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha. Conducted over twelve months (February 2011 to February 2012)

Case Study 3 took me back into a brownfield environment, this time a small, ugly site. Having explored an unmanaged brownfield over 0.25 ha, discovering an ecological gem and locating CES, the next stage in my investigations was to explore an unmanaged urban brownfield site that appeared to lack ecological merit and a site that could not possibly qualify for OMH PDL; a site less than 0.25 ha and with only one habitat type.

This case study reports an altogether more subjective CES experience as encountered by the researchers, myself and Dr Alicia Prowse, re-told in the blog diary and reported in Chapter 4:4. Orientating our way through a small, littered, and ugly urban brownfield site that we had 'taken' as our *Anyone's Brownfield Garden* allowed us to explore and question aesthetics: nature aesthetics and the aesthetics of organic, non-organic and fabricated matter, litter and waste matter; and, question what was 'in' or 'out' of place in this brownfield landscape. In developing the idea that dirt is matter out of place in her analysis of pollution and taboo, English social anthropologist Mary Douglas (1921–2007) asserted that things, people, and practices become dirty when they are matter out of place (Douglas, 1966). Matter out of place – weeds, dirt, or waste - can be perceived as a threat to good order because it potentially disrupts rules (Douglas, 1966; Dwyer 2012). Matter out of place also interrupts cleanliness and tidy managed landscapes. Thereupon, matter out of place becomes 'noxious', 'pernicious', 'hateful', and 'ugly' (Dwyer, 2012, p.297).

Our *Anyone's Brownfield Garden* (non) gardening principles imposed a way of being in the brownfield site that removed interference with any kind of matter.

This led to a level of acceptance that was, at times, difficult to accept. Leaving litter when you could easily sweep it away felt counterintuitive. In the seminal text, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*, Douglas argues that the human response to dirt is associated with our deep-seated need for order (Douglas, 1966). I discovered I had a deep-seated need for order. I found myself having to suppress urges to 'tidy up' and rid the site of what I initially saw as 'mess in the *garden*' and debris that posed a potential danger to others; the broken glass in particular. I also had to suppress urges to re-arrange litter; transforming it from litter into art to 'beautify' the environment. But, left alone and viewed in another way, the glass – and other litter – revealed qualities initially obscured by the notion of waste, dirt, and pollution (reported in Chapter 4:4-iii). The glass refracted light, and glistened in sunshine, adding a gem like quality to the ground surfaces. Certain fly tipped objects ceased to be waste and became transformed – through perception - into functional or ornamental *garden* features. Rotting shoes supporting plant life became miniature gardens; plastic cups filled with rainwater and became temporary 'pond' habitats for freshwater organisms; biodegradable litter became lower plant life vivarium's as moulds and fungi spread across their surfaces; and the mattresses became comforting focal point features (they too began to sprout vegetation). As we approached a year of inquiry on the brownfield site, we recognised that our transformative experience - seeing beauty and function in detritus that was initially repugnant - presented a challenge in the re-presenting of an alternative truth of the essence and aesthetic characteristics of 'our' *Anyone's Brownfield Garden*, wherein *the entirety of the site is the essence; the quiddity* (line taken from the poem reported in Chapter 4:4-iv).

There can be no absolute definition of a beautiful nature or a beautiful landscape because each person's idea of beauty – or ugliness - is subjective and therefore, is 'true'; consequently, 'beauty' cannot be disputed (Porteous, 1996). Aesthetics is often equated to beauty. The study of aesthetics began with Edmund Burke (1729 – 1797); however, it is German philosopher Immanuel Kant that laid the foundations for modern aesthetics in *Observations On The Feeling Of The Beautiful And Sublime* (1764) followed by *Critique of*

Judgment (1790); hence, the classically correct sense of the word is *the science which treats of the conditions of sensuous perception* (Harper, 2010, no page numbers). In the Shorter Oxford English Dictionary, 2002 (p.35), 'aesthetics' is *the perception of the external world by the senses*, yet 'aesthetic', the noun, is: *the philosophy of the beautiful* including art, or, as a science: *the science of sensuous perception*. In trawling the Internet for definitions of aesthetics it was difficult to find a definition that did not contain the word 'beauty'. In general, aesthetics appears synonymous with visual beauty. And, if we think of words to describe beauty we may agree with the following thesaurus alternatives for the noun 'beauty': *the beauty of the scenery, attractiveness, prettiness, good looks, comeliness, allure; loveliness, charm, appeal, eye-appeal, heavenliness; winsomeness, grace, elegance, exquisiteness; splendor, magnificence, grandeur, impressiveness, decorativeness; gorgeousness, glamour; literary beauteousness, pulchritude. Antonym: ugliness* (Apple Inc. Dictionary, 2007).

The implications of notions of beauty and ugliness, when it comes to unmanaged urban brownfields is that, beauty, as a defining criterion of aesthetics has limitations and leaves no room for challenging or intriguing sensual perceptions, fragmentation, pictorial canalization, chaos, or nihilistic points of view (Ranciere, 2004, p.61). Notions of visual beauty muddle aesthetic appreciation of nature. When referring to nature and ecosystems 'beauty' serves no practical purpose. Whether a landscape is deemed beautiful or not is irrelevant to ecosystem health and biodiversity (for example, Parsons 2008; Holmes Rolston III, 2012). More, healthy ecosystems give rise to multifarious health and well-being benefits (Fig. 2-3) irrespective of beauty.

In *Anyone's Brownfield Garden*, with our gardening principles setting rules for doing nothing to the environment, we observed and sensuously experienced the changing brownfield landscape over the course of a year. We watched plants grow, some full cycle from cotyledon to seed; whilst others succumbed to the predatory nature of nature or stress caused by arid conditions; or, the hatchets of other 'gardeners'. To watch a plant wither and die or an insect being eaten when we could have intervened to 'save it' also felt counterintuitive

(reported in Chapter 4:4-iii.). Relinquishing impulses to nurture and tidy resulted, at first, in perturbed feeling. Yet, by leaving everything as we ‘found’ it, we learnt another way of experiencing nature, dirt, and waste. The matter out of place became matter of the place and an integral part of our landscape: orientation markers and garden features. Ultimately, we discovered that they too provided CES goods within the quiddity of a semi-natural environment and within the quiddity of an unmanaged urban brownfield (Chapter 4:4-iv.).

Over the twelve-month period of Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha, my posture required different positions, physically as well as cognitively. The environmental setting shifted with the seasons; plants grew, bloomed, attracted insects, seeded, and died-back. The environment was alive. The environmental setting also altered as detritus moved around the site or new waste materials were added: fly tipped rubbish dumped in the environment. We knew from our observations, listening to others (for example, local artists and art students, recorded in Chapter 4:4-iii and 4:4-iv.), and recording traces left as a result of human activity: foot prints and the displacement of organic and non-organic matter, that this site was a CES environmental setting. Perhaps to discover more about CES associated with this, and other unmanaged urban brownfield sites – regardless of size - inquiry and explorations should go beyond daylight hours.

5:7. Overall findings

5:7-i. Findings in relation to Aim 1: unmanaged urban brownfields as CES providers.

Exploring CES associated with unmanaged brownfields through an interdisciplinary art and sciences lens and examining unmanaged brownfields as CES providers, the research reported has revealed CES goods, practices, and benefits, of unmanaged urban brownfields. CES goods as defined in the MA (2005) and the UK NEA (2011) (aesthetics; inspiration; health goods: physical activity; recreation and leisure; educational and ecological knowledge and spiritual refection) have been located across the case studies reported.

Case Study 1 and Case Study 3 identified unmanaged urban brownfields as CES environmental settings, as they are, complete with barriers, muck, waste, and rubbish intertwined with wild nature and modern ruins. If these findings are applied to the conceptual framework for CES as illustrated in the UK NEAFO (2014) Synthesis of Key Findings (Figure 15, p.35), then the cultural values of unmanaged brownfields and the CES benefits they enable can be seen (Fig. 5-1).

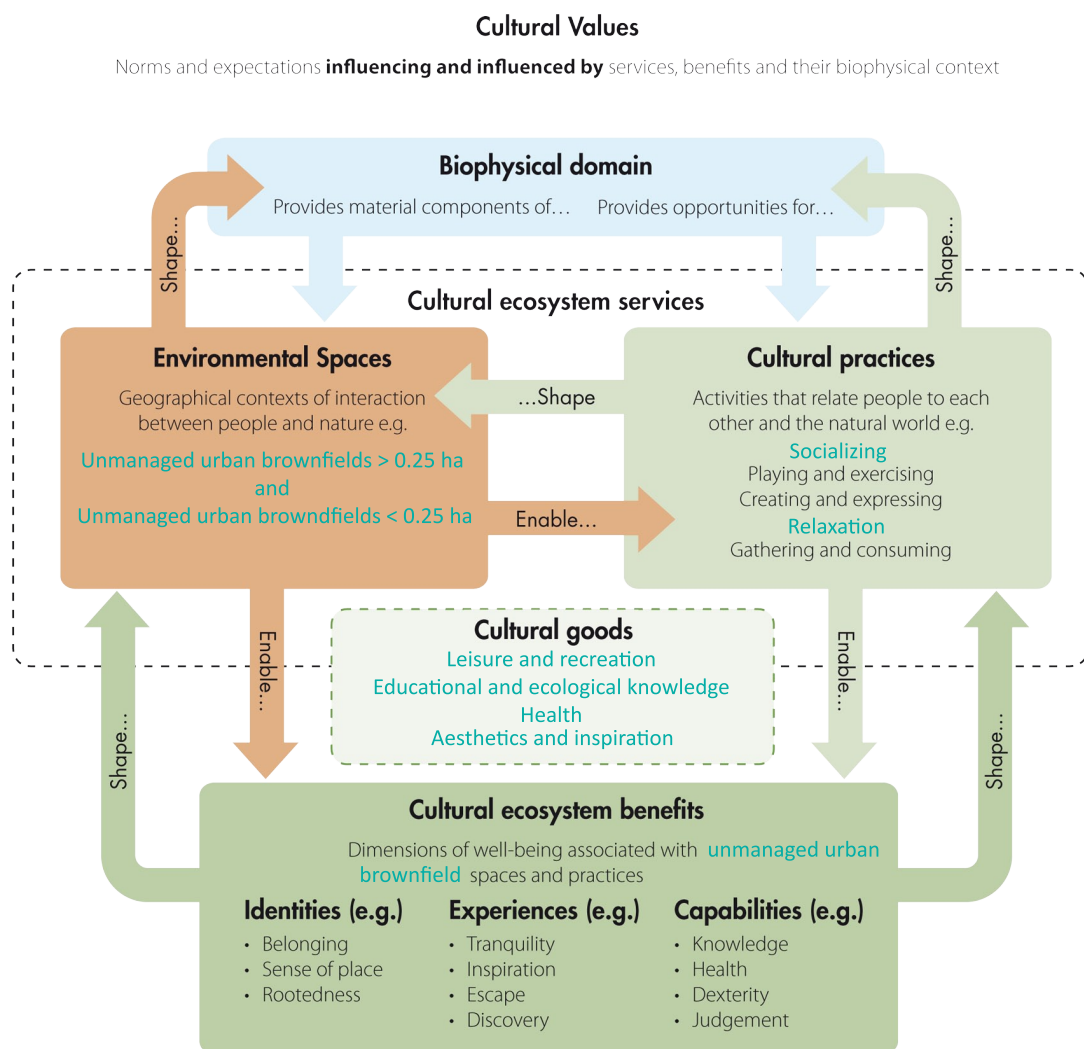


Figure 15. A conceptual framework for the linkages between cultural ecosystem services, values and benefits, emphasising the importance of the interaction between environmental places and cultural practices.

Fig. 5-1: CES of unmanaged urban brownfield illustrated within a biophysical domain. Adapted from UK NEAFO (2014, Fig.15 p.35).

In Fig. 5-1, along with the existing black text, additional blue text has been added to articulate the findings of the research reported in this thesis: the CES associated with unmanaged urban brownfields. Fig 5-1 illustrates CES values of unmanaged urban brownfields within a 'biophysical domain', the *different components that make up the relationship between culture and ecosystems are represented graphically* (Church, et al., 2014, p.15). An environmental settings-based perspective, as used in the research reported here, explores the idea of CES in a geographical context (for example, Church, et al., 2014).

In 2014, as the research reported in this thesis was drawing to a close, the UK National Ecosystem Assessment (UK NEA) published its follow-on report: UK NEAFO (published in July 2014). Within the UK NEAFO, *Work Package 5: Cultural Ecosystem Services and Indicators* (Church et al., 2014); and, *Arts & Humanities Perspectives on Cultural Ecosystem Services (CES) Arts & Humanities Working Group (AHWG): Final Report* (Coates et al., 2014) are most pertinent within this discussion chapter. As my research draws to a close, unmanaged brownfields as CES environmental settings remain under acknowledged and latent landscapes of CES provision; as the UK NEAFO (2014), Church et al., 2014 reports:

Part of the task for researchers and decision makers ... is to stay alert to countervailing tendencies, and to attend to spaces that are incongruent with dominant systems of value, such as the 'unofficial countryside' and the 'edgelands' of the urban hinterland (Shoard, 2002; Mabey, 2010) (Church et al., 2014, p.19)

The 'unofficial countryside' is a term coined by nature writer Richard Mabey for wastelands (Mabey, 1973); Marion Shoard coined the term 'edgelands' which include *chaotic, unkempt wastelands* (Shoard, 2002, p.117) - both are reviewed within the literature review reported in Chapter 2:5. The *Arts & Humanities Working Group (AHWG): Final Report* (Coates et al., 2014, p.33) delves deeper into wasteland settings (for rationale outlined in Chapter 1:1, I use the term 'brownfield'):

The example of the unclassified wastelands or edgelands that occupy the frontier zone between town and country provides a reminder that CES research should acknowledge that people can derive inspiration, a sense of place and heritage value from environmental settings that are less than green and pristine – even an abandoned (and probably still contaminated) mine site. ‘Wastelands are important as places of possibility’, reflects artist Lara Almarcegui, who campaigns for empty lots, ‘because one can only feel free in this type of land, forgotten by town planners. I imagine that, in a few years’ time, those wastelands that were protected by my projects will be the only empty spots within built areas’ (Alfrey, Daniels and Sleeman, 2012: 7). Artworks have the power to protect by converting ‘blank’ space into ennobled place (Coates et al., 2014, p.33)

Bringing contemporary art inspired by wastelands into CES discourse is a new turn in CES literature, suggesting that the research reported in this thesis is timely.

In bringing together existing knowledge and learning from across the arts and sciences – firstly through the literature review, Chapter 2 - the research reported has highlighted how artists reap CES goods from unmanaged brownfields; while, at the same time, reporting much of the prevailing literature on urban brownfields suggests an interim or meanwhile use of interventions and landscape treatments such as temporary gardens, urban greens, wild flower meadows, or allotments (for example Green Estate, n.d.; REMADE, n.d.; English Partnerships 2006a, 2007, 2008; Loures and Panagopoulos, 2007; Siikamäki and Wernstedt, 2008; Taylor, 2008; Doick et al., 2009; Hollander et al., 2009; Westphal et al., 2010; Kattwinkel et al., 2011; Natural England 2011; McPhearson, 2012; McPhearson, et al., 2013; Schewenius et al., 2014). Long-term brownfield reclamation through urban green space design is championed by, for example: English Partnerships, 2007; Liverpool Biennial and Design Liverpool, 2007; Loures and Panagopoulos, 2007; Siikamäki and Wernstedt, 2008; Taylor, 2008; CABE, 2009a, 2009b; Hollander et al., 2009; Westphal, L. et al., 2010; Goldberger, 2011; Steiner, 2011; The Liverpool Biennial, 2012.

Yet, to remove the matter of brownfield land (organic and non-organic) and replace it with a designed landscape or gardened brownfield removes from the urban landscape the wild abandon that can hold attraction for some citizens (for example, as illustrated in the writing of: Mabey, 1973, 2010; Edensor, 2005; Gissen, 2009; Farley and Roberts, 2010; Jorgensen and Keenan, 2012; and work of: Foster et al., 2011a; Gwilliam and Lemke, 2012; Fynn, 2014; Haydock, 2014), and as evidenced in Case Study 1 and Case Study 3. Through the fieldwork case studies, the research reported in this thesis complements, and adds new knowledge to the afore cited artworks and literature in favour of the wild and unmanaged brownfield; evidencing that unmanaged urban brownfields have an intrinsic quality and allure as they are, qualities that are already providing CES such as recreation (as reported in Case Study 1: Examining A Linear Brownfield > 0.25ha and Locating CES's), interaction with nature for sensual pursuit (as reported in Case Study 2: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds), and aesthetics and inspiration (as reported in Case Study 3: Orientation and Experience of an Unmanaged Urban Brownfield < 0.25 ha).

Taking in, and writing about, the sensory qualities and sentient experiences of being in unmanaged urban brownfields and investigating perceptions of so-called weeds, the research reported adds another layer of knowledge to unmanaged urban brownfields that can be considered as 'ugly' landscapes with 'ugly' nature. They may be ugly, yet, still they are attractive; they hold an allure, and they beget CES goods. Such is the allure of these landscapes that artists (for example, landscape architect, Giles Clement; ecological artist, herman de vries; and contemporary artists who exhibit brownfield inspired art works in galleries, for example, Lara Almarcegui and Edward Chell) have re-created aspects of brownfield environments in their creative practice. Creative manifestations of brownfield matter are designed and purposefully fabricated. They are not brownfields, but art inspired by brownfields. They are art of and about brownfields that is held in high international acclaim with the artists Clement, de vries, and Almarcegui being recipients of prestigious accolades (Clement, RIBA Honorary Fellow 2003; de vries, Skulptur Projekte Münster, 2007; Almarcegui, Venice Biennale Spanish Pavillion, 2013).

Within the arts unmanaged brownfields are celebrated for their wild nature, muck, and edgy aesthetic, in other words, CES. The inherent aesthetics and sensory qualities are recognised, rendered, and re-valued as art. The artist's inspirational and aesthetic valuing of the intrinsic nature of unmanaged brownfields needs to be clearly articulated within the ecosystem services framework. Artists seek out and access the CES goods of brownfields: aesthetics and inspiration. As discovered and reported in Case Study 3, art and fashion students, photographers, and performance artists accessed the small un-scenic brownfield for inspiration resulting in expression and creativity. An artist's creative expression is a CES practice (Fig. 5-1). Not only do some artists value the unmanaged brownfield as a CES environmental space, the brownfield – wasteland - work of artists is disseminated to a wider audience, for example, the Venice Biennial, 2013, where Almarcegui exhibited her brownfield inspired artwork had in excess of 475,000 visitors (Biennial Foundation, 2013). However, as aesthetic philosopher Carlson argues, focusing heavily on artistic qualities distorts the true character of the environment, and can be criticized as anthropocentric, subjective, and morally vacuous (Carlson, 2010). The artist's rendition alone cannot convey the whole system. The artist can frame the chaotic and seemingly ugly in ways that re-imagine the subject and re-present a challenging landscape wrapped up in the presentation of the art world. Carlson calls this paradigmatic art appreciation *design appreciation* (Carlson, 2000, p.109). And, herein lies a criticism of re-presentational art as a primary way of knowing a brownfield. Referring back to Almarcegui's mounds of brownfield terra – sifted and separated and crafted by the artist – these gigantic mounds filling gallery spaces are not brownfields; they are installation art, and, as such, far removed from the everyday disorder and natural chaos of the unmanaged brownfield landscape from which they were excavated. They are tamed *terra*. They are art (Fig. 2-8). However, I do not concur with Carlson. Brownfields re-presented through the language of art can shift perceptions of maligned or sublime landscapes. If we consider the sublime landscape paintings of the Alps by Salvator Rosa (1615 – 1673), a comparison can be drawn; viewed in the safety and comfort of galleries and salons, the Alps were rendered palatable (Porteous, 1996). The Italian painters of the seventeenth century shifted public opinion of the Alps from treacherous to magnificent

landscapes (Porteous, 1996). Aesthetic philosopher, Yuriko Saito, argues that art practice informs environmental appreciation, and as such, is beginning to guide anew nature and environment aesthetics, in particular, environments that are *normally neglected or taken for granted in our everyday lives* (Saito 2005 p.41).

Quantifying the allure of landscapes is problematic; it is a subjective attraction; and qualities such as aesthetics and inspiration are argued in the UK NEA (2011) to be incommensurable. However, the research reported in this thesis has illustrated that unmanaged brownfields have allure and that inspiration is obtained from these landscapes. Inspiration – a CES ‘goods’ - is manifest through the creative arts. Contemporary artists today (writers, social engaged practitioners, and performance artists) including myself – as two of the case studies (Case Study 1 and Case Study 2) were commissioned as art works and framed within an art world context - are illuminating the sublime aesthetic qualities of brownfields and the allure of unmanaged nature within an urban landscape. Yet, with art and literary works experienced in comfort, away from the brownfield landscape, it is unclear how connected the reader or viewer becomes to the brownfield landscapes depicted. Coates, et al., 2014 (p.33) suggest that an interesting exercise might be to *take a group to an edgeland, hear their views on the value of the place in question, then assign ‘Edgelands’* [the book *Edgelands: Journeys Into England’s True Wilderness*, by Farley and Symmons Roberts, 2011] *and, afterwards, take them back to find out if they have found additional value there since their initial visit*. This approach may hold merit, however, the full extent of the impact of the arts on shifting perceptions of maligned landscapes might only be revealed after a period time.

CES heritage goods connecting natural areas with art cultural heritage is well documented in the UK NEA (2011):

The connection of natural areas with cultural heritage has a long and distinctive history in the UK, linked to the notable tradition of art and literature in transforming the landscape from an environmental setting to a “scenery with amenity value” (Andrews 1999, p.56 in Church et al.,

2011, p.667).

Landscapes with art history references and literary associations are used as indicators of landscapes with CES value (Church et al., 2011). Poetry, novels, and paintings, by artists such as Wordsworth, Constable, and Turner, attract tourists to the landscapes rendered by the pen or the brush of the artist. Aesthetics – as rendered in Romantic and Picturesque art - are bolted into the very fabric of the UK NEA (2011) and the UK NEAFO (2014); heritage goods, and the Picturesque and Romantic run like a thick seam throughout CES literature. Accordingly, there is likelihood that contemporary art inspired by brownfields, will, in time, attract tourists. As art inspired by the rural is used to champion the value of heritage goods, so too could marginal urban landscapes such as unmanaged brownfields be championed and valued.

Attraction to unmanaged urban brownfields – whether for creative inspiration, solace, education, or recreation - has hitherto been overlooked within the treatment and assessment of CES in the UK NEA, as acknowledged in the UK NEAFO (2014) *Arts & Humanities Annex 1: Arts & Humanities Perspectives on Cultural Ecosystem Services: the fugitive, feral non-places, scruffy and 'unkempt' in-between lands* have been previously overlooked (Coates et al., 2014, p.32).

Examining the ways people use brownfields, through the literature review and, importantly, through the three case studies reported, sheds new light on unmanaged urban brownfields as CES providers. Unmanaged urban brownfields, as CES providers, should not be overlooked in the ecosystem services framework; they are used and they are appreciated. The two case studies that took this research into unmanaged brownfield landscapes, Case Study 1 and Case Study 3, combined with examples in the Literature Review (for example: Mabey, 1973 and 2010; Shoard, 2002; Edensor, 2005; de vries, 2006; Clement, 2006; Daniels, 2008; Haarmann and Lemke, 2009; Gissen, 2009; Kopke, 2009; Farley and Roberts, 2011; Jorgensen and Keenan, 2012; Gwilliam and Lemke, 2012; Almarcegui, 2013; Chell, 2013; Fynn, 2014; Haydock et al., 2014; Foster et al., 2015) evidence that unmanaged urban

brownfields provide a unique resource for people to engage with urban nature. The people entering these sites are CES beneficiaries. More, Case Study 1 and Case Study 3 provide evidence that the whole environment, complete with unmanaged nature, modern ruins, and detritus holds the allure; the ecosystem is bolted into the urban fabric and discarded matter.

5:7-ii. Findings in relation to Aim 2: an interdisciplinary approach to illuminate CES's associated with unmanaged urban brownfields

When the research reported was begun, CES research and literature omitted landscapes and nature that did not conform to notions of aesthetic beauty (for example, MA, 2005, UK NEA, 2011). A distorted CES value was presented; hence, the need to undertake this research into the CES of maligned brownfield landscapes. This has since been acknowledged within the UK NEAFO (2014). Following on from the UK NEA (2011), the UK NEAFO (2014) conducted a search to identify all CES literature *...over multiple decades across a broad range of disciplines including natural and social sciences as well as the humanities* (Kenter et al., 2014 p.34). Only 117 CES focused papers were identified. These were reviewed, identifying gaps for further investigation. Brownfields were identified as a gap needing further investigation:

For NEA purposes, it would be particularly advantageous to identify environmental settings with a high but unrealized potential for benefiting local populations, such as an 'edgeland' [brownfield] rich in biodiversity or close to a socio-economically deprived area, as well as marking out areas of this kind that are already appreciated by locals (if not, yet, by decision-makers) (Coates et al., 2014, p.32).

UK NEAFO Work Package 5 (Church et al., 2014), highlights the need for the participatory and interpretive approaches and creative, arts-based, techniques to link environmental settings - places and landscapes - to CES, interactions between people in natural environments, and CES value; and, calls for a wide range of innovative and novel methods and approaches drawn from the arts

and humanities to understand CES in location – in the environmental setting - and with a community context (Church et al., 2014, p.11). Church et al., (p.65) go on to state: *...deliberative and dialogue-based methods of research [...] and mapping methods [...] may seek to further probe the reasoning that underlies attitudes about CES; activate hitherto unarticulated or latent values; encourage exchange of perspectives on matters of mutual interest and concern and evaluate different types of evidence.*

Two of the case studies reported (Case Study 1 and Case Study 3) delve and probe into the fabric of unmanaged urban brownfields. All three case studies investigate the settings by being in the settings, and explore the environment through an interdisciplinary lens. Embracing process led social engaging art practice – a dialogic approach and method enabling conversations - durational public eco-art, performance, social observation, wildlife observation, mapping, and systematic data collection, a thick description of the environmental settings explored has been generated (reported in Chapter 4, sections 4:2; 4:3; 4:4). Bringing together methodologies and methods from across the arts and sciences, and investigating unmanaged urban brownfields and wild, weedy nature in collaboration with researchers from other discipline backgrounds: a botanist, a geographer, an artist, and a landscape architect, has illuminated CES goods and practices associated with unmanaged urban brownfields in activities and CES practices observed, stories told through conversations with brownfield CES beneficiaries, and shared experiences of the researchers.

Case Study 1 provided evidence of a range of CES obtained from unmanaged brownfield land, for example: bird-watching, angling, walking, jogging, cycling, dog walking and boating (dinghies); activities that align with leisure, recreation, health, and education and ecological knowledge CES goods. Tim Edensor (2005, p.30) describes walking and dog walking as mundane leisure pursuits, habitual practices, and *rational recreation*. However, within the UK NEAFO (2014), dog walking, considered an informal and non-specialized activity (Church et al., 2014, p.11), is reported to improve enjoyment and relaxation in public spaces, and have a revitalizing and refreshing effect on visits to environmental spaces (Church et al., 2014, p.11). In Case Study 1, walking, with or without a dog, was the most frequent CES practice recorded (Fig. 4-9).

The conversations we had with dog walkers revealed that they chose to walk along the canal because the canal route – unlike the city streetscape - brought them into contact with nature; likewise with the walking commuters we met and spoke with. I disagree with Edensor's descriptors *mundane* and *rational recreation* - which also includes the bird-watcher and the botanist (Edensor, 2005). These terms appear to patronize and be dismissive of more subtle pleasures, for example, pleasures that include the senses of smell (wild flora), and sound (bird song heard while bird watching and walking). Pleasures that can inspire and generate ecological knowledge.

The interdisciplinary research approach and collaborative inquiry along the canal corridor in Case Study 1 enabled an integration of social observation, dialogue, and site surveys. Methods from the arts and sciences generated rich data that a single discipline approach might not have captured. The conversations revealed a sense of place and a sense of belonging, an example being the man who was Klondyke (a neighbourhood in Bootle) born and bred. His desire to be connected to the (non-navigable) canal was such that on moving into his new home he cut an entrance in the back fence to gain access to the water before he put up the curtains (Chapter 4:2-iii and summarised in in this chapter: 5:6-i.). Methods used also included site and human activity surveys, writing, drawing, and photography. Throughout the investigation of the canal corridor, observations, encounters, and experiences were logged and noted on the site survey sheets; and logged, noted, and drawn on the observation logbook sheets. Photographs were also taken during each day's investigation. This collective data, recording the environmental setting along with CES goods, practices, and benefits, is a mapping approach that locates CES within an environmental setting and geographical context.

In many ways, enumerating and recording observations is relatively straightforward. More difficult to capture are the spiritual feelings, for example, awe and wonder, and aesthetic appreciation. Kenter et al. (2014, p.68) state that to understand the aesthetics of an environmental setting and aesthetic CES value, discursive engagement is required, supported *through forms of testimony and proof anchored in the perception of aesthetic qualities*.

Conducting investigations in four fieldwork locations facilitated through performative happenings, data, including testimonies, were gathered which were specific to the environmental spaces, the CES practices of those spaces, and the CES goods attainable. These data were collated and mapped, and re-told through diaries, essays, charts, and performed presentations. This process of interdisciplinarity and working at the edges of disciplines, in the hyphen spaces and not at the centre, has brought to light aesthetics values and non-monetary values that cannot easily be quantified.

In the UK NEAFO (2014) it is acknowledged that spirituality, as experienced through a sense of awe and wonder which embraces the less beautiful, less serene, and the less scenic in nature, also incorporates threatening aspects: *for some, the element of danger is integral to the notion of wildness and an indispensable ingredient of wild places themselves* (Coates et al., 2014, p.29). This certainly chimes with the experiences of Case Study 3, where the wildness of the site inclusive of decay, rotting carcasses, shards of glass and soggy mattresses had pleasing and awe inspiring attributes.

Case Study 1 delved beyond the subjective, merging subjectivism with interpretivism and objective data collection to seek out and report the CES obtained in a linear brownfield environment. To understand more about how this brownfield site was utilized by visitors, methodical recording techniques of observing and counting were used, along with more organic methods of data collection, for example, conversations and reflecting on sentient experiences. This interdisciplinary arts and sciences approach revealed that it is not only artists who are attracted to the bricolage of the muck, detritus, waste, and crumbling fabrics of urban living melded within a medley of unplanned nature. A faction of people embrace the personal freedom of being able to explore unmanaged brownfields - as they are - for an array of experiential reasons that align with the CES. Investigating CES associated with unmanaged urban brownfields, probing into perceptions of so-called weeds, and exploring a small ugly brownfield, has illuminated a breadth of CES goods, practices, benefits, and non-monetary values that were hitherto under acknowledged.

5:8. Moving on

If, as the literature suggests, the ecosystem service framework exists to aid environmental decision making in ecosystem conservation and raise awareness of the interconnected values (non-monetary as well as economic values) of multifarious ecosystems (for example Fisher et al., 2009, UK NEA, 2011; UK NEAFO, 2014), then understanding of the complexity of maligned environments and CES associated with unmanaged urban brownfields is critical. Without acknowledgement of the full spectrum of CES, latent landscapes such as unmanaged urban brownfields will likely be overlooked by decision makers: considered valueless. The nature they contain and the CES they already provide could be - unwittingly – destroyed in an attempt to ‘create’ a landscape that is ‘known’ to be a CES provider.

Hitherto, the ecosystem services framework has not been a complete method of nature valuation; too many other non-monetary values along with scenically challenging landscapes have been missing from the research. Until this is fully addressed – the research reported goes part way – unmanaged urban brownfields, particularly those which fall short of OMH PDL criteria (which nevertheless, provide maintenance free CES), are in danger of being uprooted, along with some of the people who utilize these environments. A report by the Chartered Institution of Water and Environmental Management (CIWEM): *Placing a Monetary Value on Ecosystem Services* (CIWEM, 2012, no page numbers) suggests that: *increased engagement with social science communities may help to address this and investigate human behaviour and attitudes toward the natural world.* From the research and findings reported in this thesis I agree with this suggestion, but I would argue that research needs to extend beyond the social sciences to include the research of artists, not as CES illustrators or deliverers of workshops to produce novel maps with community participation in support of CES research, as suggested in the UK NEA FO: Work Package 5 (Church et al., 2014); but as research equals working with a interdisciplinary approach or within a multidisciplinary team to generate new knowledge.

5:9. Suggestions for Future Research Informed By The Findings Of The Research Reported

5:9-i. Barriers to accessing CES goods or barriers enticing activities, which generate a connectedness to nature

Upon analysing the case studies reported, I realized that locked-in unmanaged urban brownfields, with perimeters of fencing and security measures, for example, razor wire, may elicit attention from individuals and groups who wish to conduct activities away from the gaze of others. Initially I had been concerned that brownfields hidden behind security perimeters locked out potential unmanaged brownfield CES beneficiaries. The manner in which the CES of unmanaged urban brownfields are unlocked may have more to do with *an Other* (Lefebvre, 1980, in Soja, 1996, p.53) appraisal of CES value of brownfields rather than a physical unlocking of sites to make them physically accessible; and from a prospect refuge point of view, safer. Additional research is required to understand the significance and well-being values of unmanaged urban brownfields, in particular, the sites that are locked-in, or, as with the canal corridor, sites that offer little in the way of prospect refuge. These types of sites are hidden away from public view; and, as such, offer a haven for those who do not wish to be observed – adults and children. Children's play scenarios that could be viewed as potentially dangerous and high risk, for example, playing without adult supervision, climbing trees, or unsupervised activities in or on water, help young people to develop spatial awareness, personal risk assessment, and confidence (Lester and Russell, 2008; Natural England, 2010; RSPB, 2010; Ward Thompson, 2012). Likewise, with activities that can be perceived as anti-social behavior. Larking around as a teenager *is not a precursor to development into a 'bad' adult. It is healthy play* (Mugford, 2012, p.95). Those seeking the seclusion of barricaded brownfields must not be overlooked, for in doing so a social inequality and bias of one sector of society – or 'type' of person - over another occurs. Access to CES of unmanaged urban brownfields for a few - who may, or may not be, participating in deviant activities – can benefit the individual, regardless of how others' might perceive them; and as a consequence, have positive knock-on effects that benefit the wider community. For example, in some cases, access to natural

green space in high density urban neighborhoods may help reduce domestic violence; decrease bullying, help children develop empathy, increase social and family bonding, and improves psychological health (Louve, 2013). This is a specialized field arguably beyond the scope of a single discipline approach. However, a multidisciplinary arts and social sciences approach could break new ground generating new contributions to knowledge, specifically social inequalities in relation to CES.

Research from across disciplines, multidisciplinary research, together with interdisciplinary approaches and transdisciplinary research could identify and report on the ecological and social inequalities, and spatial injustice (Soja, 2009) of landscape preference. The locked-in brownfields within our urban landscape provide ecosystem services, including CES. The problem is that activities that take place within locked-in brownfield sites are subject to misinterpretation; they could be perceived as a less social kind of behaviour, counterculture activities or antisocial behaviour. Referring back to the work of Mary Douglas, people and practices become dirty when they are out of place and when they do not conform to societal rules; when people do not conform they become a threat to good order (Douglas, 1966). However, this does not mean that such practices should – or even could – be grubbed out. This research has touched upon existing counterculture community use of unmanaged urban brownfield land. However, whilst acknowledging that social and spatial injustice could result through remediating unmanaged brownfields by turning one type of green space into another style of green space – possibly accessible to a wider demographic – the research reported did not delve into spatial injustice issue. Spatial injustice lay beyond the parameters of the research question. Nevertheless, it is an important consideration.

5:9-ii. Safety

The interdisciplinary and collaborative approach within this research process opened a line of inquiry. Observing dog walkers, the team had wondered if peoples' choice of dog breed was significant in relation to feelings of well-being and personal safety along the canal corridor. Data were collected; the dog breeds being walked were noted but not reported here as those data do not

shed light on locating CES goods and practices along the canal corridor. However, feelings of safety and well-being present an interesting line of inquiry for further and future studies that link into social inequalities, and spatial injustice of environmental spaces.

5:9-iii. Classification of brownfield land

Environmental settings alone do not provide CES. The CES, unlike the other ES of supporting, regulating, and provisioning, are co-produced relationships between people and nature (Church et al., 2014). To this end, analyzing the CES associated with unmanaged urban brownfields as reported in this research goes only part way to help us understand brownfields as CES providers. A brownfield site could meet all the OMH PDL criteria, for example, contain more than one habitat type and be rich in biodiversity; yet, it might not provide CES. The environment, the ecosystem, must be accessible for CES to manifest. For example, abandoned military zones (MOD land) could provide an example of OMH PDL that is inaccessible, and therefore without CES.

Brownfields are multifarious, for example, they come in different sizes and different shapes, comprising of different habitats and habitat features, different stages of natural succession, differing landscape characteristic, different social contexts, and different geographical contexts. They are present in urban, peri-urban, industrial, and rural landscapes. Some might be accessible, others not. Brownfield classification: size, habitat structures, landscape characteristics, geographical and socio-economic contexts, and types of physical barriers surrounding brownfields, could further aid our understanding of unmanaged brownfields and how we communicate – and importantly differentiate – brownfield environmental settings. Currently there is OMH PDL. Other than that there are: brownfields, or wastelands, or edgelands, or unofficial countryside, or urban commons, and so on – as reported in Chapter 2:2. These terms are by-and-large interchangeable and none actually describe the site, what makes up the brownfield environment or ecosystem, or whether or not a site is accessible or used. A brownfield environment in a socio-economic deprived area could provide access to local natural green space giving rise to health and well-being benefits (as reported in Chapter 2:5); more, a brownfield site may

already be a valued local green space. However, unmanaged brownfield land does not automatically equate to CES provision. People have to be able to access and interact with the brownfield ecosystem in order to co-produce CES. Further research into CES of brownfield spaces would benefit from brownfield classification.

5:10. Concluding

The original contribution to knowledge is twofold. Brownfields were hitherto under-examined as CES providers. This is acknowledged in the UK NEAFO (2014), which calls for multidisciplinary and interdisciplinary research spanning the Sciences and the Arts and Humanities (AH) to articulate and evidence CES value and benefits of not yet examined ecosystems such as brownfields (Church et al., 2014; Coates et al., 2014).

- Firstly, the research reported has revealed and provided evidence of CES value and benefits associated with unmanaged urban brownfields.
- Secondly, the research reported was interdisciplinary, combining approaches from the arts and sciences to illuminate CES of hitherto under examined – latent – brownfield landscapes and ecosystems.

In 2014, The UK NEAFO, *Work Package Report 5: Cultural Ecosystem Services and Indicators*, Church, et al. (2014, p11) wrote: *arts-based participatory mapping is unprecedented in formal ecosystem assessments.*

Through integrating participatory arts based approaches: eco-art, socially engaging art, performative happenings, and art based methods including mapping, drawing, photography, creative writing, and poetry, together with quantitative site and habitat surveys, and dialogue-based methods of research, the research reported has taken formal CES assessment into previously uncharted territory. As such, the processes of data gathering which, record the environmental settings in conjunction with the experience of place, the sharing of experiences, and knowledge of place from CES beneficiaries, combined with

layering knowledge from environmental science, geography, social science, and aesthetic philosophy, is unprecedented. The CES associated with unmanaged urban brownfields revealed and evidenced through the research reported can be articulated and re-told in visual, written, and spoken forms, through depictions, creative interpretations, and re-presentations. The research does not end with the thesis. The research reported paves the way for new cycles of research, and knowledge dissemination within and beyond academia.

APPENDIX

Appendix 1. Preamble. Journeying into brownfields through art and developing an interdisciplinary approach

A1-i. Being an interdisciplinary artist

With an unrestricted curiosity and integrating elements from different academic disciplines, art practices, and everyday life, I have been exploring unmanaged urban brownfields since 2006. I long since abandoned an art studio practice in favour of being outside, within the real world, creating performative – ‘data’ collecting - interventions that are alive and interactive, that have humour, and that allow for conversations with whom-so-ever happens to be around. The field work case studies for this research are framed within an interdisciplinary art context – socially engaging environmental public art - and one of the studies was commissioned by the internationally renown UK biennial of contemporary art: The Liverpool Biennial.

A1-ii. Journeying into brownfields

Journeying into brownfields through interdisciplinary art practice has been a journey: cognitively and physically. Navigating my way through my research question has physically taken me to - and into - a variety of unmanaged urban brownfields in Liverpool and Salford in the UK, and Wiesbaden in Germany, as well as managed parks and urban green spaces, also in Liverpool, Salford, and Wiesbaden in Germany. On my journey I have cycled through streets seeking out unmanaged brownfields, climbed over barriers, and scrubbed about in ‘wastelands’, all in pursuit of exploring – and experiencing – and recording the CES of unmanaged brownfield sites in urban areas and the wild nature they contain. The journey has been one incorporating collaborative enquiries: working alongside others; and social engagement: talking to people who frequent the vicinity or the sites being studied. The journey has also been one of systematic, self-reflective, and critical enquiry. As such, it has not been a straightforward route but meandered as new themes have emerged through encounters, conversations, and observations.

A1-iii. Developing a method of inquiry into urban brownfields: *liverpool wastelands*

My exploration into the CES of brownfield sites began, unwittingly, with an art project for the Liverpool Independents Biennial programme, 2006. At that time I was an artist dipping my toe into another discipline by working in collaboration with botanist, Dr Alicia Prowse. She and I shared a passion for brownfields borne from a fascination with non-native species, natural (secondary) succession, and pioneering plant species taking root in sites officially abandoned by people. Yet, more, we were interested in what value these sites may hold for local people to experience a bit of exuberant wildlife. Liverpool City Parks Department gave us their list of 'known' Brownfield sites. There were twelve sites including 'out of management' parks, post-industrial sites, and railway corridors. What followed was the task of finding, mapping, and evaluating the city's 'unknown' brownfields. To do this, I took to the streets on a bicycle. The whole experience of cycling around Liverpool, seeking out brownfield sites, mapping them, and evaluating them for their value for experiencing wildlife, was recorded on a blogsite: www.liverpoolwastelands.bogspot.co.uk. The first entry reads:

Welcome to "Natural Succession"

This is the first entry of a brand-new blog to track and record the work of artist Kerry Morrison during the Liverpool Independents Biennial.

Within the Independents Programme, Kerry will undertake the challenging task of locating and mapping Brownfield sites within selected areas of Liverpool starting with Woolton, the City Centre, and along the Mersey from John Lennon Airport through to Canada Dock.

"A Brownfield site is any land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilized. It may also be vacant, derelict, or contaminated" (Journal of Environmental Planning Jan. 2000).

This is a process led art and ecology [eco-art] project initiated by Kerry

Morrison and botanist Dr Alicia Prowse. The aim is to flag up the ecological and aesthetic value of urban wastelands and examine the intrinsic value of these neglected, maligned areas to those who visit, pass through, or use them.

Left unattended, wasteland sites become reclaimed by nature, and as unmanaged sites, natural succession is the deciding factor in what does or does not survive on the land. A lack of human interference and applied judgement values:

e.g. Native Species = Good, and Non Native (alien) Species = BAD,

can result in cosmopolitan landscapes comprising of indigenous and non-native species. Alive with vibrant and diverse wildlife, could these biodiverse Brownfield ecosystems be more accurately described as 'Greenfield' sites?

To reduce the carbon footprint of the project, Kerry will navigate the streets of Liverpool on her bike. Sites in over 4 square miles of the city will be flagged up, and using a combination of artistic and scientific evaluation techniques, these least cherished landscapes will be mapped and graded for their potential value for experiencing wildlife.

After each day of cycling, the results will be exhibited at:

*The Outhouse, off Menlove Avenue, Woolton,
Liverpool 25.*

www.wooltonouthouse.co.uk

For further information about The Outhouse visit

www.axisweb.org/pbCOMM.aspx?SID=15821

Kerry will also write an anecdotal diary account of her daily experiences, observations and encounters. These will be posted on this blog.

(Blog excerpt, Monday, 25th September, 2006)

Although not one of the actual case studies conducted during this PhD research, this project, *liverpoolwastelands*, is relevant and significant. It laid the foundations for this PhD research as it led to:

- Realizing that brownfield sites are used by different people in different ways to obtain a variety of CES;
- Recognizing that brownfield sites hold great potential for experiencing nature; however, sites may appear foreboding;
- Gaining an understanding of brownfield sites and the diversity of brownfields in terms of size, topography, habitat, successional stages, use, and accessibility;
- Realizing that little academic literature exists about the CES value of urban brownfields.

Lessons learned, knowledge acquired, and experience gained throughout the process of *liverpoolwastelands* have enabled me to develop robust research methods for this PhD research and thesis, in particular developing:

- Methods of process led art and performative art happenings that attract un-coerced participation and conversations: a socially engaging and a dialogic practice;
- A collaborative and an interdisciplinary approach to gathering information and data;
- Reflexive writing (thick descriptions) and photo rich diaries.

In addition, I devised a method to evaluate brownfield sites for their value for experiencing nature that took into account ANGSt, stages of natural succession, ruins, and, importantly, barriers around sites.

For the duration of The Liverpool Biennial, 2006 (16 September - 26 November), the Liverpool Independents Biennial positioned itself within a major international art event and took full advantage of the associated, Liverpool focused, PR and art destination tourism. Riding on the kudos of The Liverpool

Biennial, the Independents curated a programme of city wide art events in non-art venues and in-between spaces coopted to create opportunities for local and regional artists to exhibit, adding to the overall cultural offer of Liverpool during The Liverpool Biennial period, while supporting lesser-known (known, but not famous) and emerging artists - I was one of those lesser-known artists.

To alert the public's attention to the Independents' exhibition venues (floors inside dockside warehouses, shop units, artist studio spaces, cafes, and non-traditional art spaces), each exhibition space was given a brightly coloured hand painted traffic cone. The cone was to be placed outside the venue during opening times. During the Independents Biennial, 2006, my work was the only duration, performative, socially engaging work, occurring outside a static venue (although I did have a static space to exhibit traces of my journey: The Outhouse in Woolton). As the majority of my work was conducted on a bicycle, on the streets of Liverpool, I opted to put the cone on my bike rack (Fig. A1-1).



Fig. A1-1: Independents Biennial cone on the bike, Banks Road, Liverpool, 2006

Each and every time I encountered a brownfield site I would take the cone off the bike-rack and place it in the brownfield – or against the brownfield if I could not gain safe access (Fig. A1-2).



Fig. A1-2: Independents Biennial cone inside an 'entrance' to the former Festival Garden site, Riverside Drive, Liverpool, 2006

These situations were then photographed and uploaded onto the blog: www.liverpoolwastelands.blogspot.co.uk. During the course of the work, and the blogging, the cone became a familiar, almost comical, addition to the expedition. Further, it was a point of intrigue, particularly when it was on the bike. As I cycled, people would point at me – I became noticeable on the streets; stationary, some people passing would approach me and ask: *Why have you got a cone on the back of your bike?* A section of the blog entry on Friday, December, 2006, annotates a conversation begun as a result of intrigue about the cone:

"Ey gerl – what's that cone on ya bike?"

Two young very scouse men – sharing a spliff.

Oh, that's to do with the Liverpool Independents Biennial – have you heard of it?

"No"

"Oh, it's a really big art show all over the city and I'm an artist in the Biennial and I'm looking at places like this (point to site) to check out the wildlife on them"

They look at the derelict site and then look back at me – heads slightly tilted.

“Oh...” “Av ya seen the foxes? Round ere there’s loads ov em. I took a load out with me pellet gun and last night – should un a said that should I - bet ya like foxes, ay gerl?”...

Then one of them blurts out...

“What’s that blue thing in ya mouth?”

At which point I realize that I had, until this point, been in conversation with a blue tag held firmly between my teeth...

(Blog excerpt, Friday, 8th December, 2006)

Inadvertently, due to the cone, I was having conversations with people who normally would not engage with art. The cone created a spectacle that made my cycling expedition both the artwork and the venue, and, more importantly, a talking point. As a result The Outhouse, as a stationary venue, became somewhat redundant: a dead space in-so-much as it was an archive and not an interactive platform. The work, *liverpoolwastelands*, was alive on the streets, and brought to life through conversations. This lesson learned has been embraced and incorporated into all of the fieldwork case studies for the research reported in this thesis. Creating a spectacle has the potential to generate intrigue and draw attention to the field of study that sparks conversation relevant to the inquiry, social interaction, and participation in the study. This process is expressed in greater detail in each of the case studies reported. Each case study spectacle was created and designed to be specific to the focus of the investigation and conspicuous within the environmental setting.

liverpoolwastelands was not an academic venture; it was an artwork that took place during and within an international art event. However, the results obtained from the process, along with the lessons learned, have helped to shape this PhD research, which began in 2009. The time between (2006 – 2009) was also spent investigating brownfield sites as an artist – in Pennine Lancashire. Projects undertaken within this time frame include bringing a brownfield into use as public green space (Lancashire.gov, n.d.) and, exploring

possibilities or interim uses of brownfield sites within the Housing Market Renewal (H.M.R.) Pathfinder area of Elevate. (The HMR was a – controversial - nationwide government regeneration programme. A critical account of the rise and the demise of the HMR programme within the nine Pathfinder areas is presented in *Ground Control* (Minton, 2009).)

One hundred and twenty four brownfield sites were explored and investigated from 2006 to 2009. (One hundred and one sites were assessed in *liverpoolwastelands*, and twenty-three sites across Pennine Lancashire were explored through on site art interventions and photography). Yet, none were explored in depth and over time to gain a deeper understanding of unmanaged sites, as they are, through the changes of season. Further, the twenty-three sites investigated across Pennine Lancashire were commissioned works to design future end and interim uses. The commissioners (decision makers) were not concerned with how these naturally re-wilding urban environments were being used and valued in their existing state by people living in the near-by neighbourhoods. The brownfield as an environmental setting for CES was overlooked.

A1-iv. Artwork into CES research

With over three years of brownfield study under my belt, it felt appropriate to take stock of my artistic interventions, findings, and thinking about, unmanaged urban brownfields. Embarking upon a PhD, particularly within a School of Environment and Life Sciences seemed a natural – and challenging – progression; one that would take me beyond an eco-art practice, and into the realms of interdisciplinary environmental research: bridging together knowledge and learning from different disciplines to shed light on an under examined environmental setting and the CES thereof. The UK NEAFO (2014) reports:

Part of the task for researchers and decision makers... is to stay alert to countervailing tendencies, and to attend to spaces that are incongruent with dominant systems of value, such as the 'unofficial countryside' and the 'edgelands' of the urban hinterland (Shoard, 2002; Mabey, 2010).
(Church et al., 2014, p.18)

The point at which this PhD research began, literature attaining to how unmanaged - seemingly abandoned - urban brownfields were being used (for example, for recreational purposes, Edensor, 2005) was thin on the ground. Future end uses or interim uses appeared to be the focus of decision makers (for example, Benson, 2002; Environment Agency, 2003; Box and Stanhope, 2004; English Partnerships, 2007, 2007, 2008). Yet; through investigating unmanaged sites, it was apparent that they had value for people as they were: traces of use were clearly visible on some sites, for example den building, rope swings, and camp fires; and, I had encountered people using urban unmanaged brownfield sites for casual recreation purposes, for example, dog walking. Literature relating or researching the voices of people interacting with unmanaged urban brownfields was also elusive. Through my practice as an artist I was aware that artists – including myself - were creating work in response to the environmental settings of brownfields, for example, the Spanish artist Lara Almarcegui, was commissioned by the Liverpool Biennial in 2004 to create work in response to the abandoned Festival Garden site in Liverpool (Liverpool Biennial 2004). Delving into literature on ecosystems services, and cultural ecosystem services (MA, 2005) I was surprised to discover that urban brownfields – managed or otherwise – were absent as CES environmental settings. The dearth of research on brownfield sites as environmental settings for recreation, play, and inspiration raised questions that I was keen to research. Did unmanaged urban brownfields provide CES? And, could an artist's approach, more, an interdisciplinary approach, shed light on unmanaged brownfields as CES environmental settings?

My journey into brownfields through art took an unexpected turn: into the University of Salford, School of Environment and Life Sciences to begin exploring the CES associated with unmanaged urban brownfield sites. The decision to commit to PhD research interrogating the CES of unmanaged urban brownfield sites coincided with the offer of a commission from the Liverpool Biennial in 2009. The Liverpool Biennial curators, having heard about my work and social engagement methods, invited me to be one of seven selected international artists to work within a nine month programme, *Art for Places: Urbanism 09*. I was commissioned to explore

and record a disused (non-navigable) and unmanaged section of the Leeds Liverpool Canal. This was to be the first of my fieldwork case studies exploring the cultural ecosystem services associated with unmanaged urban brownfield sites. As a new environmental science PhD research student, it would be an interdisciplinary arts and science investigation.

Appendix 2. Extracts from Research Diaries, Case Study 2b: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds.

***Grass is not Green: what lies in lawns*, University of Salford campus lawns**

A2-i. First investigation of the lawns 13 April 2011

| Case Study 2b: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds | | | |
|--|---------------------|--------------------------|-------------------------|
| PART 2: <i>Grass is not Green: what lies in lawns</i>, University of Salford | | | |
| WHEN | WHAT | WHY | WEATHER |
| 13 th of April 2011 | First investigation | art science nature | overcast and cold |

First investigation of the lawns

In times of environmental concern, an art intervention that does not intervene reveals alternative views.



Not to cut the grass

To let grass grow

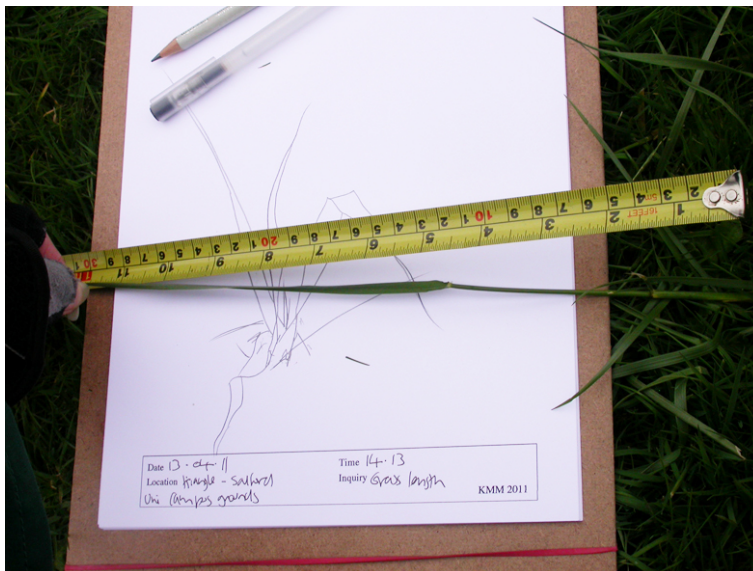
is part of the art

the other part of the art

is to have conversations
(dialogic art)
with
the people who pass by
(the university community)
about
the visual appearance of
the campus
with an un-mown lawn
or two
and then there's the science
and biodiversity
(biologically diverse life on earth)
not that it will be measured
although
species discovered lurking among the grass
(as well as the grasses)
will be examined
and
where possible
identified

On the 13th April

The grass on the triangular cherry tree lawn looked like this



and at its longest measured 19 cm



not particularly long

and not necessarily particularly noticeable as an 'un-cut' experiment

partly because the grass isn't really long enough to make a significant visual impact

but also because

the government cuts have affected the majority of local council departments

and one of the first things to be cut

by many parks departments

appears to be
cutting grass
un-mown lawns are emerging throughout our urban landscapes
and not by design.

Atmospheric condition
↓

it might rain &
I think it's around
10°C



What lies in the grass begins. But
my eye is drawn away from the green
and up to the pink. 3 cherry trees
in full bloom. A few blossoms strewn on the
grass



| | |
|---|---|
| Date 13. Apr. 11 | Time 13.41 |
| Location pink triangle, Uni of Salford. (campus grounds) | Inquiry pink triangle grass KMM 2011 |

Cart
parked up in the middle of the lawn
atmospheric condition

cold, windy, grey
drawing fallen blossom
people pass by, look on, and smile
the centre of the lawn is not the best location
for enticing
conversation
but a great spot for pigeon watching...

2 pigeons walk across the grass. From one side to the
other - quickly.
So quickly I only managed to sketch one of them.
They walked across the grass - then back - & then onto
the other (main) grass



| | | |
|-------------------------------|---------------------|----------|
| Date 13.04.11 | Time 4.15 | |
| Location Δ Uni Salford campus | Inquiry pigeon walk | KMM 2011 |

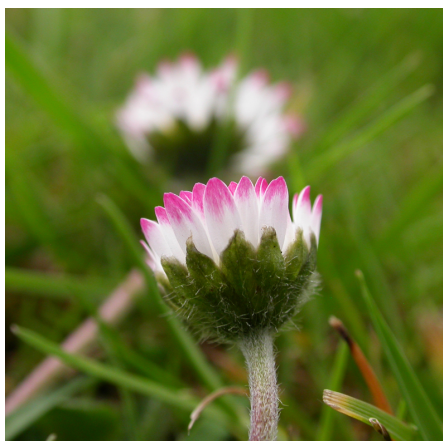
Cart repositioned
under the cherry trees
wind blows
cold
much less than 10° C now
feels like 6°
students walk by
on their own: head down – or held proud as if on a mission
in pairs: gabbing
or small groups: chattering amongst themselves

I wonder if this demographic are the type of people that will take the time to
stop and talk
to a stranger
in a green coat



the top of the cart conceals a flower press
a herbarium preparation kit
it's windy
so pressing flowers is tricky
Daisy
Dandelion
Celandine
Thale cress
Thyme leaved speedwell

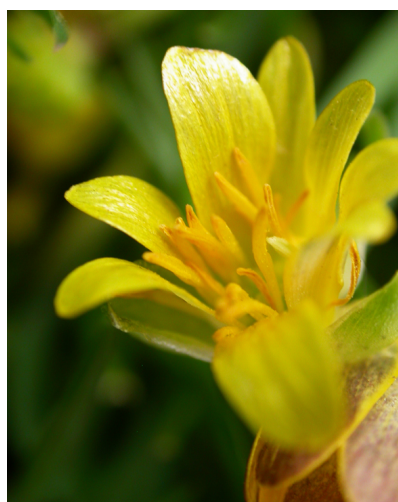
most likely
Thyme leaved speedwell - *Veronica serpyllifolia*
white flowers with dark blue lines 5-6m ✓
hairless ✓ unlobed leaves ✓
creeping ✓ flowers much - at ✓
bracts along ✓



Daises (*Bellis perennis*) (eye-of-the-day)



Dandelions (*Taraxacum officinale*) (priest's crown)



Celandines (*Ranunculus ficaria*) under the cherry trees



Thale cress (*Arabidopsis thaliana*) (mouse-ear cress)



Thyme leaved speedwell (*Veronica serpyllifolia*)

cold fingers fumbling

delicate flowers, layers of paper

swathes of young people walk by

on mass

groups being shown around, unable to break free from the flow

then, finally, I'm approached

he asked - as they usually do...

"what are you doing?"

I replied "I'm letting the grass grow to see what happens"

he started talking about spiders & the architecture of grass.

turns out he's doing a Masters in Biology - spiderology.

(at mhw) he has a sample site in Didbury where they're (he didn't say who 'they' are) looking at different management techniques. They're letting some areas of grass grow & he's measuring spider diversity. He works here, so he may, if I'm lucky - come & count the spiders here. ground dwellers are his speciality.

He told me they "balloon" which means, when they want to move on they cast a thread of web into the air & float off like upside down balloons. blown by the wind.

Then she came over & asked the same question

to which I replied the same reply.

She's here on a Uni visit. Should she come to Salford?

They've offered her a place to study Biology.

She really liked the idea of long grass & being at a campus with unmanaged & wild areas.

perhaps this project will swing her decision.

Sheffield, Preston, Wolverhampton & Liverpool are her other choices...

Date 13.04.11

Location cherry tree grass

Uni Salford campus

Time 15.27

Who He who likes spiders

2011

The architecture of grass

The architecture of grass



not only a delightful term
but visibly noticeable
spiders have architectural preferences
and the grass on the library lawn is certainly architecturally different
cart
in new position
another un-cut lawn inspected



Daisies (*Bellis perennis*) (eye-of-the-day)
Dandelions (*Taraxacum officinale*) (priest's crown)

Thale cresses (*Arabidopsis thaliana*) (mouse-ear cress)
Thyme leaved speedwell (*Veronica serpyllifolia*)
no Celandines (*Ranunculus ficaria*) (butter and cheese)
but Groundsel (*Senecio vulgaris*) (old-man-in-the-spring)
picked
and herbarified
along with the rest



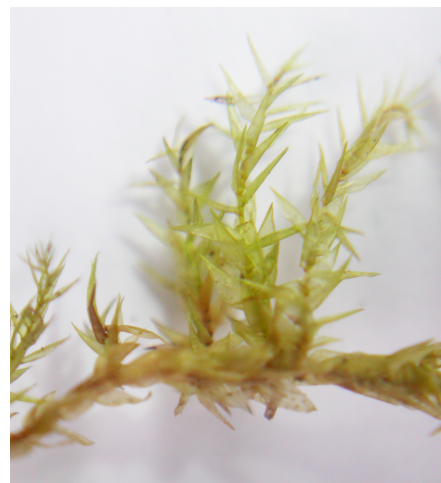
this lawn
the library lawn
is strikingly different
in colour
in texture
and, lest not forget, the architecture of the grass
different
this grass is thinner
spikier
and shorter
as well as less densely packed
the back section
of library lawn
has
less than 50% grass cover

and
more than 50% moss cover
Rhytidiadelphus triquetrus
spongy and vibrant lime green



no microscope
no positive i.d.

| | | |
|-----------------------------------|---|----------|
| Date D. Oct. 11 | Time 16:37 | |
| Location Library (own Substratum) | Inquiry Moss - possibly <i>Rhytidiadelphus triquetrus</i> | KMM 2011 |



temperature even lower
cold to the core
cart packed up
day done

A2-ii. An afternoon on the library lawn 7 June 2011

| Case Study 2b: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds | | | | |
|--|------------|---------------------|------------------|----------------------|
| PART 2: <i>Grass is not Green: what lies in lawns</i>, University of Salford | | | | |
| WHEN | WHAT | WHO | WHERE | WEATHER |
| 7 th June 2011 | A surprise | Me And Art students | The Library Lawn | Sunny after the rain |

An afternoon on the library lawn.

I arrived after a downpour, which is a hindrance for the herbarium; so another day out without pressing plants.

It's sometime since I last looked at this area so I began by slowly looking at what lies in the lawn: the front end and the back end.

One of the gardeners told me that when the disabled access for the library was installed (sometime last year) the grassed area at the front had to be re-seeded. That accounts for the slender texture and fresh green colour of the grass; it's a new lawn in its first season of growth. Scattered amongst the newly sown are the self-seeded, daisies, clover, black medic, and shepherds' purse: all rather sparse. Shepherds' purse is a delicate white flower, but it's name derives from its seed pod; flat heart shaped cases resembling leather drawstring leather pouches of a bygone age: a shepherd's purse. Inside the purse is a tissue paper like membrane coated in tiny golden seeds.



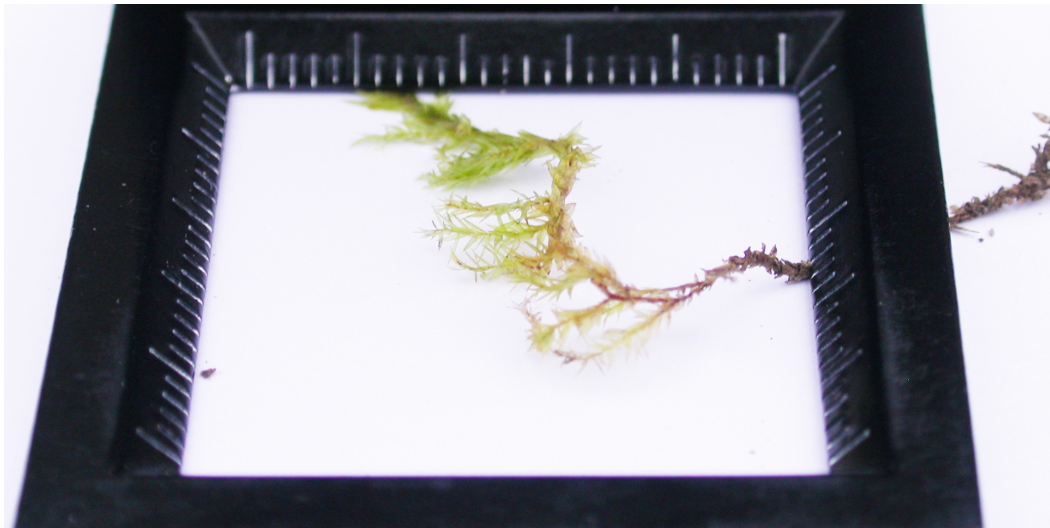
Bursa-pastoris

The soil edges around the lawn support tall herbs: broad-leaved willowherb, hedge mustard, turnip, and smooth sow thistle: *Sonchus palustris*, which in turn visibly supports the munched meanderings of micro moths.

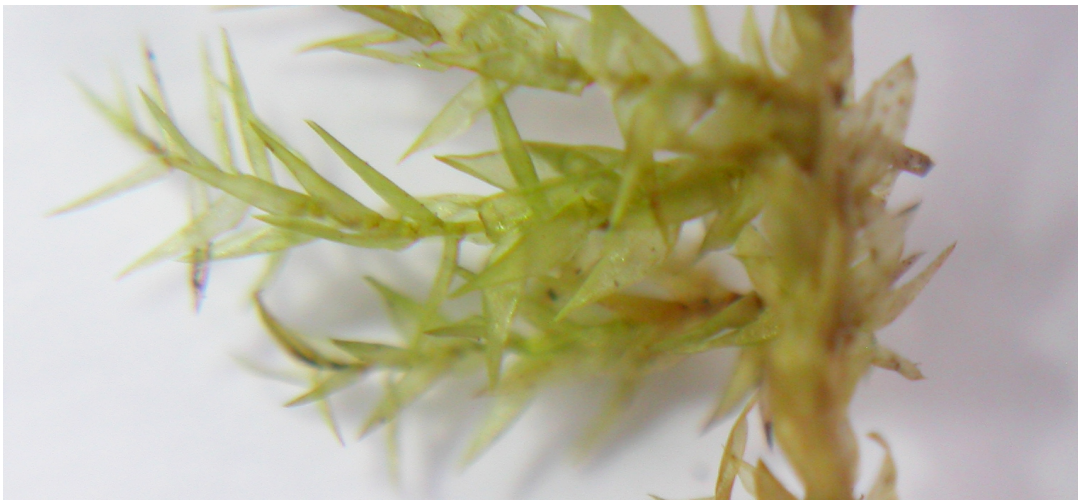


The grass at the back end of the library lawn (all but adjacent to the crumbling concrete steps that lead down onto Peel Park) is quite different in texture, colour, and content; it's deeper in hue and texture with greater diversity of flora. The lawn has an underlay of moss: *Rhytidiadelphus triquetrus*. Moss is common in many lawns and a scourge of the meticulous gardener. The Royal Horticultural Society says: *Most gardeners have trouble at some stage with moss on lawns. This is unsightly and is often a result of poor growing conditions. By improving the health of the lawn, moss can be kept at bay.* (<http://apps.rhs.org.uk/advicesearch/Profile.aspx?pid=422>). To control moss they recommend: scarification (raking out the moss) and chemical control. Weed killers combined with fertilizer - one to kill, one to alter the structure of the soil - will get rid of moss and encourage healthy grass growth; the grass should then outcompete moss growth, keeping it at bay. At the end of the day it comes down to personal preference – and choice. As for choice, well in our own back yards, yes, but less so on municipal areas. And preference: mine is to leave the moss, and for several reasons. In times of climate change and uncertain weather conditions, for example, too little rain in April, too much in May, moss is a sustainable - green - alternative to grass. Moss is drought tolerant. The common cushion moss, *Grimmia pulvinata*, (the type that you see growing in little cushion forms on walls) can survive fifty-two weeks without any water and then, when watered, resume growing (<http://www.saps.org.uk/students/projects/231-student-projects-investigations-with-mosses>). After torrential rain, downpours, or prolonged wet weather, moss acts as a sponge, soaking up water and regulating storm water run off. Mosses absorb water quickly and, depending upon the species, can absorb from 16 times up to thirty times their weight in water. Not only that, moss is a hyper-accumulator of toxins, absorbing and locking away, in its cell structures, heavy metals and pollutants from the atmosphere and from water. Moss attracts gases and particles released into the atmosphere by man-made processes: sulphur dioxide, hydrocarbons, lead, and fine particles known as PM10 and PM2.5 (which can be breathed deeply into our lungs). Like multi purpose vacuum cleaners, mosses help clean up our environment. The benefit of mosses as phytoremediators, sequestrators, and air cleaners is scientifically evidenced (e.g. Kirchhoff and Rudolph, 1989; Steinnes, 1995; Berg, 1997;

Wolterbeek, 2002; Makholm, 2004; Heber et al., 2006; Gomoiu and Stefanut, 2008; and on line, for example, <http://environmentofearth.wordpress.com/2008/08/04/plants-as-indicators-and-monitors-of-pollution/>). So, moss is a rather useful plant for us human beings. Yet, as a plant in our lawns, paving, and walls, or on roofs, it is often unwelcomed. And lastly, moss doesn't require mowing, so the lush green spongy carpet is low maintenance - as well as magical (but that's a subjective opinion).



Rhytidiadelphus triquetrus from the library lawn under a 2.5 cm hand lens



Rhytidiadelphus triquetrus from the library lawn, viewed through a x10 hand lens

On the back lawn, atop of the mossy underlay lie deep pile rugs of bouncy black medic.



They're on the wane, but as one species fades, another comes into fruition. About to bloom is *Prunella vulgaris*, commonly known as Selfheal, another common-or-garden lawn 'weed'.



To surprise and delight, amid the common that you would expect to find in any unmanaged lawn, a jewel: a bee orchid, *Ophrys apifera*.



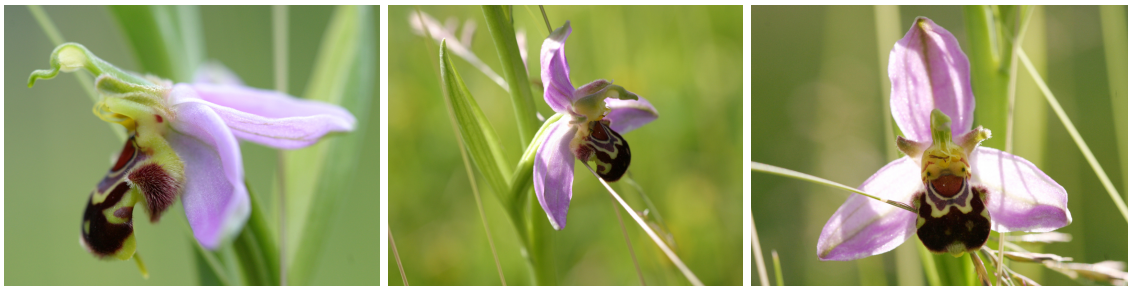
On hands and knees, a closer look reveals two dangling pollen sacs. (Not captured in the photograph is how they swing from side to side as the wind blows.)



Five final year visual art students approached. Thrilled by the bee orchid discovery, I excitedly (and most likely without much explanation about why I was on the grass in the first place) hurried them over to marvel, with me, at the delights of such a delicate find; so delicate and inconspicuous - despite its gregarious flower - that one of them almost trod it down with his size 10s. They'd never seen a bee orchid before, but neither had they seen *Prunella vulgaris*. They were equally as intrigued by the common as they were by the less common. However, they were more intrigued by the project: why I was on the lawn, the art element and the process of letting the lawn grow. Within moments the subject of aesthetics was broached: from Kant, who laid the foundations for modern aesthetics (Kant, 1764) to nature aesthetics and the 'positive aesthetic' theories of Holmes Rolston III and Allen Carlson (both philosophers of environmental ethics and nature aesthetics): all nature is beautiful. We discussed 'aesthetic indifference', if aesthetics is on a sliding scale with ugly at one end and beauty at the other, at the centre point is the bland, ordinary, and undistinguished (Moore, 1998) and 'negative aesthetics', the fact that ugliness exists in nature (Eco, 2007; Brady, 2011). They, like many artists, are attracted to that which is not beautiful, partly because it is challenging, partly because it evokes strong emotional responses; the idea was mooted that if something is 'beautiful' it evokes a lesser emotional response than if something is repulsive. Of course, aesthetic value is completely subjective and as such, there is no wrong when it comes to perceptions of beauty or ugly, in the mind of the beholder the judgment at a given time and place is right. But aesthetic value is fluid and perceptions can change, for example, an unkempt lawn is messy and ugly until we see the delicate flowers of the grasses and the butterflies they attract, at this point our aesthetic judgment may shift along the sliding scale. Our discussion about aesthetics led to function: what is the function of a mown lawn? Clearly, for one of the students, the mown lawn has a function: people can sit on it, have picnics, and play games. And what is the function of this un-cut library lawn? Plainly, it has an ecosystem function; it is a habitat supporting diverse flora and fauna. It also has an ecosystem service – the cultural service - we humans can enjoy the recreational benefits of this lawn as much as mown lawns: we can still sit in it, have picnics, and play games. In addition, it has an educational value: we can

learn about plant-life, ecosystems, and biodiversity. Furthermore, it has inspirational value: seeing and experiencing what lies in lawns has inspired me as well as members of staff and students at Salford University.

After the students had left I came across a second bee orchid, with more flowers in bloom on its stalk than the first.



Bee orchid, *Ophrys apifera*

Bee orchids are not a rare or protected species, they are classified as common, frequent, and local, which means if the conditions are right they will be common and frequent in localized areas.



| | |
|------------------------|--------------------|
| Date 07.06.11 | Time 17.39 |
| Location Library (CMM) | Inquiry Bee orchid |
| KMM 2011 | |

In his article: *The terrible lesson of the bee orchid; we must fight to protect not only biodiversity, but bioluxuriance*, Richard Mabey (author of *Flora Britannica*) recalls a personal anecdote poignant to this project:

At a stroke, the bee orchids have gone from our lane. Two summers of tropical grass growth have brought the verge-cutters out early, before the orchids flower and seed, and we won't any longer be able to see those fabulous, chimerical blooms, with their velvet bodies and sculpted pink wings just an amble from the front door... their passing seems like a stitch dropped, part of a great unraveling... the natural world isn't only about humans' aesthetic experiences; it is about the actual existence of living organisms. The wild orchid has an aura that the garden specimen lacks. At the end of the line, the one solid argument for the preservation

of species is an a priori ethical one: they are important in their own right, simply because they exist, as part of the unfathomable intricacy of life.
(<http://www.guardian.co.uk/environment/2005/jun/18/ruralaffairs.comment>)

The idea of bee orchids growing on this patch of lawn may have been unfathomable this time last year, but here they are. And their presence, along with the *Rhytidiadelphus triquetrus*, tells us even more about the ecology of this site: the soil. These species tend to be found growing on calcareous (chalky) grasslands.



A2-iii. Discovering secret gardens 15 June 2011

| Case Study 2b: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds PART 2: University of Salford: <i>what lies in lawns.</i> | | | | |
|--|--|--|---------------------------|----------------|
| WHEN | WHAT | WHO | WHERE | WEATHER |
| 15 th June 2011 | A primary school visit to investigate what lies in lawns | Me, two teachers, eight pupils, a Dr of Env. Sc., and four first-year Wildlife Conservation students | Cheery tree triangle lawn | Sunny to start |

Discovering secret gardens

Attired in green coat with white hat, I pushed the art-cart uphill towards the Cherry tree triangle lawn. As I drew nearer I spotted the students who had volunteered to help, bent over picking litter from the long grass, making it tidy, neat, and clean for the visitor. Today is a day that has been a while in the planning; outreach work with a local primary school. St Philips school is about a ten-minute walk away from Salford University campus (for someone with long legs but for smaller people probably more like a twenty-minute walk). The school was built on what was Islington Square, where the author of *The Secret Garden*, Frances Hodgson Burnet grew up. It is a small school where student numbers are in decline and sits in the shadow of the tower blocks of Islington Village and the Grade 2 listed building, Islington Mill. The volunteer students had spent the morning at the school working with eight, year six pupils, (the class usually has eleven pupils). Together they painted posters of flowers and various bugs and talked about urban nature in preparation for the afternoon, hands-on, investigation of the Cherry tree triangle lawn where the pupils and teachers alike would encounter real, live, critters with eight and six legs.

The pupils and their two teachers had a picnic lunch on the mown grass opposite the Cherry tree triangle. Picnic over they made their way to the triangular Cherry tree triangle lawn. As they walked towards me I noticed one young girl twitching, lifting her legs, and scratching her calves. I asked her if she was worried about insects in the long grasses, she replied: *I don't like insects*. I replied: *well hopefully by the end of the afternoon you will love insects*. After introducing myself, as Kerry the artist, we began an afternoon of

activities to explore the lawn and what lies within. Because they were so few, and we were so many, it was possible to have one student helping two pupils - a great working ratio. This left the Dr of Env. Sc. and me free to mingle amongst them all.

We began with a game called rainbow chips. This game helps people focus-in on the world around them and to look more closely at nature and elements within nature. I told the children that that morning I had seen a rainbow containing all the colours of nature; I reached up and collected a bag full of colour chips from the rainbow. I took out the bag of rainbow chips from the art-cart and invited them pick one. Each child placed a hand into the bag and pulled out a rainbow chip. I told them if they looked very hard into the lawn they would be able to find something the same colour as their chips. The children scurried off, heads bent downwards, looking at their cards and looking in the grass. They searched the area with great intent, carefully and meticulously trying to match things in the grass to the colour of their rainbow chips. Their care paid off; deep reds were matched to the base of the florets of Clover flowers; blues to different parts of Speedwell flowers; greys to stone chippings; and dusky purples and pinks to the flowering heads of Yorkshire Fog grasses.



Pleased with their successes, they wanted more rainbow chips and another go at matching colours. They played this game for quite some time focusing in, more and more, on the different colours and different nature elements within the lawn.

Atop of the art-cart were several small containers containing different moth species and insects. These had been collected earlier in the morning, from the campus especially for the children to look at. After a while they noticed the moths fluttering around in their Perspex pots. We began to gather around the art-cart, lifting the pots and having a look. One of the moths was a Large Emerald, *Geometra papilionaria*. I have never seen one of these before; a very pale emerald green with a white and furry body; to my eyes a delicate beauty.



Large Emerald (*Geometra papilionaria*). Image taken from:
<http://www.inishowenwildlifeclub.com/news08.htm>

I asked the young girl with the twitchy legs, which was her favourite moth. She picked up the Perspex pot containing a small red and grey moth, a Cinnabar moth, *Tyria jacobaeae*; this day-flying moth was her favorite.



Image from:

<http://www.mattcolephotography.co.uk/Galleries/insects/Moths/slides/Cinnabar%20Moth.html>



Image from: <http://www.record->

[irc.co.uk/c2.aspx?Mod=Article&ArticleID=Speciesofthemoth](http://www.record-irc.co.uk/c2.aspx?Mod=Article&ArticleID=Speciesofthemoth)

By and large, this species of moths is dependent upon a plant called Ragwort, *Scenecio jacobaea*. The moths lay their eggs in large batches and their yellow and black caterpillars feed upon the leaves of the Ragwort. Cinnabar caterpillars also feed upon Groundsel but because these plants are so much smaller than Ragwort they don't really provide a suitable food source to sustain

this species; this species is almost totally dependent upon Ragwort for its survival.

Unfortunately, Ragwort is not a popular plant. It contains toxins that are poisonous to cattle and other grazing animals, and as such, it is an injurious weed. It appears in the 1959 Weed Act and the Ragwort Control Act of 2003, however, it is not compulsory for landowners to remove and destroy Ragwort by law. So, landowners do not have to destroy Ragwort growing on their land. Like many weeds that are unpopular with a majority of the human species, this plant often receives a bad press, but this does not mean that this plant is without a place within ecosystems or within urban green spaces. It is very much a part of the wonders of the natural world, and, the Cinnabar moth is not the only invertebrate to feed on it. To learn more about the ecology of ragwort see <http://www.ragwortfacts.com/> and <http://www.swanseafoe.org.uk/ragwort-and-the-cinnabar-moth.html>. There are also scientific papers published on the ecology of Cinnabar Moths, for example, "The population ecology of the Cinnabar Moth, *Tyria jacobaeae* L. (Lepidoptera, Arctiidae)" by J. P. Dempster.



Cinnabar caterpillars on Ragwort. Image from:
http://www.newforestpics.co.uk/photo_7705696.html

It was time to move onto the next activity: insect collecting. The children were given sweep nets and butterfly nets, and a demonstration on how to use a sweep net before they went off into the grass: sweeping and gathering insects. Their finds were potted with help from the students. Insects firmly contained, the children were given lenses to take a closer look. It soon became apparent that different children had different preferences. One little boy was *mad keen* on spiders, and the little girl who started the afternoon being frightened of insects, became particularly keen on bumblebees. The Cherry tree triangle lawn has a lot of White Clover patches. White Clover, *Trifolium repens*, is a high source of nectar for bumblebees and honeybees, so it was not a surprise to see many bees buzzing from flower to flower.



Red tailed bumblebee, *Bombus lapidarius* on white clover, *Trifolium repens*.

What did surprise us was seeing and catching bumblebees with elongated and pointed white back ends. Again, this was another first for me; I had never seen bumblebees before that had such long, white, pointed abdomens, much longer than that of a Garden Bumblebee, *Bombus hortorum*.



Garden Bumblebee. Image from: <http://www.dgerc.org.uk/?q=BiG/Bumble>

Bumblebee species identified included: Red tailed bumblebee, *Bombus lapidarius*; Whitetail bumblebee, *Bombus lucorum*; Buff tailed bumblebee, *Bombus terrestris*; and Garden bumblebee, *Bombus hortorum*. The bumblebees were released almost immediately. We told the children that bumblebees are a very important species and without bees, or other pollinators, flowers wouldn't be naturally pollinated, and without pollination there would be no fruit, vegetables, wheat (to make bread), or even cloths made from natural fibres like cotton.



Sketch of White tailed bumblebee.

From sweeping the grass it was time to move onto insects that live in trees. One of the students volunteered to climb a Cherry tree and shake its boughs to release a shower of insect life. The children held a white sheet, outstretched, under the Cherry tree. The boughs were shaken and little black bits fell onto the sheet; quite an unspectacular catch: nothing had legs. Perhaps Cherry trees aren't the greatest harbourers of insect life. The children, the sheet, and the students moved to another tree, a Rowan (*Sorbus* sp.) on a mown lawn. The branches were shaken and more than specks of black detritus landed on the sheet: shield bugs, a gall wasp, unidentified larvae, and bright green insects that we were also unable to identify. With all the activity going on, today was not a day about identification: it was a day of investigation and experiencing.

From bugs we moved onto a game called 'nature slides', led by the Dr of Env. Sc. The idea for this game harps back to the times when photographs were

taken on slide film and images were projected onto a wall using a slide projector. Each child was given a white card frame and asked to go and collect a piece of vegetation to put inside the frame. Once more they hunted amongst the grasses and each child picked a leaf, or a blade of grass, or part of a flowering plant, and placed it in their cardboard slide. They then stood around in a circle and held their slides up to the sky so that the light shone through them. They were asked to look carefully at their slide; what could they see? Would they be able to recognise their own slide again? They were then asked to pass their slide onto the person standing next to them. With the new slide in their hands, they held it up to the sky and looked. Light shining through a leaf makes visible all the veins and any little dots or holes that insects may have made. It also changes the colour of the leaves: they become iridescent and radiant. This game slows down the pace of activity; it is about looking at nature in a different way.



Leaf by Joanie Cahill. Image from:
http://www.firstscience.com/home/photos/leaf_35.html

The slides were passed from one child to the next; time was taken to look at each one carefully. When they recognised their own slide they were asked to put their hand in the air: all eight hands went into the air at the same time.

The final game of the day was about reflection, what had they seen, what had they experienced, what was the best thing they saw, what was the best part of

their day, and what did they like the least. Large sheets of paper were taped to the Cherry trees, the trees becoming easels: 'treasles'. Their reflections were captured in drawings. They drew bugs, flowers, bumblebees, and spiders, as well as each other. Whilst drawing, two of the boys noticed a red spider mite crawling up the Cherry tree. They wanted to see the spider mite in greater detail so were given a lens. Magnified (x 10) they were able to see the tiny face of the spider mite and their response was: *ohhh, isn't he cute*.



Red spider mite, *Tetranychus urticae*: less than a millimetre long. Image from: Wes Digital's photostream.

<http://www.flickr.com/photos/wesdigital/1385280691/>

What was interesting about this is that spider mites are absolutely tiny, smaller than the head of a pin, and, the bark of a Cherry tree is rough and deep red in colour. Ordinarily you might not expect a child of ten to notice such a tiny creature crawling up such a rough surface but, after their day of honing in on the details in nature, these two boys were able to spot the spider mite in instance. One of these boys then asked me if he could take a spider home with him because he wanted a pet. I asked him if he lived in a house with a garden. He said he did. I asked him what was in his garden, he replied: *a dog*. I asked him what else was in the garden and he said: *nothing*. So I then asked him what was on the ground and he replied: *concrete*. *No pots with flowers in? No, just the dog*. I told him that if he looked really hard in his garden and on the garden fence he might find spiders already living there and that it might be best

if he adopts, as a pet, a spider already living in his garden: *If you look the right way you can see the whole world is a garden* (*The Secret Garden* by Frances Hodgson Burnett).

Just as they were finishing their 'treasure' drawings the heavens opened. The children and their teachers (who, incidentally, had also learnt a lot investigating the lawn) took refuge from the rain in University House. When the rain subsided it was time for them to head back to their school, but not before they were taken to see the Bee orchids. Before the activities with the children began I had gone to the library lawn and placed a low fencing around the two orchids,



I noticed a third. This third orchid, not yet in bloom, but in bud, also had a little fence put around it. The fences were put around the orchids because I wanted them to be clearly seen as well as not accidentally stood on. Not that the children would have stepped on the orchids because at that stage in the day their awareness of the world around them was heightened, but I couldn't help but remember how close one of the orchids came to being squashed last week when I showed them to the art students. The children were very excited to see a Bee Orchid - apart from one child who was from Poland; she told us that where she used to live (in Poland) there were lots of Bee Orchids, so the sight

of a bee orchid was not new to her. Like the art students of the previous week, the children were just as excited to see *Prunella vulgaris*.

As the children were about to leave the teachers said that they would be doing more work on nature, and in particular, they wanted to find out more about bumblebees. The children gave little yelps of excitement when they heard this. After they had gone, and the university grounds returned to normal, by which I mean an adult demographic, I decided to spend some more time on the Cherry tree triangle lawn, to take some photographs, to draw, and to try to identify some of the insects. But it began to rain again: heavily. In the distance I could see the Hilton tower, but before long the tower disappeared in the low clouds and the rain. It was time to pack up the art-cart and call it a day.

When I returned home, I downloaded the pictures I had taken during the day. Frustratingly, the memory card was corrupted and I was only able to retrieve the first six shots of the day. Consequently, the photographs illustrating this diary account are a mix of past and archived photographs I have taken and images taken from the Internet.

A2-iv. 1 summer, 1 season, 1 lifetime for some 15 September 2011

| Case Study 2b: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds | | | |
|--|--------------|------------------------------|-------------------------|
| PART 2: <i>Grass is not Green: what lies in lawns</i>, University of Salford | | | |
| WHEN | WHAT | WHERE | WEATHER |
| 15 th September 2011 | Welcome Week | Cheery tree triangle lawn | Sunny and rather hot |

1 summer, 1 season, 1 lifetime for some.



The last time I wandered through the long grasses of Cherry tree triangle lawn was on the 7th of June: just over three months ago.

Three months - the summer break - is a lifetime spent for much of the flora and critters of this place; and that is noticeable. The lawn is no longer adorned with the blues, yellows, and purples of wildflowers. The flowers have died back, their function complete. What greets the eyes now are of hues of deep green, rusty brown, and fawn: the colours of autumn are encroaching.



Amid the grass, crunchy Selfheals (*Prunella vulgaris*), their seeds ready to spill, and crunchy Plantains (*Plantago lanceolata*), their seeds all but popped out.



Clover (*Trifolium pratense*), no longer pink and perky, is brown; some already dusted with silvery mould: the decomposition side of nature kicking in. Mould is a fungus – micro-fungi - with a significant role in the cycle of life. It can't produce it's own food like a vascular plant does: it's a heterotroph feeding off organic matter such as dying flowers. To 'eat', mould secretes exoenzymes that break down organic matter into simple compounds that can then be absorbed. Through this process mould plays a vital role in the ecosystem: building humus and returning nutrients back into the soil, creating and

maintaining the all- important supporting ecosystem service.

The butterflies, ladybirds, and bumble bees are no-where to be seen; even though the sun is hot on this fine September day the nights are cold forcing many bugs and insects into a state of winter shutdown - but not so for all. This is the time of year when Crane flies, commonly known as Daddy-long-legs, come to the fore; a familiar insect of the autumn lawn, attaching themselves to grasses with their spindly legs.



Crane flies, *Tipula* sp.

And wasps appear more prevalent; perhaps because they are more aggressive than at other times of the year. During the summer months wasps are considered a gardener's friend, eating aphids and caterpillars, and by-and-large they leave humans alone; but come autumn, as their food supply dies out, they become hungry, desperate, and sting happy. This is their last stab at survival – sadly doomed to fail because all but the queens will die.



Black and yellow wasp, *Vespula germanica*

As I am savouring the change in the season as experienced on this small triangle of lawn, music is blaring through the air. This is Welcome Week and the University is welcoming its new intake of students. A DJ, with all his DJ-ing in paraphernalia, is set up on the adjacent lawn next to a semi-permanent marquee structure. Lively pop tunes playing at loud volume give the campus a disco feel and I find myself inadvertently shaking my hips in time to the rhythm of the beat. It feels less like a bastion of knowledge and more like a hip place to be; a combination of the two can't be bad.

Entranced by the nature of the lawn and the music, I'm suddenly drawn back to the social world: *Are you the lady doing the messy grass? Can I make a comment?* A student, who had recently submitted her PhD. in housing, innovation and regeneration, wanted to tell me how much she loves this lawn. She first noticed library lawn in the spring and wondered why it hadn't been mown; then she noticed Cherry tree triangle lawn, soon followed by the wildflower area at the north end of the campus (near to the Myers building). When she realized it was an intervention she began following the project via its online presence: these diaries. We chatted for a while about nature on the

campus and being a student on the campus. She is never quite sure if she's allowed to walk on the grass, but she does because she feels as a student paying fees she has a right to access and roam the campus. It was her roaming of the campus lawns that led her to the planted wildflower garden area, which she described to me as being the most natural of the three lawns that had been left to grow. She was quite surprised when I told her that the wildflower area was the least natural; it was planted - seeds selected were sown by the gardeners in order to create a wild flower garden. Whether planted or simply left to grow she appreciated all three areas and was glad of their existence. It was whilst talking about whether or not walking on the lawns is permitted that I noticed a desire line through Cherry tree lawn; could this be the desire route of one man in particular? In June's diary I wrote:

One man came up to me and described himself as a 'nature man' [...] Since the grass in this area has been left to grow he's deviated from the tarmac path to wander through the ever-growing grasses and wildflowers. His new path runs parallel with the tarmac one, some 280 cm behind the Cherry trees. This green diversion is now part of his daily routine through the campus.

The description fits. Furthermore, the desire line appears to curve and does not follow through onto the adjacent grass and towards the entrance of the Myers building, which would be what one might expect if this desire line was being used as a shortcut route from the tarmac path to a specific destination point. If this is a pathway made by one man's repeated journeying through the flora, just for the experience of the nature, then it is indeed a line created by emotional desire, as opposed to a desire to be quicker: a short-cut route.



| | |
|-------------------------|---|
| Date 15.09.11 | Time 15:33 |
| Location Δ grass | Inquiry Desire line through Δ grass KMM 2011 |

Map showing trajectory of the desire line.

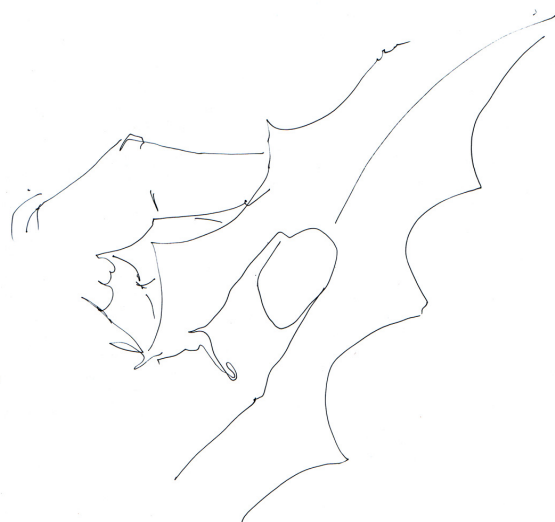
The lady I was talking to stepped onto the desire line. Before she trod its path she asked if I'd read the short story, written by a student, about life in the lawn. I have. Nicky Bassnett was the winner of a creative writing competition to describe feelings provoked by *what lies in lawns*. She wrote an enchanting tale from the perspective of – well, if I say I'll be giving too much away. It's well worth a read.

http://www.estates.salford.ac.uk/page/Creative_Writing_Winner

Others have read the tale too; one woman was apprehensive about stepping into the grass for a chat and wanted reassuring that nothing nasty would slip over her shoes. But creative writing is creative writing and not necessarily fact.

As conversations commenced, practical investigations ceased. More than two hours were spent in dialogue and, for much of that time, one student remained engaged and we touched upon many issues. Our conversation began by her telling me that this long grass makes her feel closer to nature: it stirs within her a desire to lay in the grass, soak in its fresh scent, and let the insects crawl about her; a desire that she wasn't about to enact. Poignant to much of what we talked about was the fact that she and I don't share the same cultural background: she is an overseas student from China and I am British. In China they have a saying: *one flower is a whole world*; so *what lies in lawns* has a cultural resonance for her. However, she is saddened by the way in which developed nations across the world are becoming disconnected from nature. She fears that too much time is spent sat inside in front of computer screens and worries that people, particularly the next generation, will abandon physical connections with nature. We spoke about how much can be learned from a computer these days, but nothing is like the real-world experience: fresh air in your lungs, uneven ground beneath your feet, and wind on your face. Moreover, computers don't give us access to smell. We might be able to learn about fruit, how it grows, how it is harvested, and how it finds its way to our table, but that is in no way comparable to precariously stretching to pick a ripe apple and experiencing its fragrance as you bite into it. We are quite literally at risk of losing our senses. Furthermore, she is perplexed by the way in which humans try to control everything. Nature is a formidable force and we should strive to connect with it and work with it instead of constantly trying to control it

and modify it for the short-sighted gain of just one species. She spent the last three years studying international politics at the University of Salford, and yet, her solution to the problem she perceives lays not in political directives but individual attitudes: believing that if each person changed their attitude towards nature we could work out a way to live our lives with technologies as well as with nature. Our conversation weaved between global and local environmental issues. She worries about the food she eats in China, considering it to be polluted through chemical fertilisation, pesticides, herbicides, and air pollution produced by industry. The first thing she notices when she arrives in Salford, from the city where she lives in China, is the fresh air. Hard for me to grasp is the notion that the air in Salford smells good; when I travel home from Salford, the first thing I notice is how fresh air smells in Todmorden. As well as more access to nature she would like to know where her food comes from and the conditions it's been grown under. I walked her to a dandelion and asked if she knew the plant. She recognised the dandelion clock, but it was the first time she'd looked closely at a dandelion leaf. She was surprised when I told her it was edible. I picked a couple of leaves for us to taste and explained, before she bit into it, that it has a bitter taste, but it was a flavour that agreed with her taste buds.



| | | | |
|----------|----------|----------|-----------------|
| Date | 15 09 11 | Time | |
| Location | Δ grass | Inquiry | dandelion taste |
| | | KMM 2011 | |

It is easy to overlook the fact that people from another cultural background will not have learnt about the different properties and lore of British flora – this was

her first introduction to British wild food foraging, as well as children's games and fables associated with dandelions. With over four-hundred students from China alone, the University of Salford's campus, along with Peel Park, could provide a rich resource for introducing overseas students to the properties and lore of British flora, as well as insects, birds, and mammals which, in turn, could increase access to, and enjoyment of, the surrounding countryside. Good food, clean air, and access to nature are critical to good health and human well-being; they are fundamental human needs.

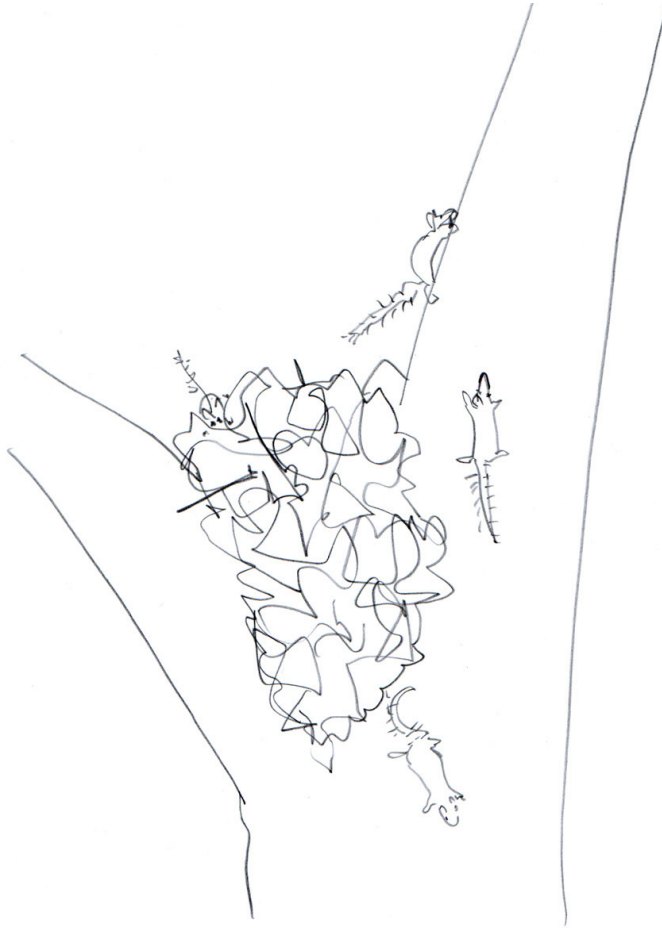
Throughout our two-hour talk, others came, joined in, and went, including two new Student Union vice presidents eager to get people involved in politics, debates, student groups and initiatives. They mentioned that has a student has initiated - and is in the process setting up - a green collective:

<http://www.salfordstudents.com/green>. Anyone interested in getting involved in tackling environmental issues should contact: vpsee-ussu@salford.ac.uk, tel: 0161 351 5400.

At five o'clock the campus fell quiet of music. The DJ packed up. New students continued to wander back and forth. I was alone on the grass, but not for long enough to settle into some sketching. Just as I was poised to put pencil to paper two young lads sauntered across the grass towards me. They were not new students, in fact, it turned out that they were excluded pupils excluded from a local secondary school. Bored, with time on their hands and days to fill, they had decided to seek some sort of entertainment at the University. The first thing they asked me was: *where's the Museum?* I told them where it was and said that it would most likely be closed by now. *Is there anything else going on around here? What are you doing?* I told them I was an artist and I was letting this lawn grow as part of an art and environment project. They became fascinated and wanted to see my drawings. Unfortunately, I didn't have any to show them as I had spent all my day talking and had not had time to do any sketching. They asked me to draw something for them. One said: *can you draw hands? I can't draw hands. Whenever I draw a hand it looks like club. Can you draw a hand for me?* I'd been put on the spot. Not wanting to let them down I obliged, drawing my hand holding a dandelion leaf and then handed the pen to

the young man (both were 13 years old). He drew a hand and as soon as it was done he started laughing: *you see? It looks like a club doesn't it. We can't draw, but we really like art. Do you know what manga art is?* I didn't, so they told me what it was: Japanese cartoon illustration. I asked them if they'd heard of Zen art; they hadn't, so I told them a little bit about Zen. They listened intently: intrigued by the notion of simple lines that capture the essence of object and spirituality. It was getting late. They wanted to know when I would be on campus next. I told them and asked them if they wanted to come back to do some drawings as well as investigate the lawn. They said they would like that. I have no idea why these boys have been excluded from school. My first impression of them was that they were interested young people. For whatever reasons they are misfits within our educational system. As individuals that don't fit in, and are most likely non-compliant, they've been cast adrift and left to wonder the streets of Salford seeking entertainment where they can. Of course this won't be the official line, but here they were, and my encounter with them, although very cheerful, saddened me.

I packed up my art-cart and trundled across to the Northern car park. As I loaded the art-cart into my van I noticed a squirrel nest – a drey - in one of the Poplar trees that line the car park. The young grey squirrels, rat like, their tails not yet bushy, scurried and play together up and down the trunk of the tree and in about their nest.



Date 15 09 11
Location northern ar park

Time 6 ish
Inquiry squirrels

KMM 2011

**Appendix 3. Peoples comments about the overgrown lawn,
Case Study 2a: Investigating Perceptions of Unmanaged Nature and CES
Goods Connected to Weeds; Nerotal Park, Wiesbaden, Germany, August
2010.**

Table A-1: People's comments expressing an appreciation of the overgrown lawn. Translated from German to English by Helmut Lemke.

| | |
|-----------|--|
| 1 | The beautiful Natural meadow should stay (educational) that is nature! |
| 2 | This meadow should grow in the next years, too. The only good 'Art project' in this otherwise nature destroying 'Exhibition'. Signed, Nadia (<i>other side</i>) Was it part of the 'Art Project' to cut trees? |
| 3 | Don't cut [with little drawings of flowers]. |
| 4 | Please cut once a year, so the flower meadow stays. Signed, Martina S. |
| 5 | Please leave this meadow for the future. Signed, R. Wenner |
| 6 | Please leave this meadow in its original state (naturalness) next year, too. |
| 7 | Do not cut, under any circumstances! |
| 8 | I think this idea is very good. I got the idea (from this) to go on biological excursions, by myself, to do drawings with notations. To precisely identify samples I will use books. Signed Markus D. |
| 9 | Cut 50%, leave 50% |
| 10 | Do not cut, under no circumstances. Signed, M J & bless you. |
| 11 | Of course leave it naturally – cutting happens everywhere in Germany. |
| 12 | There is no question: do not cut! Of course, don't cut. |
| 13 | [Written in English] Great idea! You only pay attention to the weed if next is a cared for meadow. |
| 14 | Let everything grow and sprout. Signed, Christiane, 20.08.2010 |
| 15 | Don't cut. |
| 16 | Approx 20 – 30% should be left to nature. The rest should be cut for those who cherish the sun (sunbathers). All the best from the sun worshipers. |
| 17 | I am also in favour that this spot of nature in Wiesbaden stays wild and free. |

| | |
|-----------|--|
| 18 | [In English] Please do not destroy this masterpiece. Thank you Signed, LPS. |
| 19 | Yes, can it stay because nature is also for humans Signed, R. Kaiser. |
| 20 | This meadow and many more in Wiesbaden! Do not cover everything with buildings, do not remove everything, also with these 'flamethrowers'! |
| 21 | Do not cut, under no circumstance – next spring we can get dandelions from here for our little rabbit. Signed, Sascha & Luna. |
| 22 | Do not cut, small animals are happy!! & me too! Signed, Th. Sch. |
| 23 | Since in spring the first plants started to bloom I followed the development of the meadow. I would like to know if the meadow will have further 'inhabitants' next year. |
| 24 | Do not cut, under no circumstances. |
| 25 | ... bit more nature in the big city – insects, too, need a home! Therefore: do not cut! |
| 26 | Please do not cut! There is such a variety of plants and animals, that can develop here. It should grow verrrry high! Signed, Cleo, aged 6. |
| 27 | Don't cut, but more colour, I like meadow flowers. |
| 28 | Do not cut, under no circumstance. What is more beautiful than untamed 'wilderness'? |
| 29 | I am enthusiastic. Such a beautiful meadows exists only here. |
| 30 | Nice, sensitive activity here – congratulation! Please do not cut. |
| 31 | Under no circumstances, many animals can find space to live. |
| 32 | This part of the Park should stay, as naturally growing as it is, because the children can learn much about different plants and animals here. |
| 33 | When cutting my Bonsai Meadows I always ask myself: to cut or not to cut. Cut – that's the question! |
| 34 | This Meadow please do not cut, but cut the others! = Nice changes! |
| 35 | I would very much appreciate it if in the next year plant identification course for children would be organised here. Signed, Lisa Wagner, 'learning support clinic' training for listening'. |
| 36 | Save the meadow! & Grow with it.... Signed, Peter A. |
| 37 | We think the meadow should stay as it is and thus the Park gets a bit 'wilder'. |
| 38 | Under no circumstances cut the meadow. |
| 39 | Do not cut. When all beautiful meadows are cut, soon there will be no little insects any more. Please Don't!!!! |
| 40 | Do not cut, wild, that is sooo beautiful – for animals, too. |
| 41 | I'd like the Wild Meadows forever!!! Signed, Ricarda Peters. |

| | |
|-----------|---|
| 42 | Let spiders speak...! We were fascinated by the wasp spider – an exciting discovery in front of our door in the middle of the city. The Nero Valley – a wilderness – a great idea that sensitizes for the wonders of nature! |
| 43 | Let it grow! |
| 44 | Please do not cut. The Diversity of Nature becomes visible here. |
| 45 | This <i>genuine</i> meadow should stay. |
| 46 | Nature is only nature if Nature is allowed to develop Signed, Beate. |
| 47 | Do not cut, under no circumstance! This much better than that grass that is cut short. |
| 48 | Yes – once a year in autumn. |

Case Study 2a: Investigating Perceptions of Unmanaged Nature and CES Goods Connected to Weeds; Nerotal Park, Wiesbaden, Germany, August 2010.

Table A-2: People's comments written onto bags and tags expressing a dislike of the overgrown lawn. Translated from German to English by Helmut Lemke.

| | |
|----------|---|
| 1 | Very inspiring and innovative - NOT |
| 2 | I want it cut. This is an artificial Park system, there are sufficient wild meadows! Signed, A.Z. |
| 3 | CUT!! |
| 4 | Yes, because it just looks a mess. |
| 5 | In any case: cut. |
| 6 | 100% cut. |

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