Landscape character and public perception: a participatory Historic Landscape Characterisation approach in Northumberland

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Abstract

The public perception of landscape character has been recognised and legitimised as a fundamental aspect of landscape policy and research through the European Landscape Convention (ELC). However, the practice of integrating the way communities perceive and value landscape in management decisions remains limited. The aim of this research is to gain a better understanding of how landscape and its historic character is perceived by people and to map and operationalise public perception to inform participatory Historic Landscape Characterisation (HLC). This study uses two qualitative approaches: map-based interviews and walking and talking interviews with local people in two Northumbrian case study areas, Heddon-on-the-Wall and the Wallington Estate, to develop insights into the factors influencing landscape perception. Having gathered and analysed the qualitative data, the findings were incorporated within a GIS designed to inform the HLC project of Northumberland.

Three main conclusions were reached as a result of the analysis and discussion of the research: (1) landscape perception must be understood as a dynamic synergy between four dimensions: personal, collective, space and time. (2) The unique combination of these dimensions mean that landscapes are interpreted differently by different people and mean that a landscape is perceived differently by the same individual at specific locations and at specific times. (3) To be included in characterisation processes and to include public perception in landscape management, people's views cannot be focussed individually but must be generalised in line with the philosophy and principles of HLC.

HLC databases form an ideal platform to integrate the multiplicity of views on landscapes and open them up for more focussed discussion during problem-oriented moments in the landscape management process.

Keywords: Landscape character, public perception, Historic Landscape Characterisation, participation

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Chapter 1:
INTRODUCTION

1 Introduction

1.1 Background to the Research

Every Wednesday afternoon when school was out, my grandfather used to take me into the woodland in the village where we both lived. While I could spend the rest of the afternoon in what I imagined to be the largest playground on the planet, he used the time to meet up with his friends who saw the woods as their communal garden. Together with my friends I built treehouses and bridges across small ditches or fed the ducks in the lake. When my Dad stopped by at the end of the afternoon, cycling back from work through the woods, I knew it was time to go home. For about 12 years of my life my Wednesday afternoons were filled with trees, mud and wet feet. Still today those woodlands mean the world to me and since my grandfather passed away at the beginning of my PhD studies perhaps those places beneath the trees matter even more. For other people those woods are just another ordinary area typical of that part of Flanders. However, for them other parts of the landscape such as the marketplace or the sports fields, might bring up similar associations or memories with special meanings. This small anecdote shows how different landscapes or parts of landscapes matter to different people and how every single person might bring different arguments to the table when discussing the future of landscapes and how to manage them. In the region of Flanders alone there are about 6.5 million inhabitants, so there is no table that is large enough to accommodate each person individually. The key question, therefore, is how can the multiplicity of views people project onto landscapes be included in a more participatory landscape management? When learning about the European Landscape Convention during my studies in Geography I realised that it might be possible to bring everybody to the table after all, if only we could find appropriate methods or approaches; particularly methods that make it possible to better understand what it is that influences the way we interpret landscapes while we are continuously interacting with the natural and cultural processes that create what we understand as landscape.

At the core of the European Landscape Convention (ELC), a treaty developed by the Council of Europe in 2000, is a definition of landscape:

'An area as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.

(CoE, 2000, Art.1-Definitions)

Although the terminology and the concept of landscape remain hotly debated, this working definition is now used by many policy makers, practitioners and academics. Because of its definition of landscape, the ELC has instigated change in the way landscapes are managed in Europe. It has inspired countries outside of Europe to think along similar lines. From a management that focussed on conserving the most spectacular and special areas within landscapes, the Council of Europe asked its member states to emphasise the multiplicity of views about landscapes, including ordinary landscapes, that their inhabitants have. The ELC indicates that landscapes are common goods and therefore multiple voices must be heard when it comes to their management. However, in research on and policies about landscape there is a significant gap between the acknowledgement of the importance of developing participatory approaches to underpin landscape planning and practice in everyday decisions on the future of landscapes. Still today, landscape planning and policy making on landscape is mostly a top-down process residing in the professional or academic domain.

Two key methods developed in Britain are closely linked to the ELC: Landscape Character Assessment (LCA) (Swanwick and Land Use Consultants, 2002; Swanwick; 2002) and Historic Landscape Characterisation (HLC) (Herring 1998; Clark et al., 2004; Turner, 2006) particularly interested me as methods that seemed to show a lot of potential to identify and effectively integrate the way different people interpret landscapes into landscape planning decisions. Both these characterisation approaches have co-existed in England for the last 25 years and were developed at a time landscape managers became increasingly aware that policies and practices on landscape only dealt with the most 'spectacular', 'special' or 'beautiful' parts of landscape. Landscape characterisation regards landscape as ubiquitous. In this respect it differs from conventional approaches used in the fields of archaeology, heritage or landscape architecture, which often focus on specific sites or (in the case of heritage) 'monuments'. While today both methods are often seen as means to implement the ELC requirements in Britain, they pre-date the ELC and have provided a source of inspiration during the development of the ELC's wider framework for landscape management over the past two decades. The notion of character used in different ways in LCA and HLC: In LCA character is used to reflect on the multi-faceted views on landscape and cultural impacts on natural processes. While in HLC, the notion is used to be able to confront the more conventional methods with their focus on the visual, within HLC character underlines the human agency and long-term change in landscapes where time depth and history is legible but not visible for us all (Swanwick and Fairclough, 2018). The parallel development of LCA and HLC as GIS-based characterisation approaches and having recognised their potential to create a better understating of landscape change led to the adoption

of landscape character as a concept in the European Landscape Convention (ELC). Since the introduction of the ELC, character-based approaches have become pivotal for landscape analysis and debate in both the fields of policy making and research in many European countries. Characterisation approaches developed in the UK have been the basis for the development of many similar approaches across Europe (Loupa Ramos and Pinto Correira, 2018; Nogué and Sala, 2018; Sarlöv-Herlin et al., 2018; Vervoort et al., 2021) and even outside of Europe (Atik and Karadeniz, 2018; Swaffield et al., 2018; Lee, 2018). Despite the use of the notion of character in both LCA and HLC the methods have their differences. For instance, HLC uses a GIS database to identify different areas whose character has been created by similar and legible historic processes. In doing so, the approach uses pre-defined and a limited number of landscape character types, so many separate blocks of historic character can be characterised as being of the same type. LCA on the other hand can also identify many blocks of landscape character areas in a GIS dataset but each is defined by mapping the combination of characteristics that makes it unique in comparison to all the others. Because of the difference in approach HLC tends be carried out on a more local scale whereas the blocks the character areas developed through LCA are usually rather large.

Another major difference is that LCA from the outset is an 'assessment' of landscape character, whereas HLC is focusses more on the characterisation *per se*. While LCA offers a judgement on the relative value of different character areas, HLC interprets how landscape character has emerged through time.

When the need is to bring people around the table, the factor of judgement is an interesting point of comparison. The outcomes of an HLC as such do not bring a judgement of the values of landscape character with them but rather a dataset that guides people through the discussion about those values in order to reach consensus. The issue here is that by the time the HLC dataset can be used in discussions about landscapes, most of the interpretations about landscape character have been done by a small team of experts. The focus of debate is therefore steered from the outset by the initial perception and interpretation of landscape of that expert team. But could this process be different? Could local people be involved earlier on in the process?

Another key theme the ELC emphasises is the importance of having multiple voices and meanings in the identification of the character of landscapes, the ELC ensured that the need for public involvement in landscape management has received greater attention (Prieur and Durousseau, 2006, Jones, 2007, Selman, 2010, Clemetsen et al., 2011, Jones and Stenseke,

2011). Including the public in landscape issues and challenges gives a voice to the people most affected by its changes and acknowledges their views on the future of their landscapes. (Butler, 2014). However, the role of public involvement in HLC projects still seems to cause a major issue. Swanwick and Fairclough (2018) admit that progress on the development of participatory methods in HLC lags far behind the expert-driven stages of the methodology. While studies have looked at the integration of participation in LCA and its failures or successes (Caspersen, 2009; Butler and Berglund, 2014; Tudor, 2014; Butler, 2016; Terkendli, 2021) the possibilities of integrating participatory elements in HLC on the other hand are heavily understudied (Turner, 2018). The lack of public involvement and inclusion of non-expert views within the HLC dataset themselves is a criticism that frequently appears in literature about the method (Williamson, 2007; Austin, 2007; Dalglish and Leslie, 2016). This criticism is mainly due to the inclusion of the consideration of participation. Including multiple voices in landscape management in one of the guiding principles of HLC:

'Characterisation is designed to be a spatial framework that can accommodate people's views, enabling collective and public perceptions of landscape to sit alongside more expert views'

(Historic England HLC webpage, visited 21/04/2019)

HLC's scale gives a lot of potential for the integration of public perception. As HLC characterises landscape at a scale that can be grasped and understood by the public itself, while LCA's scale tends to be larger than how the public perceives landscape according to Fairclough and Herring (2016). However, after more than two decades of development the approach is still failing to include interpretations of the landscape that lie beyond the knowledge of individual specialists who develop the spatial databases (Daglish and Leslie, 2016). All HLC projects carried out in the light of the National Programme to characterise England have been carried out using the perception of landscape of just one (or a small team of) expert(s). Recent attempts to include participation into HLC processes have however underestimated or overlooked the role HLC wants to fulfil in the planning process (Butler and Berglund, 2014; Dalglish and Leslie, 2016). Turner, 2018 sees HLC as a strategic tool that is developed before any threat or issues with or planned changes in landscape have appeared. He states that one of its main strengths is precisely to be used as a basis for debate and to reach consensus when those threats or issues do appear in the future. To date, there have been no studies carried out that operationalise local landscape perception to inform conventional HLC projects having that philosophy in mind.

The anecdote based on my own experience described at the beginning of this chapter provides a background to the question of how people's perception of landscape can be integrated within such HLC datasets in order to enrich the dataset and have a multiplicity of views included in the block of character types before the problem specific debates start. Is there a way to map and visualise how my perception of the woodland might be linked with that of others? Do other people perhaps perceive the character of the woodlands as 'special' as well but for different reasons? And if these differences are mapped, could we really be on the way to give everybody a seat at the table when it comes to debates about landscape? Could everybody feel their feelings and views are recognised in the debate about landscape and the final decisions made about landscape management?

This chapter provides an introduction to the key elements of the research as set out in this thesis, first the aims and objectives of the research are discussed, based on the identified shortcomings in current research. Then, a brief summary of the methodologies and research strategies used in this study is given followed by a brief interpretation of the definitions used for the key terms in this thesis. To conclude this chapter an overview is given of the thesis structure and content of each of the individual chapters.

1.2 Aims and objectives

In summary, there are three main shortcomings which are recognised in order to develop a participatory Historic Landscape Characterisation which this thesis will aim to address.

First, despite landscape being referred to as an integrating and inclusive concept that provides a common ground for diverse meanings and stakeholders to address shared challenges, the concept of landscape is still situated in a complex linguistic and academic context (Fry, 2001; Naveh, 2001; Tress et al., 2003; Butler and Berglund, 2014). While the reports on the significance of landscape for both physical and mental well-being of individuals and communities (Buijs et al., 2006; Bowler et al., 2010; Knez and Eliasson, 2017) and the importance of the participation in the debate about 'their' landscape by local stakeholders has been recognised (Council of Europe, 2000; Scott, 2011; Butler and Berglund, 2014). Still today most approaches and tools in landscape management are top-down and expert-led. Addressing this shortcoming in landscape analysis and management tools will allow the thesis to contribute to the further development of participatory and more democratic processes with enhanced

embedding of the multiple perceptions and different interpretations of landscape in decision making.

Secondly, the ELC emphasises the importance of perception of an area in the construction of landscape as well as physical characteristics. (Butler and Berglund, 2014). It therefore becomes important that 'perception' of landscape is clearly understood (Groening, 2007). In literature perception is recognised as a process that derives, organises and interprets information through all the human senses (Kaplan and Kaplan, 1978) and therefore both a physiological and psychological process (Ulrich, 1973). Today, studies on landscape perception and how landscape is perceived by people can be divided into two main areas: a bottom-up approach, that emphasizes perception being guided by the information stored in the world 'out there' (Gibson, 1966; 1979; Appleton, 1975), and a top-down approach, that focusses on the cognitive activities within the human brain, and which is based on experience and expectations (Purcell, 1987; Heft and Nasar; 2000). Both sets of ideas on landscape perception rely on empirical studies carried out through exposing participants to photographs or conducting interviews removed from the actual landscape under study (Ward Thompson, 2013). Far too often these approaches have focused solely on the visual senses and on preferences and aesthetics of landscape (Bell et al., 2004; Ward Thompson et al., 2004). Ward Thompson (2013) argues that more in-situ research could help the researcher to understand the immediate and multi-sensory factors of perception. This thesis therefore argues for more in-situ investigation of landscape perception and approaches that do not only study landscape perception to focus on what is preferred or aesthetically valued in landscapes but which take a more neutral stance and acknowledge the interpretation of landscape can be impacted both positively and negatively by experience and all the senses, not solely that of vision.

Thirdly and finally, the afore-mentioned shortcomings illustrate the need for research that combines both the multiplicity of views on landscape and in-situ investigation of the factors that cause the differences in those perceptions. While acknowledging that it is not impossible to integrate perceptions and interpretations of landscape and that HLC asks for direct engagements with landscape stakeholders (Turner, 2018), the only attempts that have been made to involve the public in characterisation in Britain have either left the ideas of the conventional HLC approach and became more problem-oriented (Dalglish and Leslie, 2016) or have been conducted in order to judge the characterisation done by the expert/(team) (Butler and Berglund, 2014; Scott, 2011). This research will address this failure to include information on the understanding of landscape from stakeholders. The thesis uses mapping and visualisation

of in-depth qualitative studies to provide maps on 'what matters to people in landscape' in order to add information to HLC. This attempt to include landscape perception in HLC should provide the start of a debate about landscape issues and challenges rather than a fixed and static map visualising the values of landscape. In doing so, the thesis aims to contribute to a wider practical and theoretical debate on the role of HLC in landscape management and planning.

The principal aims of this thesis are therefore:

- To develop a better understanding of people's perception and interpretation of landscape and landscape character.
- To map and operationalise people's perceptions of landscape to underpin Historic Landscape Characterisation

The project encompasses seven equally important research objectives related to the shortcoming and aims mentioned above:

- *OB 1: To deconstruct the concepts of landscape and character*
- *OB 2: To critically examine current ideas and theory on landscape perception and the human/landscape relationship.*
- *OB 3: To investigate if HLC is suited as a participatory tool for landscape management in order to investigate if the approach is suited to integrate multiple views on landscape.*
- *OB 4: To conduct participatory empirical research to gather data on how landscape is perceived*
- *OB 5: To code and analyse the qualitative and participatory data*
- *OB 6: To map and visualise in a GIS database the outcomes of the empirical study*
- *OB 7: To inform existing HLC projects about how character types are triggering people's perception of landscapes*

1.3 Summary of Methodology and Research Process

While explained more in depth in Chapter 5, this section provides an introductory overview of the methodology used in the thesis. In general terms, the research process provides a study about landscape transcending traditional humanities and social sciences approaches. The aim is to develop a framework both for understanding the different dimensions of landscape perception and for mapping and contextualising people's views on landscape to inform HLC

projects. It is the landscape itself that will be the medium through which this understanding of perception will be developed, in terms of what influences and constructs people's interpretation of landscape.

The thesis is a combination of empirical and secondary research, in line with suggestions made throughout the literature on how to treat research questions that deal with landscape and people's perception (Van Eetvelde & Antrop, 2004; Wagner & Gobster, 2007; Ward Thompson, 2013; Dossche et al., 2016). The result is a thesis encompassing a three-staged study: a literature review on the main concepts, a qualitative and participatory empirical investigation and a spatial analysis in GIS.

First, the literature review on the concepts of landscape, character and landscape perception conceptually develops these notions by exploring and discussing their uses, processes and modes of construction. This way an overarching framework is created to link the concepts together and to identify gaps in knowledge while linking them to the approach of Historic Landscape Characterisation, the main backdrop of this thesis.

Second, a set of approaches, running in parallel but targeting different groups of stakeholders, build on this theoretical knowledge to develop a new understanding of how landscape is perceived. Both walking and talking interviews and a map-based questionnaire are used to collect the empirical data for a thematic analysis on the dimensions of landscape perception in two case study areas, Heddon-on-the-Wall and the Wallington Estate (Northumberland, UK). The two case study areas are selected on the basis of having an HLC in place, offering only minor barriers to accessing participants, and the absence of any major changes to landscape in the near future. Following a further mapping and visualisation of the outcomes of the qualitative methods, the findings are used to inform and be compared with the interpretations of landscape made by the expert(team) that developed the HLC of Northumberland.

Finally, the findings and results of the empirical study described above are analysed and interpreted using thematic and spatial analyses. This is then discussed and evaluated within the intellectual framework constructed in the literature review.

1.4 Definitions

Definitions used by researchers often differ from discipline to discipline, making it important to give a brief summary of the adopted definitions of the key concepts of this study. This will not only clarify certain conceptual links within the thesis but will also establish positions that are taken within this research. While the literature review will give a more extended overview of the reasoning and theories behind these concepts, this introductory chapter is useful to clarify three terms that are particularly debated and contested in literature.

First, the term of landscape itself needs to be clarified as it means different things to different people and in different disciplines. It is often used as a synonym for a series of other words such as nature, countryside, scenery, place and environment (Fairclough et al., 2018). And because all these synonyms of landscape again have their own different meanings to some (Olwig, 2003; Lowenthal, 2005; Fairclough et al., 2018) the confusion about the notion of landscape is complete. This confusion makes it difficult to communicate about landscape between disciplines or to the public, since landscape can have yet other meanings in common language (Antonson, 2009; Soini, 2004; Sevenant and Antrop, 2009). When landscape was seen as a research subject for the first time within the traditional school of geography, landscape was treated as an object, a unit of land (Forman and Godron, 1986; Zonneveld, 1988). Gradually and especially because of the 'cultural turn' in geography, the study of landscape started focussing on the meaning and representation of landscape (Cosgrove, 1984; Cosgrove and Daniels, 1988). Studies on landscape changed towards studies of the set of values emerging from landscape (Wylie, 2007). Landscape turned into a relative, dynamic and holistic concept, based on subjectivity (Lowenthal, 2005). It was within this discourse that the main and commonly accepted definition of landscape in Europe was developed, the definition of the European Landscape Convention (ELC) as mentioned in the first section of this Introducing chapter:

'An area as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.

(CoE, 2000, Art.1-Definitions)

This definition is adopted within this thesis because of its reliance on perception as a building block in the construction of landscape and because of its representation of landscape as ubiquitous, present in all areas that show interaction between natural and human factors, which

is everywhere. A framework for landscape, to give this thesis a better theoretical foundation, is given in Chapter 2.

One of the aims of this thesis is to better understand how people interpret landscape character and therefore it is important to clearly define what is meant by character within this thesis. As a key concept in the ELC's definition of landscape, character is used to define the relationship between people and their natural environment (Council of Europe, 2000). However, this relationship has been conceptualised using many different terms such as genius loci (Hunt and Willis, 1988), spirit of place (Lawrence, 1991), sense of place (Manzo, 2003) and landscape identity (Stobbelaar and Pedroli, 2011). Chapter 2 gives an insight into why character is the main focus of this thesis and not any of its synonyms. In summary, within this thesis, character is seen as being more than the physical appearance and layout of landscape. It is more properly situated at the level of the collective experience of landscape, the experience that has grown from a collective understanding and use of the land.

Following the ELC's definition, the analysis of the character of landscape cannot be complete without fully understanding how landscape is perceived. In literature, landscape perception is found to be a synonym to sensing the landscape, the interpretation of those sensations and as a reference to the result of the interpretation process (Ward Thompson, 2013). Within this thesis, landscape perception is understood to be the combined process of sensing the landscape and interpreting those sensations to make sense of landscape as an individual. Because these interpretations are influenced by personal preferences and cognitive abilities, the perception of landscape is the conceptualisation of how landscape is part of people's identities.

1.5 Thesis Structure

This section will give a short summary of each of the chapters (excluding the Introduction) and link them with the aims and objectives (see section 1.2) of this thesis.

Chapter 2: Landscape and Character
This chapter sets the scene for this thesis and explores the theoretical foundation on which this thesis is based. The chapter reviews and synthesises existing work and literature on the concepts of landscape and character, the two key concepts of this research. The chapter explains how landscape is a concept with different meanings in both common language and academic literature. Borrowing the concept of character from the European Landscape Convention's

definition of landscape, the chapter concludes with how character is used to describe the human-landscape relationship in this research.

Chapter 3: Landscape Perception

Drawing on the definition and ideas on landscape and landscape character, this chapter conceptualises the notion of landscape perception. The chapter gives an insight in how landscape perception is theorised in literature and how including landscape perception in landscape management is not only a matter of studying the landscape itself but also the cognitive senses of humankind. The chapter develops a backdrop to this study in terms of what landscape perception is, how it was studied in the past and more importantly which gaps still exist in that knowledge today.

Chapter 4: Landscape character and Historic Landscape Characterisation

Having explored and discussed the key notions of landscape, character and perception, this chapter gives an insight in how landscape character is operationalised in characterisation approaches. The chapter highlights the similarities and differences between LCA and HLC, demonstrates why HLC has been chosen as the backdrop to this thesis and explores the main criticisms of HLC which this thesis aims to address, using the formulated theories on landscape perception and participation.

Chapter 5: Research Strategy and Methodology

This chapter defines the specific research methodology used to reach the main aims of this thesis. Linkages and gaps between theory and data requirements are explained and provide the framework for an integrated and multi-method research design. The chapter comprehensively details approaches of case study selection, participant recruitment, empirical procedures and techniques during the walks and talks and map-based questionnaire processes, besides discussing the way in which data analysis and interpretation was carried out.

Chapter 6: Thematic analysis: Understanding Landscape perception through walks and talks

In this first chapter on the results of this study, the data analysis of the participatory approaches used in this thesis is described. The findings are introduced using the codes and themes that emerged from the conducted thematic analysis on the qualitative interview and questionnaire data. The findings are arranged in such a way that they reflect the dimensions of landscape perception found during the empirical stages of the study, allowing to better contextualise and operationalise people's perception of landscape in the rest of the thesis.

Chapter 7: Underpinning HLC with the framework of landscape perception

In this chapter the understanding of landscape perception gained through the thematic analysis of the participatory data, is used to inform the HLC dataset of Northumberland. Having linked both interview and questionnaire data to their spatial locations, participants' perceptions of landscape are visualised on a map. These visualisations display what matters in the landscapes to the participants and can be linked to the dimensions of landscape perception developed in the previous chapter. The created spatial datasets are incorporated in a HLC whose polygons have landscape perception as a generalised attribute stored within them.

Chapter 8: Discussion

While the previous two chapters provide a preliminary reflection on the findings of both the thematic and spatial analyses, here these findings are the subject of a more in-depth discussion. First, the central themes which emerged are discussed against the thesis's literature review and intellectual backdrop. Then, the outcomes of the spatial analysis and the integration of people's views in HLC are evaluated through a comparison with other existing techniques and with the HLC's own expert-based interpretation.

Chapter 9: Conclusion

This chapter first summarises the thesis, provides an insight into the contribution to knowledge it makes, reviews its used approaches and gives recommendations on their use in other characterisation approaches. Finally, it explores the opportunities for further research on the topic of landscape perception and its integration within HLC.

1.6 Conclusion

This chapter has set out the foundations for this thesis. It has introduced both the research background and research aims, together with a justification for this study. In doing so, the intellectual context in which this research is situated has been established and summarized. Key definitions of the three main concepts used in this thesis – landscape, perception and character - have been presented and the research methodology has been briefly described. The next chapter proceeds with a more in-depth discussion of the main concepts and how they have been studied and theoretically discussed in literature.

Chapter 2:
CONCEPTUALISING LANDSCAPE AND (LANDSCAPE) CHARACTER

2 Conceptualising landscape and (landscape) character

2.1 Introduction

As in the most general terms this research can be described as a study of the human-landscape relations, located within the disciplines of landscape, character and perception and in the context of Historic Landscape characterisation (HLC) it is the aim of this Chapter to consider some of the literature concerning the familiar, yet complex and often confusing concepts of landscape and character. In addition, the concept of landscape perception is given more attention in a separate Chapter (Chapter 3) This review will pay particular attention to how the term landscape has been used to describe and understand what can be commonly called our surroundings and how 'Character' can be seen as a way to describe the human-landscape relation. Both concepts are often used in different meanings and because of their key role in this study an adequate analysis and understanding of both is one of the conditions to come to appropriate research strategy.

First landscape will be discussed as a word in common language and how it is used in different ways. The etymology of the word will then be used to develop a review on the way it has been used in research through time. Finally, the use of the concept of landscape in research is also reflected in the way it is used in policy at various different scales. Next, borrowing the term 'character' from the European Landscape Convention, the notion and uses to describe the human-environment relations are reviewed next to how character compares to concepts that are often seen as its synonyms. The chapter will explain the reasons for using character as a backdrop to this research. Finally, the chapter ends with a discussion on the reason why this study is concerned with landscape character and the human-landscape relationship and why the popular notion of landscape identity is not used within this study.

2.2 Landscape

2.2.1 The word landscape and its meanings

Wylie (2007, 1) starts his book on 'Landscape' by stating that "landscape is tension". This statement is perhaps the only one that describes the only agreement on 'Landscape' in literature. There are many different meanings for the term landscape. There are perhaps as many meanings as there are disciplines that study landscape, others might suggest there are as many meanings

of landscape as there are people in this world. This section will give an insight in the maze of these multiple meanings and come to a conceptualisation of landscape that will be used in the rest of this thesis.

'Landscape' as a word originates from Germanic languages, one of the oldest translations of landscape comes from the early nineth century Dutch word '*lantscap*'. '*lantscap*' or '*lantscep*' that refer to a region of land (Antrop, 2013). Antrop (2013) explains how 'land' is translated as a bordered territory and the suffix -scep is used to refer to the creation of land or reclamation of land. The same idea can be found in the German translation of landscape today: '*Landschaft*' where the suffix refers to '*schaffen*' = 'to make'. Janssen (2004) however, explains that the origins of the Dutch '*landschap*' (and potentially of its English translation) are found at a time in which people were much more relying on the common services the land provided. He states that already in the nineth century '*landschap*' referred to groups of people that are joining forces to decide on the territories they work or live in. These 'board of directors' of the lands are brining stakeholders together to debate how the land should be managed. However, by the time the word reached the English language in the sixteenth century, when the Dutch word 'lantscap' turns into the English landscape, it was borrowed from the Dutch to refer to 'a picture depicting the scenery on land'. Within that century the Dutch were using to word to talk about pictures made by Dutch artists about their destinations during their explorations of overseas countries (Muir 1999; Olwig, 1996). So already from its origin 'landscape', as a term is debated it seems, as literature suggest it used to refer both to a picture or painting of an area of the land, the creating or making of the land and to the community that decided on the land (Olwig, 2002; Tress and Tress, 2001).

Consequently, in common language the word 'landscape' can be interpreted in multiple different ways too (Antrop, 2013). Fairclough et al. (2018) suggest that in the British public mind today landscape is often used as a synonym for nature, countryside, scenery, place and environment. Also, experts are confronted with this interchanging of words when talking about 'urban landscapes' for example the reaction that is often received is that of surprise as landscape is often understood to be the opposite of cities and towns, it is the distant countryside, the rural places away from the urban. It makes clear how sensitive talking about landscape is or can be (Sevenant, 2010). It also shows that landscape how academics and researchers see it today (as this section will explain later on) is not necessarily the same as the public. Even the different definitions of landscape in the Merriam-Webster dictionary might only partially explain how the general public understands and uses the word 'landscape':

1 - *a picture representing a view of natural inland scenery*
- *the art of depicting such scenery*

2 - *the landforms of a region in the aggregate*
- *a portion of territory that can be viewed at one time from one place*
- *a particular area of activity*

3 - *obsolete: vista, prospect*

These definitions contain references to landscape perception, pictures and the art of making them, the view, a region and the transitive meaning of landscape such as 'the economical landscape'.

All this illustrates that language is playing an important role when trying the reach out to people about landscape. As far as possible local people should be approached in their own language and through their understanding of landscape (Antonson, 2009; Soini, 2004; Sevenant, 2010). Another difficulty added to this is that translating words from other languages (which will inevitably be the case in this research) makes similar seeming concepts sometimes misunderstood (Antrop, 2007).

2.2.2 How is landscape seen in science?

The confusion of the meaning of landscape does not stop at the borders of everyday language. Even between different scientific disciplines there is barely an agreement (Antrop, 2001). Over the course of about four decades the meaning of landscape in research has changed significantly. While it would lead too far away from the core ideas of this thesis to set out this history in detail, it is useful to tap into some of those semantic changes to help illustrating how landscape is understood within this study. While at the start of landscape research there was a focus on the objective description of the morphology of landscape from a positivists approach in geography, research on landscape has changed in the direction of humanistic approaches. Nowadays increased attention goes to 'mental landscapes' and these views complement the positivistic approach with more focus on meaning and values people add to landscape (Jones, 2003).

Within the positivist approaches in landscape research, landscapes are studied and understood as spatial unities, a tangible reality with defined borders (Antrop, 2000; Sevenant, 2010). Within literature, this spatial unity, formed the main subject of debate and discussion on landscape both

in the fields of landscape geography and landscape ecology (Forman and Godron, 1986; Zonneveld, 1988). The notion of landscape as a spatial unity was also the subject of the traditional school of regional geography that analysed and delineated regions based on the unique combination of landscape features that were the result of the physical landscape and of the society that lived within it (Johnston, 1986; Muir, 1999). At the start of the twentieth century this phenomenon was also established in France, who created its own tradition in regional geography by describing the distinctiveness of the countryside existing out of the so-called 'pays' (hence the French translation of landscape in paysage). Antrop (2000) sees Paul Vidal de la Blache as one of the main researchers that were carrying out this type of work in France. The cultural aspect of landscape, stepping away from the purely visual and delineation based on physical factors, was introduced in the USA by Carl Sauer (1925) (Wylie, 2007; Stephenson, 2008). Sauer's approach to landscape opened up new fields in landscape research: Jackson for example started looking at meanings, perceptions and symbols of landscape (Jackson, 1980; Wylie 2007). These new ideas exposed landscape research to subjectivity co-produced by the cultural turn in geography (Thompson et al., 2013). Landscapes were now studied as concepts that are internalised, landscapes are not just 'out there' anymore, landscape research now started focusing on meaning and representation (Cosgrove, 1984; Cosgrove and Daniels, 1988). From then onwards, landscapes were understood as a set of values and ideas about how society is organised and should be working (Muir, 1999; Wylie, 2007; Butler, 2016). This cultural turn also questioned the underlying meaning of landscape (Muir, 1999). In doing so, the landscape becomes a relative notion as it is now understood to be perceived from different perspectives by many observers each with their own background (Butler, 2014). At the beginning, perspectives were mainly based on the visual aspects of landscape as illustrated by Meinig's (1979) ten notions of landscape. These notions are all based on subjectivity, but this subjectivity is built on the visual landscape and does not recognise any other form of engagement (Butler, 2014). While an in-depth review on the literature on landscape perception is the subject of the next chapter (Chapter 3) of this thesis, it is important to note here that perception of landscape was dragged up in both human geography (Lowenthal 2005, Jackson, 1980) and phenomenological thinking (Relph, 1976; Tuan, 1974). Besides the visual and dwelling nature of landscapes, Cosgrove (1984) and Cosgrove and Daniels (1988) 'way of seeing landscape' starts to become the new thinking when it comes to landscape research. Schama (1995, pp. 6-7) adds to this that landscapes are 'a work of the mind' and its scenery is 'built up from the strata of memory as it is from layers of rock'. Landscape is not solely the tangible region or part of land as it was discussed earlier on, neither is it solely the world that can be seen but the landscape is a product of perception and interpretation. Which in turn gave space to the

development of new concepts such as ‘mindscapes’ (Jacobs, 2006) and the cognitive map (Tuan, 1975).

In many respects, still today landscape is understood as a distanced visuality of the concept and newer, alternative perspectives are underpinned by the visual (Butler, 2014). Different theoretical conceptualisations of landscape slowly turned the phrase ‘different ways of seeing’ into ‘different ways of understanding’. This has led to the argument of the pluralistic view of landscape as mentioned earlier. Several scholars have discussed landscape from a phenomenological point of view (Ingold, 2000; Wylie, 2002) Phenomenology addresses landscape as a mean through which people engage and are involved. Tuan (1974), Relph (1976) and Wylie (2002) in cultural geography, Ingold (2000) in anthropology and Tilley (2004) in archaeology have explored this idea from their own study backgrounds. Butler (2014, p.43) refers to Tilley to describe the phenomenological way of understanding as ‘the ties between the conscious and the physicality of the world from which meanings develop and people and things are intertwining’ (Tilley, 2004). So, what we experience is tied to human embodied perception, not solely the visual sense, but also the other senses and the mind (Urry, 2000). In this understanding, the landscape belongs to those who ‘dwell’ in it, landscape becomes more than the visual as every representation of landscape is founded on meaning and significance (Ingold, 2000; Tilley; 2004; Butler, 2014). This experiential understanding of landscape has been critiqued for having ‘too romantic’ views on the concept (Eiter, 2010). And further critiques have been formulated about the focus on the individual within these experiential views on landscape. The social, economic, historical and political dimensions that shape the individual seem to be excluded from these views (Thomas, 1993; DeLue & Elkins, 2008). Wylie (2013) however, argued that focussing on the individuality of landscape reveals wider implications that are embedded within the engagement itself. Landscape as a way of understanding, as experience seems to have its shortcomings.

Another key idea found in landscapes studies that must be discussed here is the holistic nature of landscape. Holism is a concept that is borrowed from psychology and the niche of Gestalt-psychologists which emerges in the 1920s in Germany (Ash, 1998). The most important idea behind this is that landscape is seen and understood as a Gestalt and can solely understood by underpinning that the whole is more than the sum of its parts. Each of the elements in landscape thus holds its significance solely because of its position and relationship to the surrounding elements (Antrop, 2000). The ‘*Totalcharakter*’ of landscape was first introduced by Von Humboldt (in Zonneveld, 1995) and similar notions of holism in landscape can be found in

Granö's (1929) '*Gesamteeindruck*'. The holistic idea later received renewed attention in landscape ecology and was developed by Troll (1939), added to by Zonneveld (1985; 1995), Naveh and Liebermann (1994), Naveh (1995, 2000, 2005) and Antrop (1997, 2000, 2005, 2007). This perspective on landscape, as a holistic concept, was used in landscape ecology by Naveh (2000) and helps us to understand why landscape should be approached and studied from a transdisciplinary point of view. Tress and Tress (2003), Tress et al. (2005) and Antrop and Rogge (2006) therefore stress that issues on landscape need to be faced by researchers and non-academic stakeholders such as inhabitants, managers, policy makers and administrators. Later on, in this thesis (Chapter 3) the Gestalt-theory will be used to further explain how human perception is determined by mostly unconscious principles.

2.2.3 How is landscape used in policy?

Today, as in research, landscape studies sit firmly integrated in policies on nature conservation, cultural heritage, agriculture and spatial planning (Jones, 2003). While this is reflected in the use of the concept in many of the sectors policy documents, where the same issue remains, the meaning of landscape varies across the policy domains. The use of landscape in policy is wide-spread and ever changing. Policy nowadays is interspersed with an extended legal arsenal of conventions, charters, laws both on a national, international and even local level. In general, it can be noted that seen the increased importance given to landscape this also is stimulating the discussion on the definition or meaning of landscape. The divide between the subjective and objective dimension of landscape seems to widen rather than be closed at the moment. Often these policy documents are aligned with theories risen in social theory, environmental disciplines or more humanistic approaches (Sevenant, 2010). Overall, there is a clear shift from giving direction and control towards facilitating and collaborating in landscape management. The often more traditional (and in some countries still conventional) top-down approaches are left behind to work towards more inclusive, participatory and democratic tools and methods. Within the overview given here focus will be given to policies that deal with the idea of landscape because of the focus of this thesis.

International context: UNESCO

The first international convention included in this review evidences the changes in ideas about landscapes illustrated in the previous sections. The World Heritage Convention (WHC) (or the convention concerning the protection of the world cultural and natural heritage) was adopted

by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in 1972. At present (2021) 194 nations are state parties to the convention. The convention aims at promoting cooperation between the nations to protect heritage around the world that is of an outstanding universal value (OUV) to humanity. Within the convention a definition of 'cultural landscapes' (which were not included in the convention till 1992) is given, at that time it became the first international legal instrument to recognise and protect 'landscapes' in this integrated way:

'the combined works of nature and man', being illustrative of the evolution of human sociey and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external'

(UNESCO World Heritage Convention, 1992)

The convention distinguishes three categories of cultural landscape: Clearly defined landscapes, that were designed and created intentionally by man, organically evolved landscape and associative cultural landscape. Furthermore, UNESCO takes pride in the fact that World Heritage sites or landscapes are belonging to all peoples of the world. In the idea of this study it is interesting to review how considerate this convention is with the multiplicity of views on landscape by people. And although UNESCO stresses the universal application of the designation of World Heritage, by stating that listed sites belong to all people, the process of listing of the sites is not taking into consideration the public's view. Still today sites and landscapes are nominated to be listed by nations only. The exclusion of the public opinion can be situated in the historic context of the convention. Public involvement in designation procedures was out of the question at that time, not only because experts thought there was no interest from people's side but also because of the matter of urgency involved in protection valued monuments in the decades after the Second World War, since then nomination procedures have hardly changed.

In 2003 UNESCO released a Convention for the Safeguarding of Intangible Cultural Heritage which puts more emphasis on people engagement (Turner, 2018), while this convention does not specifically refer to landscapes as such it shows a shift in UNESCO's mindset regarding heritage and thus, landscape. Later on, in 2011, UNESCO issued their 'Recommendations on the Historic Urban Landscape' (HUL). This recommendation, a more voluntary guidance compared to the WHC, can be understood as the next step towards a landscape approach in

UNESCO's policy documents. HUL does suggest that urban planners must make use of participatory approaches to reach consensus on future changes. HUL starts with the development of assessments of the urban character based on surveys integrating the natural, cultural and human heritage resources (Turner, 2018). And while HUL obviously advocates the landscape approach, its definition of landscape seems to be limited in city and town and does not suggest that landscape is ubiquitous and everywhere.

European Context: Council of Europe

Focussing on landscapes in a European context is not done through the European Union. The EU does not have a direct competence that relates to landscapes as such, focus here will be put on the Council of Europe's (CoE) conventions about matters related to landscapes (CoE, Florence, 2000) and cultural heritage (CoE, Faro, 2005). An important note must be made, to avoid any confusion, the United Kingdom is still a member of the Council of Europe even after Brexit. The UK withdrew of the European Union and the European Atomic Energy Community at the end of 31st of January 2020 and of the European Union Customs Union and European Single Market on the 31st of December 2020, but Brexit did not involve withdrawal from the Council of Europe.

The most relevant convention on landscape matter is the European Landscape Convention (ELC) (CoE, 2000). The convention has strongly boosted the status of landscape as a spatial policy issue (Selman, 2006). The United Kingdom, where most of the empirical work was undertaken that formed the base for the ELC, ratified the convention in 2007. The Convention must be seen against the aims of the Council of Europe to promote democracy and the protection of Human Rights (CoE, 2011). One important difference between the conventions of the EU and the conventions of the CoE is that the CoE ones do not represent law, Olwig (2007) refers to the ELC as 'reflecting the moral voice of Europe' (Butler, 2014). The ELC requires of its ratifying member states the recognition of landscape in their national (regional) laws and the implementation of the convention in line with their legal system and planning frameworks. The development of the ELC was inspired by the Dobríš Assessment (Stanners and Bourdeau, 1995) which reported on the condition of the European environment. An entire chapter of this report dealt with the degradation of European rural landscape and as such landscapes became a subject on the political agenda. Out of these concerns raised in the Dobríš Assessment, the ELC was founded in 2000 in Florence and came into effect in 2004 following the ratification by ten CoE member states. The scope in the convention is described as:

'This Convention applies to the entire territory of the Parties and covers natural, rural, urban, peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday landscape'

(CoE, 2000, Art.2-Scope)

This scope already sets the scene of the ELC and shows the difference in meaning of the term landscape in the ELC and the WHC. The ELC understands landscape as an inclusive concept and it includes all landscape, not just the outstanding or spectacular ones. The definition of landscape in the ELC is as follows:

'An area as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.

(CoE, 2000, Art.1-Definitions)

This makes landscape reliant on the perceptions of people who experience it (Butler, 2014). Landscape is seen as informed and created by those who live and experience it thus, all stakeholders are part of this process (Jones, 2007). Landscape becomes the all-inclusive surrounding of life, a holistic entity (Butler, 2014).

The values of the CoE are also further translated in the ELC, more specifically within the prescriptive measures to implement the Convention. Participation forms a key pillar of these measures the involvement of the public is recognised in Article 5c:

'Establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies...'

(CoE, 2000, Art.5c)

As explained before, the ELC is not prescriptive and therefore the convention does not specifically instruct members states on how to include the general public in landscape issues (Turner, 2018). The specific measures of the ELC also include awareness raising, identification and assessment. Especially identification and assessment are important to discuss within this study. Signatories are expected to:

'(i) to identify its own landscapes throughout its territory; (ii) to analyse their characteristics and the forces and pressures transforming them; (iii) to take note of changes'

(CoE, 2000, Art.6c.1a)

and to:

'assess the landscape thus identified, taking into account the particular values assigned to them by the interested parties and the population concerned'

(CoE, 2000, Art.6c.1b)

Both articles are in line here with the scope and the aims of the convention discussed earlier on. Both of these are procedures that take into account the involvement of the public and illustrate the inclusive basis of this convention. Two key terms of the ELC, perceiving (perception) and character will be discussed later on in this literature review (Chapter 3 and Section 2.3).

For the completeness of this work, it is worth mentioning the Faro Convention on the Value of Cultural Heritage to Society (CoE, 2005), commonly known as the Faro Convention. Its definition of cultural heritage is directly linked with the definition of landscape in the ELC:

'*cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time'*

(CoE, 2005, Art.2-Definitions)

Especially the last sentence of the definition shows how closely landscape and cultural heritage are related. Though both conventions heritage and landscape are understood to be ubiquitous and everywhere around us (Turner, 2018). It also becomes evident that heritage like landscape is temporal, they are both everchanging through processes that are constantly on-going. Both are also connected to both individual and collective experiences. It reflects the idea that landscape is open for debate and is contested at all times, as is heritage. This is an interesting thought process on which this thesis is partially based as the thesis does not want to develop a tool that tells 'the only truth', but a tool that can be used as a common ground to start the debate on landscape issues.

UK context

Within the UK landscape was never really seen as an integrating, inclusive and democratic concept at high level policy making. Government has always favoured the separate components of landscape at different times. Seeing however through the lenses of landscape, this is perhaps difficult to review. This is why a more in-depth analysis of how landscape is seen in English policy documents is discussed in the chapter on Landscape Characterisation (Chapter 4). This gives the opportunity to give a more focused overview on the policy in which those characterisation approaches were developed and could be used in planning today.

The above sections have looked at the concept of landscape of landscape in common language, research and a policy context in various different ways. Within the study the idea of landscape as defined within the European Landscape Convention (ELC) is used as a base. Landscape is seen as an everchanging and ubiquitous concept that can only exist through the perception of people. The notions of the action and interactions of natural and human factors, the focus on perception of people and the idea of landscape character are extremely relevant for this kind of research. This Chapter will continue by conceptualising character and what it means when used in combination with the concept of landscape.

2.3 Character

While the concept of character has been used in the UK for over 30 years (Swanwick & Fairclough, 2018), it was the European Landscape Convention's definition of landscape that put character of landscape firmly on the policy and research agendas of different countries (e.g. National Planning Policy Framework in the UK and the Catalan Landscape Act). Within its definition of landscape the ELC understands character as the concept that lies in the entangled actions and interactions between people and their natural environment (Council of Europe, 2000). And while character is used to define this relationship within this study too, the understanding of the relationship itself is part of a much longer tradition in social and environmental sciences such as geography, sociology, psychology, planning and architecture. The ELC's definition has not stopped numerous scholars and policy makers from those different fields addressing the human-nature relationship in various different ways. There is a need to look at conceptualisations such as genius loci (Hunt and Willis, 1988), spirit of place (Lawrence, 1991), and sense of place (Manzo, 2003) in order to fully comprehend the theoretical context of the term landscape character. Besides these conceptualisations other

authors have used concepts such as Topophilia (Tuan, 1974), place and placelessness (Relph, 1976), rootedness (Tuan, 1980), place attachment (Altman and Low, 1992), insideness (Kaltenborn, 1998) and place satisfaction (Stedman, 2002), when discussing similar aspects of human experience of our environment. These concepts are looked at from an angle to frame character and characterisation better. It would appear that in landscape planning and landscape policy documents 'sense of place', 'spirit of place', 'genius loci' or 'character' are often used as synonyms of each other and that they are interchangeable. This is however seen as untrue, as Norberg-Schulz (1980) already stated, the concepts must be understood as distinct of each other and operating at different scales (Jiven and Larkham, 2003), therefore a more in-depth review of all four of those concepts is needed.

2.3.1 Genius loci

Probably one of the oldest and most ancient ideas that describes the human-environment relationship is 'genius loci' which technically is the literal translation of 'spirit of place' in Latin. In Roman times the genius loci of a place is closely interlinked with beliefs and the sacred character of places. In their understanding places had inner spirits similar to the belief in human souls (Winterburn, 2008). However, literature suggest that this spiritual bond with the environment was broken during the Middle Ages (Bartelse, 2016). It was not until the Renaissance period when 'Genius Loci' appeared again in Italian garden architecture to describe the 'ultimate' connection between humankind and the landscape. An example can be found in the *Giardine Secreto* of the Villa Medici in Fiesole. The concept grew out of fashion during the Baroque period and re-appeared during the eighteenth century when the idea of genius loci is used again in landscape architectureal theory. During this century it becomes a guiding principle of the English Landscape School (Hunt and Willis, 1988) who develops a new vision on gardening and landscaping. During this period the notion of 'genius loci' is used to describe the landscape as a whole and not just individual places as was done in previous times. 'Genius loci' was regarded as an authentic experience of the land and the natural forms in the landscape (Bartelse, 2016). Norberg-Schulz (1980) makes the concept into the cornerstone of his architectural theory which adopts Heidegger's phenomenological approach. And states:

"the spaces where life occurs are places…A place is a space which has a distinct character. Since ancient times the genius loci, or spirit of place, has been recognized as the concrete reality man has to face and come to terms within his daily life. Architecture means to

visualize the genius loci and the task of the architect is to create meaningful places, whereby he helps man to dwell."

Norberg-Schulz (1980, p.5)

This shows that in (landscape) architecture 'genius loci' is seen as something that can be created and can be conserved for the future. Norberg-Schulz's (1980) work is based on the same Gestalt psychological theory as employed by Kevin Lynch (1960) but explores places on the ground of their meaning rather than their structure and identity (as can be found in Lynch (1960)). Norbert-Schulz (1980) described 'genius loci' as representing the sense people have of a place, understood as the sum of all physical as well as symbolic values in nature and the human environment. Within his description four levels can be recognised (Norbert-Schulz, 1980; Jiven and Larkham, 2003):

- *The topography of the earth's surface*
- *The cosmological light conditions and the sky as natural conditions*
- *Buildings*
- *Symbolic and existential meanings in the cultural landscape*

Nature for him is the basis for people's interpretation and it is only in relation to nature and physical features that places and objects are receiving a meaning. He discusses the way in which morphological connections are given physical expression in societies. Norberg-Schulz conceives of people's natural surroundings as a basis for orientation and identity (Norberg-Schulz, 1980; 1985).

Further on, Conzen and Whitehand (1981) understand 'genius loci' as a principle to be used in analysing and managing historic townscapes. Conzens' (1981) idea of 'genius loci' relates very closely with that of Lowenthal (1986) who suggested that 'genius loci' can be created and exists as both an individual and collective construct. They understand that 'genius loci' is the geographical variation in the composition of a town plan, building pattern or land and building utilisation. For Conzen (1969) the whole landscape can be understood as an 'objectivation of the spirit' of a society. This relates closely to Tuan (1977) who understands place as the embodiment of feelings, images and thoughts of those who live, work and engage with those spaces. Same for Walter (1998) who uses 'genius loci' in combination with the expressive intelligibility of places. He refers to the quality that can only be perceived in a holistic manner through the senses, memory, intellect and imagination one has with a place. Jakle (1987) contradicts this by arguing that 'genius loci' indicates the subjective nature of place which is best experienced and expressed by somebody that visits the place, a tourist. This however

conflicts with many of the earlier mentioned authors who see the perception of ‘genius loci’ directly linked with the familiarity with a place.

Today, the notion of ‘genius loci’ could thus be understood in various different ways. Larkham (1996) for example explains ‘genius loci’ as the characteristics of a place that are worthy to be conserved. In some explanations the ancient origins of the concept come to the fore. As according to Thompson (2003), humans need their mysteries and legends and he suggests that there might be more willingness to care for spiritual (enchanted) landscape, than the landscape we only value in an instrumental way. Thompson however states that, while ‘genius loci’ could be a useful term to define places, it is necessary to integrate a renewed meaning or clarification of the concept. In literature the way ‘genius loci’ needs to be assessed and preserved remains very vague and a complex matter (Winterburn, 2008). Thompson (2003) is followed by Iris Brook (2000) who also claimed there is a need to redefine the concept of ‘genius loci’ as there are too many meanings attached to it. She understands ‘genius loci’ to be similar to the concepts of ‘sense of place’ and ‘spirit of place’. Through time ‘genius loci’ thus moved from a concept with a spiritual dimension to one with more human components and with a practical utility in landscape planning, this move also brought this concept closer to the concepts of ‘spirit of place’ and ‘sense of place’. Which are discussed in the next sections.

2.3.2 Spirit of Place

In literature almost no direct definition of ‘spirit of place’ is given and while it is closely interlinked with the previously discussed notion of ‘genius loci’ (it is the translation of Genius Loci from Latin to English) the term seems to be more ambiguous in literature (Brook, 2000). While Brook (2000) already suggested there is confusion about the meaning of both concepts she seems doubt about the differences between both notions. She does however, state that ‘spirit of place’ describes a reality that is not based on a simple inventory of the features of a place, neither a description of the feelings about those features but has its own ‘legitimacy’ as a means to prevent homogenised designs and sees ‘spirit of place’ as the idea that is sometimes called ‘genius loci’ or ‘sense of place’ (and not vice versa). Brook (2000) lists so called shades of meaning of ‘spirit of Place’ ranging from the ancient ideas of a place as special to the more recent interpretations of the notion as local distinctiveness, authenticity, essence and coherent narrative.

Interestingly ‘genius loci’ seems to take on a larger part of literature than ‘spirit of place’ and is discussed many more times. However, ‘spirit of place’ was quite recently used in a declaration made by ICOMOS (2008) on preservation *Quebec Declaration on the Preservation of the Spirit of the Place.* ICOMOS (2008) sees ‘spirit of place’ as complex and multiform and suggests multidisciplinary research is needed in order to preserve ‘spirit of place’.

2.3.3 Sense of Place

Sense of place in literature is more often than ‘genius loci’ and ‘spirit of place’ understood as the human response to place, not solely the qualities of a place that arise from the place itself (Winterburn, 2008). Yet as Manzo (2003) found in a literature review on ‘sense of place’, the notion has been used as a synonym for ‘genius loci’, ‘spirit of place’ and ‘character’ and vice versa. To complicate things even further human-environment relations are also explained in literature through the notions of place attachment (Altman and Low, 1992), place dependence (Stokols and Shumaker, 1981) or place identity (Proshansky, 1978). Hunziker et al. (2007) and Jorgensen and Stedman (2001) understand ‘sense of place’ as a more general concept that contains place attachment, place dependence and place identity. Place attachment is then explained as the positive emotional bond that develops between individuals or a collective and their surroundings (Altman and Low, 1992; Korpela, 1989). Whereas place dependence refers to what extent a setting serves the achievement of a goal given the existing range of alternative situations (Jorgensen and Stedman 2001; Stokols and Schumaker, 1981). Finally, place identity represents those aspects of ‘self’ identity which involve and are repeated by landscape and its social and personal meanings as discussed earlier in this chapter (Buchecker 2005; Korpela 1989; Twigger-Ross and Uzzell 1996; Proshansky et al. 1983).

There is a large volume of studies on ‘sense of place’ published in the past decades. Relph’s (1976) study on ‘sense of place’ recommends using the notion as a tool for integration and take into account all aspects of the people-environment relationship. Others, such as Hummon (1992) state that this would make it too complicated to use and therefore differentiates between a cognitive dimension and an emotional dimension of ‘sense of place’. These two functional dimensions of the notion help people to understand the place and develop an external orientation (cognitive). This could offer information on the relationship one has with a place and enable an individual to build up an internal orientation. Graumann (1983) took this one step further by arguing that the cognitive dimension needed to be fulfilled before an emotional ‘sense of place’ could be developed. In the last decade, the cognitive dimension of ‘sense of place’ has been more or less neglected while the emotional dimension has become a main

subject in environmental psychology, anthropology and landscape studies in general. However, Manzo (2003) and Hunziker et al. (2007) state that not all aspects of 'sense of place' have been studied in equal amounts. Research on 'sense of place' often focuses on people's favourite places in residential areas. Informal meeting places (Oldenburg, 1989), symbols of collective belonging (Buchecker, 2005) or places used in childhood or during leisure activities (Korpela et al., 2001; Yamashita, 2002) seem to receive another significant role in 'sense of place' research. Risbeth and Powell (2012) discussed how belonging and place attachment are important people search for post migration. This as empirical evidence to Manzo (2003), Cooper (1995) and Relph (1976) who all stressed the importance of negative emotions in the notion of 'sense of place'. Buchecker (2005) suggests that a place might become 'too structured' this goes along with Tuan (1974) who states that 'sense of place' might also be a feeling of oppression. Manzo (2003) sees the lack of studies that research such 'negative' side of 'sense of place' as a shortcoming in research. Another shortcoming Manzo finds, is the relationship between people and groups or collectives in landscape and the relationships between groups. The concept of 'sense of place' is a complex matter and studied from different angles. The more specific concept of 'character' could therefore be better suited as a tool for understanding human environment relationships and be an inclusive concept in the sense that people – people relationship are taken into account at the same time. This concept is looked at in the next section.

2.3.4 Character

The three concepts discussed in the previous sections do not have the desired features to be used to reach the aim of this study it seems. Another concept to study human-environment relations is 'character' and while it is sometimes used to refer to the physical appearance of a place, it is also used as a synonym for 'genius loci', 'spirit of place' or 'sense of place'. 'Character' is not only referring to the physical state of a place or landscape it also refers to the way that physicality is perceived or experienced by people (Winterburn, 2010). Winterburn (2010) states that 'character' is not always mentioned directly but often disguised by used references to '-scapes' such as 'Townscapes' or 'Streetscapes'. Words that refer to the distinctiveness of places both in their physicality and the way people experience them compared to 'the other'-landscape. To proof this she uses a quote from Worskett's work on the Character of Towns (1969, 30-31) where he discusses 'Townscape' and 'character' as being synonyms.

"Whilst individual buildings contribute to the overall quality and character of a town, they cannot be considered the only constituent part of that character, nor necessarily the most important part. Visually most towns derive their identity and personality from the way in which individual buildings, both good and not so good, together create a general atmosphere and build up a recognisable local townscape- a distinct organisation of spaces and an arrangement of buildings which combines as a whole. Furthermore, the total image of a town (its relationship to the countryside, its underlying land form, its archaeological layout) may be so powerful that it merits conservation on that one count alone if the town's real identity is to be maintained. The town's size and the number of people who live in it will also be constituent parts of the character."

Worskett (1969, pp. 30-31)

Worksett seems to look at 'character' from a physical appearance point of view, however he adds to this understanding that: "the townscape is not only just a matter of bricks and mortar, is concerned with the atmosphere and personal experience too" (1969, p. 119).
Brooks (2000), who was discussed earlier on the subject of 'spirit of place', suggests that that notion also could be replaced by 'character', however she does not add any more explanation to this suggestion.

In general, literature suggests that 'character' is more than only the physical appearance of a place. This study therefore also sees 'character' to be operating on three levels. A first one can be found in the way Patterson and Williams (2005) see 'character' used at an operational level. It is used in many policy documents on environmental and heritage discourses. However, in most of these operationalisations the notion is not explicitly explained and remains a certain 'black box' of which it is assumed that the reader or user knows what 'character' means. A second level can be found in Pereira-Roders' (2007) explanation of 'character' which states that the notion is a cultural value (or a set of values) of a place and should be considered as any other cultural value when making planning or management decisions. And on a third level Dalglish and Leslie (2016) understand 'character' as the things that matter in a landscape, not only in the relationship between people and their environment but also between people themselves, the idea that 'character' is what brings people together in landscape. Besides these three levels it is important to understand there is perhaps a fourth more abstract level to be added too, the level that character is not necessarily understood by everyone as 'positive'. 'character' in general is understood to be debatable and only will be used to enable the discussion on places and landscapes.

2.4 Landscape character or 'Landscape identity'?

Over the last couple of years, literature on the human environment relationship in landscape research makes use of the concept of landscape identity a lot. It is therefore interesting to integrate this notion within the theoretical framework of this study to understand why this study will not make use of this concept as such but uses it constituent parts separately instead.

The concept of identity is used and mentioned in both academic literature and policy documents. One of the guiding policy documents on landscape policy in Europe, and previously mentioned in the conceptualisation of landscape in this chapter, the European Landscape Convention (ELC) includes 'identity' in already in its preamble:

"The landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity"

(Council of Europe (CoE), 2000, p.8)

Further on, the ELC asks the ratifying member states to recognize landscapes in law and to state them as an essential component of people's surroundings, and expression of the diversity of their shared cultural and natural heritage and a foundation of their identity (CoE, 2000). Besides the ELC, also the World Heritage Convention makes use of identity when it suggests that cultural landscapes are part of collective identities (UNESCO, 1972). While these policy documents agree that landscapes form a constituent part of people's identities, current studies are using the relationship between landscape and identity to define the relation between landscape and people (Ramos et al., 2016). Again, as with the earlier discussed notions of 'genius loci', 'spirit of place', 'sense of place' and 'character', the idea of landscape identity is widely used, yet it lacks clarity, it is open to interpretations. The concept of landscape identity is often used and referred to in landscape management or landscape research, but a clear definition of the concept is not available. Landscape identity has a different meaning when used in different disciplines and even different studies within one and the same discipline (Stobbelaar & Pedroli, 2011; Ramos et al., 2016; Dossche et al., 2016; Butler et al., 2017).

In general terms the use of landscape identity can roughly be divided in the two different meanings of landscape identity, which brings the idea very close to the earlier mentioned notions of human-environment relations. On the one hand, there is the tradition of studies where

people are ascribing identity to their environment, so called spatial identity (Van Zoest, 1994), landscape character (Antrop, 1998, Washer, 2005; Turner, 2006) or even just landscape identity (Antrop 2000, 2007). In this way landscape becomes seen as the identity of landscape in which spatial is not merely the visual aspects of landscape, but it is based on forms, patterns and elements, the features by which people recognise a landscape. On the other hand, there is the notion that landscape identity is the synonym for the sense of belonging to a certain place. The part of identities that people derive from a place or landscapes in a certain region is then called often referred to as place identity (Jorgensen & Stedman, 2001; Olwig, 2006; Proshansky et al., 1983) mentioned as a synonym of 'sense of place' earlier on or existential identity (Boerwinkel, 1994; Gualtieri, 1983; Van Mansvelt & Pedroli, 2003; Van Zoest, 1994). As with the earlier mentioned notions of human-environment relations it is important to look at the differentiation in use of the termlandscape and its link with identity more in depth as it focuses on how landscapes might also have an impact on the identity on the individuals themselves rather than solely seeing landscapes or places in different ways through the lenses of individual or collective identities. First it will be discussed how landscapes or places can be seen as part of people's identities by discussing the uses of place identity and landscape identity in these ideas. Then it will be argued how it could be interesting not to use landscape identity as a synonym for landscape character and use the two alleged constituent parts of landscape identity separate and clearly define them.

2.4.1 Landscape as part of identities or landscape character?

The relationship between people's emotional relationships have been explored, however there are various key concepts that emerge from that relationship, yet their interconnections are somewhat unclear. These concepts are the earlier discussed notion of 'sense of place' (Tuan, 1980; Hunziker et al., 2007; Jorgensen and Stedman, 2001), 'place attachment' (Altman & Low, 1992), 'Place dependence' (Stokols & Shumaker, 1981) and 'place identity' (Proshansky, 1978; Proshansky et al. 1983, Twigger-Ross & Uzzell, 1996). 'Place identity' and 'place attachment' are often the subject of studies in environmental psychology, but very few of them have given a clear theoretical explanation for the relationship between place and identity. Dixon and Durrheim (2000) tried offering an answer for this issue, they state that places are re-conceived and dynamic arenas that are both socially constituted of the social relations. According to various geographers and psychologists, questions of identity (who we are?) are unquestionably related to issues of location or environment (where we are?). Earlier mentions of place identity such as the one by Proshansky et al. (1983) defined the notion as "a pot-pourri

of memories, conceptions, interpretations, ideas and related feelings about specific physical settings as well as types of settings". This definition is wider and broader than the one by Korpela (1989), who preferred a narrower definition of place identity: "as a psychological structure that arises out of individuals' attempts to regulate their environments". In general, the main thread throughout these psychological explanations of 'place-identity' is a sense of belonging, as all of them understand that place-belongingness is not just one aspect of place-identity, but it is a necessary basis for it. This can also be understood from Twigger-Ross & Uzell (1996), who see no separation in components of identity, they understand that place is present in all parts of identities nevertheless. The same goes for Breakwell (1986) who sees four principles of identity: Self-esteem, self-efficacy, distinctiveness and continuity. Breakwell (1986) argues that identity is a concept that is formed through the movement of a biological organism moving through time and space and develops identity through the accommodation, assimilation and evaluation of the social world. The information that is selected through accommodation, assimilation and evaluation is managed by three of the principles mentioned above. The fourth one, self-efficacy was added only later.

- Distinctiveness is the desire to maintain personal uniqueness. Used in for example research on settlement identity (Giuliani and Feldman 1993) and community identity (Hummon, 1990). The research on this first principle suggests that distinctiveness summarises a lifestyle and establishes a person as having a specific type of relationship with his/her home environment.
- Continuity is seen as the continuity of the 'self' over time and the relations between past and present self-concepts. Within literature this is often discussed in two distinct types of self against environment relationships. The first is self-referent continuity and the second is place-congruent continuity. Place-referent continuity is discussed in Korpela (1989) and Giuliani and Feldman (1993). These studies both show that places act as referents to past selves and actions and some people form a link with a place which facilitates an important part of the continuity of their identity. Other research, for example Devine-Wright, 1997 argues that this phenomenon not only exists on a personal but also on a group level. Their study about the role of historic places in building of national identity shows that these monuments play an important role in the continuity of a group's identity. While place-referent continuity refers to the maintenance of continuity, place-congruent continuity refers to the maintenance of continuity via characteristics of places which are generic and transferable form one place to another. Giuliani and Feldman (1993) give an example of a person that will look for a place to live that represent his or her values. He sees that absence of this

place-congruent identity of the self could lead to general dissatisfaction and the desire to leave the place for another area.

- Self-esteem in literature refers to a positive evaluation of a person or the group who we identify ourselves with. It is dealing with the feelings of worth or social value of a person. Favourite environments can support this self-esteem (Korpela, 1989). Twigger-Ross and Uzzell (1997) explains how this self-esteem differs from the positive evaluation of a place. He uses the term 'liking a place (evaluation) versus a place that makes one feel good (self-esteem).
- Self-efficacy is defined as an individual's belief in their capabilities to meet situational demands. It is used as a measure of personal agency. This principle was developed within the framework of the social learning theory (Bandura, 1977). Living in a manageable environment means that a person feels self-efficacious with respect to their daily functioning in that environment. They believe that they are able to carry out their chosen activities in that environment.

This reinforced the idea that landscapes can be seen as a container and medium of collective memory. It is something also Simon Schama (1995) recognizes in his book 'Landscape and memory', in which he argues that the construction of identity is mediated more through others than through ourselves. He refers to the specific landscape qualities and values and the tangible and intangible sides of heritage. People's identity is not only related to specific locations or places but can also depend on certain landscape types or features within the landscape. Schama (2005) again gives an example of that, he argues that people, who are raised in an open area will always tend to experience certain feelings and memories if they come across similar areas elsewhere.

Moving on to landscape identity it was from the 1970's onwards the issue of landscape and identity became more and more fashionable among scholars in geography. The first books that dealt with this relationship were Tuan's (1974) Topophilia and Meinig's (1979) The interpretation of Ordinary Landscapes in which they acknowledged that some universal values are embedded in landscape. While the former sees landscape as a representation of the cultural identity, the latter goes one step further and argues that the physical landscape serves also as an identity builder (Egoz, 2013). From then onwards, Barbara Bender (1998) conceptualises landscape as "part of the way in which identities are created and disputed, whether as individual, group or as a nation" (Bender, 1995; p.3). This idea is used for various other approaches in archaeology, history, anthropology and heritage studies. Similar to Bender's statement Paasi (2002) argues that the identity of people is shaped through interaction with environment, but also social class, religion, ethnicity and gender. First of all, landscape identity (and therefore

place identity) has multiple forms, not only on different scales but within different people and will therefore always be contested (Darby, 2000). This ability of landscape to construct identity, can also not be seen from a solely positive side. Being contested, landscape identity can for example be used to exclude people rather than bring them together or make them feel part of a group (Dixon & Durrheim, 2000). The focus on the more negatives sides of landscape identity brings us to questions such as the ownership of the landscape, or power and justice within the landscape (used for in another discussion paper). Palang et al. 2007 argue that shifting powers or changing context can also easily cause shifts in landscape as a component of identities. When other functions become more important or if other powers step up to the line using different parts of the landscape to underpin their policy, this might cause a change in the associations people make with their surrounding physical environment. This process of changing power can then cause an impact on certain people's or groups of people claim to land (Dixon & Durrheim, 2000; Stobbelaar & Pedroli, 2011).

Besides the idea that landscapes are being builders of identity, landscape identity is also often used to describe the processes during which people ascribe identity to their environment (Stobbelaar & Pedroli, 2011). Landscape identity then becomes the characterisation of landscape by those features that distinguish one region from another (Antrop, 2000). The focus is on features that can be perceived by everybody: spatial composition, land use, wildlife, vegetation and minerals, colours, forms and patterns, etc. Many landscape classifications in various countries are using this form of landscape identity. In literature this is often called or referred to as spatial identity (Van Zoest, 1994), landscape character (Antrop, 1998) or just landscape identity (Antrop 2000, 2007).

As a summary of the above described meaning of landscape identity, Egoz (2012) comes to the following differentiation:

- Landscape and identity, the relationship between landscape and the identity of humans engaged with the landscape, representing the formative role of landscape in building identity, both collective and individual, in response to the basic human need of belonging.
- Landscape identity, the identity of landscape as the spatial character of landscape. It is an evaluation of a physical entity that can be analysed according to criteria.

Ingold (2000) and Paasi (2002) agreed with this proposition, the former was speaking about building and dwelling. While the latter speaks about the identity of a region and the regional identity of the inhabitants. Adding to this Stobbelaar and Pedroli (2011) did see another guiding principle in the approach to landscape identity besides the above described human-

environmental interactions. They argued that also a distinction can be made between personal and cultural landscape identity. Dixon and Durrheim (2000) and Jacobs (2006) also refer to this distinction. To them toponyms are a perfect example of this cultural landscape identity idea, however it can be asked how this cannot be seen as the landscape identity describe as the 'regional identity of the inhabitants' by Paasi (2002).

Stobbelaar and Pedroli (2011) suggest their own definition for landscape identity:

> *"landscape identity is the unique psycho-sociological perception of a place defined in a spatial-cultural space."*
>
> Stobbelaar and Pedroli (2011)

They are also understanding landscape identity as the field of interest divided along a spatial to existential axe and a personal to cultural axe to integrate all of the above made interpretations on landscape identity (Figure 1)

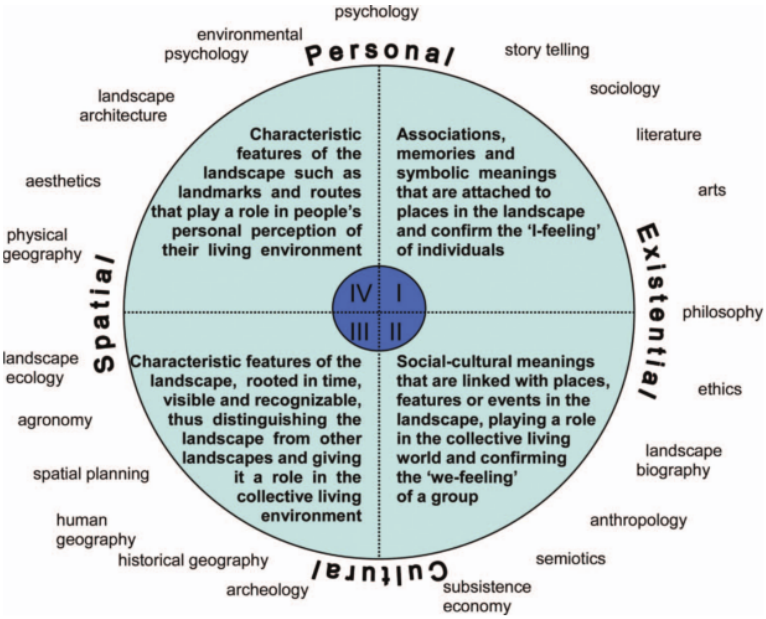


Figure 1: the four quadrants of landscape identity (Stobbelaar and Pedroli (2011))

Similar to Stobbelaar and Pedroli (2011), Loupa Ramos et al. (2016) come with a model for landscape identity and consider it to be the dynamic relationship between people and their landscape, considering it as interdependent aspects. They built a model in which landscape identity is formed through the mutual interaction of people and the landscape at two separate levels. The first is a sphere of perceptions, the second one is a sphere of action (Figure 2). Next, they understand there to be a 'tipping point' to landscape identity where, because of landscape change, new landscape related identities form (Loupa Ramos et al., 2016; Butler and Sarlov Herlin, 2019). This idea could be linked to the idea of 'solastalgia' introduced by Albrecht et

al. (2007): ‘As opposed to nostalgia (the melancholia or homesickness experienced by individuals when separated from a loved home), solastalgia is the distress that is produced by environmental change impacting on people while they are directly connected to their home environment’ (p. 95). This to indicates changes in a human landscape relationship exist linked with landscape change over a longer term and possibly related to longer processes such as climate change today (Galway et al., 2019). Also, Butler et al., (2018) have suggested this in relation to forest fires and thus sudden changes in landscapes.

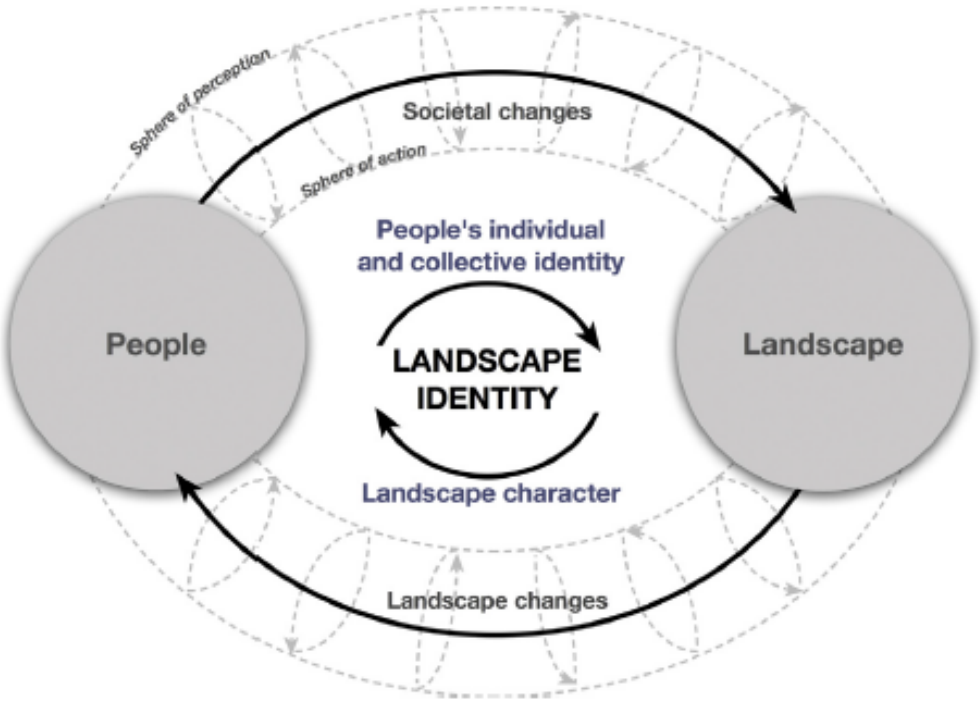


Figure 2: The landscape identity-‘process’ (Loupa Ramos et al. (2016))

2.4.2 Landscape as part of identities and landscape character

Seen the complexity of the above explained terms and the earlier discussed notion of landscape the choice was made not to use landscape identity as such. The use of ‘Landscape identity’ might have a few disadvantages while used in this project:

- Landscape identity is used in literature in two separate meanings and it is therefore not always clear what it is used for;
- Landscape Identity seems to refer to a single possible identity of landscape. While landscape was understood in the first part of this chapter as perceived by people and thus contested and constructed on multiple scales;

- Landscape only exists by being perceived by people and because it is seen from different perspectives it is hard to understand that landscape could have an identity of its own. Seen the concept of landscape makes that the qualities and values not inherent but attributed and perceived (ELC definition of landscape);
- Using landscape identity as a concept within the PhD could easily lead to misunderstanding and misuse of the concept in terms of exclusion of people or groups of people. While the project focuses on the ubiquity and inclusiveness of landscape.
- The use of 'landscape identity' as a concept could also be too political and lead a too top-down approach.

As seen in the above section character could provide an alternative for landscape identity when it comes to the different combinations of features that distinguish one region from another (Antrop, 2000). Applying character to landscape, calling it landscape character started off in 1990s in the UK and is central to many approaches of landscape management. One of first ones was Landscape Character Assessment (LCA) introduced by the Country Agency (Swanwick, 2002). Character is described in LCA as '*a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse*' (Swanwick, 2002, p.8). Another approach to character, which was an answer to LCA from a historic perspective, is Historic Landscape Characterisation (HLC) developed by English Heritage (now Historic England) at the end of the 1990s. Within the HLC approach, used as a base for this project, landscape character is a result of the changes and the evolution of the landscape through time (Fairclough et al., 2002). It looks as if the specific combination of geology, topography, soil, vegetation, land use, field patterns and perception form and shape the landscape character. The approaches used to describe and analyse landscape character will be discussed in Chapter 4.

The second meaning of landscape identity of literature is the role that landscape place in the building of people's or groups of people's identities. As seen in the review above, this has been conceptualised in 'place attachment' (Low & Altman, 1992; Manzo, 2003, Manzo, 2013), 'Place dependence' (Stokols & Schumaker, 1981), the earlier mentioned 'sense of place' (Tuan, 1974), 'Place identity' (Proshansky et al. 1983, Twigger-Ross & Uzzell, 1996) and 'Landscape identity' itself. But here landscape might be seen as a part of people's identities and this might in fact be the most straightforward way to use it. Rather than using landscape or place as an adjective to identity as to develop a concept. Saying that landscape is one of the constituting components of identity explains how, while there are different perceptions of landscape, there may also exist different identities and there is not one landscape identity as the concept of

‘landscape identity’ itself might suggest. Defining landscape as a component of people’s identity can then also be used to explain how landscape change can affect the identities of people, but also how the change within the identity of people might trigger landscape change. Using ‘landscape identity’ within a project might make it more complicated to see this reversible relation. This might then become how landscape character has and defect on the identity of people. When using landscape identity explaining this idea would be impossible.

2.5 Conclusion

This Chapter has discussed existing approaches to the meanings of landscape and reviewed in more detail various conceptualisations of character that are used in various disciplines. The above discussion has established that landscape is dynamic and everchanging, relative and holistic. Landscape is ubiquitous and reflects on the action and interaction of natural and human factors. Landscape can therefore be a unifying frame, bringing together multiple views and disciplines. This is also promoted within the European Landscape Convention (CoE, Florence, 2000), the convention of which the definition of landscape will be adopted in this study. Landscape therefore can be is understood ‘as an area as perceived by people whose character is the result of the action and interaction of human and/or natural factors’. Within this definition and therefore throughout this study landscape will be treated as (i) an integrating concept bringing together and bridging the gap between nature and culture; (ii) a spatially comprehensive concept, it is everywhere around us; and (iii) it can be used at every different spatial scale and but also in temporal scales or participatory scales (Selman 2006; Fairclough, 2018).

In summary the review of the notion of character described how character is a cultural value not often specifically defined when used in policy or research. It remains often a ‘black box’ that everyone is assumed to understand. As, the following issues remain after reviewing the literature on the concept: (i) Character is more than the ‘physical appearance’, land-use type and lay-out of a landscape, but (ii) character does not function purely at the level of the individual. Thus (iii) character appears to refer to something that exists collectively, beyond just personal experience.

So, in order to fully comprehend landscape character, there is a need to better understand how landscape is perceived by people and inherent to their different individual and collective identities as landscape character is ‘what is all things that are debatable in landscape’. The next chapter will focus on how landscape perception is framed in literature and discuss how this study will take this concept further.

Chapter 3:
LANDSCAPE PERCEPTION AND PARTICIPATION

3 Landscape perception and participation

3.1 Introduction

As noted in the Introduction of this thesis (Chapter 1), the main aims and objectives of this study can be situated in the realm of research on landscape, character and perception. This chapter discusses to become familiar with the idea of landscape perception and the processes involved. Together with the earlier chapter conceptualising landscape and character (Chapter 2) this chapter gives an insight into how the three main concepts of the European Landscape Convention's definition on landscape (landscape, character and perception) are seen in literature and how these are used within this study.

Hunziker et al. (2007) explain how studies that incorporate a participatory element in landscape studies have to deal with the complexity of not only the character of landscape, but also with the intricacy of the human character. They state (after Bourassa, 1991):

> *'Each human is, simultaneously, a biological organism; a person with a unique set of capabilities, experiences, and aspirations; a social being acting within various roles in various groups; and a carrier of culture.'*
>
> (Hunziker et al. 2007, p.48)

The intricacy or complexity of the human character can be found in the way different people perceive landscape in different ways. The same landscape can therefore mean different things to different people. Integrating these different ways of seeing into existing expert-based interpretations of landscape is central to this thesis and an understanding of how people make sense of landscape is one of the pre-requisites for the further development of a theoretical framework.

This chapter first reviews the existing literature on landscape perception by looking for different definitions and understandings of the word perception. Then the chapter will focus on the divide on landscape perception that exists in literature that can be linked with the quote earlier. On the one side there are studies that understand landscape perception to be a biological process and put emphasise on the objects that shape landscape to explain how humans make sense of what surrounds them, while other studies believe perceiving landscape is a cultural process in which the psychological component of perception and the interpretation of the senses is deemed to be

most important. Finally, this chapter looks into literature that reviews empirical research on landscape perception to better understand the impact of the methodology itself on the outcome of this study.

3.2 Landscape perception: sensation and interpretation

3.2.1 Landscape perception, a definition

When there is confusion about a term, it can be helpful to trace back its etymological roots. 'To Perceive' is derived from the Latin word '*percipere*', which means 'to grasp, gain, learn, and understand' (Leeman,1990). Bell (2004) defines perception as follow:

'*The activity carried out by the brain by which we interpret what the senses (mainly sight for most people) receive. It is not merely a factual reporting but tends to be referenced to associations and expectations already present in the mind of the beholder*'

Bell (2004, p. 185).

This definition includes two prominent factors in perception: the senses and the brain. Bell distinguishes two spheres of perception: the physiology of landscape and the psychology of landscape. In order to explain these two spheres, it is useful to clarify the difference between sensation and perception as two notions that are often used as synonyms. Sensation in literature is seen as the information that is taken in without any interpretation (which can be done through each of our senses, including touch, sight, smell or sound). Sensation is the 'simple' act of bringing information from the outside into our brain. In general, perception is then seen as the way this information is interpreted in order to make sense of the world. Jacobs (2006) explains how sensation becomes perception by analysing and interpreting the information through 'the mental concept' or the memory of previous experiences to then structure and recognise what our senses take in. For him perception is the process of experiencing organised and already interpreted information extracted from our sensations. This process is more or less comparable to what Bell (2004) explained by suggesting the two spheres of perception: 'physiology of perception and psychology of landscape'. Physiology of perception in Bell's theory is what can be seen through the mechanism of the eyes, the structure of the eye, how it receives light and the different limitations of the human eyesight (different for different people). It is the side of perception that can be measured objectively. On the psychology side, Bell explains how landscape is subjective and different for everyone. This will be discussed in more depth in the next section.

This section will consider how the literature presents the role of sight. Which Bell (2004) suggests sight is most important to most people, accounting for around 87% of the information they receive (Nijhuis et al. 2011). Other studies suggest that sound has an equal significance to sight. For example, Carles et al. (1992) argue that – especially for children – perception is as much influenced by hearing as it is by seeing. While Howard (2011) suggests sounds as key triggers in perceiving landscape, Bell (2004) explains how other senses are complementary to the visual one, acting to reinforce and confirm the sense of sight rather than adding value. Howard (2011) adds to this understanding that music (and therefore sound) is an integral part of the perception process. He suggests that natural sounds such as birdsong are one of the best examples of this, since they connect people to their surroundings and could become a part in the romantic interpretation of landscape. Howard describes two types of sound that influence perception: the ambient and the sudden. The ambient is suggested as the type of noise often 'filtered out' and so ignored in perception processes. Sudden noises however are picked up by the hearing system in a much more efficient way because these type of sounds might indicate a threat (Howard, 2011). In general literature on soundscapes highlights the auditory properties of landscape and sets the visual dominance in landscape perception research into a new context. Despite the research on sound and landscape in a laboratory atmosphere while bringing aural stimuli to subjects (instead of photographs in visual perception studies) (Carles et al. 1999; Pheasant et al., 2008); field investigation studies (Liu Kang, Luo, Behm, 2013) and projects focussing on soundscapes of larger regions (Matsinos, 2008) the relationship between soundscape perception and landscape characteristics remains to be analysed in greater detail (Liu, et al., 2014). Still today literature on the impact of sound on landscape perception is often subjective and it seems to lack general acceptance and effective parameters.

Smell and landscape perception is understudied in general. This is partially explained by the fact that studying the influence of smell on perception a is much more difficult than in the case of sight and hearing (Bunkse, 2007). An interesting notion that links smells and perception is the so-called 'smellscape' which has its roots in cultural geography and was theorised by Porteous (1990). Porteous, who also noted there are many challenges in studying and recording sensuous olfactory world, defines 'smellscapes' as the totality of the olfactory landscape in a specific place. He distinguishes smells in both background and site-specific or episodic smells (cf. the similarities with the visual sense in this case). Contrary to the visual part of landscape perception however, is that 'smellscapes' are not believed to be continuous but rather to be fragmentary in space and time. It is interesting that Porteous sees smells as place-specific and therefore enriching the overall character of a place or landscape. Another sensory geographer,

Paul Rodaway (1994), draws attention to the temporality of smells in landscape and its difference to sight and views. He discusses how research into the link between smells and landscape perception are limited because of the limited vocabulary on smell across the Western modern languages. Another struggle is identified through his ideas, he argues that smells are not objectively classifiable, it is a mere experience of intensities - as are pain or joy, for example. Over 80 years ago Lefebvre had already noted that olfaction enables direct encounters with landscape in ways that sight cannotby creating an unmediated sense of place (1934). This is linked with Drobnick's 'toposmia' (place + smell) in which he describes how the spatial location of odours must be linked to specific locations. He suggests that while landscape can be viewed at a distance, a smell can only be detected on the spot due to the inhalation process by which smells are sensed (though wind-driven smells can become distant). As can be understood from the limited amount of research done on the subject of smell and landscape perception very little can be said about how smells influences landscape perception. The only consensus here is that smell does affect the perception of landscape, but whereas the visual landscape can be measured and set into parameters, this seems to be never done for 'smellscapes'.

To be complete in this literature review also taste and touch should be covered. Research on how can be linked to landscape perception can be done in many different ways in different cultures. It is not very common to consider the impact of taste on landscape perception in the strict sense of the concept. In literature taste is usually linked with the food culture of the countries. In France for example the word *terroir* means 'all the products of this land'; as such all the products are seen as an inherent part of that landscape, and the *terroir* is perceived through them (D'Onofrio et al., 2016). Bishop (1990) argued that in this way landscapes can be seen through the stomach. Wylie (2007) suggests that a focus on food in landscape provides a wider understanding of the forces that produce landscape. This sits very close to studies on regional landscape and their food culture, which has not very much to do with the sense of taste in a strict sense. Perhaps Wessel's (2010) work on 'tastescape' (yet another neologism using the -scape suffix) comes closest to understanding taste in relation to perception. She suggested that it becomes possible to read landscape as a gastronomic text that can be used as a biography of landscape over time. As 'what food we eat, and why we eat the food the way we do, shapes the landscape' (Wessel, 2010, p.1). Literature on food and taste thus focuses in general on the relationship between food and landscape in terms of production and the interaction between people (e.g. tourism and consumption of food).

The last sense discussed here is the sense of touch. The primary value of touch is having direct and physical contact with features of the landscape (Howard, 2011). Almost all activities of landscape have to do with this physical contact, people walk, cycle or swim while being in touch with landscape. The topic seems to be heavily understudied in terms of its links with landscape perception and its links with interpretating what we sense in landscape. In archaeology and anthropology however, this is studied within the body of phenomenological approaches. Oliver Harris (2010) discusses that by dwelling through the world people add emotional and mnemonic connections to certain places. He states that through bodily encounters and movement through landscapes these connections can be re-experienced further on. The sense of place is in this case also embedded in the feelings that are generated through moving through a place. His work focusses on how 'people, places and things constitute each other through meaningful, affective and mnemonic engagements' (p.386). He concludes that materials create certain conditions and constraints for practice in and experience of landscape and adds to this that these conditions are often carried on for a long time within our history and that by manipulating materials people came to understand and add meaning to the places they lived in. Tim Ingold (2004) focusses on the materiality too, being the materiality of the way we, as humans, are walking. He reflects on Gaston Bachelard's (1964) 'muscular consciousness' by suggesting that the forms of landscape that we perceive today are not imposed upon a material surface but that they are experienced as 'condensations' and 'crystallisations' (p. 333) of activity in connection with landscape. This activity here can be understood as walking or 'making our way by foot' in everyday life so the paths, textures and contours of the places we walk through can be incorporated into our 'own embodied capacities of movement, awareness and response' (Ingold, 2004, p.333). This reflects also what Tilley stated about walking as by walking landscapes are woven into life, and lives are woven into the landscape, in a process that is continuous and never-ending (Tilley, 1994, pp. 29–30). Ingold makes this theory more understandable by adding: 'When the same paths are repeatedly trodden, especially by heavy boots, the consequences may be quite dramatic, amounting in places to severe erosion. Surfaces are indeed transformed. But these are surfaces in the world, not the surface of the world. Indeed strictly speaking, the world has no surface. Human beings live in the world, not on it, and as beings in the world the historical transformations they effect are part and parcel of the world's transformation of itself' (Ingold, 2000, pp.199–200, 241)

The different senses discussed above then create the sensation that needs to be interpreted to become perception. To come to perception people do need to sense something (as a result of an individual sense described above or a combination of some or all of the above). According to

Reid (1970) perception is the process of interpreting and organising information extracted from sensations to make sense of them, perception is thus a mental process on to of a purely physiological one. Similar definitions of perception can be found in Bell (2004) as mentioned earlier and as Schacter et al. 2011 suggests that perception is the 'organisation, identification and interpretation of sensory information in order to represent and understand the environment'.

Within different fields of research there are several theories that further explain landscape perception. Tveit et al. (2006) divide these theories in evolutionary theories and cultural preference theories. Hunziker et al. (2007) and Uzzell (1991) see the same division but refer to theories that understand landscape perceived as space and theories that look at landscape perceived as place. To understand the current knowledge on landscape perception an overview of these theories is given below. The reader of this study must be aware there is much more research on landscape perception than is reviewed here, since only literature that was relevant for this study (and its discussion) is included.

3.3 Evolutionary theories on landscape perception

3.3.1 Biophilia hypothesis

Developed by Edward Wilson in 1984, the biophilia theory suggests that humans have an inherent need to affiliate with natural environments and other forms of life. The human evolutionary process resulted in a preference for natural environments with a biological environment. The reason for this can found in the fact that humankind have existed much longer as hunter gatherers that are relying on nature for food and shelter than as the developed kind we know at present. This is supported by Ulrich (1983), who sees biophilia as the result of the rewards and advantages associated to natural settings so humans acquired positive responses to kind natural environments. He sees a direct link between these kind natural settings and the way people today are still relating to natural environments. Especially certain visual configurations in landscape can create strong emotional and affective responses. He refers to environmental 'preferenda' that can trigger those responses and states that positive feelings to natural settings could lead to restoration and enhancement of cognitive functioning. He suggests that this is the results of the connection we had with nature as humankind in the past and the skillset we built through time (Ulrich, 1983). In more recent studies it is suggested that this understanding of landscape perception should be further analysed as it can help and support research on people's attitudes towards a more sustainable and biodiverse world (Kaymaz, 2012).

3.3.2 Prospect/refuge theory

Another similar theory on landscape perception can be found in Appleton's prospect-refuge theory (Appleton, 1975; 1996). Appleton notes that this theory can be related to Darwin's habitat theory and adds an aesthetical dimension to it. The theory proposes that humans experience positive feelings with landscape that responds to their biological needs. The prospect-refuge theory thus refers to the preference for landscape that seems to provide 'prospect' and 'refuge'. It is mainly based on the basic human need to feel safe and to survive. People developed a 'sense' to perceive landscape by interpreting which areas could serve as hiding places when in danger while hunting or gathering. This seems to suggest that landscapes are perceived from a common outset. Fisher & Nasar (1992) add to this understanding that this indeed happens for humans, but it also works for animals as the places that offers refuge and prospect are also the perfect places to hide for offenders. They therefore suggested that landscape that is perceived with low prospect and high refuge is giving feelings of fear and unsafety. Kaymaz (2012) states that Appleton's prospect-refuge theory is concerned with primarily natural environments and physical organisation of space and clearly linked with the feeling of safety and therefore the same principles can be adapted to landscape planning in urban environments.

3.3.3 Information processing theory

Another key theory on landscape perception useful to better understand the concept is the Information processing theory developed by Rachel and Stephen Kaplan in 1979. The Kaplans' (1979) information processing theory is one of the most influential and well-known theories on landscape perception and landscape preference. Information is key within their theory, since they argue it has been central to human experience and survival throughout the evolution of humans (Kaplan et al., 1998). The theory assumes that landscapes in which rapid acquisition and processing of information are preferred. People need information to make sense of landscape and individuals value landscapes with promising information to explore (Kaplan, 1975, Kaymaz, 2012). Next to this, people want to explore to gather more information than is available and seem to look for new challenges and experiences. The information becomes important to function well in landscape (Maulan et al., 2006). The information is gathered through the human senses (as described in the previous section), but in the Kaplans' idea mostly through the visual one. The information is derived from the contents and the structure of

landscape. It is this structure that leads to making sense of the landscape through perception. They suggest that 'sameness' in landscape suggest there is nothing going on and deviated attention away from those areas (Kaplan et al., 1998; Kaymaz, 2012). When it comes to preferences, people prefer heterogenic landscapes, dense vegetation for example has rich content but no focus so it confuses people's perception process. The same goes for blocked views, which provoke insecurity as the viewer does not know what to expect when moving on. Based on the results of their study they developed a preference matrix. While this thesis is not concerned with preference in landscape it is useful to explain this matrix because of the way it defines four factors in two phases of landscape perception. In the first phase, people immediately perceive the *coherence* and *complexity* of landscape. In the second phase, perception encompasses two other informational factors, *legibility* and *mystery*, which require more time and involvement in the landscape to decipher, even though the step from one to the other phase happens unconsciously (Kaplan et al., 1998). A brief explanation of the four factors is included in Kaymaz's (2012) review on landscape perception:

"Coherence: *Coherence of a setting is about the order and organization of its elements. If a place is coherent, then people can easily make sense out of the setting. Kaplan et al. (1998) suggest that coherence can be achieved through repeat of themes and unifying textures; however limited degree of contrast is also helpful. Coherence is similar to gestalt principles of organization that state elements are perceived in groups rather than parts (S. Kaplan, 1975).*

Complexity: *Complexity refers to the degree of diversity of landscape elements. The more complex an environment is, the more information it involves. According to the Kaplans' theory, greater variety in a setting would encourage exploration. They argue that coherence and complexity shouldn't be confused since a highly coherent setting can still also be very complex.*

Legibility: *The concept of legibility is about orientation. Wayfinding is important for an individual in terms of feeling secure and safe. It is about reading the environment and making sense out of it. Distinctiveness contributes to legibility of an environment. Hence, landmarks or focal points may increase the legibility of a setting. However, one has to experience the setting first, in order to realize what is distinctive and what is not. Spaciousness also supports legibility by increasing the individual's range of vision (S. Kaplan, 1975). S. Kaplan, (1975) points out that fine texture is also a legibility component; the finer the texture, the easier to distinguish figures from ground.*

Mystery: *Mystery is the component of preference related to exploration. It is about the setting's potential of promising information. Mystery requires an inferential process (S. Kaplan, 1975). Mystery motivates people for exploration in order to gain new information. There are various ways to create mystery in a landscape. Kaplan et al. (1998) suggest that a curved path or vegetation that partially obstructs the view can add mystery to an environment."*

Studies by Kaplan and Kaplan seem to suggest a combination of all four factors is needed for people to like certain places better than others, however too much information integrated within one view seems to work in the opposite way (Kaplan el al., 1998). The idea of legibility in landscape in the Kaplans' theory is common in literature. Heft and Nasar (2000) state that landscape perception evokes a response plan in preparation for future circumstances. This is relatable to research on wayfinding and landscape perception. Such research makes us aware of the importance of attempting to understand how people navigate through landscape in order to better comprehend the processes of perception (Ward Thompson, 2013). Passini (1996) suggests that there is an 'expected image' available to people during wayfinding. This means that people expect and anticipate what is coming next on the way to somewhere and this expectation then influences their interpretations or perceptions of what surrounds them. Most of the literature on this idea deals with the concept of landmarks and how these play a key role in creating those expectations (Foo et al., 2005). One of the key conclusions of such research is that humans depend on the landmarks that surround them to navigate around a landscape. These conclusions, together with legibility of landscape as described by Kaplan et al. (1998) reinforces the idea of Lynch (1960) discussed in the previous chapter. It is important note, however, that all these studies remain limited solely to the visual sense. No mention is made in the literature as to whether this can be understood in the same way for other senses or a combination of senses.

3.3.4 Gestalt principles of visual perception

The literature suggests that the psychological side of perception focuses on form, patterns and shapes in landscape (Marr, 1982; in relation to the visual: this theme is not intensively studied for other senses). When people view landscape the first things that are seen are the main structural elements, only later adding the details and shading. This can be compared to an artist making a painting of a view across the countryside for example. The Gestalt-psychology, an influential notion of human perception, underpins this idea (Bell, 1999). Bell translates the German Gestalt as 'the character of shape' (Bell 1999: 51). Gestalt was developed by German

psychologists in the early 20th century. The theory describes how people tend to perceive things as a whole rather than as separate elements. The psychology explains how more complex images are interpreted from the identification of edges and contours in the primal sketch. The Gestalt-principles are developed by multiple academics as reviewed in Bell's *The Elements of Visual Design in Landscape*. In this book he defines the Gestalt-principles as: 'those principles of organization used to confer a structure to a composition, such as rhythm, tension, balance, proportion and scale' (Bell 2004: 186). The principles explain a set of mechanisms integrated within human perception. The principles are practical in nature and deal with the relative positions between the elements in space. These principles are an important subject of study in landscape design (Sevenant, 2010).

3.3.5 Gibson's theory

A statement that is often found in literature on human perception is that people only sense what they know or recognize. This could partially explain the individuality of landscape perception, and it affirms the theories that state that perception is an active, selective and intelligent process. What seems common in literature is the way perception is studied as if humans are sensing and interpreting in a 2D-world. However, due to stereopsis and binocular vision people are able to perceive depth (Sevenant, 2010). These considerations are suggested in Gibson's (1979) work on visual perception. Gibson's ecological approach to visual perception describes it as part of the necessary interaction between organisms and their environments, including but not limited to humans. His theory suggests that environments offer affordances which are perceived immediately, and which differ between observers. He determined variables such as: texture, density and colour for visual perception. His theory has been criticised for underestimating the complexity of the perception process (Kaymaz, 2012). As with the Gestalt laws, mentioned earlier, these variables became important in planning and design principles (Sevenant, 2010)

3.4 Landscape perception theory and cultural preference

The theories in the previous section attempted to explain the parts of landscape perception that are common for all people. This section reviews literature on the factors that enable different people to understand and perceive landscapes differently. The division made here, between personal and cultural differences, is based on the work of Bourassa (1991) who divided the field of research in three parts: literature considering a common base in landscape perception (see

previous section), studies that look at factors that bring together larger groups and factors that are strictly personal.

3.4.1 Influencing factors on a cultural level

The interpretation of cultural landscapes is often discussed on a national level (Buyhoff et al., 1983). While people may differ substantially within a nation state, all of them are influenced by the decisions of their national/regional governments, education systems and other national policies. Nationality is not central to this research which concerns two case study areas and only involves participants of the same nationality (or at least people resident in the same country). However, the notion of differences in landscape perception between nationalities is interesting because of the perspective (and thus possible interpretations) of the researcher, a Belgian working in the UK (Chapter 5).

Besides nationality an insight in landscape perception that is more interesting for this thesis is the influence of culture and religion on landscape perception. Looking at the European Landscape Convention's interpretation of landscape and the differences in application of the World Heritage's convention between for example Europe and China the differences between European attitudes towards landscape and historic places and other cultures become visible (Howard et al., 2013). The interpretation of landscape seems to differ between people with different cultural background (Li et al., 2010). While it is an understudied subject, also religion plays an important role in how landscape is perceived. Howard et al. (2013) highlight some studies that deal with religion and landscape perception such as that by Thomas (1984), who discussed the impact of changing religious ideas on attitude towards nature (and thus landscape as understood in this study).

As discussed in the previous chapter (Chapter 2) the way landscape is used as a concept in the language of people is an important factor when discussing the idea of landscape perception. Language will thus always be coloured by languages and linguistics (Howard et al., 2013). A recent study by Saskia van Putten (2020) revealed how the idea of landscape is weakly structured and variable across the different languages. This implies that sensations of landscape will also be interpretated in various different ways according to the vocabulary of each of the languages and yet that they will be very difficult to compare to one another. Also, here the difference between the researcher's native language and the interviewees native tongue will have to be taken into account while interpreting replies from the participants.

Social status or background may be just as important for landscape perception than than language and cultural difference. Creighton (2009) gives evidence on how difference in social background and class already shaped the landscape in the Middle Ages. The role of social status and class have been widely discussed by Cosgrove (1984), Cosgrove and Daniels (1988) and Bender (1998). In their work on the contested landscape of the Lake District, Mitchell (1994) and Darby (2000) showed a contrast in attitudes towards landscapes between social classes. In fact, the majority of studies on the relationship between landscape perception and class or background have reached this consensus. More recently, Setten (2004) has looked at how landscape formed a discussion platform between different social classes. Inglis (1987) suggests this idea of class and difference in perception of landscape seems to be less clear on the countryside than in cities. Howard (2011) however suggests that this is ever changing due to 'rural gentrification' and the change in demography in rural areas. The difference between perception of landscape between residents of rural areas and urban areas seems to be obvious in literature (Haartsen et al., 2000). This is closely related to the idea of 'insideness' often discussed in literature. Howard et al. (2013) define insideness as the degree to which a respondent is part of the community which regards the landscape as 'their own place'. In this respect it is important to consider the definition of insiders and outsiders not only from a geographic point of view but also in the sense of the expert vs the local resident. Forty-five years ago, Relph suggested that it was not only residents who need to be seen as insiders but also others who may have an 'inside stake' in landscape (e.g.: members of local organisations) (Relph 1976). In the literature, however, it is often residents who take the role of insiders when discussing the influence of this factor on landscape perception. Urry (1990) refers to the differences between tourists and residents and De Lucio and Mugica (1994) state the same about visitors. Recent studies have looked at the attitudes of local people to landscape in specific situations. Butler et al. (2018) looked at changes in perception of local people in case of sudden and drastic changes to landscape. Riley and Harvey (2005) tried to understand the ideas of local residents about the historic landscape that surrounds them. Important work done by Krauss (2006; 2010) on debates on landscape shows that people can embody more than one set of possible interpretations about landscape depending on what role they are playing within the discussion. This also can be understood from the work of Primdahl el al. (2010) and Setten (2005) who found that farmers often have distinct and conflicting attitudes towards landscape while perceiving through the lens of their profession or the lens of a resident.

These considerations introduce another key factor influencing landscape perception, occupation or profession. Research on the link between landscape perception and occupation includes foresters (Bradley & Keane, 2007), architects (Pennartz & Elsinga, 1990) and even artists (Andrews, 1989). Most of these studies linked the profession with a certain level of expertise and are interlinked with the study of Kraus and the expert vs. insider debate. Surprisingly few studies have been carried out on the impact of profession on landscape interpretation. It may be relevant to consider this alongside studies on the impact of educational level on landscape perception. It seems that both the level of education (Carlson, 1995) and its style or tradition have an influence on landscape perception (Thompson and Barton, 1994). Carlson (1995) emphasised the importance of disciplinary differences on perception which suggest that people with a background in nature conservation will have different attitude to landscape than people with a humanities training. Educational background as an influencing factor can also be understood as a factor that exists on a personal level.

3.4.2 Influencing factors on a personal level

Leading on from the education level of people which is seen as a major factor in landscape perception (Kent, 1993; Wyzga 2009; Howard et al., 2012). Also differences in age are critical in landscape perception especially because of the experience that is built though a lifetime (Tuan, 1977). Tuan demonstrated how travel experience, moving places during a lifetime and recreational activities have an influence on how landscape is interpreted. Dearden (1984) came to the same conclusions and added to this idea the notion of familiarity with landscape. He discovered that people make comparisons based on information of the area with which they are most familiar. Nieman (1980) saw familiarity as something that can make some features in landscape 'invisible' and states that some parts of landscape can be interpret differently because of having to go through that process too often for the same features. In the literature, familiarity with landscape is often linked to access to landscape and leisure activities (Nieman, 1980; Kaplan & Herbert, 1987) and visual preferences (Svobodova et al., 2010). Appleton (1994) discussed this based on his own personal situation and explains how age cannot be separated from experience (the older the more experience with interpreting landscape) and often age may also be related to with physical height. Some research has been done on how children perceive and understand landscape especially when looking at how landscape is experienced in play areas designed for particular age groups (Jansson 2010). Aitken and Wingate (1993) and Tunstall et al. (2004) used photographs to understand how school children perceived a river that runs through a landscape.

Another personal factor discussed by Howard et al. (2013) is gender but there is little or no research on the direct influence of gender on landscape perception. If there are studies on the differences between gender these are situated within landscape planning or design and often deal with differences in experience of landscape between men and women as in the study by Burgess (2007), who stated that the more closed landscape structure of woods and forests were experienced in a more negative way by women than by men. While literature often cites gender as an influencing factor (Howard et al., 2013; Ward Thompson, 2013), research on its influence appears to be very limited.

More recent studies added health to the list of influencing factors. For instance, Ottoson and Grahn (2008) see different interpretations of landscape as a result of traumatic experiences or mental illness. As discussed earlier, Ulrich (1983) also saw these links in the opposite direction, perceiving landscape is also seen as a positive factor in mental well-being and psychological restoration. Other such as Carru et al. (2015) focussed on how introducing green and thus the perception of a 'healthy nature' add to mental well-being.

3.5 Landscape perception and research approaches

Besides the evolutionary and cultural factors which influence landscape perception it is important to review possible contextual factors of the studies carried out on landscape perception itself. Often this aspect is neglected in the literature, but these contextual factors must be taken into account and the researcher needs to be at least aware of those factors in order to limit their influence. Such factors are the way 'landscape' is presented as a concept and thus how landscape perception is interpreted, but also the way respondents are approached and the involvement (commitment) of the respondent in the study and the landscape itself. When it comes to in-situ studies even seasonality and weather may be impacting factors.

3.5.1 Visualising landscape or not?

Much of the literature reviewed for this study which deals with landscape perception is related to landscape preference and aesthetic valuation of landscape (Ward Thompson, 2013). Most often studies try to assess the affective responses of respondents while exposing them to static, two-dimensional images alone (Ward Thompson, 2013; Heft & Nasar, 2000). Almost all of

them have been carried out in a setting away from the actual landscape or area investigated. While cost and time are the most obvious reasons to do research on landscape perception this way, according to Ward Thompson (2013) one of the main reasons is because this approach is easier to administer for larger groups of participants. Another reason can be found in the function of most of the studies on landscape perception. As most of these studies are carried out in order to gain an insight on people's preference for specific landscape types, static images give the opportunity to alter scenarios by simply manipulating the pictures (Karjalainen and Tyrväinen, 2002). In studies of this type photographs have been used as representations of the landscape as well as sketches, narratives and computer simulations. To underpin the use of these types of representations many researchers have referred to Daniel and Boster (1976), Zube et al. (1974) and Zube et al. (1983) to justify the photographic representation. However, in 2001, Palmer and Hoffman made a review of approaches used in studies on landscape perception and they called for attention when referring to these authors, recommending the use of panoramic photographs and more photos per viewpoint if static images are used. Subsequently Ode et al. (2009) made use of digitally processed images.

Studies on landscape perception are however increasingly looking away from static images and photographs in more recent times. Different sorts of questionnaires and interviews are increasingly used which sometimes taking participants into the landscape. Focus here is on how landscape perception is studied in this way. Several types of studies can be distinguished using: (1) semi-structured interviews (Myers & Ward Thompson, 2003), (2) questionnaires (Galindo & Hidalgo, 2005) and (3) focus groups (Bell et al., 2004) to study people's understanding of landscape. However, most of the studies in the literature are not done within the landscape itself but are still completed inside. Those which focus on longer periods of time are often in the form of questionnaires that become 'personal projects' to study the transactional relationship between the participant and the environment (Sugiyama and Ward Thompson 2007; Little, 2010).

An approach that is developed from Gibson's affordance theory (see section 3.3.5) is the observation of behaviour of the participants and how they react and interact with the environment. This approach was initiated by Baker (1976), who wanted to look at repetitive behaviour for certain combinations of features or structures in landscape. The behavioural differences were then used to delineate the physical landscape in order to link behaviour and landscape types. Moore and Cosco (2007; 2010) have used this type of participatory work on behaviour in order to study how people engaged with their environment through observing them

in the field. This is different (but can be seen as complementary to) interviews or questionnaires in the way it deals with human-landscape relationships that are expressed through bodily engagement and not through verbal communication. These are more conventional type of studies and evolved into approaches such as extended interviews during accompanied walks which offer the benefit of researching the subject within the landscape (Macpherson, 2007). Within such studies the researcher accompanies the participant during routines and normal daily activities within that landscape and records their comments, reactions and responses in as much details as possible (Ward Thompson, 2013). Scott et al. (2009) used ethnographic and phenomenological approaches to record participants of different social groups' experience of the landscape. They allowed participants to discuss their perception of landscape amongst each other during the study in order to come to a more coherent analysis. These approaches are often critiqued because the researcher is meant to be distant and 'apart' from the participants, on which grounds Ingold (2007) recommends a more anthropological approach grounded in participatory conversation his aim is to use landscape as a base for debate.

Recently, computer-based questionnaires and other computer-based techniques such as public participatory GIS (PPGIS) have been used in order to save time and money during the studies. These often GIS-based software packages allow for the integration of people's replies into spatially based modes of recording and analysis (Kyttä et al., 2011; Butler et al., 2018). Digital cameras, voice and video recording have also led to research methods that are easier to employ. The combination of walking and spatially based approaches will be further explored in Chapter 5 as these approaches form the base and main influencing ideas within this thesis.

3.5.2 Involvement of the participant

Not much has been said about the involvement or the commitment of the participant in literature, however Sevenant (2010) stresses its importance for studies on landscape perception. Her view is that questions must be asked in order to understand why any respondent is participating in such studies. She argues that the commitment of the participant is linked with the relationship that respondent has with the landscape used as study area.

3.5.3 Weather and in-situ landscape perception analysis

A last factor that could play a role during studies on landscape perception that must be discussed here is the influence of weather and seasonality on research in the field. It must be stressed however that this influencing factor is understudied and that this review must be limited to looking at some earlier mentioned studies. There is of no need to explain that an experience is different when sensed in sunshine or when it is raining. Granö (1929) already discussed this:

'It should be kept in mind when planning fieldwork that one would obtain a more complete picture of the site if one had the opportunity to make observations not only in as many parts of it as possible, but also as frequently as possible, at all seasons and in the course of a number of years.'

Granö (1997, pp.22-23)

Granö (1929) hereby states the effect of seasons on the different senses for participants and for the researchers themselves. The features of landscape change throughout the year and these ephemera change with weather, the growth and decay of plants through the seasons, but can also be linked with a different choice of crops by farmers (Brassley, 1998). Jones (2004) suggests the researcher examines how perceptions differ between 'ephemeral landscape' (characterised by irregular and short-lived phenomena) and 'seasonal landscape' (with phenomena that can be short and transitory but are regular and rhythmical). (see also Palang et al. 2005).

Underestimated, but related to weather and seasonality is the dependence of the mood of the participant to these factors. This is recognised in literature as very hard to measure and analyse. Galindo and Rodriguez (2000) refer to a link between mood and feelings and landscape perception. In a more general way, as discussed earlier, landscape has an impact on both physical and mental health (Ulrich, 1979; 1981). This must be taken into account while doing research and the empirical parts of the study outside and within the case study areas themselves.

3.6 Landscape perception in policy

The introduction of the ELC in 2000 (and its ratification by the UK in 2006) introduced the requirement to identify and assess landscape with the active participation of stakeholders. This has led to the development of many tools in policy making dealing with interpretation and thus

perception of landscape to inform landscape management, planning and monitoring (Ward Thompson, 2013). In line with the focus of this thesis, one category of these tools, characterisation, will be discussed more in-depth in the next chapter. In many cases such tools are focussed on visual perception, which implies both viewing and evaluating the view in relation to function (Tveit et al., 2006). These can be situated within the disciplines of environmental psychology (Hägerhall, 2000), preference studies (Sevenant, 2010) and studies that combine photo elicitation and eye tracking (Dupont et al., 2014). In the case of eye-tracking, participants observations of landscape photographs are analysed using an eye-tracking device. In doing so, conclusions can be made on which landscape elements participants focussed of in given situations or when asked particular questions. Dupont et al. (2014) however conclude that the properties of the photographs themselves have an impact on the way they are looked at by participants. They for example found that panoramic photographs are observed in a significantly differ way than standard photographs. This suggests that such studies are not necessarily interpreting landscape perception in the same ways as is the concept is understood within this thesis. The physiological aspect of landscape perception seems to be more important within this type of studies. These are closely related with studies on preferences related to landscapes and types of landscape. However, there is an important difference in that studies on landscape preference seem to represent the process of both physiology and psychology of landscape perception much better. Hägerhall (2000) states that landscape preference could be related to either affections of certain landscape types or recognition/familiarity with certain landscapes. This points towards the understanding that landscapes are experienced through an affective and cognitive part which was expressed in earlier studies (Ulrich, 1983; Bourrassa, 1990). Such studies on landscape preferences are often based on questionnaires or surveys and are valuable sources of information in landscape planning and management (Sevenant, 2010). A final approach to be discussed are the tools that define indicators of what is perceived by people. Yet again, this is often focussed on solely vision. Tveit et al. (2006) developed such framework for assessing landscape visual character using indicators: The VisuLands Framework. Such indicator framework had to predict and analyse the visual effect of landscape change and was thus focussing on comparing situations before and after change. In doing so, they have identified nine key concepts that describe visual landscape structure: Stewardship, naturalness, complexity, coherence, disturbance, visual scale, historicity, imageability, and ephemera. Such framework is suggested to be useful in establishing visual indicators that can help to quantify, measure and compare landscapes and the effects of landscape change on visual character. Also, Hedblom et al. (2020) develop and evaluate a model that links people's perceptions of a mountain landscape to physical monitoring data. The question can be asked

however, to what extent such methods are able to take into account other senses and how they make it possible to go beyond the conventional approach of management that was focussed on 'spectacular landscape' in different ways than 'everyday landscapes' these methods seem to use quantification to divide between 'better' and 'worse' and could therefore be understood to steer landscape planning in such ways.

3.7 Conclusion

This chapter has discussed existing ideas on the processes behind human perception and reviewed literature on possible influencing factors while studying landscape perception.
Landscape perception in literature is seen as a complex and broad term. Three main uses of the concept can be distinguished:

- Perception used as a synonym for sensations;
- Perception used as the interpretation of different sensation and thus the interplay between a physiological and psychological process;
- Perception as a reference to the result of an interpretation or understanding process.

Using the above understandings of landscape perception this study is keen to emphasise that landscape perception should be understood in the context of all the senses, not solely the visual one as is often the case in literature. Landscape perception is therefore not just looking at landscape, but also includes smelling, hearing, tasting and touching landscape. Moreover, it encompasses the psychological process that has both biological (evolutionary) and cultural (collective and individual) components that interprets these sensations to create an understanding of landscape. The way landscape is perceived will therefore be different for each person. By understanding landscape perception in its widest sense, a more inclusive framework for landscape perception and thus the link between people's identity and landscape can be developed within this study. This could then be used in characterisation approaches to make them more inclusive and underpin them with a bottom-up perspective.

The next Chapter will review characterisation approaches and focus on Historic Landscape Characterisation in more detail. The focus of that review will be on the approach's principles, philosophy and critiques.

Chapter 4:
LANDSCAPE CHARACTER AND HISTORIC LANDSCAPE CHARACTERISATION

4 Landscape character and Historic Landscape Characterisation

4.1 Introduction

Moving on from the concepts of landscape, character and the processes in perceiving landscape this Chapter will focus on the backdrop of this thesis, landscape characterisation processes and more specifically Historic Landscape Characterisation (HLC) it is the aim of this chapter to consider some of the published sources dealing with the concept of landscape character and existing tools to describe and identify this character, landscape characterisation and how the multiplicity of views on landscape are integrated within them. Characterisation work carried out by Historic England and the English Countryside Agency (Swanwick, 2002, 2003; Clark et al., 2004; Aldred and Fairclough, 2003; Countryside Agency, 2002; Fairclough et al., 2002) will be looked at more in depth as they are subject to one of the objectives of this thesis. Thus, in order to explore the framework of existing literature for this study further, this chapter addresses, in the English/British context, the links between perception and characterisation approaches, the principles and philosophy behind 'Historic Landscape Characterisation' (HLC) and the critiques formulated on the HLC approach. First this chapter looks at the origins of characterisation. Then, the chapter looks at the two main characterisation approaches for England: Landscape Character Assessment (LCA) developed mainly by the Countryside Agency and Historic Landscape Characterisation (HLC) developed mainly by Historic England (then English Heritage). This is followed by exploring the background and the development of HLC as a national programme for England and reviewing the HLC project of Northumberland, the county in which both case study areas of this research are located. Finally, the criticism HLC faces today and to which this thesis wants to formulate an answer are looked at more in depth. Evaluation of these criticisms then leads on to an assessment of alternative approaches and the development of a research methodology in the next chapter of the thesis.

4.2 From perceiving landscape to characterisation

The past three decades, the concept of character, as discussed in (Chapter 2) has been used as an interdisciplinary notion to study and analyse landscape across Europe and outside. Methods to identify and assess landscape character have been used regularly to inform landscape research, planning and management (Fairclough et al., 2018). While an increase of its uses was noted because of the ELC, the approach to characterise landscape was initially used to

overcome the protection and designation of special, 'unique' landscape creating a more integrated approach to landscape management. Characterisation seeks to understand and to manage landscape as a ubiquitous concept, not solely the special and threatened parts of it. As mentioned in the sections on Character in Chapter 2, it was the European Landscape Convention that puts character and character-based approaches firmly on the policy and research agendas which led to a significant increase in similar techniques across Europe. This was not only due to the definition of landscape of the ELC "…whose character is the result of…" (CoE, 2000) but also to one of the requirements the ELC asks of its signatories:

"identify their own landscapes throughout its territory; to analyse their characteristics and the forces and pressures transforming them; and to take note of changes and to assess the landscapes thus identified, taking into account the particular values assigned to them by the interested parties and the population concerned."

(CoE, 2000 – Art 6c)

This sixth article requires the state parties to identify landscape characteristics throughout their territory yet, leaves it to them how to do this. Due to the holistic nature of landscape different methods, approaches and systems for identification landscape character exist. These can be situated within their disciplinary fields and traditions of geography, archaeology, ecology and landscape architecture (Simensen et al., 2018). Wascher (2005) stresses that depending on their roots, the characterisation and classification methods are emphasising different aspects of the landscape to a smaller or larger degree. These might also understand landscape on different spatial and temporal scales (Mücher et al., 2010). Yet again, as Olwig et al. (2016) stresses, any discussion about landscape characterisation is a discussion about the definition of landscape itself. In literature authors suggest that in general in landscape classification there is a division between a biophysical approach, with a background in natural sciences and a landscape character approach with a background in humanities and architecture (Simensen et al., 2018). The biophysical approach is originating from the period in which there were more descriptive and systematic landscape classification made during the naturalistic explorations (e.g. Von Humboldt). This tradition is adopted by physical geographers and sits within the discipline of landscape ecology. Such an approach is defining landscape units as actual and physical delineated areas on the surface. In the idea of landscape this would mean that there is a divide made between 'better' or 'worse' landscape according to some pre-set conditions. This way of classifying was used up until the end of the 20th century (Forman and Godron, 1986; Zonneveld, 1988).

It is especially the second approach to landscape classification that is interesting to this study. These 'newer' methods are contrasting with the biophysical approach as they are developing landscape units that are dependent on human perception of or sociocultural relations to landscape (Simensen et al., 2018). This tradition of landscape classification originated in the UK in the early 1990s (Swanwick, 2002) but similar approaches occurred across Europe, with the same idea in mind but with different concepts of landscape supporting them (Fairclough et al., 2018). These other approaches are appearing in France (Atlas des Paysages) and in Belgium (Traditional Landscapes) using Antrop's work. It was however the UK-based approach of Landscape Character Assessment (LCA) that has become central to a lot of landscape classification techniques in Europe (Van Eetvelde and Antrop, 2009; Butler and Berglund, 2014). LCA-methodology aims to integrate both natural and cultural aspects of landscape and people's perception to form a spatial dataset for planning and development. Simensen et al. (2018) note how many perception-based approaches often solely deal with landscape preference and landscape values (what do people like and prefer in landscape), LCA has a distinction between two stages: the relatively value-free process of characterisation (relatively value free because the expert carrying out this part of the process interprets landscape through the lenses of his own values) and the subsequent assessment of landscape values (Swanwick, 2002). A more in-depth overview of the LCA methodology and its influence and complementarity the characterisation approach used in this thesis will be given in the next section.

4.3 Start of characterisation in the UK: Landscape Character Assessment

4.3.1 Origins of Landscape Character Assessment

While is it not the characterisation approach that is used within the rest of this thesis it is impossible to start explaining the ideas of Historic Landscape Characterisation (HLC) without explaining the ideas and approach behind Landscape Character Assessment (LCA).

Today, Landscape Character Assessment (LCA) is used across England and Scotland to inform future planning and identifying landscape resources in line with ELC's requirement (Butler and Berglund, 2014). Originally developed from the 1980 onwards, LCA was a reaction to the earlier mentioned biophysical and statistical methodology looking at landscape as an object and to the approaches that evaluated landscape to be able to make one area of landscape 'better' than another one. To overcome these limiting approaches, gradually landscape planners started

to use perceptual, subjective factors of landscape alongside the objectifiable matters of agriculture, forestry, recreation and nature conservation but a more systematic approach was needed (Swanwick and Fairclough, 2018). The approach, which matured into the LCA method known today, recognised the experiential value of landscape to be as significant as the other values and landscape to be greater than the sum of its parts, landscape as a holistic concept (Chapter 2). Around 2000 (and thus together with the launch of the ELC) the LCA approach became more or less formalised in the Countryside Agency's (now Natural England) guidance: *Landscape Character Assessment: Guidance for England and Scotland* (Swanwick and Land Use Consultants, 2002). Subsequently LCA has been identified as one of the tools that contribute to the implementation of ELC in England. Martin (2004) states that there is a positive distinction between LCA-based landscape planning and planning based on the more traditional approaching focussing on landscape as an object and statistical concept:

> *"More recently, with the introduction of Landscape Character Assessment, the balance has shifted away from policies for designated areas alone towards an emphasis on more positive policies aimed at maintaining the distinctive character of the whole countryside"*
>
> (Martin 2004, p. 205)

This shift towards a more holistic landscape approach and understanding landscape to be ubiquitous rather than a selective and objective approach can be understood in a general change in thinking regarding the management of landscape as seen in Chapter 2. While protection of 'special places' was a central and key tool before, sustainable development across the whole countryside comes to the foreground (Dobson, 2012). Fairclough (2006) does outline how at that time (and probably still today!) there was a clear need for sustainable development thinking in heritage, landscape management and planning and therefore suggests that the whole landscape needs to be examined to carry and accommodate change. The guidance on LCA suggests that The Countryside Agency focussed on environmental protection and prudent resource use which situates characterisation as a tool in managing preservation and change of landscape (Dobson, 2012). The key principles of LCA can be explained as follows:

- *the emphasis placed on landscape character;*
- *the division between the process of characterisation and the making of judgements to inform decisions;*
- *the roles for both objectivity and subjectivity in the process;*
- *the potential for application at different scales.*

(Swanwick and Land Use Consultants, 2002, 8)

Characterisation is defined in LCA based on the understanding and description of the variation between distinct landscape areas and types, identifying what is unique about each area, rather than better or worse. This uniqueness is based on the combination of the landscape features that are present which make up the landscape character in which all of those aspects play their part (Butler and Berglund, 2014). LCA consists of two phases: a characterisation phase and the assessment phase. The first phase is seen to be a value-free stage, defining and describing the landscape character areas and types. This phase exists out of a desk-based study in which an initial understanding of landscape is acquired through map analysis and preparation of overlays of different aspects. This first step provides a base for a draft of character areas and types. This is then followed by fieldwork which involves identifying sensory elements, refining boundaries of the map-based study. Finally, classification of the information of the landscape is carried out before dividing this into distinct recognisable areas and types with consistent common character (Swanwick and Fairclough, 2018; Butler and Berglund, 2014). The second phase then includes a variety of different judgements on the outcome of phase one. These judgements can include both value questions and judging management needs of specific areas. In some projects however the phase of judgement is not carried out immediately but deferred to when it is deemed needed within a planning process that takes place within the area (Swanwick and Fairclough, 2018).

At a national level the National Character Areas (NCA) (Figure 3) which are developed by the Countryside Agency and Natural England provide a consistent character framework for England. This network serves (together with more regional character assessment projects) a broad strategic and planning purpose. More detailed local assessments then underpin local planning policies or management plans of individual sites (Swanwick and Fairclough, 2018).

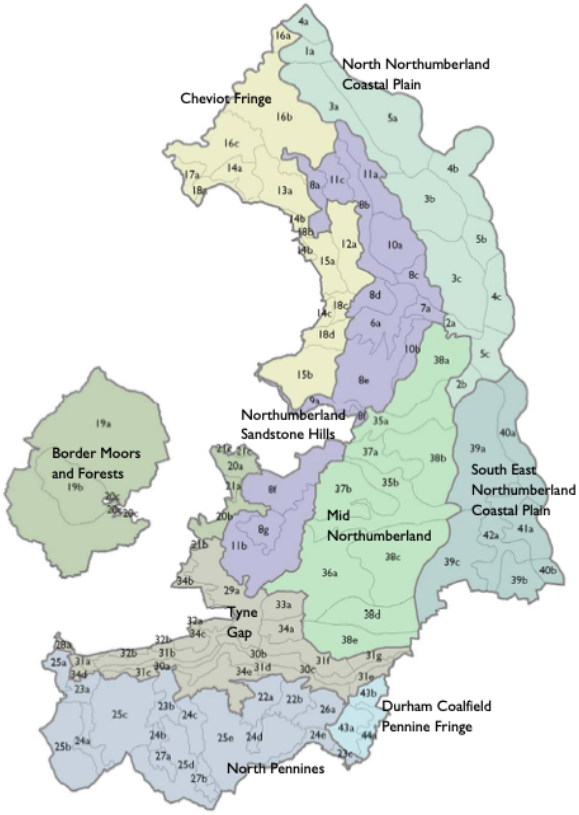


Figure 3: National Character Areas for the Northeast of England (in colours) with subsequent character areas (coded polygons)

4.3.2 People's perception and Landscape Character Assessment

While LCA projects are mainly prepared, developed and used by professionals (Sarlöv-Herlin et al., 2018). The LCA guidelines refer to the ELC's definition of landscape in order to include people's perceptions of landscape. In the idea of this thesis, it is interesting to review how this is done in practice. The section here is largely using Butler and Berglund's (2014) review of the of bringing public involvement in LCA.

The LCA approach and methodology do offer the possibility of bringing public involvement into a very early stage of the planning process and makes room for the public to be involved in defining and identifying landscape as required by the ELC. However, there are very limited guidelines on how to operationalise the participatory promises within LCA. There is a small mention on the importance and benefit to having people's view included in local projects and within the judgement phased of all LCA projects. These stakeholders are seen as the people (individuals and groups) with an interest in the particular landscape. Here the approach recognises the difference between a community of place and a community of interest. The

former can be defined as those who live in the place, visitors to the area and businesses located within the area. While the latter, the community of interest is focussing on the governmental bodies, NGO's and others who can provide a contextual information. The guidelines acknowledge that a community of place have the greatest stake and also the widest variety of perspectives and meanings about landscape which need to be integrated. Butler and Berglund (2014) suggest that the division of communities of place and interest could be useful in terms of understanding where stakeholders come from, however it could complicate the participatory process more than is needed as it is sometimes hard to differentiate, they add. The guidelines however do not state whether it is better to undertake a more in-depth approach with fewer participants or to gain a broader understanding by involving more stakeholders. Also, they do no give guidance on what phase of the LCA (characterisation or assessment phase) is best suited for the involvement and what scale is most appropriate. It is however recognised that stakeholders should be included within the process as early as possible. Butler and Berglund (2014) add that the scale at which this involvement should take place is preferable the local scale as this is most appropriate to the community of scale. This is the scale at which people can relate to landscape and understand how it relates to their lives. For LCA public participation should result in better informed assessment with richer data and providing the opportunity for partnerships and debate in landscape afterwards. Butler and Berglund (2014) accessed 52 LCA projects and for them the participation approaches could be divided in two subsets: the first set in which the public provided feedback about the landscape (characterisation phase) and the set in which the public gave feedback on the assessment phase. The authors state that the latter approach is contrary to the ELC advice that considers that there is a need for the public to be involved within the identification phase of landscape characteristics (CoE, 2000). Bringing the public involvement to the end of the LCA process misses the perception of landscape held by those who reside and use landscape which is seen as central in ELC. Swanwick and Fairclough (2018) give a few reasons for not having adequate participation in LCA projects (and in fact in other characterisation approaches, including HLC in general). They point to the context of characterisation work as the main reason, taking place in an academic or professional context. Within these setting only using the expert's perspective is less time consuming, easier and more cost efficient. They suggest however there might be more fundamental reasons to why the public is not involved or involved at the wrong time. This has to do with the idea that characterisation has to happen at a higher scale than the local to be working as designed and also to be a strategic tool it needs to be developed before any changes are planned or due imminently. In Swanwick and Fairclough's (2018) opinion it is not easy to draw in the public at a stage where there is no imminent threat of change. Also, the discussion on 'who are the

people' that need to be involved in the process is providing a barrier that needs to be overcome in their opinion (Swanwick and Fairclough, 2018). Butler and Berglund (2014) conclude by stating that including multiple perceptions of landscape in characterisation approaches (in LCA in their particular article) needs the realisation of the diversity of perception. 'Approaches need to be able to aggregate the diversity of perceptions in such way that they are understandable outside of the process in which they are formulated' (p.233). These last set of comments on public involvement will be used and explained further in the Methodology Chapter (Chapter 5). This thesis sets out from the idea that landscape is tension and therefore the inclusion of public perception in characterisation processes will be treated in line with the objective of HLC to be a start for discussion on what matters in landscape rather than a final product. The next section will zoom into HLC as an approach and will look at the reason behind this objective. This is, from what is gathered from the literature review and looking at specific LCA project perhaps one of the main differences between LCA and HLC.

4.4 Historic Landscape Characterisation

4.4.1 Origins

Since the 1940s and 1950s landscape has been managed in the UK through a set of tools that was primarily focussing on designating special areas. It was not till the 1980s the consideration of characteristics in landscape appeared alongside the evaluation of specialness (Fairclough, 2006; Dobson, 2010). As discussed in the previous section, LCA was the first and perhaps most significant methodology with that philosophy in mind during that time. However, at the beginning of LCA the methodology was more focussed on the rural landscape only and not appreciating the historic and cultural dimensions of urban landscape as such. Therefore, a parallel methodology started to emerge at the beginning of the 1990s: Historic Landscape Characterisation (HLC). Inspired and shaped by the LCA approach, HLC has different objectives than LCA. While LCA was developed by the Countryside Agency, HLC is developed from within English Heritage (now Historic England) and its Scottish and Welsh counterparts in order to extent their work from individual sites, monuments and buildings to more wider ideas of the historic landscape. But both characterisation approaches have the same central themes as Dobson (2010) discussed in his PhD thesis on the practical use of HLC by referring to Swanwick (2004): "Identifying, describing and analysing the character of the English Landscape" and "Identifying specific opportunities to conserve or enhance this

character" (p. 113). And while having its own objectives HLC shares a lot of its aims with LCA and was always seen and understood to be complementary to the 'other' characterisation approach. This is also what the developers have argued in their guidance for HLC, they confirmed the perception of social and humanist disciplines that LCA lacks a focus on the complex ways in which humans have impacted on the appearance of landscape and the length of time over which this influence has occurred (Macinnes, 2004, p.156). Therefore, the guidance of LCA recommends that the best form of landscape management would be to combine both the LCA and HLC approaches and mapping in the final assessment or judgement (Swanwick and Land Use Consultants, 2002)

The need to address the human impact on landscape was especially apparent in disciplines such as landscape archaeology and landscape history where approaches to record, analyse and manage the whole historic environment were lacking (Swanwick and Fairclough, 2018). Macinnes (2004), in her overview of the uses of HLC in planning affirms this original need for a characterisation methodology and looks at the holistic aims of the technique to highlight and analyse the importance of landscape-scale archaeology for both creating a context for sites or when remains cannot be classed as site in the traditional manner. Fairclough (2006) mentions the reason for the development of HLC once again:

"HLC was designed to help with managing change in the whole landscape in ways that are rooted in sustainability and integrated management. It uses principles and objectives that differ from those used in traditional monument-based protection."

(Fairclough, 2006, p.55)

One of the aims of HLC was to be a tool to communicate knowledge about the historic dimension of landscape and to add richer data to landscape studies in general too. Its philosophy is clear in that sense: all aspects of landscape have a historic process that shapes them (including ecological, economic and social aspects) (Turner, 2018, p. 40). Fairclough and Herring (2016) understand the three concepts of the HLC acronym as follow:

- *Historic: a questioning view of the past as it is seen by us in the present*
- *Landscape: A place as perceived and contested by people and created by natural forces and human actions*
- *Characterisation: identification and description of essential or distinguishing features and qualities.*

(Fairclough and Herring, 2016, p.189).

The technique and its practical application pioneered in Cornwall in 1993-1994 and since then its nationwide coverage as part of a national programme has been completed. At the beginning, the approach was focussing on observable attributes that were ascribed to predetermined landscape character types (Herring, 1998, 2013). While at this point a couple of similar approaches were coordinated by English Heritage it was the HLC approach that was rolled out to a first pilot study carried out on Bodmin Moor, Cornwall. This pilot study was delivered as part of a larger project of Landscape Character Assessment and coordinated by both the Heritage Agency and the Countryside Agency (Land Use Consultants, 1994). The fact that HLC was part of a bigger LCA project is the reason for the similar principles between both methodologies according to Turner (2018), these similarities and differences will be discussed later on in this section. While, both HLC and LCA have similar aims and partially similar principles both approaches have evolved separately and matured into two different approaches to landscape characterisation over the past 30 years.

The original aim of the Bodmin Moor and Cornwall HLCs to inform the LCA also showed to benefits of HLC as a stand-alone approach (Fairclough and Herring, 2016). By developing both HLCs archaeologists and heritage managers changed their ideas and conceptualisations of the historic landscape they were looking at. Fairclough and Herring (2016) state this by underlining that it became clear to the landscape managers that landscape is debatable. They appreciated that the way people have different interests and values in landscapewas not included in previous approaches to deal with historic landscape. These approaches often ascribed fixed value to parts of the landscape as explained earlier but neglected the multiple evaluations made by other stakeholders. Therefore, HLC outputs and databases are value free (or 'judgementally neutral' as Fairclough and Herring (2016) state). HLC becomes a starting point for future decision-making without steering that decision making itself but by allowing valuations to be carried out at the time and by the stakeholders that matter at the time of the project (Herring, 2013). Furthermore, the authors stress the importance of HLC in steering policy on historic environment management in England at the end of the 1990s. The value free approach of the HLC was mirrored in the new heritage guidelines that were developed at the level of the Heritage Agency (English Heritage). The agency suggested that there was a need to enable inclusivity in the multi-cultural English society and emphasised on the idea of heritage (and thus the historic landscape) as plural and universal (English Heritage, 2000; Fairclough and Herring, 2016). These are ideas that are inherent to the earlier mentioned European Landscape

Convention (CoE, 2000) as well. The UK government reacted to the renewed thinking of English Heritage and noted that HLC is a 'sophisticated technique for assessing the character of particular areas and for identifying management implications and opportunities for change and development using the historic landscape character to enrich the future landscape and to inform decision on future sustainable uses' (In: Fairclough and Herring, 2016). This policy document gave HLC a framework to develop the approach further towards a national programme that would be carried out on a county basis. The different HLC-projects that were developed within this programme are faithful to the original aims of HLC, yet each and every one of them has its own little deviations from the template methodology. This 'variety' of methods is different to the way its Scottish counterpart wanted to be comparable across the country and therefore adopted a standardised methodology (Dobson, 2010). The differences across the various English counties were inevitable for two reasons: Firstly, because of the variety and composition of the different local teams that developed the HLCs. While the HLC project aimed at being value-free it is impossible to exclude the experts' interpretations of landscape altogether, so they are inevitably taking into account their values in landscape. The importance of certain aspects of landscape therefore differs across HLC projects (Fairclough and Herring, 2010). A second reason can be found in the aims of the approach itself it aims at facilitating and analysing local distinctiveness. This can only be achieved when the tool is adapted to fit local and county specific planning and conservation issues (Dobson, 2010). Today this national programme has been completed and the numerous HLC project have been gathered and connected within a National HLC, this was a Natural England funded project. This process involved the simplification and translation of local types into a national scheme. Various other approaches have used the principles and aims of the HLC approach such as:

- *Historic Seascape Characterisation (HSC), initiated by English Heritage to map and describe the historic cultural influences that shape present seascapes.*
- *Urban Historic Charactersation: a broad term that includes Extensive Urban Surveys (EUS), Metropolitan Historic Landscape characterisation, carried out in for example Birmingham and Tyne & Wear; and Urban archaeological databases (UAD)*
- *Historic Area Assessment (HAA) concentrating on specific parts of a city or town, area or rural landscape in relation to proposed change*

(Subdivision after Historic England website, visited 21/04/2019)

It would lead to far in the scope of this thesis to review the literature on these approaches.

4.4.2 Guiding principles of HLC

As stated in their paper pioneers Fairclough and Herring (2016) suggest HLC is a tool for everyone, not only planners, heritage managers or historic environment conservationists can use it. They refer to its principal aim to make this clear:

> *'Characterisation raises awareness that the whole of the landscape (…) has historic value and all should be involved when considering a sustainable future (…) All those with an interest in the future of the landscape, urban as well as rural, will be concerned that its historic character, and the components that help determine it, are included in decision making processes (…).'*
>
> (Herring, 1998, pp. iii, 1 in Fairclough and Herring, 2016)

The utility to everybody has been suggested when HLC was said to be concerned with three areas of study:

- *'The passage of time – time-depth "the superimposed layers of landscape, not all equally visible, that make up landscape's palimpsest"*
- *Human agency is central – considering the "historic process that lay behind the fabric and morphology of the landscape."*
- *Issues of change. Change creates landscape diversity which is the nature of 'landscape character''*

(Fairclough and Wigley 2005, p. 93)

And in their 2016 paper Fairclough and Herring underline those three directions, HLC projects need to look at our own time and landscape with a critical gaze, needs to provide a guidance on looking towards the future and give a clearer view of the past. Especially that first direction mentioned here is crucial to the aims of this study. The HLC approach thus tries to inform all landscape stakeholders on the part, present and future of landscape.

Besides being 'a tool for everybody' another key principle of HLC was briefly mentioned in the previous section, the whole landscape contains time-depth and legibility of past changes, it is therefore the landscape itself that can inform us about the various stage that make it into a palimpsest. Dobson (2010) states that to come to inclusive changes in landscape, planners (and other stakeholders) need to be aware of the time and place in which they take place in order to respect the multiple layers of change that are undervalued in isolation but together form the

'character' of landscape, which is multi-temporal because of its definition. Because it the current landscapes are the only landscapes that went through this full temporal diversity it is the current landscape that forms the starting point of HLC something that was also underlined by Macinnes (2004).

'HLC enhances our understanding of the modern landscape. It is beginning to offer an insight into the historic complexities behind it and to depict regional variation and local character related to this"

(Macinnes 2004, p.162).

HLC wants to put a focus on the changes that have happened in the past, to come to the present landscape and form a basis to make sustainable decisions for the change towards the future (Dobson, 2010).

While 'being for everybody' and 'starting from the present landscape' are two of the principles that are key within the scope of this study. Other HLC principles are:

- *The present-day landscape is the main object, though characterisation of that will require understanding and representation of a place's history, (...) its most important characteristic is its time-depth; the appreciation that change and earlier landscapes exist in the present landscape*
- *(...) Characterisation recognises that landscape is and always has been dynamic and that society and its decision makers are most often involved in the careful management of change rather than preservation in the face of it*
- *HLC-based research and understanding are concerned with area not point data*
- *HLC itself provides a valuable context for understanding individual heritage assets*
- *Semi-natural features (woodland, rough ground, hedges etc.) are as much a part of landscape character as archaeological features; (...) The value of habitats, communities and species is increased, not diminished, by acknowledgement of their historical meaning.*
- *HLC does not attach an expert's ascription of significance or value, recognising that these are not immutable. (...)*
- *All aspects of the landscape, no matter how modern or fragmentary, are treated as part of historic landscape character. (...)*

- *It is possible and desirable to use the records of a place's attributes that HLC contains in its database and that have informed assignment of places to HLC Types to prepare statements of significance and to model degrees of sensitivity to particular change scenarios*
- *Users of HLC need to be confident that it is reasonable and robust material, so the process of characterisation is transparent, with clearly articulated records of data sources and methods used*
- *For the same reason, HLC maps and text have been made to be jargon free and easily accessible to users. Most HLC results are integrated into other environmental management records, most often HERs*
- *Characterisation is designed to be a spatial framework that can accommodate people's views, enabling collective and public perceptions of landscape to sit alongside more expert views*

(Guiding principles of HLC on Historic England website, visited 21/04/2019)

The last principles and the inclusion of people's views and enabling collective and public perceptions of landscape to sit alongside the expert views is the core of this thesis as this study is formulating an answer to some of the criticisms HLC has received on the lack of inclusion of participatory work within the approach. More details on these critiques will be given in section (Section 4.6).

4.4.3 HLC Methodology

The method as described by Herring (1998) in the report of the Cornwall HLC is remains the core of the approach today. Turner (2018) states that the key to this approach is that it related to both the physical form of today's landscape and interpretation of the processes and practices that have shaped the characteristics of each landscape type over time. The types of landscapes discussed can vary across the different HLC projects according to the sort of HLC project (rural or more urban orientated HLC for example). The types discussed in each of the projects are predefined before the mapping and characterisation starts and are the result of past research and built-up knowledge of the archaeology and history of the area. Within the original HLC for Cornwall, Peter Herring and his team developed seventeen landscape types (see Table 4.1):

Table 4.1:Types of landscape character in Cornwall HLC (after Herring, 1999, p.21)

1. Rough ground	10. Industrial (disused)
2. Prehistoric enclosures	11. Industrial (active)
3. Medieval enclosures	12. Communications
4. Post-medieval enclosures	13. Recreation
5. Modern enclosures	14. Military
6. Ancient woodland	15. Ornamental
7. Plantations and scrub woodland	16. Water (reservoirs etc)
8. Settlement (historic)	17. Water (natural bodies)
9. Settlement (modern)	

In Cornwall HLC the classification of HLC types was used to characterise the whole of the county using pen and paper. Printed Ordnance Survey maps (scale 1:25,000) were used base-maps and the primary source of information. Turner (2018) signals one of the main differences between the Cornwall HLC project and the following HLCs: the use of Geographic Information System (GIS) to create, analyse and manage data.

GIS have been used in geography and natural resource management since the 1970s, and their adoption in archaeology and historical studies dates back to the 1980s (Aldenderfer, 1998). Today GIS has become a standard tool in professions that are dealing with landscape management and can be used for outreach to the general public using various web-based GIS viewers too. One of the key advantages of GI-systems is their resilience to new insights and changes to the data at later stages or when the project is finished. They are also suitable tools to compare HLC datasets with others and perform spatial analyses on them (Turner, 2018). For HLC in particular this mean that within a GIS both the spatial and non-spatial complexity of landscape can be described and analysed within a single digital platform. On the other hand, there are different pros and cons in using raster datasets or vectors (the two data types in GIS) to record landscape character. For example, high-resolution raster datasets can visualise small variations in the landscape and record them to be a homogenous part of landscape which is particularly useful when the structure of the landscape is unknown. Then raster maps could be used to analyse patterns of cells and isolate sectors of the study-area with uniform characteristics. The use of raster datasets such as LiDAR or satellite imagery, widely utilised in archaeological and ecological remote sensing (Hesse, 2010) can be taken as an example of this. However, HLC is user-based and question-driven, rather than an automatic pattern recognition. Besides, each character type can be associated with a variable amount of information, which would lead to management problems in raster format. All these issues

suggest that the use of vector formats linked to external databases is more appropriate for the research questions of HLC (Dabaut and Carrer, forthcoming). This leads to vectorised polygons which are visualising 'blocks of character type' within the GIS database. GIS can also be a useful tool when creating more local HLC projects based on the countywide HLC (included in the national programme), as HLC is not necessarily carried out on a county scale. The scale of an HLC project will depend on the aim of the project and thus GIS can be used to fit in more local HLCs into broader projects. Besides the GIS software itself, Turner (2018) explains how most HLC-projects use stand-alone database (often within Microsoft Access) to store the data related to each of the polygons. Which makes it interesting to attach large amount of data to each of the polygons or add supplementary data to the character type or the attributes themselves. A feature of the HLC approach that will prove key to this study when integrating the data of the empirical study.

Dabaut and Carrer (forthcoming) give an overview of the technicalities behind HLC. HLC methodological foundation is the identification of the smallest 'block of character' (given a project-specific threshold) with distinct landscape character through time. The character of the polygon might have changed over time, but it has always been uniform within the boundaries of the polygon.

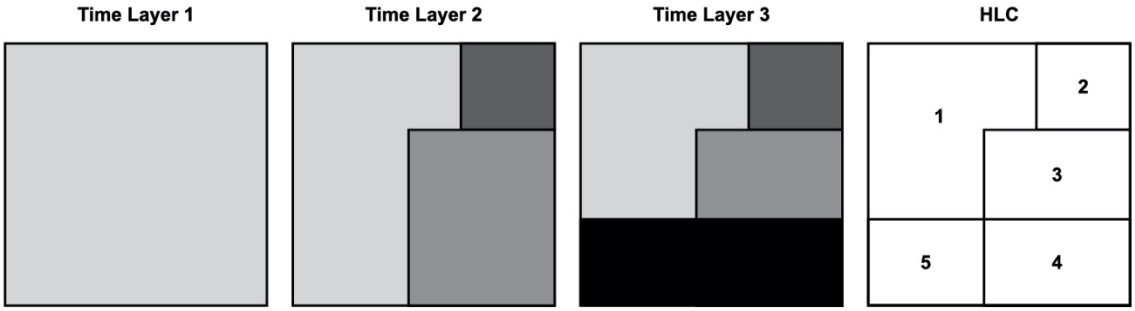


Figure 4: Uniform diachronic approach used in HLC (after Dabaut and Carrer, forthcoming)

As illustrated in Figure 4, the study-area has a uniform character in time layer 1; in time layer 2 two sectors convert to different character types; in time layer 3 other two sectors, previously homogeneous, start differentiating, while one of the two transformed sectors of time layer 2 change its character; in time layer 4 the study-area presents five distinct characters. HLC records this spatial and temporal change. The number of polygons is 5, corresponding to the largest number of character types recorded in every time period. All these polygons will have the same character in time layer 1; in time layer 2, three polygons will have the same character and two will have a different character; in time layer3, two polygons have the same character,

and the other three have distinct character; in time layer 4, all the polygons have different characters. If the process is reverted, and time layer 1 becomes the most recent and time layer 4 the oldest, the characterisation approach does not change. The number of regions matches the largest number of character types in the study-area, regardless of the chronological sequence. As previously pointed out, each polygon represents the evolution of an individual spatial polygon over time. Therefore, each polygon is associated to a single database record, recording the different transformations of landscape character and including the attributed that describe character within that spatial polygon in different the different time layers. If the information for every phase is large and complex, it can be organised into different tables (one for every time layer) connected via UID to the polygon. Together with Turner (2018), Fairclough (2008) provides the best summary of the methods used in HLC and together with that he refers to some reviews of the approach that provide technical and specification (Herring, 1998; Fairclough 1999; Fairclough et al., 1999; Fairclough, 2002; Fairclough et al., 2002; Aldred and Fairclough 2003). Interesting to the idea of this thesis is aim of HLC to identify similarity and general patterns in landscape, an aim that is stated by Fairclough (2008):

> *'What HLC seeks to do is to identify similarity and general patterns. It is not an environmental database, but a way of mapping interpretations. The detailed attributes attached to each polygon provide the basic means to describe present-day historic landscape character.'*
>
> (Fairclough, 2018, p.416)

According to this quote HLC is a way of mapping that makes it possible to integrate different interpretations of landscape, this is one of the aims of this thesis.

4.4.4 HLC in practice: HLC of Northumberland

To illustrate the previous section and to give an insight in the HLC project that will be used as a backdrop to this thesis. This section will look at the methodology used in the HLC of Northumberland (the county in which both case study areas are located) and will also focus on the outcomes and used attributes to come to the characterisation. This section relies on the report made at the end of the HLC project developed by Liz Williams at Northumberland County Council in 2008 (Williams, 2008).

Sources used for an HLC project

In order to be able to carry out the broad and generalising HLC methodology there is a need for area-wide sources of information to be integrated within the GIS-database. In Northumberland the following map sources were used:

- Ordnance Survey MasterMap (base-map of the project) (1/2,500)
- Ordnance Survey MasterMap (1/10,000) – for more wide perspective
- Ordnance survey maps of the 1970s
- Ordnance survey maps of the 1980s
- First and second Edition maps (1860s and 1890s)
- Digital aerial photography from Getmapping (Millennium Map)

Also, a physiographic model of Northumberland was used to create this project. This is an aggregation of datasets that describe geology, soils and landforms of the county and was used to the analysis stage (Williams, 2008). This is in line with the comments of Turner (2018) who refers to the potential of new data sources (Lidar in particular) on top of the more conventional data-sources such as historic maps and aerial photography to add information to HLC projects.

Mapping methodology

(after Williams, 2008, p. 15)

The process of defining HLC polygons began with examination of the modern Ordnance Survey mapping, looking for 'blocks of character'. Having identified these blocks within today's landscape a comparison could be made with the first edition map from the 1860s, any similarities or differences noted, and adjustments to the boundary of the HLC polygon could be made. Because, the large quantity of data involved, each of Northumberland's district (borough) authorities were dealt with separately and at the end of the project all polygons were pasted into a new county shapefile. Relationships in border areas (between districts) were considered carefully as the data gathering programme developed. Once a polygon was defined details about it were then entered into the database with only minimal metadata information being added to the GIS attribute table.

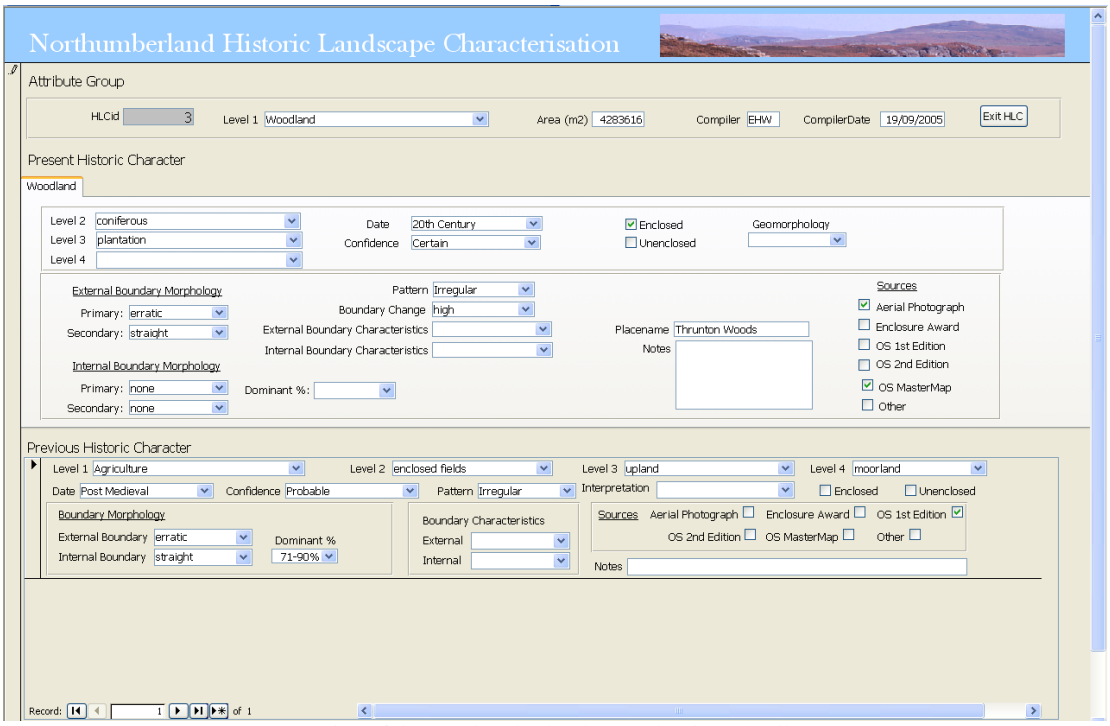


Figure 5: Screenshot of the Northumberland HLC-database (Williams, 2008, p.15)

Interestingly the database structure of the Northumberland HLC was based on the original template project design developed by English Heritage in 2002. As can be seen in (Figure 5), two main tables were created: one for the 'Present Day character' of the polygon and one for the 'Previous Historic character'. The data entry screen was related to the Level 1 category given to the polygon and changed accordingly to allow for different combinations of relevant attributes (relevant to the category) to be displayed. It would lead too far within this study to review all tables and databases however it is interesting to look at the hierarchy of types used (Table 4.2) and some more specific attributes included within the database (Table 4.3).

Table 4.2: Historic Landscape Character Types in Northumberland HLC (Williams, 2008)

Entry Level Types (Level 1 categories) Often called Broad Types in different HLC projects	**Level 2 categories** Often called Classes in different HLC projects	**Description of Level 1 categories**
Coast	Intertidal zones	Land between high and low watermarks, including cliffs, sand dunes and rocky foreshore.
	Dunes	
	Rockey Foreshore	
	Saltmarch	
	Cliff	
Communications	Roads	Major communication routes over 20m wide, airports, and harbours. Includes road, rail, air and water transport.
	Railways	
	Disuses Railways	
	Airfields	
	Harbour	

Fieldscapes	20th Century restored fields	Enclosed Fields
	Other 20th Century fields	
	Late 19th Century Fields	
	Surveyed Enclosure (straight edged)	
	Surveyed Enclosure (wavy edged)	
	Surveyed Enclosure (erratic edged)	
	Other small surveyed fields	
	Piecemeal enclosure	
	Reorganised piecemeal enclosure	
	Other small irregular fields by settlement (paddocks and closes)	
	Irregular upland fields	
	Miscellaneous floodplain fields	
	Other large irregular fields (lowland)	
	Other medium irregular fields (lowland)	
	Other medium irregular fields (lowland)	
	Ancient enclosure	
	Horticulture	
	Other farming	
Industry	Active extractive sites	Land used for industrial purposes, including extraction, fabrication and utilities.
	Abandoned extractive sites	
	Other active industry	
	Utilities	
	Abandoned industry	
Military	Disused military airfield	Land used for military purposes, including land (barracks, etc) and air (RAF bases, etc).
	Active military airfield	

	Active military site	
	Disused military site	
Ornamental/Parkland/ Recreation	Designed landscape	Designed landscapes, including parkland, cemeteries.
	Golf course	
	Sports ground	
	Other Parkland and Recreational	
Rough Land	Open upland moorland	An area of open, uncultivated land with poor soil that is covered with a moorland vegetation (predominantly heather, grass and sedges).
	Enclosed upland moorland	
	Open lowland moorland	
	Enclosed lowland moorland	
	Reverted moorland	
Settlement	Pre-1860s settlement	Excludes parks, sports grounds, cemeteries, etc
	Late 19th Century settlement	
	20th Century settlement	
	School	
	Institution	
Water	Reservoir	Bodies of water, including natural (rivers, etc) and artificial (reservoirs, lakes, etc).
	Natural open water	
	Artificial lake/pond	
	River	
	Marsh	
Woodland	20th Century Woodland	Areas of woodland.
	Later 19th Century woodland	
	Pre-1860 woodland	
	Ancient Natural woodland	
	Ancient semi-natural woodland	
	Ancient replanted woodland	
	Scrub	

According to the presence of the historic landscape type different attributes are filled out for the polygon. It is hard to find which of these attributes could be attributed to a specific type. Table 4.3 gives an overview of the most commonly used attributes.

Table 4.3: Attributes of the Northumberland HLC (Williams, 2008)

Attribute in HLC database attributed to polygons (based on the types above)	Description
Date	Record of broad period of current or previous landscape character type came into being. Based on OS maps and Historic Environment Records
Confidence	This is a measure of the confidence for the date and interpretation attributes, which gives a rough indication of likely 'correctness'.
Geomorphology	an indication of the physical situation of a polygon where relevant and included the terms, dean, haugh, island, river terrace, and valley bottom.
Interpretation	A list of landscape types was devised to give an indication of the likely processes and origin of polygons.
Field Size	Only applicable to Fieldscapes and enclosed Rough Land groups. The predominant field size in an HLC polygon was described as one of three categories: small (< 2 hectares), medium (2 to 10 hectares), and large (> 10 hectares).
Number of fields in polygon	This is a count of the number of enclosures in a polygon as shown on the modern OS MasterMap or 1:10,000 scale map. When used with the number of fields recorded on the first edition OS map it can give an idea of the loss or change of boundary features.
Boundary Change	A rough measure of the degree of boundary change, measured as high, medium, low or none.
Place Name	Town, village, farm and woodland names have all been recorded as they appear on the modern OS 1:10,000 map or MasterMap.
Pattern	The boundaries and divisions within each polygon and was mainly used to record field boundaries in the Fieldscapes group
Boundary Morphology	This describes the primary (dominant) and secondary (minority) internal and external

	boundaries of a polygon. The values include, curving, erratic, sinuous, straight, and none.
Dominance	This is a rough measure of the proportion of internal boundaries which are in the primary (dominant) category. The bands are 51-70%, 71-90% and >91%.
Boundary Characteristics	Other boundary characteristics were recorded with a separate list for internal and external boundaries.
Sources	More than one source could be selected for each polygon
Notes	Free text field for additional information if available

At the end of the mapping phase and joining up the database with the polygon through their unique IDs the database can be queried in order to visualise different situations, time layers or (combinations of) attributes. Figure 6 visualises the ten broad types of historic landscape. In Figure 7 the next level of types is visualised for one single borough of the county. This can be done for any time layer or attribute in similar ways. In order to understand this analysis phase of HLC it is important to understand HLC is not a single map, but is a queryable database (Dabaut and Carrer, Forthcoming).

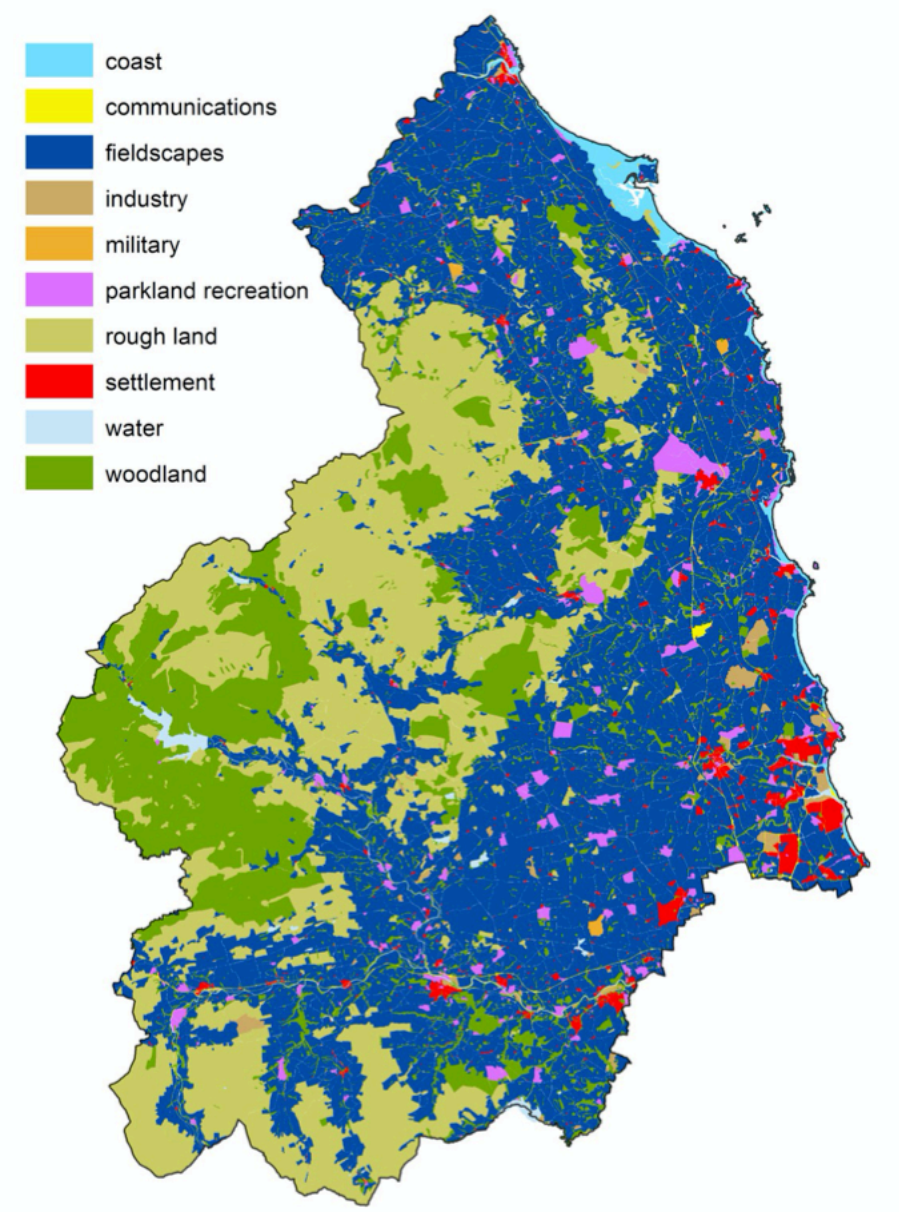


Figure 6: Broad entry level types of present landscape Northumberland HLC (Williams, 2008)

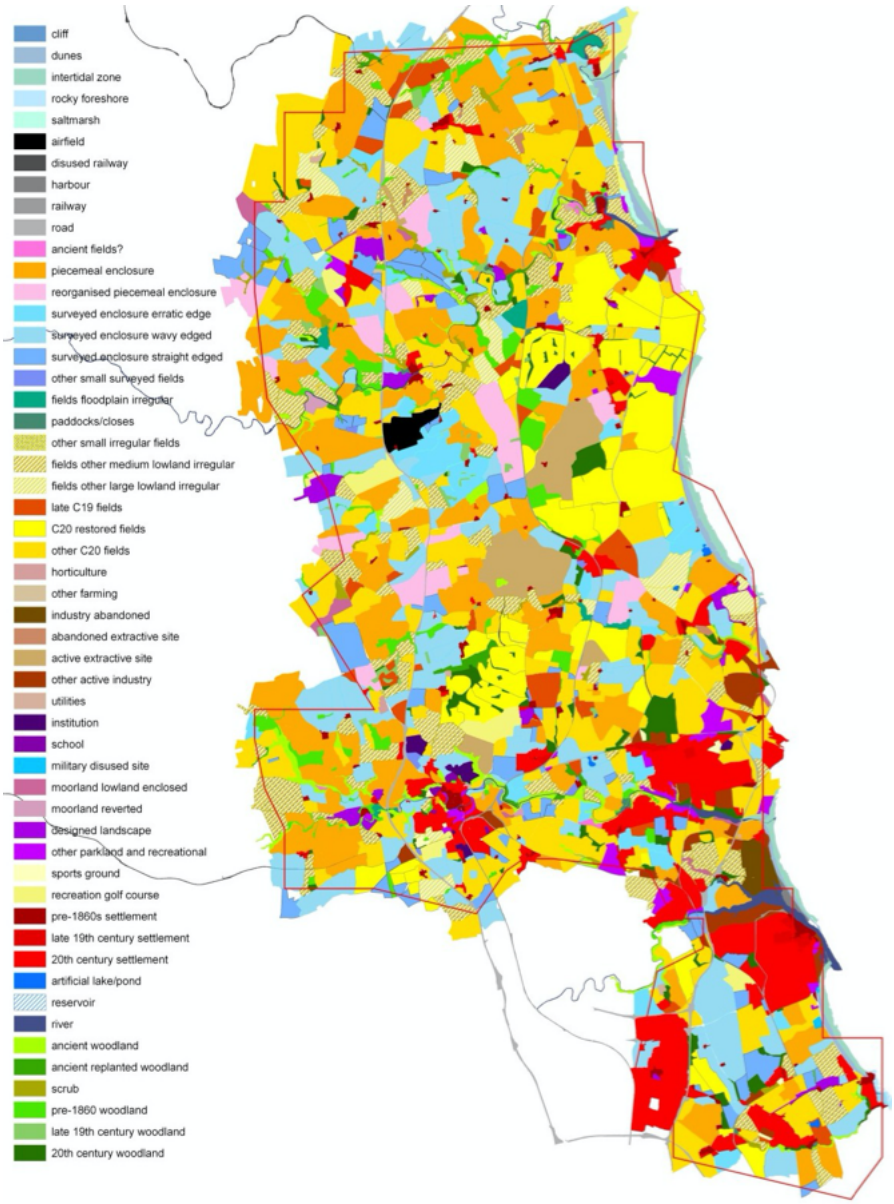


Figure 7: South East Northumberland and Historic Landscape Character types (Level 2) (Williams, 2008)

4.5 Comparing LCA and HLC

While having reviewed both LCA and HLC and understanding they are both representing a shift in thinking about landscape management it is interesting to do a short comparative review of both of them. This have been done in literature before and this section is based on Fairclough and Herring (2016), Swanwick and Fairclough (2018) and Turner (2018) in particular.

First and foremost, the main difference are the traditions from which both approaches have developed. LCA is rooted within landscape planning and landscape architecture while HLC must be situated within the disciplines of landscape archaeology and history. This is also the reason for their change in scope and focus, while LCA's scope can be situated on the rural

landscape and countryside, HLC is focussing on all landscape both rural and urban. Both see landscape as a whole however, but LCA on what is unique and distinct in landscape character while HLC is asking question on why it has become to what it is today. In doing so, HLC places the past in the present-day landscape.

A second difference can be found when looking at the naming of both approaches (Fairclough and Herring, 2016). Landscape Character Assessment stresses the fact that this approach is mainly about the assessment, the judgement of the concept of landscape character. While Historic Landscape Characterisation makes clear that it is about the characterisation, the description or interpretation of landscape with the emphasis on the historic aspects of landscape. HLC seems to tell its users what the content of the approach is: A tool to look at landscape and describe it, informed by historical sensibility. LCA does not reveal the sensibilities of landscape it focusses on and without indicating its philosophy while treating landscape, according to Fairclough and Herring (2016).

A third difference is the way both are treating landscape. LCA is treating landscape as a scenery, from a visual perspective (in some cases other senses are involved) while HLC understand landscape through cognition as well as visual senses. Within HLC it is about the visible as well as the hidden stories behind landscape. On the contrary, LCA puts a strong focus on the physicality of landscape but is therefore sometimes static in time and space. HLC assumes landscapes to be inherently dynamic and changing all the time. This difference is also visible in the scale at which both approaches work best. While LCA is higher than the public perception of place it is more likely to be used on a regional scale. HLC is much more open on local scales and the same approaches could be used to developed HLC at different scales. Larger regional HLCs only involve more generalisation than more local based projects.

Fourthly, LCA is developing character areas whereas HLC is working with a limited number of pre-defined types (Turner, 2018). In LCA identifies each character areas through mapping the combination of characteristics that makes it unique compared to all others. In HLC the pre-defined character types can be repeated when ‘blocks’ are shaped through similar and recognisable historic processes (Turner, 2018). This is also one of the reasons behind the earlier mentioned difference in scale for which they are designed (while in fact both could work and multiple scales).

A last difference is perhaps one of the important one for this thesis as both LCA and HLC aspire to include more public involvement within their project this is still part of one of the largest criticisms on the HLC, this will be looked at in detail in the next section of this study. Because of the differences and the similarities in aims (both aim at describing and identifying landscape within their own right) a lot of discussion is going on in the UK about the complementarity of both approaches. Fairclough and Herring (2018) mention that there is a definite scope for both to reinforce or to question each other, LCA could be used as a vehicle to introduce HLC into design debates, while HLC can bring LCA to a more local level to for example inform local authorities and manage local change. On the contrary, LCA's larger nationwide character areas can also be used as a way to generate larger HLC character areas with aggregate the smaller grained character type polygons. Also, HLC could give more information on urban dimensions of landscape, a dimension that is often not included within LCA projects. And while HLC might be able to put more focus on recent (or more distant past) changes in landscape, both LCA and HLC could be used to tell stories about the landscape and provoke discussions about future landscape plans or challenges.

Both Fairclough and Herring (2016) and Swanwick and Fairclough (2018), understand that the discussion whether LCA or HLC can or should work together should be one of the past. They argue that it is important to consider at which stages in landscape characterisation and judgement processes it is useful to bring both perspectives together. Fairclough and Herring (2016) propose to work together on three of the four stages of characterisation: the scoping of the project, the over-arching interpretation phase and the final step in which debate on landscape plays a crucial role. The missing step, in between the scoping and the interpretation of the data then needs to be a step that can be filled by both approaches separately. Both HLC and LCA approaches carry on their own projects with their own disciplinary differences to create a more general and inclusive interpretation of landscape in the following step. As literature suggests, the integration of both approaches is still in a theoretical phase and not many of them have actually been used alongside each other in practice. Swanwick and Fairclough (2018) suggest that both approaches must be seen as two 'steppingstones to a future integrated method which will build on the past 20 years of development' (p.30). In order to become fully integrated it is interesting to have a look at the critiques to HLC and in particular the critiques to which this thesis wants to answer to.

4.6 Critiques on HLC

Whilst acknowledging that HLC has many practical utilities in landscape archaeology and landscape studies and planning in general over the past 30 years HLC has received a range of methodological criticisms (Austin 2007; Williamson, 2007 and Dalglish and Leslie, 2016). Williamson (2007) explains how the different interpretations of the HLC approach throughout England have caused an issue in some of the counties and a difficulty in comparing landscape across county boundaries. He argues that in some of the counties the HLC project is conducted by experts in GIS and mapping rather than experts in landscape history. He refers to the difference in vocabulary used in particular HLC projects (e.g. Hertfordshire HLC) and the terms for specific landscape types commonly agreed by historical geographers and landscape historians in their work and studies. Turner (2018) agrees with Williamson to a certain extent, he admits that such issues on vocabulary and perhaps even misinterpretation of dating can be integrated in HLC but argues that this can be overcome by including sufficiently detailed and precise summaries of their methodology and database structures.

Another set of criticisms can also be grouped together as they are relating to the generalisations that take place within the characterisation process. One of the benefits of characterisation it that is gives an overall interpretation of landscape that does not focus on individual sites, doing this in a time restricted and often very efficient way, HLC will 'simplify complex patterns in landscape in order to make them comprehensible' (Turner, 2018, p.46). Critics however are arguing that in generalising landscape complexity in this way HLC is creating an oversimplified interpretation of processes that occur in landscape (Williamson, 2007). The author refers to a concept that historical geographers call 'equifinality' in which different historical processes produce the same present day landscape structure. He explains how HLC is not able to pick up these subtle changes and is therefore not an adequate tool to study landscape history. According to Austin (2007) HLC simplifies complexity inherent to landscapes because of the classification process. And in doing so, it fails to make critical interpretations of the change in landscape and therefore HLC makes untested assumptions rather than proven statements. Linked with this criticism is the idea that HLC is a tool that can be used for any issue that concerns the landscape. Finch (2007) studied the fox-hunting landscapes of English Midlands and states that HLC has a tendency to promote medieval landscape features over the 18th or 19th Century ones even when the current landscape shows hardly any traces of those eras in his opinion. Turner (2018) explains how any HLC project is developed for a particular set of applications and that it might not be the right tool to use for every study concerning landscape. He adds that, as with any

research, all of the HLC projects are set up with an aim and a range of applications in mind and that the methodology and reports should clearly state this from the outset.

One of the main criticisms on HLC was already mentioned in the Introduction chapter (Chapter 1) of this study, because it was a key to the background of this thesis and this project aims to find a solution for them. Since the start and especially from the TAG conferences (Theoretical Archaeology Group) in 2007 and 2008 onwards, HLC has been debated because of its inclusion of views beyond the expert's view. While one of the guiding principles is stating that participation is key in HLC:

'*Characterisation is designed to be a spatial framework that can accommodate people's views, enabling collective and public perceptions of landscape to sit alongside more expert views'*

(Guiding principles of HLC on Historic England website, visited 19/04/2019)

HLC projects tend to be conducted by small teams of geographers, landscape archaeologists or historians and are therefore almost solely based on expert opinions on landscape. The main reason for missing out public participation and the inclusion of people's interpretation of landscape are certainly the limited resources (time and money) with which all HLC project that were part of the national EH programme had to be conducted. Austin (2007) already referred to this as he argued that HLC is too much of a 2D-approach focussing on (historic) maps and aerial photography from behind a desk, drawing polygons in a GIS while losing out on the experiential aspects of landscape studies in landscape phenomenology and environmental psychology. Also, Williamson (2007) is stating that landscape character is not something that can be seen from above alone:

'(...)a generation of archaeologists have emphasized that we should think of past sites and landscapes as they were experienced by contemporaries, as three-dimensional arrangements of space and structures(...) . This is important because the contribution that the past has made to the landscape we experience today takes many forms, of which the shape of elements like fields is only one.'

Williamson (2007, pp.69-70)

This can be related to the critique expressed by Dalglish and Leslie (2016) on the failure of the HLC approach to include interpretations and knowledge of local people in the HLC database.

They proposed a characterisation methodology in which the interpretation of landscape character emerged from within the communities themselves. Turner (2018) states that this could be overcome by using oral history techniques and other participatory approaches such as questionnaires and photograph elicitations as used by Primdahl and Kristensen (2016) in their attempt to underpin LCA datasets with more inclusive data. He adds that recently developed techniques such as participatory GIS on mobile phones could be useful in resolving these issues in HLC (p.46).

It is this potential this thesis wants to address. Together with the call by Austin (2007) in his critical HLC paper:

> *'Nevertheless . . . we must all view this as a challenge and work together to create the next generation of analysis, one of greater levels of complexity and which genuinely engages all, because the real enemy of the historic environment is out there and not within.'*
>
> Austin (2007, p. 104)

This study therefore proposes that, by developing a better understanding of landscape perception and people's views on landscape the input from the public can be conceptualised and integrated within HLC as is done with any of the other attributes of the HLC database. This will result in a research methodology that can be used to underpin new and already existing HLC-projects and which will inform them on the way landscape in perceived by (local) people or other stakeholders. This way the characterisation will make it possible to visualise the most debated and tense parts of landscape and the reason behind the debates. This way these can be used in later judgements and discussions on future challenges and planning issues.

4.7 LANDMAP and landscape perception

Given the mentioned criticisms on HLC and especially the integration of people's views on landscape within the approach and the aims of this thesis it is interesting to have an in-depth look at the characterisation approach of Wales, LANDMAP. This approach claims the 'landscape perception' aspect to be included within the overall methodology (Scott, 2002). The process of LANDMAP was first developed and introduced by the Countryside Council for Wales and the Welsh Partnership Group in 1996 (CCW, 1999; 2001). LANDMAP includes aspects of both LCA and HLC and combines them together in a multivariate approach to

landscape. First ‘landscape character areas’ are delineated who are based on 12 separate layers of information (Scott, 2002):

- geology and geomorphology (three layers)
- visual, sensory and spiritual (one layer)
- biodiversity (one layer)
- historic (one layer)
- cultural associations (two layers)
- settlement and development (one layer)
- rural land use (three layers).

Each of these character areas are identified and analysed by experts that work with pre-defined templates provided by the LANDMAP advisory service (Scott, 2002). The evaluation includes both contextual information (settlement, development and rural land use) and more evaluative aspects (the other layers). Both phases are completed to come to a multipurpose characterisation that is more than the more conventional visual assessment (Scott, 2002). Till this stage the LANDMAP methodology is similar to the LCA and HLC approaches. The following step however is different, having created and mapped the composite character areas, a study on public perception in the areas is added. Important note here is that the initial identification process and characterisation process it already completed at this stage. Scott (2002) states that the inclusion of landscape perception at the end of the project is necessary ‘given the nature of the exercise and it does condition and generalise perception to fit in with expert notions of character areas’ (p.278). The handbook on the approach mentions this as both a weakness and a potential strength. A potential one because the participatory part could be focussed on specific landscape and a weakness because the comments are on constructed character database rather than landscape as interpretated by the people themselves (CCW, 2001).

The public perception approach included within LANDMAP is utilising a combination of conventional household questionnaires and focus groups, but no in-situ studies. The main objects used during the participatory part are representative photographs of each of the character areas, for each of the areas three representative photographs are selected by local experts and a team of public-perceptions consultants. The use of photographs suggests a strong emphasis of the visual characteristics of landscape within this approach, this is acknowledged in literature. But this was chosen as a methodology because of time and money constraints. Within the questionnaire and focus groups the following question areas are targeted for each of the character areas (Scott, 2002):

- landscape appreciation (likes and dislikes) with justification

- features important to conserve with justification
- features important to change/enhance with justification.

Respondents were recruited through random choice from the electoral register. 100 respondents are then divided into six focus groups: Children, Youth, Special Needs, Unemployed, Visitors, Rural Land Use.

Having done the questionnaires and focus groups, the responses were then coded and analysed and added to each of the areas (Figure 8). To develop a general idea of the public perception to particular landscape types.

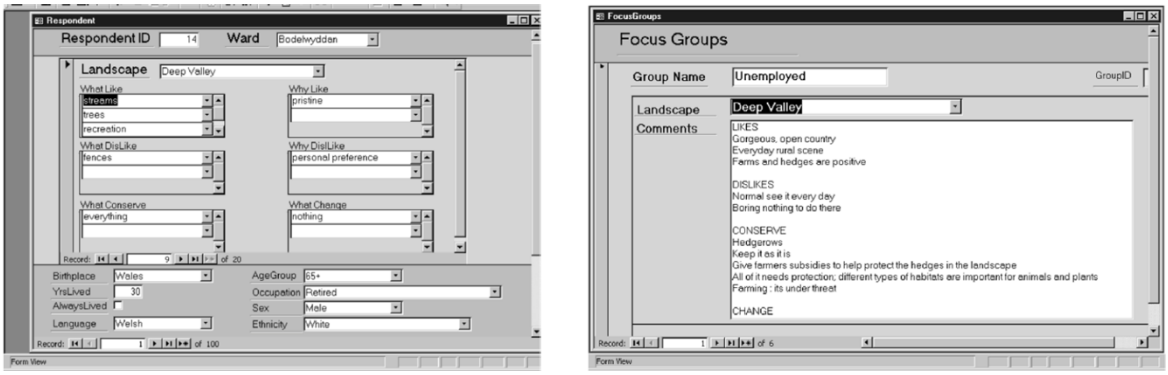


Figure 8: Questionnaire (left) and Focus group response (right) (Scott, 2002)

The responses are then added to the GIS-database so they become an integral part of the characterisation.

Several issues can be identified about this way of dealing with perception. First, it is hard for people to appreciate change in landscape and the indicate what rate of change is acceptable in landscape. This is due to the use of static photographs to be commented on during the approach. Scott (2002) suggests this can be overcome by participants by assessing change through their own knowledge and experience of landscape and points to the study of Tress and Tress (2001) to state that better ways to study perception of change in landscape exist in for example computer simulations.

A criticism that is more key to this thesis is the fact that participant have to reply to the questions based on photographs that are seen as representative for the character areas by others. There are several aspects of landscape that are not included in this approach. This way the landscape character of the specific areas seems to be overgeneralised into three photographs. Scott (2002), who reviewed the methodology himself as well, admits that this approach might be focussing more on the perception of the individual landscape character types rather than landscape as a

whole. This thesis will try and address these issues on the integration of landscape perception in LANDMAP by using a different methodology for the participatory aspect and the mapping side.

4.8 Conclusion

The character-based approaches developed since the 1980s have gradually replaced the more traditional landscape conservation ideas. While before landscape management was centred around the identification of the 'best' and 'most unique' examples of landscape and areas of landscape considered to be of most 'value' for one or more specific reason (Swanwick and Fairclough, 2018; Sarlöv-Herlin, 2016). In England, a switch towards landscape as ubiquitous concept and the need to give more attention to landscape beyond the protected areas first led to the development of Landscape Character Assessment, quickly followed by Historic Landscape Characterisation. Whilst the discussion about both characterisation approaches above has demonstrated that both programmes are developing complex GIS databases on specific aspects of landscape and landscape character in various ways. They are both valid tools in the management of (historic) landscape in general, but they both have their criticisms.

Both approaches can be commented on the way they involve the public within the characterisation process. In the case of LCA the discussion shows that inclusion of public involvement happens too far into the process while landscape has already been characterised by experts. The participants are then only adding a review about the characterisation as such to the LCA process and are not part of the 'characterising' themselves. For HLC the lack of inclusion of people's view on landscape, when this is includes in the approaches' guiding principles, is perhaps one of the main criticisms to the methodology.

As Olwig (2007) argues the 'conventional' identification of landscape has not risen from an established theoretical top-down definition but rather from perceptions, interests and practices. In such a way understanding of landscape should be shaped by ''public discursive practice, rather than scientific reasoning'' (Olwig, 2007, p. 580). And therefore, this thesis will build on the idea of HLC to develop an inclusive characterisation approach. But in doing so it will use the initial and existing HLC database as a backdrop for the participatory work. When complemented with a thorough study of how landscape perception can be conceptualised to be mapped spatially, HLC can be used as a baseline of enquiry to study many aspects of landscape. This is the reason why HLC is chosen as a baseline to this study and not LCA. HLC is developed

to be used at a scale at which landscape is perceptible for people, the methodology has therefore more potential to include, within its character type polygons information about the public perception of landscape, because inherently it is already including the interpretation of landscape of the expert. The discussion above articulates one of the main criteria the conceptualisation landscape perception will have to adhere to: perception, to be included within HLC will have to be treated as a value free and neutral attribute in order to be able to form the start of a landscape debate concerning future landscape issues. Therefore, the research here will not focus on landscape references as the LANDMAP approach for example, but will be looking at how landscape is perceived and through what lenses it is understood as a whole.

Chapter 5:
METHODOLOGY

5 Methodology

5.1 Introduction

The aims of this study are to create a better understanding of landscape perception and how people interpret their landscape and to use this understanding to inform Historic Landscape Characterisation in order to create more inclusive and richer HLC projects. The preceding chapters have shown the concepts of landscape, landscape character and the process of landscape perception all to be complex and multifaceted. This chapter explains methods used to examine this complexity and operationalise people's understanding of landscape to use it in the characterisation process.

The study element of this thesis involved two qualitative research methods carried out in two case study areas. This allowed for the following problems to be addressed: How do local residents understand their landscape and how can the outcome of such participatory process be used to map and integrate landscape character as perceived by local residents in HLC databases. To explain how these problems were investigated, this chapter will first address a selection of appropriate methods by which to conduct participatory processes on landscape perception. Then, the chapter will move on by giving an overview of the selection of the case study area, to be followed by an explanation of how the qualitative data of the participatory process will be analysed and operationalised in order to be used to inform the HLC of Northumberland. Finally, this chapter will also address the problems and limitations of the study to work on this subject as someone that is not a native speaker of English.

5.2 Methodological approach

This thesis is concerned with exploring the interpretation of people and processes in the individual and collective construction of landscape through perception. These are qualitative issues relating to how and why local residents are experiencing and interpreting the landscape as opposed to more quantifiable concerns on landscape on 'how much' and 'how many'. Unlike experimental studies where variables are manipulated in order to try and model causations or surveys asking more standardised (scalable) questions on large representative samples, the focus of this research is on in-depth analysis of how individuals perceive landscape. This is why a qualitative approach was necessary.

Qualitative research is an approach to research which facilitates better understanding of individual's perceptions, interpretations and observations. Applying a qualitative approach as part of the empirical study allows the use of various methodologies within interpretative paradigm. The use of this research idea fits the relative and dynamic concept of landscape and landscape characterisation as they are both subject to debate and reinterpretations all the time. To get a better understanding of how landscape is perceived and processed by people in different ways, it must be studied by bringing those multiple ideas together. Besides this, the main focus is not on what people like or prefer in landscape, but on gaining a better insight on what matters for them in landscape, this can be understood to be both negative and positive relations to landscape. A definite strategy to reach these goals has been developed by translating the goals into separate objectives that will be provide the right kind of data to answer the research question. The objectives can be defined as follows:

- To examine, at the level of a local community, how landscape is perceived and interpreted
- To analyse and explore the outcome of such participatory work
- To explore how the multiplicity of landscape perceptions can be visualised and mapped
- To examine the potential of the findings to inform existing Historic Landscape Characterisation project databases

The research was carried out in in two case study areas: Heddon-on-the-Wall and Wallington both situated in Northumberland in the northeast of England. The interests of the study are not to compare both case study areas and contrast them, but the focus was on creating rich and information dense qualitative data that could elucidate specific ways of how landscape is perceived by different individuals. The research design entailed a triangulated approach based on the theory that was acquired through the previous chapters and the empirical work that gathered the data through two separate approaches. Using two different approaches was driven by the concern to reach enough participants on the one hand, but also because using both types of approaches would make it possible to use them as an integrated data source during the analysis of the data.

The research strategy adopted in this project builds on the theoretical insights on that landscape is constructed through the perception of people (CoE, 2000) and the understanding of landscape perception as a relative process as discussed in Chapter 3 of this thesis; the need for multidisciplinary approaches (both in-situ and from a distance) to study landscape perception

as a process (Ward Thompson, 2013) and the acknowledgement that interpretation of landscape is inherent to Historic Landscape Characterisation in order to generalise the complexity of landscape while characterising (Swanwick and Fairclough, 2018). In doing so, the study did not have the aim to explain and be representative for the perception and ideas of landscape of every individual or community. On the contrary, it attempts to develop an added layer to existing approaches that can explain and understand the multiple and sometimes incompatible views on landscape in order to start debates on how to manage and use landscape facing future and present-day challenges.

5.3 Case studies

The empirical part of this study has been conducted in two separate case study areas. The selection of areas reflects their suitability to the objectives of the research. The selection of the case study areas took into account the need for originality of the study, took into account the interests of the author and had to build on previous experiences of the supervisors of the author. A selection of the case study areas took note of the research aims and the translation into more narrow objectives as described in the previous section. A more uniform approach to the selection was developed by defining a set of criteria enabling those criteria to be met by the final areas of study. These have been underpinned by theoretical work, exploratory fieldwork and consultation of primary sources. These criteria were as follows:

- Landscape structure and ownership: areas that have changed organically and areas that have been purposedly designed and laid out. Thus, a combination exists between ‘everyday landscape’ and ‘special landscape’ within the area.
- No immediate changes to the structure or infrastructure in landscape could be foreseen
- A Historic Landscape Characterisation must be developed for the area (county), with access to its spatial data and database
- The manageability of the case study by an individual researcher: scale of the site and in non-urban context
- Availability of and accessibility to stakeholders and potential respondent: direct link or way in, because of time restriction during the project
- Likely levels of cooperation and potential for the study to be useful for stakeholders

Starting from a long list that showed numerous potential sites that met these criteria two case studies were selected because of their higher accessibility to stakeholder and availability of the

HLC spatial data and database: Heddon-on-the-Wall and Wallington Estate. Both of these are situated in Northumberland and thus part of the Northumberland HLC and both also have a mix of everyday landscape and designated landscape.

The first case study area, Heddon-on-the-Wall (Heddon), a parish in Northumberland, is located about 9 miles west of the centre of Newcastle upon Tyne (Figure 9). As the place name suggest the parish is located along Hadrian's Wall, which is a Roman fortified line across the British mainland. Hadrian's Wall became a UNESCO World Heritage Site in 1987 and the stretch of the Wall in Heddon is often called 'the best preserved stretch of the Wall in a village setting' (Heddon parish council website, 25 January 2020). Heddon's stretch of the Wall is now managed by English Heritage. Other than the Wall the parish is characterised by its location along the Tyne (Figure 10) and the A69 that both run past the village centre in an east to west orientation. The decision to focus on Heddon-on-the-Wall was motivated (seen the criteria listed above) by the relative proximity of the village to Newcastle (Figure 11) and the fact that the parish was a case study area for the pilot project that led to the Hadrian's Wall Community Archaeology Project (WallCap, HLF funded) coordinated by the McCord Centre. The connections made by the researchers working on the Wallcap project, made it possible to make contact with an initial group of participants in the very early stages of this study. By attending social events and more formal meetings further contacts were made. The study was also announced in the local newsletter, residents Facebook pages and on the community announcement panels.



Figure 9: Heddon-on-the-Wall view towards village centre (Source: Google Streetview)



Figure 10: View towards the Tyne river from Heddon Bank (own photograph)

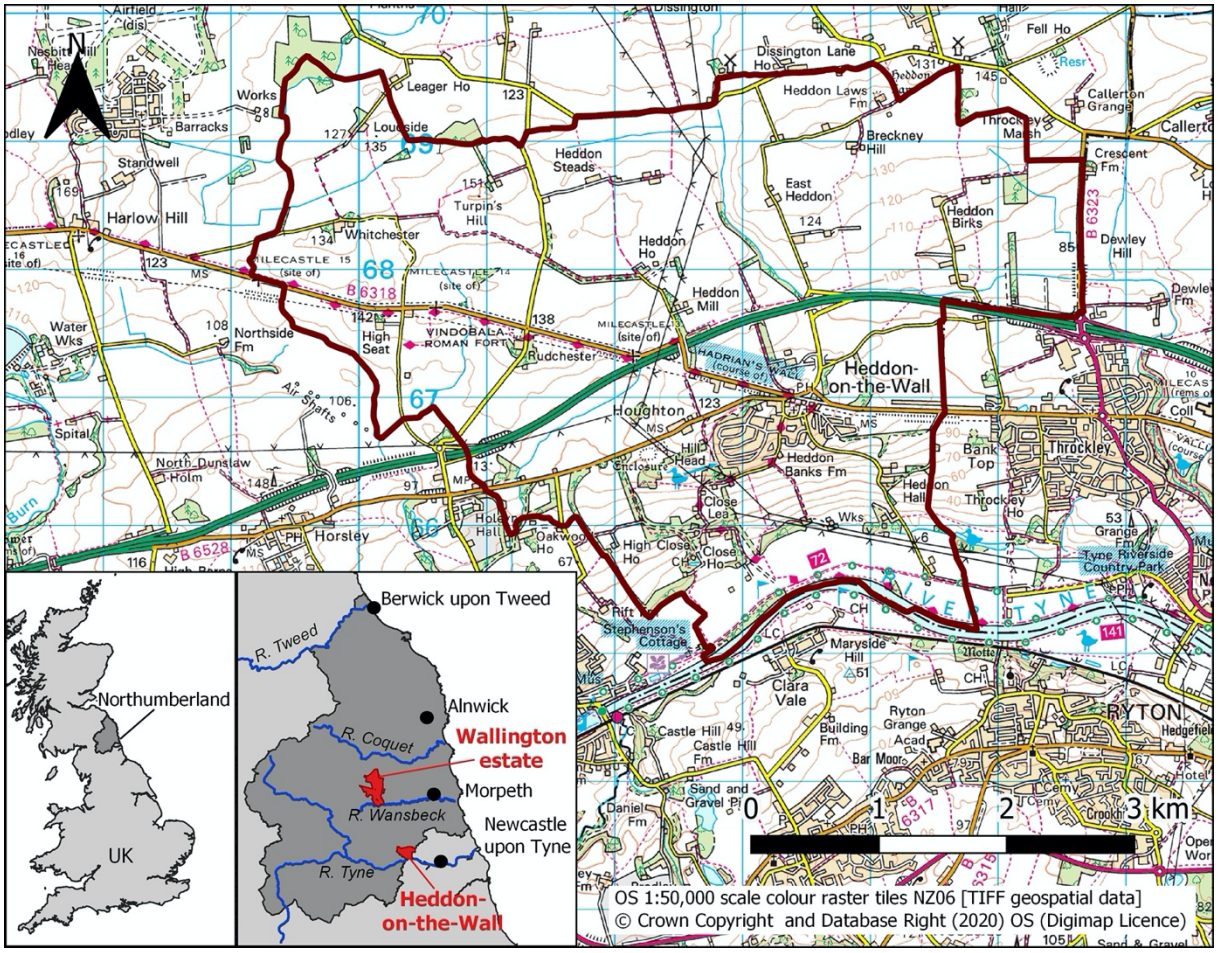


Figure 11: Map situating the Heddon-on-the-Wall case study

A second case study was the Wallington Estate (Figure 12), an estate linked to Wallington Hall (Figure 13) in Northumberland. The hall is located about 20 miles north-west of Newcastle upon Tyne (Figure 14). The estate is managed and owned by the National Trust who acquired the estate in 1958. The hall on the estate is a Grade I listed building, while the immediate vicinity of the hall is listed as a Grade II Park and Garden landscape. Across the estate there are 15 different farmsteads and one village, Cambo. Almost all farms and buildings on the Wallington estate are listed as at least Grade II buildings. Wallington is one of the typical estates in Northumberland, characterised by its location away from the main towns (Morpeths and Rothbury) but easily accessible from the A696 between Newcastle upon Tyne and Jedburgh. One of the key reasons for choosing Wallington as an area to recruit participants was the link created with the place during an internship period in Spring 2018. This gave good contacts with people that lived, worked and visited the Wallington Estate. They also gave the opportunity to announce and explain the research on their volunteer database, which was helpful to acquire more participants.



Figure 12: Entrance to Wallington Estate from the south (Source: Google Streetview)



Figure 13: View towards Wallington Hall from the south (own picture)

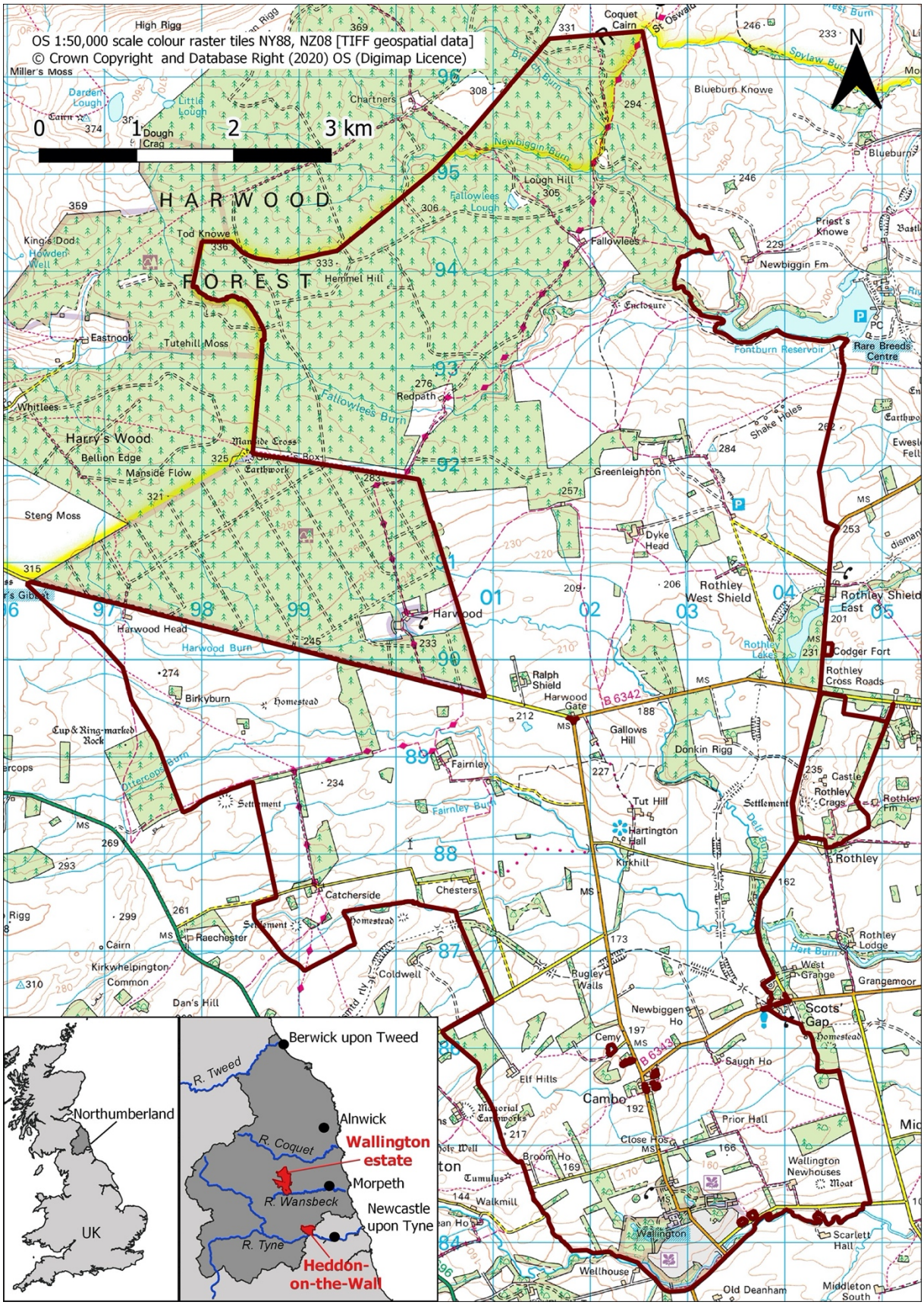


Figure 14: Map situating the Wallington Estate case study

5.4 A Belgian doing social research in British case studies

The quality of the data collection through oral history, is dependent on various different factors (Dossche, 2016). This section will reflect on the influence of the researcher's personal interests and background on the study. It is written in the first person singular, as it reflects the personal view of the author. The influence a researcher has on the outcome of qualitative studies is referred to in literature as positionality (Day, 2012; Gastaldo, 2015). Some of the many facets that make up our social identities affect the way people see and interpret the world around us and vice versa, how the world sees and interprets us (Day, 2012). It is known that researchers, who use themselves as an instrument to analyse and interpret qualitative data, are depending on their own social position in order to analyse data. A better understanding of that position related to the study is an important criterium in order to understand and mediate these influencing factors throughout the empirical and analysis phases of this project.

First of all, my position as a researcher can be understood as being an outsider in Ingold's insiders-outsider theory (Ingold, 2011). Not only am I a Belgian, so I was only vaguely familiar with the study areas until the start of my research. Then, I also had the position of the researcher and therefore linked with the university, a public institution. In general, this profile had its influence on the outcome of participatory empirical part of the study and how people reacted during the first contacts.

Being an outsider was sometimes beneficial and sometimes disadvantageous while doing the fieldwork for this project. It can be an advantage cause the participants see you more as an objective person that does not bring any English or British political connotation or status with him. It has however also disadvantages the most important one being the language barrier. This barrier worked in both ways, while my English is good enough to have daily conversations with people it is not my native language so details within the interviewees answers may have gone unnoticed. This was certainly the case when the participants were using their local dialect. On the other hand, knowing that English is not my first language, participants did sometimes oversimplify their replies and therefore these answers may not exactly reflect on what they perceive or feel, but only what they think I would understand. Being a Belgian researcher also Brexit should be taken into account these days. Some participants might have seen me as an 'outsider', 'a European' and that could have influenced the actual interview or talk.

Furthermore, I, as a researcher, had an impact on the interpretation of the various replies of the participants towards my research questions and the outcome of the project. Also, while asking

the questions I may have subconsciously steered the interpretations and the meaning of the respondents. This is often underestimated in this kind of research but should be considered while discussing the outcomes (Holmes, 2020).

5.5 Interpreting people's understanding of landscape

To solve the first of the two main research questions: how do people perceive their landscape? Two approaches were used, this is in line with the multi-method approach towards understanding landscape perception promoted in literature (Ward Thompson et al., 2004; Thwaites and Simkins, 2007). Such a multi-method approach created a more rounded understanding of dimensions and the reasons behind those dimensions of landscape perception. This section will give an insight in the two approaches used in this study. First a theoretical background will be given for each of the approaches, to underpin the methodology of this thesis. Then a more in-depth overview is presented of the approach used in this thesis.

As discussed in the chapter on landscape perception (Chapter 3), people are interacting with land and nature since the beginning of their existence (cfr. ELC). People engage with their land because of the elements and features inherent to landscape on the one side and from a collective understanding of our landscape and a personal identification with landscape on the other (Lynch, 1960). Many theories and discourses on this topic have been discussed in Chapter 3 of this study, this section wants to add to this discussion the way in which landscape perception processes have been studied in many different ways. In particular methodologies related to Geographic Information System (GIS) are coming to the fore because of the integration of the outcomes of this study with other GIS-based approaches to reach the second main aim of this research.

Some studies that analyse the interaction between people and nature, are related to ecosystem services frameworks and link in with human well-being (Brown and Fagerholm, 2015; Garcia-Martin et al., 2017), other studies look at the relevance of land cover on the link between landscape character and perception (Carvalho-Ribeiro et al., 2013), how landscape can evoke individual and collective memories of place (Wheeler, 2014) or at the temporal dimension of landscape perception (Dossche et al., 2016). A short review of the used methods will give a background to the approaches used in this study. The earlier mentioned studies that use ecosystem services as indicators for well-being increasingly draw on approaches in the relatively new field of Public Participation GIS (PPGIS) (Brown and Fagerholm, 2015; Garcia-

Martin et al., 2017). While it is recognised that different research strategies can produce different results, Brown et al. (2014) compared data collected through focus groups and PPGIS online surveys, this way they found it was possible to capture the population's idea better by using PPGIS. Using GIS as a participatory tool has been developed further in the past ten years, mainly as an approach within urban and spatial planning (Kahila-Tani et al., 2015). The PPGIS has become a very efficient approach to reach a substantial part of the population for public participation practices (Brown, 2012; Brown & Kyttä, 2014).

At the moment, one of the uses of PPGIS is to integrate a community's perception during the very early stages of a spatial planning process. Others, such as Brown and Fagerholm (2015) and Garcia-Martin et al. (2017) have used PPGIS for research-oriented manner. One of the PPGIS platforms used in many studies on the human and landscape relations is called Maptionnaire, developed by the Finnish company Mapita. One of the most recent examples of the use of this software package is illustrated by Garcia-Diez et al. (2020) who had an interest in mapping cultural ecosystem services hotspot. This study focussed on outdoor recreation, aesthetic enjoyment and sense of place as cultural ecosystem services and asked participants to map these within a Maptionnaire, which is a map-based questionnaire giving the respondents the chance to reply to questions by drawing and making notes on a digital map. While PPGIS systems and especially online accessible packages such as Maptionnaire have the potential to reach a wide and varied group of respondents, they have been found to be limited in their use too. First, they can be seen as part of the visualising approaches to participation as described in Chapter 3. Such approaches make participants interpret landscape in a static and two-dimensional way (Ward Thompson, 2013; Heft & Nasar, 2000) and combine this approach with a questionnaire to add more information. Main limit to this approach is that they need to be filled out indoors behind a personal computer. While they can be filled out on a tablet or smartphone in-situ its functionality becomes more limited as is suggested in literature (Ernoul et al., 2018). Because of these limits of this type of studies, PPGIS will be used to support an approach that takes participants within the discussed subject of landscape.

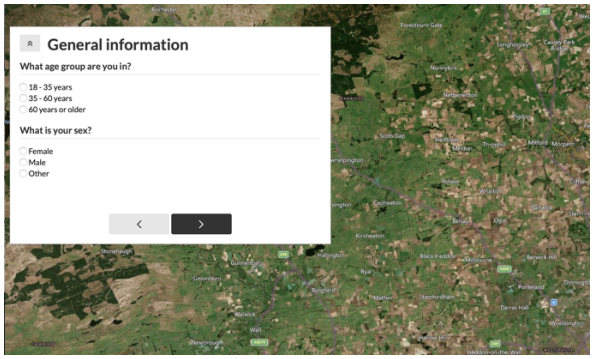
This 'go-along' idea of doing interviews has been used by a growing number of geographers (and other social scientists) as a research technique (Evans & Jones, 2011; Wheeler, 2014, Wylie, 2012). They fit in the philosophical thinking of the body and its connections to landscape (Heidegger, 1971; Merleau-Ponty, 1962) and phenomenology (Tilley, 1994). As could be understood from the literature review chapters (Chapters 2-4) of this thesis, the way we encounter landscape is the result of the social situation as well as the personal character of people. Within the mobile interview technique, there are different variations which seek for the

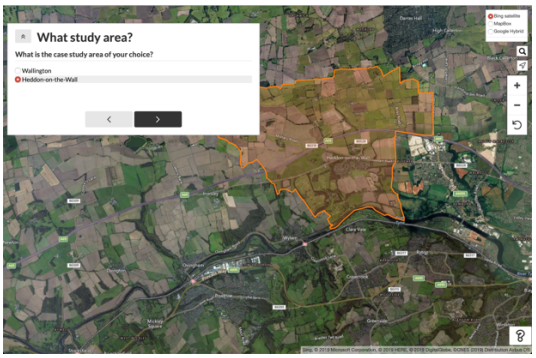
same result, offering the researcher new floors for inquiry and disclosure unavailable to the more conventional static and room-based interviews (Kusenbach, 2003; MacPherson, 2016). Evans and Jones (2011) argue that walking interviews give richer outcomes, they state that interviewees are triggered by the surroundings and less intimidated by the fact of being in 'an interview'. Participants are therefore less likely to try and give the 'right' answer or the answer they think the researcher wants to hear. These authors also provide an evidence base that supports the hypothesis that walking interviews give us more place-specific data. Walking interviews are often longer and more spatially focussed than conventional desk-based interviews. Ingold and Lee (2008) did suggest that walking with interviewees develops a connection with the surroundings, which allows the researcher to understand how places are created by the routes people take. However, there are some limitations to the approach, one of them is that many of these approaches are strictly qualitative. Authors who use walking and talking interviews as an approach almost never (or at least made little attempt to) visualise the outcomes spatially (Kusenbach, 2003; Anderson, 2004; Clark & Emmel, 2008; Hall, Lashua, & Coffey, 2006; Ingold & Lee, 2008; Moles, 2008). Literature suggests that the ability locate the contents more accurately would add another layer of interpretation to the data (Evans & Jones, 2011). Another limitation to the walking and talking approach is the difficulty to record voices or audio in general while walking due to background noises such as traffic or adverse weather (wind, rain, …) (Evans & Jones, 2011; Clark & Emmel, 2008). Especially the background noises that are not due to the weather are difficult to foresee and to filter from a possible record of the interview later on. That way critical parts of the interview can be missed or not understandable during analysis of the records later on. The weather circumstances can be predicted to a certain extent, but here as well, they could become an important factor while trying to analyse the records in the end. However, this 'limitation' can also be seen as a strength of the approach as it gives a possible better insight in how these sounds potentially have an impact of the experience of the participants as well (Macpherson, 2008).

The earlier mentioned approaches Maptionnaire and walking and talking interviews have been used in a parallel way in this study. Alongside each other have been used to focus on a more personal, in-depth insight in people experience of landscape (walking and talking) and a wider collective idea of landscape attracting more participants (Maptionnaire). The following section will explain how I have conducted both approaches and have used the outcome of both of them to come to a common thematic analysis and understanding of people's perception of landscape.

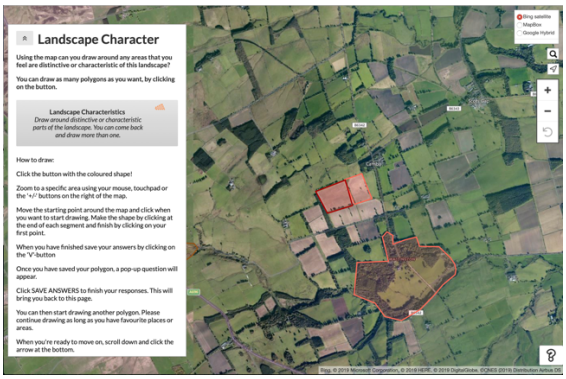
Maptionnaire, map-based questionnaires

Maptionnaire software was used to target a wider audience than the walking and talking interviews approach made possible. The questions in the Maptionnaire focussed on how landscape was used by participants. In general, questions were grouped in three sets of questions (see Figure 15): the first set of questions (1-4) were asking about the background of the respondents. While being anonymous, this set of questions was used to collect information about participant's age groups, gender, preferred case study area and their relation to the study area was. A second set of questions was focussing on participant's favourite areas within the case study areas. This was the first time they could also draw their answer on the background map (Google Maps or OpenStreetMap). This question is followed by a question asking the participant to give an idea why this was his or her favourite area, same was done for areas of dislike. A last question within this set asked the participants to draw polygons around areas that appeared to be distinctive in landscape type for them. A final set of questions asked participants about drivers for change in their surroundings. Using the map, they were asked to draw polygons around the areas that had or had not changed in their knowledge. A video was made to guide them through the process of drawing polygons within the online software.









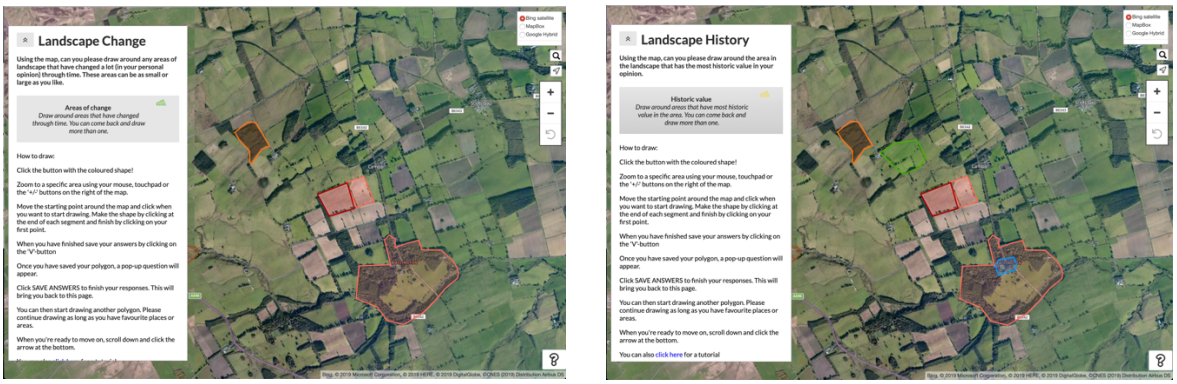


Figure 15: Map-based questionnaire using three sets of questions: Personal background, landscape preference and landscape character

Recruiting participants was done through publishing the URL of the online questionnaire in different newsletters of social societies in Heddon-on-the-Wall and using the National Volunteer and tenant network at the Wallington case study. Also, several social media accounts of different residents-groups in Heddon and the main Facebook page of the Wallington Estate were used to spread the URL.

Walking and talking interviews

Along with the map-based questionnaire this multi-approach methodology used in-situ observation of how landscape is perceived by people through conduction walking and talking interviews. It could be discussed whether 'go-along' interviews or walking interviews were conducted, but the approach here is called 'walking and talking' for ease of understanding and clarity. An original plan for all walks was developed by using techniques for semi-structured interviews and walking and talking found in literature (Clark and Emmel, 2008). However, none of the interviews were following this exact plan, this due to the organic conversation that took place within each of the interviews. But, with the plan in mind, the process of walking makes it possible to talk about personal memories related to landscape using prompts taken from what people were saying. This was one of the main advantages of this type of approach, walking in this case creates unique conversations and has certain democratizing qualities, you cannot find in sitting down interviews (Solnit, 2000).

Two separate walks were carried out with every participant, as in literature it is often suggested that people must become familiar with the researcher in order to act more spontaneously during a walking interview (Clark and Emmel, 2008). Therefor two walks could help with this familiarisation and spending more time together. A first series of walks and talks were

conducted between the 22nd of February and the 15th of May 2019. During this period eleven participants did the walk in Heddon-on-the-Wall and five participants at the Wallington Estate. These walks were carried out along pre-described routes developed before the start of the first walk. For each of the case study areas two different routes were made, one route took participants out on potentially more challenging terrains while another used a more accessible route. When meeting people at the start of the walks, the Knott Memorial Hall in the centre of the village for the Heddon walks and the National Trust property parking lot for the Wallington ones, they were asked which route they wanted to walk. This question was posed without explaining in great detail where each of the walks was leading to but was more a question asking participants about their ability to walk on more challenging terrains. Ten participants walked the first route, more challenging route in Heddon, while one person opted for the more accessible version. In Wallington there were four people opting for the more challenging route and one chose for the accessible path. After all pre-defined walks were concluded, participants were asked if they wanted to meet again to go on a second walk along a route of their own choice. This second part was carried out in the same way the first parts was done, both time the interviews and tracks were recorded simultaneously, only this time the participant took the lead during the walk. This part was done by thirteen participants, all of them had done the pre-described walk as well. Eight of these walks were done in or around Heddon-on-the-Wall and five were carried out on the Wallington estate.

During the walks Strava, a fitness tracking application for iPhone, was used to trace the chosen route and the conversation was recorded using the Reporter application of Røde microphones. The reason for also recording the walked routes was in order to be able to map how participants reacted at different locations along the walks. The outcomes of both tracks and the voice recordings could be synchronised digitally, a technique used by Evans and Jones (2011) For they both series of walks a plan was developed beforehand (see Figure 16 and Figure 17), however this was merely used as a plan in the background and was not followed completely as explained before. This was due to the idea that all interviews during the walks had to flow as conversation, so the plan was used as guidance rather than a manual.

INTRODUCTION (10'-20')

- Meeting participants at the meeting point (start point of the walk)
- Seeking for informed consent
- Small introduction of myself: who am I, what do I do (PhD).
- Explaining people how the walk will be recorded and if they give consent to have their voices recorded

WALK (+/- 60 MINS)

Walking together with the participant along a pre-defined route (if people want to show different things they are attached to while walking past them we can make small detours but the fastest route back to the fixed walking trail will then be used)

This route is not specifically taking into account heritage in the neighbourhood, as all landscape is seen as historic and the researcher is taking a neutral stance in to what is heritage and what is not.

COLLECTING DATA: Data will be collected through:

- Voice recording of what the participant is replying to different questions
- Timing along the route will be stored when people are saying something

Questions (can flow throughout the interview depending on what the participant replies)

General

- Are you familiar with this landscape (if yes: to what extent?)
    - Do you live here? How long have you lived here?
    - Do you visit this place? How often do you visit?
- If not mentioned in the reply to previous question: What is your relationship to this landscape? Do you spend a lot of time in the village/outside?
- Could you describe how a typical moment in this landscape looks like for you? (when the participant is out and about in this area, how does that moment typically look like?)

Personal attachment:

- Can you give me some example of memories you have related to this area? (While walking at any stage of the walk)
- Are there specific features within this landscape you like/dislike?

Landscape character:

- Asking the question how would you describe the landscape we walk through at the minute?
- Can you distinguish different types of landscapes here (at various points during the walks we will cross 'character'-boundaries

REFLECTION AFTER THE WALK (30')

When the participant has left a short reflection on the walk will be carried out in a notebook.

Figure 16: Plan for Pre-defined walks

INTRODUCTION (10'-20'):

- Everybody – I meet people at the meeting point (start point of the walk) – chosen by the participants.
- Seeking for informed consent from participants
- Small re-introduction of myself: who am I, what do I do (PhD

WALK (+/- 50 MINS):

Landscape and daily use and how they look at landscape – taken on from the walks

Walking together with the participant along a pre-defined route (if people want to show different things they are attached to while walking past them we can make small detours but the fastest route back to the fixed walking trail will then be used)

This route is not specifically taking into account heritage in the neighbourhood, as all landscape is seen as historic and the researcher is taking a neutral stance in to what is heritage and what is not.

COLLECTING DATA: Data will be collected through:

- Voice recording of what the participant is replying to different questions
- Timing along the route will be stored when people are saying something

Questions (can flow throughout the interview depending on what the participant replies)

General

- How did you go about this walk?
  - Experience/ Memories/ /What I should see?
  - Do you visit this place? How often do you visit?
- If not mentioned in the reply to previous question: Did you spend your childhood here?/ What is your relationship to this landscape? Do you spend a lot of time in the village/outside?
- Could you describe how a typical moment in this landscape looks like for you? (when the participant is out and about in this area, how does that moment typically look like?)

Personal attachment:

- Are there specific places you take me too?
- Or is it more the route you want to show?
- Why? (While walking at any stage of the walk)
- Specific memories why you are taking me here?

Landscape character:

- Asking the question how would you describe the landscape we walk through at the minute?
- What do you think characterises the landscape?
- What gives character to this area?
- What makes this place or area different than another?
- Questions about how they feel and about memories of the different parts they distinguish will then follow.
- Can you distinguish different types of landscapes here (at various points during the walks we will cross 'character'-boundaries
- Pictures: Of what would you take pictures?

REFLECTION AFTER THE WALK (30'):

When the participant has left a short reflection on the walk will be carried out in a notebook.

Figure 17: Plan for self-guiding walks

5.5.1 Thematic analysis of Maptionaire and Walking and Talking outcomes

This section outlines outline how the analysis and interpretation of the walking and talking interviews and the Maptionnaire survey was done. Both approaches were used next to each other in parallel and both sets of outcomes were used as input into the same thematic analysis. This gave the opportunity to be able to analyse whether some of the themes that appeared within the walking and talking interviews could be supported and underpinned with the Maptionnaire

outcomes and vice versa. This gives richer and more informed themes and interpretation of the data.

First, interviews had to be transcribed and observations made during the interviews had to be linked with the interviews. These transcriptions were done in two phases, a rapid transcription took place immediately after the interviews. This way observations made during the walks could be added within using annotations. In a later phase, once all interviews were conducted, the interviews were transcribed in finer detail. Transcribing the interviews was done in NVIVO, a qualitative data analysis software package. The transcription was the first step in analysing the interview data, through transcribing and reading over the transcriptions a first insight into re-occurring concepts and ideas was made. Some parts of the interviews were not transcribed literally, those sections were left out because they were irrelevant for this study or were longwinded deviations from the main subject. Within the transcription notes were made at the locations where parts were left out for clarity and completeness. This way almost 40 hours of audio files were transcribed. When this initial step was finished, the transcription dataset was read through all in one go while adding small notes to the transcriptions and writing down some initial ideas.

The Maptionnaire data was downloaded from the Mapita server as GIS compatible data. Polygons that were drawn by participants during the questionnaire are received in a Shapefile format ready to be used in QGIS and other data was stored into an Excel-file. Visualising and regrouping the data for each of the questions (rather that for each of the participants) gave the opportunity to quickly make connections with similar questions and answers within the walking and talking series.

To analyse the interview and questionnaire data thoroughly thematic analysis was used. This type of analysis on interview data has a very flexible nature and it has theoretical freedom this makes it a research tool that can provide a complex, rich and detailed analysis of the qualitative data (Braun and Clarke, 2006). It must be stressed here that, in line with the interview approach itself, carrying out a thematic analysis is not a passive process. Themes or concepts are not emerging from the data as is the case in quantitative research using statistical approaches for example. In this case it is the researcher who actively searched and analysed the data for relevant themes. Therefore, a certain level of subjectivity is inherent to this way of analysing. By realising and acknowledging this subjectivity, the researcher also has the opportunity to limit the subjectivity as much as possible. The main benefit for this project is that thematic

analysis, unlike grounded theory or interpretative phenomenological analysis (IPA) which are both often used in similar landscape studies (Smith and Shinebourne, 2012), can be used in different theoretical frameworks. Seen the duality of the research asked for a method that can be both essentialist approach, to understand the experiences and meaning people add to landscape and a constructionist one, to visualise how these experiences and meanings of the landscape link with the different identities in communities. Trying to combine both essential and constructionist method in one is often called a contextualised method (Willis et al., 1999). To understand the complexity of this contextualisation a couple of decisions need to be made.

Often these decisions are not openly discussed in qualitative studies, however the decisions were made before the start of the analysis and the study kept an open mind about the decisions throughout the process. Using the questions posed in Braun & Clarke (2006) this study has taken the following decisions during its thematic analysis:

What counts as a theme?

Themes have to capture the important parts of the data in relation to the research questions. They themselves then represent meanings within the data set (Braun & Clarke, 2006). The decision was taken to go for prevailing themes, key themes and not to go for an absolute measure, such as themes that are present in 50% of the data items. The importance of themes is therefore not quantifiable, key themes (and sub-themes) make it possible to get a better understanding of the answers to the research questions.

A rich description of the data set, or a detailed account of one particular aspect?

Because of the aims and objectives and the chance this phase of this study gave for an in-depth and lengthy analysis of the qualitative data the decision was made to make a rich description of the data set. This rich description will make it possible to identify, code and analyse themes across the entire data set (Braun & Clarke, 2006). Using these themes an better understanding of how the participants perceived the landscape was developed.

Inductive versus theoretical thematic analysis

An inductive approach identifies themes that are tied within the data itself (Braun & Clarke, 2006) whereas a theoretical approach is driven by a personal and theoretical 'top-down' way of analysing data (Boyatzis, 1998). As noted above, it is extremely difficult to completely distance yourself of your personal interests as a researcher. However, the decision is made to use an inductive approach in coding the data, this means this analysis limits the influence of

previous studies that are done on the same subject. Because of this inductive process the initial research questions of this research are also used as frames throughout the coding process (Braun & Clarke, 2006). This decision for an inductive method is made in order to be able to look at the data as a whole, almost detached from what the questions in the interviews were, and not to focus on specific aspects of the data or specific questions asked during the interviews.

Having made the above discusses decisions, themes (and their subthemes) could be developed. The coding process started by coding four interviews (two of each of the case study areas, one of each of the walking and talking route approaches) line by line. The codes within these four interviews were a description of what was said in each of the lines of the interviews. The next step was to identify relevant themes that emerged from the coded interviews. Themes were drawn from topics that reoccurred throughout the interviews. Then, the rest of the interviews were coded used the emerging themes, going backwards and forwards between the interviews when new themes appeared. The coded sections were then arranged by theme in order to start to interpret the most significant themes. This also caused that prioritisation of certain themes above others to the extent that some were completely dropped, because some themes did not focus solving the research questions. This also means there is more information in the interview data than is used for this specific research. Prioritising some themes and arguments above others also has the danger of taking sections of the interviews out of their context, to limit this risk the original interviews were available to review at all times. The outcome of the map-based questionnaire has been deployed to work in conjunction with the interviews. Having the Maptionnaire data integrated within the thematic analysis, names and titles could be added to the main themes and subthemes, these then became the section titles of my interview and survey analysis chapter (Chapter 6).

5.6 From thematic analysis to informing Historic Landscape Characteration

5.6.1 Mapping and visualising public perception

In order to be able to solve the second research question of this study: How to inform Historic Landscape Characterisation projects about the way people perceive landscape? The qualitative data gathered in the empirical stages of this project had to be transformed in a way that it becomes compatible with an HLC project environment. This section outlines the thematic analysis helped to answer this key question. The conceptualisation of landscape perception developed during the thematic analysis discussed above, is used to visualise the hotspots that

matter to people in landscape. Linking these hotspots to the different themes in which they have been mentioned a generalisation of local landscape perception could be achieved and resulted in data similar to the format of other attributes in Historic Landscape Characterisation approaches. A last step was to analsyse the resulting GIS through 'grounded visualisation' (Knigge & Cope, 2006). Drawing on the tradition of grounded theory in social sciences this type of analysis is used to get a better understanding of how good (or bad) the current HLC for the case study areas is representing the perception of the participants.

Having the walks and talks on the one hand and the Maptionnaire on the other, the challenge here was map and visualise the outcomes of both in one GI-database in order to analyse them spatially. This was mainly an issue for the walking and talking interview because the Maptionnaire data was gathered in a GIS environment. There is growing debate about how to link qualitative data obtained through mobile approaches such as walking and talking (eg. in-situ interviews or focus groups discussions) and GIS in literature, there are limited empirical attempts available at the present. An approach that does focus on this is the 'spatial transcripts'-approach by Jones and Evans (2011). Essentially, this technique is matching the words participants talk about during the 'go-along'-interviews with the time and place in which they were said (Jones & Evans, 2011). This produces richer data that is be geolocated and thus could be analysed spatially. This approach was adopted in this research because of these benefits.

Step 1: Dividing interview transcripts into one-minute segments

While NVIVO, the software used to code and thematically analyse the qualitative data does allow to geotag the data in Google Maps, it does not allow to generate tags within an external GIS software. To overcome this issue, all transcriptions were exported from NVIVO into Excel-files (.csv) and within these files all interviews were divided into one-minute segments. One-minute segments were chosen to keep a better overview of the interview as a whole, as opposed to breaking the interview into smaller intervals. Following field tests these one-minute intervals, opposed to longer intervals, also proved to be more accurate in terms of location. The one-minute segments were given a unique ID (IRFxxyyyy) referring to the participant number (RFxx) and the order in time with the first minute of the interview being time interval 0000 (yyyy in UID). This way it became possible to identify each of the one-minute segments on all individual walks separately.

Step 2: Detection of mentions of aspects of landscape in each of the one-minute segments

Following the division of the transcripts into one-minute segments, all references to landscape were detected within each of the one-minute segments. While searching for these references a clear distinction was made between discrete aspects of landscape (aspects that are specified enough to be able to map) (see extract of table in Figure 18) and fuzzy aspects of landscape (aspects for which interpretation of the researcher is needed to map) (see extract of table in Figure 19). Each individual aspect received a unique ID and was related to each of the individual one-minute segments. This way and because almost every aspect of landscape was mentioned by more than once participants a relational database was developed between all the aspects and all the one-minute segments.

	A	B	D
1	**Uid**	**Mentioned aspect**	**Character Type**
2	P0009	Heddon Pit	Abandoned extraction site
3	P0019	Heddon Quarry	Abandoned extraction site
4	P0029	Heddon Colliery	Abandoned extraction site
5	P0085	Mines west of Cambo	Abandoned extraction site
6	P0104	Greenleighton Quarry	Abandoned extraction site
7	P0122	Hillside Coal Mine	Abandoned extraction site
8	P0147	Quarry near Cambo Cemetry	Abandoned extraction site
9	P0016	Station Road	Communications Road
10	P0033	Hedgerows north of A69	Communications Road
11	P0055	Mill Lane	Communications Road
12	P0064	Tunnel under A69 (Heddon)	Communications Road
13	P0077	Bus shelter (Heddon church)	Communications Road
14	P0011	Heddon Low Farm	Farmstead
15	P0035	East Heddon	Farmstead
16	P0056	Heddon Mill	Farmstead
17	P0057	Turpins Hill	Farmstead
18	P0067	North Houghton Farm	Farmstead
19	P0081	Broomhouse Farm	Farmstead
20	P0094	Broomhouse Farm	Farmstead
21	P0096	Newbiggin Farm	Farmstead
22	P0097	Catcherside	Farmstead
23	P0126	Prior Hall	Farmstead
24	P0150	Elfs Hill	Farmstead

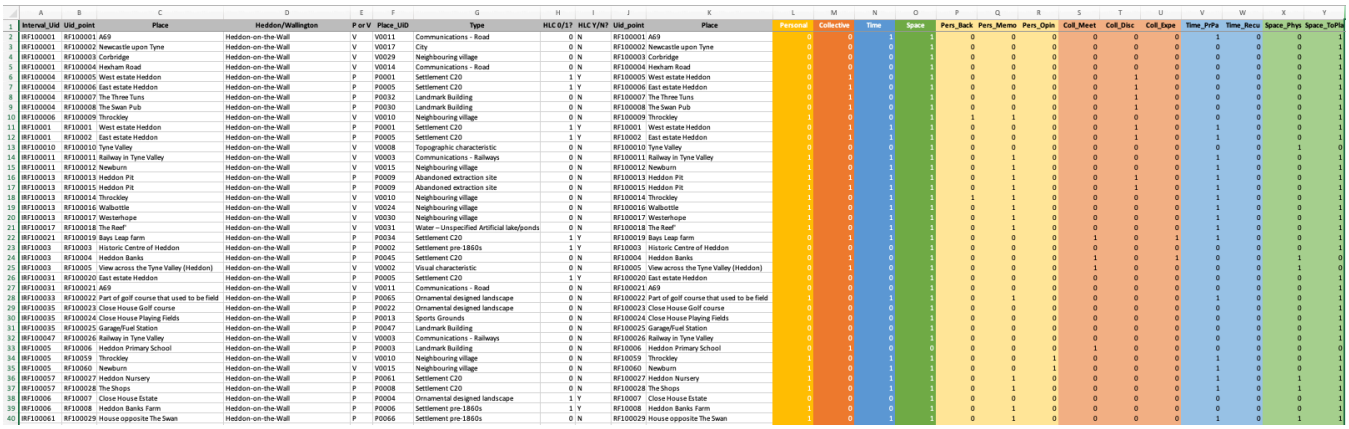
Figure 18: Extract of the table listing part of the individual discrete aspects of landscape with column (A): Unique ID of the aspect; (B): aspect name and (C): given character type)

	A	B	D
1	**Uid**	**Mentioned aspect**	**Character Type**
2	V0017	Newcastle upon Tyne	City
3	V0033	Carlisle	City
4	V0016	Newcastle Airport	Communications - Airport
5	V0003	Railway in Tyne Valley	Communications - Railways
6	V0011	A69	Communications - Road
7	V0012	A68	Communications - Road
8	V0013	Military Road	Communications - Road
9	V0014	Hexham Road	Communications - Road
10	V0035	Stamfordham Road	Communications - Road
11	V0036	North of A69	Communications - Road
12	V0005	Pylons in Heddon	Communications - Utilities
13	V0043	Scotland	Country
14	V0047	Northumberland	County
15	V0062	Veteran trees across the estate	Historic feature
16	V0007	Hadrian's Wall	Historic feature - Line feature
17	V0044	Angel of the North	Landmark feature
18	V0048	Cragside	Landmark feature
19	V0055	Holy Island	Landmark feature
20	V0063	Crayfish in the Wansbeck river	Natural feature
21	V0009	Wylam	Neighbouring village
22	V0010	Throckley	Neighbouring village
23	V0015	Newburn	Neighbouring village
24	V0020	Scotswood	Neighbouring village

Figure 19: Extract of the table listing part of the individual fuzzy aspects of landscape with column (A): Unique ID of the aspect; (B): aspect name and (C): given character type)

Step 3: Attributing all mentions of landscape with the thematic context in which they have been mentioned

Once this dataset was completed, the dimensions of landscape perception in which the aspects were mentioned (derived from the earlier mentioned Thematic Analysis) could be added to all of the entries (see Figure 20). Together with the dimension a defined character type was attributed to each of the aspects, this followed the process and pre-defined character types of the HLC project of Northumberland. In some cases when no suitable type was available a new type (N) was added (Table 5.1). Important to note is that when an aspect of landscape was mentioned more than once during a one-minute segment, the aspect was only counted when it was mentioned in a different context or when this was used as a reply to a different question within that same minute. When participants referred to the same aspects twice or more within the same sentence for example, the aspects were only added to the list once.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Interval_Uid	Uid_point	Place	Heddon/Wallington	P or V	Place_UID	Type	HLC 0/1?	HLC Y/N?	Uid_point	Place	Personal	Collective	Time	Space	Pers_Back	Pers_Memo	Pers_Opin	Coll_Meet	Coll_Disc	Coll_Expe	Time_PrPa	Time_Recu	Space_Phys	Space_ToPla
2	IRF100001	RF100001	A69	Heddon-on-the-Wall	V	V0011	Communications - Road	0	N	RF100001	A69	0	0	1	1	0	0	0	0	0	0	1	0	0	1
3	IRF100001	RF100002	Newcastle upon Tyne	Heddon-on-the-Wall	V	V0017	City	0	N	RF100002	Newcastle upon Tyne	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4	IRF100001	RF100003	Corbridge	Heddon-on-the-Wall	V	V0029	Neighbouring village	0	N	RF100003	Corbridge	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5	IRF100001	RF100004	Hexham Road	Heddon-on-the-Wall	V	V0014	Communications - Road	0	N	RF100004	Hexham Road	0	0	0	1	0	0	0	0	0	0	0	0	0	1
6	IRF100004	RF100005	West estate Heddon	Heddon-on-the-Wall	P	P0001	Settlement C20	1	Y	RF100005	West estate Heddon	0	1	0	1	0	0	0	0	1	0	0	0	0	1
7	IRF100004	RF100006	East estate Heddon	Heddon-on-the-Wall	P	P0005	Settlement C20	1	Y	RF100006	East estate Heddon	0	1	0	1	0	0	0	0	1	0	0	0	0	1
8	IRF100004	RF100007	The Three Tuns	Heddon-on-the-Wall	P	P0032	Landmark Building	0	N	RF100007	The Three Tuns	0	1	0	1	0	0	0	0	1	0	0	0	0	1
9	IRF100004	RF100008	The Swan Pub	Heddon-on-the-Wall	P	P0030	Landmark Building	0	N	RF100008	The Swan Pub	0	1	0	1	0	0	0	0	1	0	0	0	0	1
10	IRF100006	RF100009	Throckley	Heddon-on-the-Wall	V	V0010	Neighbouring village	0	N	RF100009	Throckley	1	0	0	1	1	1	0	0	0	0	0	0	0	1
11	IRF10001	RF10001	West estate Heddon	Heddon-on-the-Wall	P	P0001	Settlement C20	1	Y	RF10001	West estate Heddon	0	1	1	1	0	0	0	0	1	0	1	0	0	1
12	IRF10001	RF10002	East estate Heddon	Heddon-on-the-Wall	P	P0005	Settlement C20	1	Y	RF10002	East estate Heddon	0	1	1	1	0	0	0	0	1	0	1	0	0	1
13	IRF100010	RF100010	Tyne Valley	Heddon-on-the-Wall	V	V0008	Topographic characteristic	0	N	RF100010	Tyne Valley	0	0	0	1	0	0	0	0	0	0	0	0	1	0
14	IRF100011	RF100011	Railway in Tyne Valley	Heddon-on-the-Wall	V	V0003	Communications - Railways	0	N	RF100011	Railway in Tyne Valley	1	0	1	1	0	1	0	0	0	0	1	0	0	1
15	IRF100011	RF100012	Newburn	Heddon-on-the-Wall	V	V0015	Neighbouring village	0	N	RF100012	Newburn	1	0	1	1	0	1	0	0	0	0	1	0	0	1
16	IRF100013	RF100013	Heddon Pit	Heddon-on-the-Wall	P	P0009	Abandoned extraction site	0	N	RF100013	Heddon Pit	1	1	1	1	0	1	0	0	1	0	1	0	0	1
17	IRF100013	RF100015	Heddon Pit	Heddon-on-the-Wall	P	P0009	Abandoned extraction site	0	N	RF100015	Heddon Pit	1	1	1	1	0	1	0	0	1	0	1	0	0	1
18	IRF100013	RF100014	Throckley	Heddon-on-the-Wall	V	V0010	Neighbouring village	0	N	RF100014	Throckley	1	0	1	1	1	1	0	0	0	0	1	0	0	1
19	IRF100013	RF100016	Walbottle	Heddon-on-the-Wall	V	V0024	Neighbouring village	0	N	RF100016	Walbottle	1	0	1	1	0	1	0	0	0	0	1	0	0	1
20	IRF100013	RF100017	Westerhope	Heddon-on-the-Wall	V	V0030	Neighbouring village	0	N	RF100017	Westerhope	1	0	1	1	0	1	0	0	0	0	1	0	0	1
21	IRF100017	RF100018	The Reef	Heddon-on-the-Wall	V	V0031	Water – Unspecified Artificial lake/ponds	0	N	RF100018	The Reef	1	0	1	1	0	1	0	0	0	0	1	0	0	1
22	IRF100021	RF100019	Bays Leap farm	Heddon-on-the-Wall	P	P0034	Settlement C20	1	Y	RF100019	Bays Leap farm	0	1	1	1	0	0	0	1	0	1	1	0	0	1
23	IRF10003	RF10003	Historic Centre of Heddon	Heddon-on-the-Wall	P	P0002	Settlement pre-1860s	1	Y	RF10003	Historic Centre of Heddon	0	0	0	1	0	0	0	0	0	0	0	0	0	1
24	IRF10003	RF10004	Heddon Banks	Heddon-on-the-Wall	P	P0045	Settlement C20	0	N	RF10004	Heddon Banks	0	1	0	1	0	0	0	1	0	1	0	0	1	0
25	IRF10003	RF10005	View across the Tyne Valley (Heddon)	Heddon-on-the-Wall	V	V0002	Visual characteristic	0	N	RF10005	View across the Tyne Valley (Heddon)	0	1	0	1	0	0	0	1	0	0	0	0	1	0
26	IRF100031	RF100020	East estate Heddon	Heddon-on-the-Wall	P	P0005	Settlement C20	1	Y	RF100020	East estate Heddon	0	0	0	1	0	0	0	0	0	0	0	0	0	1
27	IRF100031	RF100021	A69	Heddon-on-the-Wall	V	V0011	Communications - Road	0	N	RF100021	A69	0	0	0	1	0	0	0	0	0	0	0	0	0	1
28	IRF100033	RF100022	Part of golf course that used to be field	Heddon-on-the-Wall	P	P0065	Ornamental designed landscape	0	N	RF100022	Part of golf course that used to be field	1	0	1	1	0	1	0	0	0	0	1	0	0	1
29	IRF100035	RF100023	Close House Golf course	Heddon-on-the-Wall	P	P0022	Ornamental designed landscape	0	N	RF100023	Close House Golf course	0	0	0	1	0	0	0	0	0	0	0	0	0	1
30	IRF100035	RF100024	Close House Playing Fields	Heddon-on-the-Wall	P	P0013	Sports Grounds	0	N	RF100024	Close House Playing Fields	0	0	0	1	0	0	0	0	0	0	0	0	0	1
31	IRF100035	RF100025	Garage/Fuel Station	Heddon-on-the-Wall	P	P0047	Landmark Building	0	N	RF100025	Garage/Fuel Station	0	0	0	1	0	0	0	0	0	0	0	0	0	1
32	IRF100047	RF100026	Railway in Tyne Valley	Heddon-on-the-Wall	V	V0003	Communications - Railways	0	N	RF100026	Railway in Tyne Valley	0	0	0	1	0	0	0	0	0	0	0	0	0	1
33	IRF10005	RF10006	Heddon Primary School	Heddon-on-the-Wall	P	P0003	Landmark Building	0	N	RF10006	Heddon Primary School	0	1	0	0	0	0	0	1	0	0	0	0	0	0
34	IRF10005	RF10059	Throckley	Heddon-on-the-Wall	V	V0010	Neighbouring village	0	N	RF10059	Throckley	1	0	1	1	0	0	1	0	0	0	1	0	0	1
35	IRF10005	RF10060	Newburn	Heddon-on-the-Wall	V	V0015	Neighbouring village	0	N	RF10060	Newburn	1	0	1	1	0	0	1	0	0	0	1	0	0	1
36	IRF100057	RF100027	Heddon Nursery	Heddon-on-the-Wall	P	P0061	Settlement C20	0	N	RF100027	Heddon Nursery	1	0	1	1	0	1	0	0	0	0	1	0	1	1
37	IRF100057	RF100028	The Shops	Heddon-on-the-Wall	P	P0008	Settlement C20	0	N	RF100028	The Shops	1	0	1	1	0	1	0	0	0	0	1	0	1	1
38	IRF10006	RF10007	Close House Estate	Heddon-on-the-Wall	P	P0004	Ornamental designed landscape	1	Y	RF10007	Close House Estate	0	0	0	1	0	0	0	0	0	0	0	0	0	1
39	IRF10006	RF10008	Heddon Banks Farm	Heddon-on-the-Wall	P	P0006	Settlement pre-1860s	1	Y	RF10008	Heddon Banks Farm	1	0	0	1	0	1	0	0	0	0	0	0	0	1
40	IRF100061	RF100029	House opposite The Swan	Heddon-on-the-Wall	P	P0066	Settlement pre-1860s	0	N	RF100029	House opposite The Swan	1	0	1	1	0	1	0	0	0	0	1	0	1	1

Figure 20: Extract of transcript of the interviews relating one-minute segments to mentioned aspects of landscape within them and with context in which they were mentioned (columns L to Y)

Table 5.1: Character Types attributed to mentioned aspects of landscape ((N) signifies a character type that is new in comparison to the HLC of Northumberland)

Discrete features	Fuzzy features
Abandoned extraction sites	City (N)
Communication - Roads	Communication – Airport
Farmstead	Communication – Railways
Fields – Small surveyed fields	Communication – Road (Outside of case study area)
Fields – surveyed enclosures	Communication – Utilities
Historic Feature	Country (N)
Horticulture	County (N)
Industry Utilities	Historic Feature – Unspecified
Landmark Building	Historic Feature – Line Feature
Ornamental designed landscape (features)	Landmark Feature (N)
Communication - Public Footpath	Natural Feature (N)
Settlement 20th Century	Neighbouring village (N)
Settlement late 19th Century	Ornamental designed landscape
Settlement pre-1860s	Sense Characteristic (N)
Sports Ground	Topographic Characteristic (N)
Water – Artificial lake/pond	Fields – Unspecified
Water – Natural well	Visual Characteristic (N)
Water – River	Walking Route (N)
Woodland 19th Century	Water – Unspecified Artificial lake/ponds
Woodland 20th Century	Water – River (outside of case study area)
Woodland late 19th Century	Woodland - Unspecified
Woodland pre 1860s	

Step 4: Visualising the one-minute segments within GIS

Using the geographic coordinates for all start and end point of the one-segments, retrieved from the record GPS track of the walks (see Figure 21), all segments could be visualised within QGIS, an open-source GIS-package (see Figure 22). The base-map used for this project was an OS Mastermap at a scale of 1:25.000, this map was downloaded in separate tiles from http://digimap.edina.ac.uk and was used within a British National Grid coordinate system (OSGB 36). This system is a projected coordinate system for the United Kingdom and usually used for official Ordnance Survey maps, this coordinate system was used in relation to the system used to map the HLC project of Northumberland.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	wkt_geom	track_fid	track_seg_id	track_seg_p	ele	time	Timestamp	Decimal result	Set to 0	Interval	Interval_Dec	Interval+1	IRF	Interval_Uid
2	PointZ (-1.79430899999999993 54.99561299999999875 126.40000000000000568)	0	0	0	126.4	2019-02-27T10:04:30	10:04:30	10:04:30	00:00:00	00:00:00	0	1	01	IRF30001
3	PointZ (-1.79408400000000001 54.99582099999999994 126.29999999999999716)	0	0	1	126.3	2019-02-27T10:04:49	10:04:49	10:04:49	00:00:19	00:00:00	0	1	01	IRF30001
4	PointZ (-1.79411399999999999 54.99584600000000023 126.29999999999999716)	0	0	2	126.3	2019-02-27T10:04:54	10:04:54	10:04:54	00:00:24	00:00:00	0	1	01	IRF30001
5	PointZ (-1.79408999999999996 54.99587199999999854 126.29999999999999716)	0	0	3	126.3	2019-02-27T10:05:02	10:05:02	10:05:02	00:00:32	00:00:00	0	1	01	IRF30001
6	PointZ (-1.79409599999999991 54.99589799999999684 126.29999999999999716)	0	0	4	126.3	2019-02-27T10:05:10	10:05:10	10:05:10	00:00:40	00:00:00	0	1	01	IRF30001
7	PointZ (-1.794049 54.99589199999999778 126.29999999999999716)	0	0	5	126.3	2019-02-27T10:05:14	10:05:14	10:05:14	00:00:44	00:00:00	0	1	01	IRF30001
8	PointZ (-1.79399700000000006 54.99590899999999749 126.29999999999999716)	0	0	6	126.3	2019-02-27T10:05:17	10:05:17	10:05:17	00:00:47	00:00:00	0	1	01	IRF30001
9	PointZ (-1.79395199999999999 54.99592100000000272 126.29999999999999716)	0	0	7	126.3	2019-02-27T10:05:19	10:05:19	10:05:19	00:00:49	00:00:00	0	1	01	IRF30001
10	PointZ (-1.79390000000000005 54.99593899999999991 126.40000000000000568)	0	0	8	126.4	2019-02-27T10:05:23	10:05:23	10:05:23	00:00:53	00:00:00	0	1	01	IRF30001
11	PointZ (-1.79386000000000001 54.99595500000000214 126.40000000000000568)	0	0	9	126.4	2019-02-27T10:05:26	10:05:26	10:05:26	00:00:56	00:00:00	0	1	01	IRF30001
12	PointZ (-1.79381900000000005 54.99597399999999681 126.5)	0	0	10	126.5	2019-02-27T10:05:32	10:05:32	10:05:32	00:01:02	00:01:00	1	2	02	IRF30002
13	PointZ (-1.79377699999999995 54.99595999999999663 126.5)	0	0	11	126.5	2019-02-27T10:05:37	10:05:37	10:05:37	00:01:07	00:01:00	1	2	02	IRF30002
14	PointZ (-1.79373099999999996 54.99597399999999681 126.59999999999999432)	0	0	12	126.6	2019-02-27T10:05:42	10:05:42	10:05:42	00:01:12	00:01:00	1	2	02	IRF30002
15	PointZ (-1.79366599999999998 54.99598399999999998 126.70000000000000284)	0	0	13	126.7	2019-02-27T10:05:46	10:05:46	10:05:46	00:01:16	00:01:00	1	2	02	IRF30002
16	PointZ (-1.79361799999999993 54.99598799999999699 126.79999999999999716)	0	0	14	126.8	2019-02-27T10:05:49	10:05:49	10:05:49	00:01:19	00:01:00	1	2	02	IRF30002
17	PointZ (-1.79359700000000011 54.99601700000000193 126.90000000000000568)	0	0	15	126.9	2019-02-27T10:05:53	10:05:53	10:05:53	00:01:23	00:01:00	1	2	02	IRF30002
18	PointZ (-1.79355400000000009 54.99603299999999706 127)	0	0	16	127	2019-02-27T10:06:01	10:06:01	10:06:01	00:01:31	00:01:00	1	2	02	IRF30002
19	PointZ (-1.79350999999999994 54.99604699999999724 127)	0	0	17	127	2019-02-27T10:06:06	10:06:06	10:06:06	00:01:36	00:01:00	1	2	02	IRF30002
20	PointZ (-1.79346099999999997 54.99606899999999854 127.09999999999999432)	0	0	18	127.1	2019-02-27T10:06:09	10:06:09	10:06:09	00:01:39	00:01:00	1	2	02	IRF30002
21	PointZ (-1.79342399999999991 54.99609800000000348 127.20000000000000284)	0	0	19	127.2	2019-02-27T10:06:11	10:06:11	10:06:11	00:01:41	00:01:00	1	2	02	IRF30002
22	PointZ (-1.79338400000000009 54.99607999999999919 127.29999999999999716)	0	0	20	127.3	2019-02-27T10:06:17	10:06:17	10:06:17	00:01:47	00:01:00	1	2	02	IRF30002
23	PointZ (-1.79339800000000005 54.99604099999999818 127.40000000000000568)	0	0	21	127.4	2019-02-27T10:06:20	10:06:20	10:06:20	00:01:50	00:01:00	1	2	02	IRF30002
24	PointZ (-1.79339800000000005 54.99601200000000034 127.5)	0	0	22	127.5	2019-02-27T10:06:24	10:06:24	10:06:24	00:01:54	00:01:00	1	2	02	IRF30002
25	PointZ (-1.79339200000000001 54.99597800000000092 129)	0	0	23	129	2019-02-27T10:06:28	10:06:28	10:06:28	00:01:58	00:01:00	1	2	02	IRF30002
26	PointZ (-1.79338899999999999 54.99595099999998803 128.19999999999998863)	0	0	24	128.2	2019-02-27T10:06:32	10:06:32	10:06:32	00:02:02	00:02:00	2	3	03	IRF30003
27	PointZ (-1.79338599999999992 54.99592299999999767 128)	0	0	25	128	2019-02-27T10:06:34	10:06:34	10:06:34	00:02:04	00:02:00	2	3	03	IRF30003
28	PointZ (-1.79338500000000001 54.99589300000000236 127.79999999999999716)	0	0	26	127.8	2019-02-27T10:06:36	10:06:36	10:06:36	00:02:06	00:02:00	2	3	03	IRF30003
29	PointZ (-1.79340199999999994 54.99586200000000247 127.5)	0	0	27	127.5	2019-02-27T10:06:39	10:06:39	10:06:39	00:02:09	00:02:00	2	3	03	IRF30003
30	PointZ (-1.79341900000000001 54.99582900000000052 127.29999999999999716)	0	0	28	127.3	2019-02-27T10:06:43	10:06:43	10:06:43	00:02:13	00:02:00	2	3	03	IRF30003

Figure 21: Extract from attribute table of recorded track of walk RF3. Column A: coordinated of recorded points on the walk; (G-J) calculation of the interval and (N) interval Unique ID

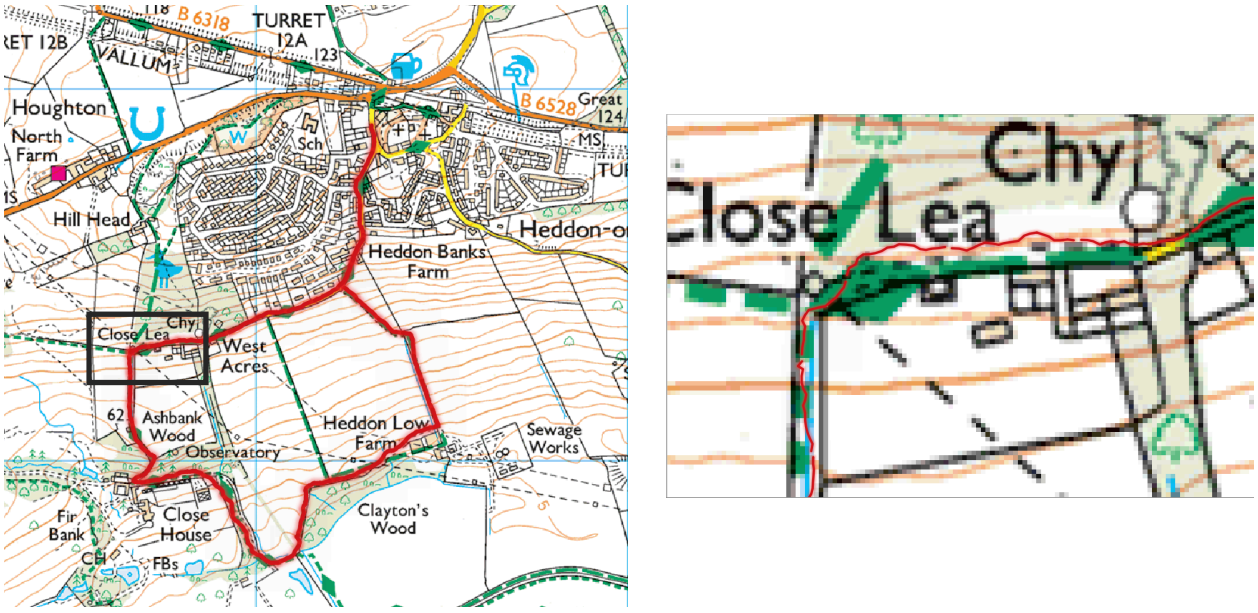


Figure 22: Walk of RF5 in GIS on the left and zooming in on the one-minute segments on the right

This process was done for each of the recorded interviews (see Figure 23) in both Heddon-on-the-Wall and Wallington Estate.

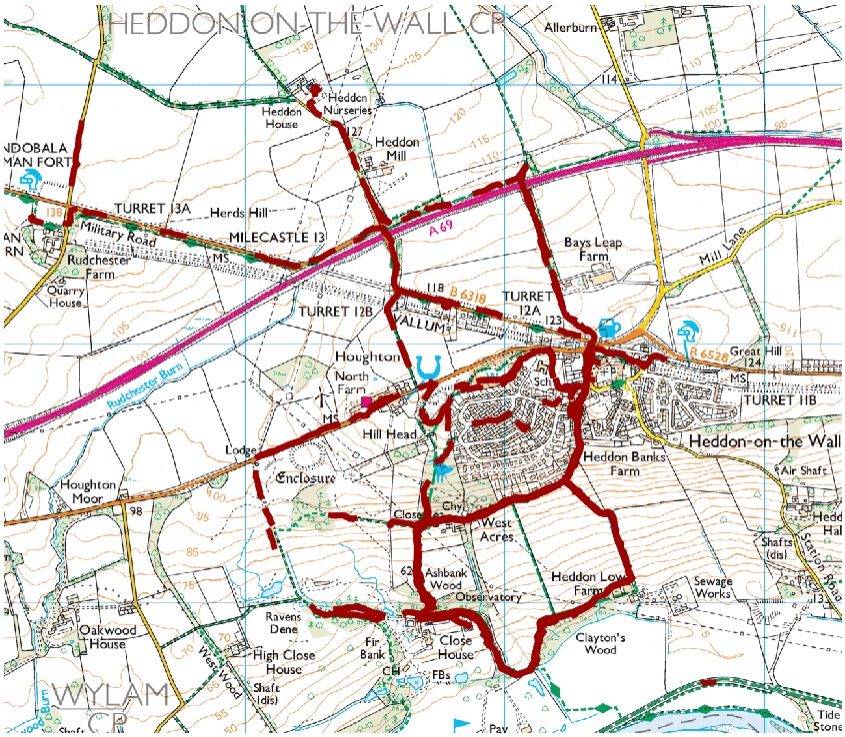


Figure 23: Overlapping one-minute segments in which an aspect of landscape was mentioned for walks carried out in Heddon-on-the-Wall case study.

Step 5: Connecting GIS and transcript to develop spatial transcript

Following the integration of the one-minute segments in a GIS project, the segments could now be linked with the transcript dataset created in Steps 1-3 using the Unique ID of each of the individual segments. This step geolocated all mentions of aspects of landscape along the segments along which they were mentioned. This is possible for both discrete and fuzzy aspects of landscape. For the discrete aspect a more detailed mapping was provided in order to be able to locate them on a map. Using their unique IDs the mapped discrete aspects could be linked to the segments in which they were mentioned, this gave the added advantage that the distance between the segment of the mention (point in middle of segment was used for calculations) and the discrete aspect could be calculated, this to give a better indication of the importance of the visual sense in landscape perception.

Step 6: Visualising public perception of landscape

Following the connection between de one-minute segments, discrete mentioned locations and spatial transcripts aspects of landscape and the location where they were mentioned could be visualised through querying the database. At this stage it must be mentioned the locations of discrete aspects and the locations at which aspects were mentioned were visualised using buffer zones around points in GIS. This allowed for the uncertainty and accuracy levels of the GPS track to be compensated. The advantage of using points to map and visualise this is the ability to visualise them through heatmaps, a technique that visualises frequency of point for each location on the map. The database could then be queried to visualise on the map where aspects were mentioned in each of the different themes, subthemes or combinations of (sub)themes. This spatial transcription and subsequent visualisation of the participatory outcomes was a necessary step to be able to have a sufficient data source to be able to inform a characterisation project such as the HLC of Northumberland.

Step 7: Finalising the GIS database

These last two steps in combination with the polygons drawn by participants within the Maptionnaire software gave a complete qualitative GIS dataset of what has been said about the landscape during the participatory stages of this research. Several queries were run across the data to be able to solve different questions. One thing must be clear however, there is not one final map that visualises how 'people see their landscape'. The result of this process is a database that could be queried and the outcome of these queries have been used to inform the HLC project.

5.6.2 Public perception and HLC: 'Grounded visualisation'

Integrating the qualitative data into GIS was one step using the outcomes of that qualitative GIS to inform HLC is another and also final step of the study to answer to the last research question: How can data on the perception of people be used to inform HLC. This section explains how the dataset that was developed in the previous section was queried and visualised to match the way HLC in generalising its attributes (see Chapter 4). The HLC database that was used as a basis for analysis of the capabilities of the approach was the HLC of Northumberland, discussed during the previous Chapter as well. In order to inform the HLC project, 'grounded visualisation' was used to analyse the data coming out of the queries made on the GIS-dataset

on the public perception. 'Grounded visualisation' was used as it takes the benefits of the 'grounded theory' approach in social science, used to analyse qualitative data, but could be used as an integrated analysis strategy that is both iterative and reflexive, but also contextual and conceptual (Knigge & Cope, 2006). This meant that the dataset visualising the public perception in landscape was used as a primary source within HLC and was not 'added to' HLC as such. Yet again this led to an earlier discussed limitation that the HLC-expert, who carries out the research has an influence on the outcome, this is however a procedure that was mitigated using the Maptionnaire data as a set of control data.

Within the HLC database new attributes corresponding to the developed themes in the thematic analysis were added, to the already existing database of the HLC project. These attributes are now used to record the frequency of occurrences of each of the themes within the HLC-polygons. In order to eliminate cases in which one-minute segments and their attributed themes were located into a sliver of the HLC map, the buffer zones developed in the previous sections were used as proxies to count. It could therefore become possible for mentions and themes to be counted in two polygons (two polygons on either side of the road) at the same time (see Figure 24). Recording these attributes was used to further describe the polygon's character as this reflects the participants' interpretation of the polygon (and surrounding polygons).

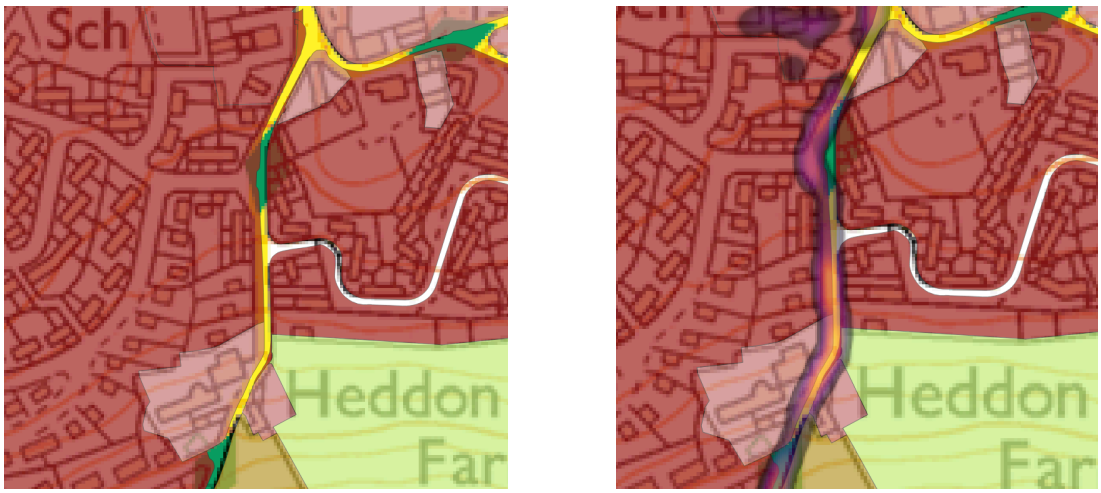


Figure 24: HLC of Northumberland with polygons leaving gaps (slivers) at roads and major paths (left) and buffer zones around one-minut segments to overcome gaps and make it possible to record public perception theme attributes in polygons on either side of the sliver (right)

The HLC database was then queried for each of the themes and subthemes and the distribution of each of the themes could be visualised. This was done in line with how the template project design of HLC (English Heritage 2002) described this for other, more conventional attributes as well. In order to see the differences between the expert's interpretation of landscape and the

public interpretation of landscape, the types attributed to each of the polygons of the conventional HLC were then compared to the types that were mentioned by participants within the polygons. This could be done because for each of the aspects mentioned along each of the segments a type was recorded (similar to the HLC types or the newly developed ones, see earlier in this section). A count of the similarities and differences gave and overview if the type in which people were walking was mentioned or whether participants were actually talking about and thus perceiving and interpreting other types of landscape during the walk (and within the questionnaire).

5.7 Ethical principles of the empirical study

This section will further explain the ethical principles that were adhered to during the empirical stage of the research. In this study the informed consent of the participants was sought, assuring them of the confidentiality and the anonymity of the research. As a guide on how to deal with ethical principles the British Sociological Association's Statement of Ethical Practice was used (British Sociological Association, 2017). All interviewees and participants in the Maptionnaire were informed that confidentiality of all information they provided was guaranteed during and after the study. The analysis chapters (Chapters 6 and 7) of this thesis show how all quotations have been coded and being used anonymously. An additional precaution was taken during the walking and talking interviews as participants were asked if they gave consent to have their voices recorded and if they wanted to stay anonymous or if it was OK to call them by their name while talking (only on the audio files).

Due to both practical and ethical reasons, there were no participants selected under the age of 18. Regarding the outcomes of the findings of this study, the participants were informed they would be updated about the results and conclusions of the study once this study has been completed. Due to the Covid-crisis this might have to wait till after summer 2021.

5.8 Limitations of the study

This research is limited to the case study areas and this might limit the generalisation of the outcomes to other cases in England, Europe or globally. As mentioned in section 5.7, the researcher is also aware of the limitation of the study in terms of conducting the interviews and filling out the questionnaire. Being a researcher or being presented to the participants as a research could have affected the interviewees and participants replies because of linking both

participatory approaches to official decision-making processes. This was mitigated by stating and explaining the aims and objectives before the study started. However, for the majority of the participants it felt as if they were not that preoccupied by fact the interviews and questionnaires were part of an academic study.

The main limitation of this study however was time and money constraints. The advertisement of the Maptionnaire would have benefitted from door to door posting of flyers promoting the questionnaire. Also, more people were available to be interviewed, but given the time cost of transcribing the interviews, the amount of conducted interviews had to be limited.

5.9 Conclusion

This chapter has developed a case study based qualitative and spatial methodology for the investigation of participatory Historic Landscape Characterisation. A range of qualitative approaches including walking and talking interviews and map-based questionnaires were applied to better understand and analyse how participants perceived the landscape and interpreted it. Both case study, with different setting, gave the opportunity to create an understanding that is based on two cases with different ownership and landscape structure. This enriched the possible application and implications of the findings.

This multi-method approach was a convenient methodology for various reasons: the in-situ walking and talking interviews gave valuable data from within the landscape. This meant the data could be geolocated and spatially transcribed. The Maptionnaire on the other hand gave the opportunity to reach a wider range of participants whereas the walking and talking had only a limited number of participants included. Analysis of both approaches in a parallel manner allowed for themes and subthemes to be defined to develop a framework for public perception. This thematic analysis will be discussed more in depth in the next chapter (Chapter 6).

Next, spatial transcripts of the interviews and outcomes of the thematic analysis were mapped and operationalised to be able to inform the HLC project of Northumberland. Generalising the public perception dataset, direct input for the HLC could be produced creating new attributes for the HLC database adding data about the way participants interpreted and perceived landscape. This spatially based analysis will be discussed more in depth in Chapter 7.

Chapter 6:
THEMATIC ANALYSIS TO UNDERSTAND LANDSCAPE PERCEPTION

6 Thematic Analysis to understand landscape perception

6.1 Introduction

This chapter presents the findings of the empirical study conducted to investigate the influencing factors on landscape perception and to gain a better understanding of how landscapes are perceived. How this understanding was effectively integrated in an existing characterisation process will be discussed in the next chapter (Chapter 7). In addressing the research question, how is landscape perceived by people? First, the chapter zooms in on how people's personal life and character influence the way they interpret landscapes. Then the chapter shows how being part of communities, different groups or society in general, makes people look at landscape through collective glasses. The next part then deals with how time and the physical landscape that surrounds us have an underestimated impact on landscape perception. To conclude the chapter brings these four themes together to give a better understanding of how landscape perception can be understood to be able to better integrate this concept and translate it into GIS based characterisation tools.

This chapter starts with an analysis of who 'the people' were that participated in this study during its separate empirical stages. Then the chapter will lead on to highlighting and commenting on the separate themes found through a thematic analysis. As a way of introducing this analysis one specific quote can be used to illustrate the remainder of the chapter.

Me: 'If you look at the landscape around us, what do you see then'
RF28 in Wallington (after giving some other place names):
'...I have been working at Wallington since I was 18, as I have said 34 years. But when I come back on say a day off and when we lived on the estate, we used to bring our son down all the time in his pushchair. But you look at the place differently. When I'm walking out here normally, I mean I'm work mode so I'm picking up trees or jobs that need to be doing so. But when you come here on your day off, you are a visitor aren't you? I switch off and enjoy the views and the site. Also, my son still loves the place, now he comes with his son, you know my grandchild. He would come on his days off now, he does not see it as my work he loves this place [….] He would still call it home, I think. And while it has changed a lot, he still knows the place and a lot of people on the estate.'

This quote was said along the participant's chosen route. Being in his mid-50s, the participant worked at the Wallington estate for most of his life, he has also lived on the estate till 2014. He was one of the interviewees keen to walk and talk about his connection to Wallington. This quote shows the complex relation the respondent has with landscape, as while the question asked for a description of what seen in the surroundings the reply was directed at how the participant was feeling, experiencing, interpreting and thus perceiving the landscape.

This particular quote illustrates the four interlinked dimensions of landscape perception identified by the thematic analysis using the principles of the framework analysis in the chapters reviewing the literature (Chapter 2, 3 and 4). Firstly, landscape is a personal experience and makes us who we are as individuals. For example, he talks about a personal memory of walking around the landscape with his son in his pram. Secondly, landscape is a collectively constructed concept. The participant seems to wear different hats when he looks at landscape. While working he is part of another social group than while being there as a visitor and looks at landscape differently because of this. Thirdly, that landscape is a matter of time, the participant says his own son is now taking his grandchild on walks through the estate and alludes that while the landscape has changed it still feel like home. This is an example of how landscape may change over time, but it still looks familiar over a lifetime even across generations. And finally, that landscape is also about physical characteristics of the land, perception is about the characteristics of the site itself as well. While we might look at it through cultural glasses, the physicality of the land plays a role in recognising an area. The views the participant is talking about would not be there without the particular relief at that place and thus the natural landscape. These four dimensions and their interlinking play a centre role in this chapter and will be further analysed showing their individual divisions (Table 6.1). In the Discussion Chapter of this thesis (Chapter 8), these findings are discussed in relation to the literature that was reviewed during the previous three chapters of this study. Through this discussion it will become clear whether the findings presented here are supporting existing research on the subject or set the understanding of landscape perception in a new light.

Table 6.1: Dimensions and sub-dimensions of landscape perception

1. Landscape as a personal matter	a) Personal background b) Personal memories c) Personal opinion
2. Collective understanding of landscape	a. Meeting through landscape b. Discussing through landscape

	c. Experiencing landscape through the collective
3. Landscape in time	a. Past – Present – Future b. Re-occurring occasions
4. Landscape in space	a. Physical landscape

6.2 Study Participants

Before moving on to the thematic analysis itself this section will give contextual information about the participants in the study. Having had some initial difficulties with the software licenses the map-based questionnaire was online between the beginning of April and the end of October 2019. All walking and talking interviews took place between 22nd of February 2019 and 8th of December 2019. Recruitment for both of the approaches was done in different ways. As set out in the Methodology chapter (Chapter 5) the empirical study has used an online software to develop the questionnaire, the participants could reach the questionnaire via an URL. Once set up, this was sent out using various channels (email, social media, newsletters, memo boards in the village) to reach participants in the two case study areas. For the walks and talks on the other hand recruitment was mostly done through initial contacts in the two areas. Other participants were also recruited from the message that was posted in the local newsletters and on social media.

In the end the questionnaire received 64 usable reactions of which 52 came out of the Wallington case study area and only 12 from Heddon-on-the-Wall. It must be said that 40 other replies, which were spread evenly across the two areas, were not used in the final analysis. These replies were either not complete, not using the maps or not genuine. Interestingly, out of the 64 usable reaction only 128 polygons were drawn, that is on average two drawn polygons for each of these participants. Given that there were nine (or ten depending on the replies to some of the questions) questions that asked to draw on a map this is not the number of polygons that was expected. Immediately, this result shows the difficulty that was experienced while using the approach. First, it was very difficult to reach participants in the first place, then it proved to be much more difficult to get the participants to draw on the digital map than anticipated. Another unanticipated finding here was the balanced distribution of the participants across the age groups (Table 6.2). The finding that the 35-60 age group is slightly outnumbering the other groups has several explanations: (1) it can be due to the fact that this is a wider age group than the 18-35 group, (2) the fact that with an online survey it is possibly harder to reach

the 60 years and older age group and (3) the 35-60 age group has been found to be the most interested group in these kind of subjects in general.

Table 6.2: Replies to the question 'What age group are you in?'

What age group are you in?	Count	%
18 - 35 years	17	28.8
35 - 60 years	31	46.9
60 years or older	16	24.2
	64	**100**

The main reason for reaching more people for the Wallington than the Heddon-on-the-Wall case study was the help from the National Trust social media page. While in both Heddon-on-the-Wall and Wallington social media was used to spread the URL, the moments the URL was posted on Facebook page for the National Trust Wallington estate the amount of people filling out the questionnaire was boosted. This broadly explains the 80% of participants that have chosen Wallington as their case study area. A reflection of this can be seen in the question about the kind of relationship the participants have with the case study area, 23 out of the 25 people that have selected 'Visitor' as a reply are taking part with Wallington as their case study. The social media boost is also mainly targeting the 18-35 age group as almost 75% of them has replied to the questionnaire in less than one day after the social media reminder. This is not the case for the other age groups where there is no clear relation between the time of the social media posting and the completion of the questionnaire.

The finding that 'visitor' received the highest clicks in the Wallington case study shows how the posts on social media reached people with different backgrounds in both case study areas too. Social media posts at Wallington reach a wider public while Heddon-on-the-Wall's Facebook page is more frequented by local people and residents. While overall, across both case study areas, only 23% of the participants indicated they are residents and 39% of them are visitors it is important to note that the remaining 37% indicated 'Other' as their relation to the area. This can refer to respondents that work in the area or in the case of Wallington this might also take into account people who volunteer on the Estate as a National Trust volunteer (Table 6.3).

Table 6.3: Replies to the question 'What is your connection to the area?"

What is your connection to the area?	Count	%
Resident	15	23.4
Visitor	25	39.1
Other	24	37.5
	64	**100**

Most of the residents that filled out the questionnaire lived at one of the areas all their life (60%), 26% lived at the place for more than 10 years. Less than 5% of the participants lived at the places for less than one year. While most of the residential participants thus lived in the areas for a long time also the visiting participants can be supposed to have a very strong connection to the areas as most participants (55%) said they were visiting the place at least once a month.

The second part of the empirical study, the walk and talks had a different set of participants. 16 different people participated and 29 walks were done in total. All 16 participants did take part in the first round of walks (the pre-defined walks) but only 13 of them took part in the second round (participant guided walks). Three participants did not take part because of various reasons: One participant was injured, while two other preferred not to take part in the research anymore. In total this led to 19 walks that were carried out in the Heddon-on-the-Wall and 10 of them were done in Wallington. 90% of the interviewees are residents of the areas or have been living in the areas in the past. The other 10% have close links with the area (children are going to school in the study area) or lived in neighbouring villages and visit the areas often (to recreate or shop).

During the 16 pre-defined walks seven walks were carried out by people over 60 years of age, seven were done by people out of the 35-60 years age group and two participants were younger between 18 and 35. For the 13 walks during which the participants guided me around, this changed a little as five people over the age of 60 did a walk, six participants were between 35 and 60 for the second set of walks and the same two people between 18 and 35 walked again. As far as the two approaches can and should be compared there is a small distinction in the participants age groups between the two (Table 6.2 & Table 6.4). Seen in a relative way, more people of the younger age groups were reached with the online survey than during the search for participants to walk with. Younger people were approached for a walk, but most of them

were time restricted and said they were willing to fill out the online questionnaire instead. It is however very hard to check to what extent this is the case.

Table 6.4: Age groups during the Walks and Talks

What age group are you in?	Count	%
18 - 35 years	4	13.8
35 - 60 years	13	44.8
60 years or older	12	41.4
	29	**100**

6.3 Landscape as a personal matter

6.3.1 Introduction

While interlinked, each of the four key dimensions is also interpretable more in-depth individually. The insights in this part are partially informed by the review findings in Chapter 3 which drew attention to how landscape is part of people's identity and on the understanding of how one's identity is interlinked with landscape perception. While carrying out the thematic analysis of the interview and questionnaire data the first theme that appeared was the way personal matters have an impact on how landscape is perceived in a subjective manner. How an individual perceives landscape depends on his or her age, background, profession, degree of expertise and other personal views and opinions. This section wants to give an overview of how this occurred within the interviews and questionnaires.

6.3.2 Background and landscape

During most of the walks and while meeting people for the first time, parts of the personal background of the participants were the first things that were revealed during the conversation. After having introduced myself, shortly introducing the study and the way the walks and talks would work many of the participants introduced themselves. This happened without having even started the recording or the 'formal' part of the interview. Within this introduction they referred to their profession, their backgrounds and even since when they are a resident of the case study area or what their connection to it is. Throughout the interviews, people's personal background turned out to be one of the major factors that influenced how participants perceived the landscape around them. This personal background can be described as the personal situation of the participant, but as the literature review discussed (Chapter 3), this study understands the

personal background of people as distinct but linked with personal memories. Therefore, the findings that relate to either background or memories are spread across two sections in this chapter. Findings give evidence that the participants' personal backgrounds are key in how people understand the landscape that surrounds them on the walk. The analysis shows how one of the important aspects of the personal background is where people have lived during their lives and how they were using their landscape in the past.

Participants' statements on their residencies suggest three categories of participants can be distinguished: first of all people that have lived at one of the case study areas or its immediate surroundings all their lives. Secondly, participants who moved around during their lifetimes and were now living in either of the two studies places. And finally, there were some of the participants were born in either Wallington or Heddon-on-the-Wall, moved away from their birthplace and then moved back during certain stages of their lives. A key finding in this context was that almost all of the participant referred to the landscape they grew up in in order to compare it to the landscape they were walking through or commenting on during the questionnaire, whether they grew up in the case study area or elsewhere. During the conversations however, it was difficult for people to imagine the exact age they had when they were experiencing the landscape they are comparing to, but they almost all referred to a period during which they were children or teenagers. Therefore, the findings here refer to childhood and youth as key factors in how people perceive landscape during their adulthood.

One participant recognised that the place they grew up in had an immediate effect on how they felt in Heddon-on-the-Wall. The similarities in landscape made them feel at home in their new surroundings.

'I grew up in a workers class family background. I was part of a small sort of semi remote rural community on the edge Northumberland. So, I think I have instantly had a connection with this landscape because it was farmland all around. This was one of the reasons to move down here.'

(RF 08 in Heddon-on-the-Wall)

Another participant who did grow up in the case study area, was also focusing on their childhood landscape and compared it to today's landscape, noticing the changes since then.

'Yeah, we're just sort of like being near where I grew up because I can remember using that space in a certain way, but also it is changed a lot since then because of the golf course'

(RF29 in Heddon-on-the-Wall)

Whilst looking at the place in different ways, the childhood of the participant or the place they grew up in was a base of comparison to start from for all three groups of participants. Childhood seems to have filled participants memories and they related to small elements in landscape that took them back to these memories, whether these were related to the exact place or not. Features in the landscape were often triggers to bring back memories of childhood periods. The analysis shows that when features in the landscape brought back memories, this often happened in a spontaneous way without being asked for it specifically. There were also no references to negative memories noted. These memories seem to take participants back to activities or places they are most familiar with.

Linked to the finding that childhood and youth are important influencing factors on landscape is perceived is the way a sense of familiarity plays another important role. Interestingly, some participants were even talking about 'being too familiar' with the place. This was the case with participants who grew up in the case study area or at least have lived in the area for a longer period of time. Those participants often referred to the fact that they were so used to walking or spending time in landscape that they did not notice that landscape around them anymore. They hardly thought about it or experienced it anymore as it was all too familiar for them. This suggests that familiarity with landscape was felt to be a positive feeling when participants were reliving memories because of similarities in landscape with the landscape they grew up but it could also be experienced as a 'negative' feeling that makes landscape almost invisible to people when they become too familiar. This became apparent when discussing how they would explain their place to people that do not know it.

'Without the Wall Heddon would be still be the commute village. A classic I tell everybody: When we first moved here, I was coming back from Throckley from my parents and there was a busload of Americans and a typical American turned around. 'Hey buddy that's The Wall' so I said yes, and he said: 'That was built before America was discovered' He said: You don't really seem impressed?' I said no, I only live 200 yards from the Wal, I see it every day.'

(RF10 in Heddon-on-the-Wall)

The familiarity with landscape also meant that a lot of participants that lived in the case study areas for a longer period of time had the impression nothing much has changed around the place, while there has been constant change throughout the village it was not picked up by most of the residents who lived there for longer periods of time. It must be noted here that this is perhaps true for the Wallington case study as the estate in owned by the National Trust it is conserved and managed as a heritage site, so not many changes are going on. In Heddon-on-the-Wall there is new housing going up at the time of the walks, so it can be expected that change through time is significant and could in fact be noticed by people. One participant however offered evidence for the interlinkage between noticing change in landscape and personal background. This participant lives in Heddon-on-the-Wall for over 30 years and noticies even the smallest changes in landscape because of the interest in the history of Heddon-on-the-Wall.

'I am very biased, about 10 years ago I got into the local history society which I am now running. And, so I know quite a lot about the local history. I could find a lot to tell you here. I think what surprised me was the amount of history that there is in such a small village. That has been subject to a lot of change.'

(RF1 in Heddon-on-the-Wall)

Besides the combination of this specific participant's background and interests also another significant outcome of the walks can be seen here. Many of the participants felt as if they were 'biased', 'not knowing enough' during the interviews. Others often said 'they are not the right person to ask' or 'they do not know enough about its history' to answer the open question. Yet, a large group of participants replied to questions in a more relaxed way and described what they could sense in very descriptive and literal manner without thinking about it much further. The findings do not give enough evidence of a clear link between this remark and the personal background of the participants.

Such descriptions of what is sensed were often linked with mentions of spare time activities and professional interests and occurred when participants reacted to something on the walk in a spontaneous way. While these were expressed in various ways going from notifying small details in the built environment by a fireman to spotting wildflowers in the edges along the fields by a keen gardener. Surprisingly many of these interactions were the result of non-visual impressions. Both sounds and smells were often the base for spontaneous comments during the walks.

'When you grow up I mean you've explored a place not just your garden and your house but you have explored and you have been able to roam it in sort of explore nature and kind of know it better because you know the intricacies and the bumps and the smell of a fox, can you smell the fox?'

(RF5 in Heddon-on-the-Wall)

From the participant noticing a sound or a smell onwards, the conversation changed into the direction of the activities the participants enjoyed doing in the landscape or what they did during their professional career. In the next sections sounds and smells will also play a key role in bringing up these memories of the participants.

6.3.3 Memories and landscape

Different to the relation between background and landscape when it came to senses and memories it was often a case of reacting to a question rather than a spontaneous comment. One finding that can be understood through the walks and talks and the maps-based questionnaire is that memories affect the way the participants interpreted the surrounding landscape in various ways and that building these memories was a constant process for each of the participants. There are distinctions that can be made in the type of memories that were encountered. Firstly, some of the memories were location based meaning the participants had a memory about something they did at a specific location encountered on one of the walks or digitised within the questionnaire. Secondly, there are memories about important (personal) events that happened but were experienced by the participant at a particular location. An example of this type of memory is the location people were at when they heard about the events of 9/11. Another type of a memory that was found during the interviews, was the association of a place with something that had happened in the past that brings back the memory of an event or situation in the landscape which happened elsewhere and not at that specific location. A final type that was encountered during the empirical study were memories of memories. During the walks this type of memory was encountered while participants remembered a story that was told to them by a member of the family or friends. These stories were then carried on from one generation to another and added associations to specific locations that were walked along during the interviews. This type of memory was found as both a personal memory (because as an individual you have to remember it exists) or as part of the collective memory.

The majority of the memories talked about in the interviews or referred to in the questionnaires were of the third type, memories that happened during the lifetime of the participant but not necessarily at the specific location. One interviewee explicitly referred to the similarities in landscape that let to bringing up memories of their youth.

'Well, I grew up as a kid in Throckley which has a very similar landscape. It has a Dene with some ancient woodland and a stream running through it the New Burn. We spent all of our youth playing in there.'

(RF2 in Heddon-on-the-Wall)

As in this example, these memories were reminiscences of landscapes that respondents experienced in their youth. This could immediately be linked with the findings of the previous section which gives evidence that memories and background are inseparable and that memories are built throughout a lifetime.

Examples of the second type of memories, the ones that bring up major events in the lifetime of people were most often found with participants who worked in one of the case study areas. Some places in the landscape therefore became places with an extra layer of meaning for them. An example can be found in the following quote:

'I know (about memories) I can actually tell you exactly what happened on certain days, the day my son was born or when my dad died. We were working at Hartington, Hartington hall and garden we went there last week and I said to (name), I remember this was my first job it was a fallen ash tree.'

(RF13 in Wallington)

This gives evidence that different places have different meanings for different participants. For this participants Hartington and Hartington Hall are now associated with the first day on the job, therefore differences exist between his experiences of these places and the experience of his colleagues.

Interestingly, not only events in the personal life of the participants were linked to places. Also, items in the news for example are linked to memories and places. An example for such an event was found in the outbreak of the Foot and Mouth disease in the UK in 2001. While some of the participants were professionally affected by it, others who are not in the farming business also remembered where they were at the time of the outbreak.

'On the Thursday before it was announced where the Foot and Mouth has started I was in the Man's club in Throckely right and everybody was taking the mick out a farmer called (name) saying that Foot and Mouth had started at his place. Then, when news broke loose on Friday that Foot and Mouth had actually started at East-Heddon at Jimmy's, when they walked back into the pub on Friday night everybody just dropped their heads indefinitely…'

(RF22 in Heddon-on-the-Wall)

Here the quote shows how an event, that has not necessarily affected the participant in a personal way, is still associated to specific location within the landscape. The quote suggests that national or worldwide events such as the spread of diseases make people look differently towards specific locations or the landscape in general. This is an interesting result as this means the pandemic situation we live in today will also affect the way people will experience landscape in the future.

While most memories were of the above shown types, also location specific memories were part of the walks and questionnaires. As was expected most of these examples came up during second phase of the walks and talks, the ones in which the participants were guiding. Participants tended to take walks to or through locations with a special meaning or association for them. This type of memories differs from the previous types because the events that are part of the memory have happened at the specific location. This often led to often long winding stories of how the events took place and some findings show that this kind of memories are often topped up by imagination too.

'To me it is connected to memories. You never came to this woodland because it is where the witches lived, right? There were marks on the trees which would really creep everybody out, (…) which in hindsight is probably just this one. But as children you did not come down here. (…) And there was a massive, steep quarry in there too. You cannot you get to it anymore. It is sheer it is the size of the quarry or about the height of these trees was massive, but today it seems a lot smaller'

(RF29 in Heddon-on-the-Wall)

This evidences that imagination did influence the experience of landscape of certain participants. The imagination of this participant led to a perception of the woodland that was not encountered by any of the other participants. This suggests that a mix of personal memories

and personal imagination led to a different interpretation of landscape between different participants.

In other cases, memories linked to specific locations were triggers to talk about landscape change and change in dynamics for the area. This happened in many cases, but nearly always in relation to big infrastructure such as motorways or the airport.

This is the A69. When I was a kid, when there was a bank holiday you could not get out when you were in the village because there was a traffic jam to get out. People were coming from Newcastle to go to Hexham and Corbridge. That was the main thing, I think people from Heddon, how can I say it? That was good for the village, it went to a sleepy little village.

(RF10 in Heddon-on-the-Wall)

Also disappeared infrastructure could bring up memories

'Here you have got the old railway line, I vaguely remember when I was a child going to Tynemouth and we went from New Burn station. Nobody will remember that. You also could hear the trains in the valley then'

(RF9 in Heddon-on-the-Wall)

While these quotes give evidence for memories linked to landscape change it also gives an example of how memories are often linked to the non-visual senses. Participants described the changes in landscape not solely by describing its visual character, but also added the sounds of the train to that description. The memory of these sounds formed an important part of that memory of the changed landscape. The link between non-visual senses and landscape perception was also reported by other participants:

(When taking a break at work) *'I find a hedgerow somewhere like this one and park up. Look at the contours of the fields the animals and the different crops. You know the rotation of the crops is interesting it is lovely just to stop and just admire and take in the sounds and the smells.'*

(RF2 in Heddon-on-the-Wall)

This gives an example of how sounds and smells were found to be equally important to the outlook of the landscape by a specific participant. And while sounds and smells were found to

be factors that are embedded within participants memories and experiences related to landscape also quietness played an important role.

'(...) I do love just walking around the village on an evening when the stars are out and it is quiet (...). You might not see anybody and if you do you see somebody you know them.'

(RF5 in Heddon-on-the-Wall)

The example here suggests that the quietness of the evening adds to the experience of the landscape this participant had during evening walks. I might also suggest that the landscape is thus experienced as being not silent during the day. The reference to quietness in this case is certainly also evidencing the role of non-visual senses.

The last type of memories found during the interviews and questionnaires were the memories that are passed on through different generations. While this is part of a collective memory (see section 6.4) it must also be mentioned here. During the walks and talks memories that were passed on from one generation to another also became personal memories, brought back moments spent with other people, brought up specific locations and linked into particular moments. These memories created different ways of looking at the landscape as it made participants see the landscape through the eyes of different generations sometimes. Participants were becoming more aware of changes and the dynamics of landscape when passing on the stories they heard. Interestingly, passing on memories from one generation to another could be found in two ways during the interviews. One way was expressed by many participants when they were talking about stories about the area that were told by their parents or grandparents.

'I was talking to my dad last night told him I was going to do this walk and he said why did I not take along the back? (...) He said that every Sunday when he was a little boy, so that would have been 85 years ago, he was to go for a walk with his mom and dad and they would walk up the backfields but I had to explain to him I cannot do that anymore because of the A69.'

(RF19 in Heddon-on-the-Wall)

In this case the story passed on by the participant's father was leading to the realisation that the landscape had changed over time. When looking at this place now, the memories were brought back to life during the walk by interpretating today's landscape. But not memories passed on from older generations made participants think about changes in the landscape, also creating memories together with a younger generation (children or grandchildren) made participants

perceive and experience landscape in different ways. As a result, it also makes them relive their own memories through the eyes of their (grand)children.

'(...) Heddon is a lovely place to grow up and then having my daughter here. I'm seeing things through her eyes and in sort of a different way. So, we use the space differently for example there is a bus shelter: I have used catching a bus but for her it is a shop. So, every time we go past, we stop. Then she imagines she is the shopkeeper and I have to order things.'

(RF29 in Heddon-on-the-Wall)

The most surprising aspect of personal memories and landscape found in the interviews was that almost all memories linked with landscape came up spontaneously. Participants found it very hard to find a reply to questions that asked them about landscape or location related memories. When asked about memories about specific locations on the walks most participants replied by explaining to what extent the place had changed since they had known the place, personal memories were then often only by-products of these replies. This links memories to personal opinions of these changes as the memories often referred to how much better it was before the changes. Personal opinions are thus strongly interlinked with memories and formed the basis of another theme within this analysis.

6.3.4 Opinions and landscape

Together with a personal background and personal memories the results indicate that the perception of landscape is also influenced by personal opinions of the participants. These personal opinions on landscape however seem to emerge from the participants background and memories. One of the first examples that can be given is the observation that participants had very strong opinions about their experience of having access to land or the changes in access. Changes in public rights of way for example were often discussed.

'I wonder how many people do know that you can walk through the golf course because I would never cross my mind to do it. To me it is really important because it is public right of way and I think that people whether you're local or not should not be restricted in where you can walk.'

(RF6 in Heddon-on-the-Wall)

'So, the public right of way was here before the golf course and they need to respect that'

(RF18 in Heddon-on-the-Wall)

'Ow, this has changed a lot. It changed completely the public right of ways. For me it has changed for the worse. I have lost my way, I was used to it.'

(RF27 in Wallington)

These examples found in the study indicate that the opinion about landscapes and access to landscape does change the way participants experienced certain areas. In this case participants found that the access to the golf course was a public right and closing those paths made their mental picture of the landscape change. This is relevant as this suggests that changes to directions in landscape made participants look at their surroundings in different ways and as the examples show this could be both negative and positive.

The way participants could or could not walk through the areas was sometimes a source of frustration and changed the experience of the surroundings. As seen in the example direct concerns were expressed about changing public rights of way or restricting access to some areas by closing off some right of ways. Some of the participants that often ride horses, had similar opinions about public bridle ways as well, this shows how opinions on landscape are directly related to personal background and interest.

Issues related to the opinions on public rights of way and access to landscape were reported by other interviewees. The study for example showed how some participants' experience of landscape had changed over time due to external factors they had different opinions about.

'Well, I walked with my parents and what has changed in my experience are the expectations people have. Walking just for walking is not part of that anymore, everybody needs to have the expensive clothes as well.'

(RF21 in Heddon-on-the-Wall)

'I think people look for the packaged experience. These are discussions we have had with our children, in our youth you used to organize yourself (...) I think people will find it easier to know that this is a clear track. they can follow it and if you have got small children, it is probably easier. I know that and it's well managed (...) But it is a change in the world changing the way people aren't always prepared to make their own experience. They want to buy the experience.'

(RF27 in Wallington)

This suggests that interventions in landscape to cater for new experiences of people are interpreted as unnecessary by others. It shows how different opinions to life in general could lead to different interpretation of landscape changes.

Besides different opinions to life, the research indicates that opinions about the history of the case study areas changed the way participants interpreted the landscapes during both interviews and questionnaires. Especially in the case of the Heddon-on-the-Wall case study, the influence of Roman features on today's landscape seemed to be overestimated.

'It was quarry for well probably since the Roman times I am sure the Romans would have taken some of their Hadrian's Wall from here'

(RF17 in Heddon-on-the-Wall)

More than once the emphasis on this specific time era let to confusion about features in the landscape. While there was doubt here about the age of the quarry itself, it was almost automatically linked with the Roman era. Participants in this case created this common view on the landscape that the Romans were central to almost every landscape feature. This shows how information about a place sometimes becomes overgeneralised and left participants with the opinion that a specific time period was crucial for every feature in landscape.

Some interviewees explicitly expressed their concerns about this focus on one specific era in history within the village. And had a different opinion about how the history (and therefore the landscape) of the village should be explained:
'And you know the Wall dominates proceedings and money. It attracts a lot of money for research but there is more to your local history than only the Romans. The Romans are a very small proportion of the history of an area. Important though they may have been and still often getting money and bringing people in.'

(RF1 in Heddon-on-the-Wall)

Within this subtheme results suggests that opinions are almost always linked to some well defined locations or features in landscape. These locations and features were showing up in almost every code that could be related to personal opinions. These opinions could then of course be opposites of each other but always referred to mainly the same aspects of landscape. One such example was the golf course at Heddon-on-the-Wall. Different opinions were expressed for the infrastructure works carries out in the recent past:

'Yes, the difference I mean if you go as far as Close house, that is very different it is very different there is even a lot of development on the golf course. But not building, in fact it is probably quite nice that it has remained as a golf course. I really do like how they keep the landscape manicured for example.'

(RF2 in Heddon-on-the-Wall)

'Well, it has (changed), it like the wood up on your right. This is an unmanaged woodland I guess and the thing I do not like about how they manage the golf course is that they ruin the woodland. A woodland is not allowed to have any understory that is then all sprayed out or heavily thinned.'

(RF1 in Heddon-on-the-Wall)

These two contrasting opinions illustrate how sometimes very strong opinions are formed about particular parts of the landscape. These opinions were mentioned without specifically asking about the parts or the changes. Taken together these results suggests that there is a relationship between the expression of opinions and specific locations in landscape. This link was almost always observed when it came to opinions about aspects that are also found to be subject of a broader (sometimes national) discussion. Evidence for this could be in the discussion about the pylons that are crossing through the landscape in Heddon-on-the-Wall and the windmills that are visible from the estate in Wallington, both are subject to discussions on energy shifts and climate change as well.

'Got the pylon on in the middle, that's part of our landscape here as well. We have got a lot of pylons they are not disturbing me, to me I quite like them I think they are a bit of architecture. Then the mathematics behind it is fantastic.'

(RF2 in Heddon-on-the-Wall)

'Then you might see wind turbines which you can see over there. Just over there… . You know that is not good enough they should be at sea, but they are here because of the money. If solar panels become cheaper, it might be those next, but they do not spoil the landscape as much.'

(RF12 in Wallington)

These quotes evidence that personal opinions about landscape are shaped through a wider, collective discussion about social economic driving forces of landscape change. Meeting within

and discussions about landscape shaped the participants opinions about landscapes and influenced how they interpreted them.

6.3.5 Summary

This section gave an overview how the research indicated that their interpretation of landscape is influenced by how participants experienced landscape throughout their childhood and youth. While evidence suggests that memories are built and created throughout participants' lifetimes childhood and youth were often mentioned when describing and translation the experience of landscape into words. The empirical studies also demonstrated that crucial events during participants' life are associated to landscape and make them look different at certain locations later on. Also, opinions were shown to have an impact on how landscape is perceived. This could be related to personal background and memories however as results suggested that personal opinions were often developing because of having lived in specific circumstances or having created those memories and thus remembering certain situations. In summary, the results show that participants were perceiving landscape through a personal dimension. Each of them had different aspects picked out, associated different personal memories to places within the landscape and thus formed his or her own map of opinions while walking through the landscape or interpreting the landscape by drawing on a map.

6.4 Grasping landscape through the collective

6.4.1 Introduction

The second of the four key dimensions of landscape perception is the collective or cultural one. In this section the collective aspects that emerged from the research will be analysed more in-depth using three subthemes. First, the research indicates that the way landscape is perceived is influenced by meeting other people at different places within landscapes. Participants reflected on their sense of belonging to different groups and communities by commenting on different and specific places in landscape related to the groups' interests. The individual groups shared an understanding and perception of the village based on the links between these places. Results also showed that different smaller groups of people with similar background and interests then connected together in creating a community at the area level, leading towards a different understanding of the area that set them off against the neighbouring villages. Secondly, and besides being part of groups that share backgrounds, interests or leisure activities outcomes

show that participants also belonged to groups that shared opinions about landscape. This indicated that the way the landscape was perceived by the participants was not only influenced by meeting each other in the communities but also by having conversation and discussions with members of other communities who might have different opinions about landscapes. Finally, responses within the interviews and questionnaires also showed there are above the local scale of the village and the estate there are regional, national or even global drivers that give direction to how landscape is perceived, the difference with these drivers was that participant felt as if they had almost no impact on them.

6.4.2 Meeting and discussing: connection and contrasts in interpreting landscape

The first subtheme of the collective dimension of landscape perception that emerged from the research was the recurrent idea of how landscape can be understood as a forum where people are meeting. While the participants were often reflecting on how and where they met other people within the landscape and how this created places and spaces of common interests, one of the most interesting observations that was made during the empirical study was not necessarily something participants said but was linked to the approach of the walking and talking interview. As explained in the methodology chapter (Chapter 5) the walking and talking interviews were conducted in two phases: a pre-defined walk and a walk decided on by the participants themselves. The starting points of the walks were the same for each of the walks during this first phase (one starting point for each case study area). Yet, while participants could decide themselves where to walk to during the second phase of the study, all of them, except for one, asked to meet them at the exact same starting point as the first walk. This indicates that the location of this starting point turned into a place they identified and related to the interviews, the research and the interviewer. The location was given a different meaning by the different participants. The location became the place of the starting point and, a meeting place that played a role in constructing new memories for the participants. Because of this, the place was perceived in a different way before and after the study, as a new meaning was added.

Many participants unconsciously reflected about this happening to other places too, while expressing how they made use of public space within the case study areas. Participants frequently explained how they met different sets of people at different locations, one of them states this as follows:

'Who I would either meet at the Swan or at Dingle Dell the little tea-room, depending on who I was meeting and why.'

(RF2 in Heddon-on-the-Wall)

All of the participants identified such common places in the village or on the estate at which they each related to different individuals or groups of people they belonged to. By expressing who they were meeting at the various places, all of the participants showed they had a clear view of what common meeting places in the village there are for both the groups or collectives they belonged to themselves and the collectives they were not a part of. While the interviewees illustrated this by explaining how people living on the different estates of the village frequented specific pubs or restaurants not only places to eat and drink were mentioned as such meeting places. They frequently explained how for example 'the garage in the village is a meeting place for people who ride horses' (RF 16 Heddon-on-the-Wall). It indicates how participants with different hobbies, interests or jobs have different meeting places in landscape. One of the participants stated that groups with different interests and background certainly interlink, however he added that having the division between this groups can be seen and understood within the village.

'You have two churches in the village one is the traditional normal church and there is a Methodist church and they is a community of people involved with the church. So, I think that is a community in itself and then we have of course the pubs and that is a community, these communities interconnect but are actually quite distinct and I think that is probably symptomatic of all villages really.'

(RF15 in Heddon-on-the-Wall)

It gives an indication of how landscape was perceived by the participants in terms of groups and collectives and their sense of belonging to one of those groups within the village. These groups each had their own common meeting places that were seen as distinct to each other. Participants seemed to make mindmaps of those individual locations that brought these together that were connected to specific groups. Participants expressed their interpretations of landscape by only talking about those aspects of landscape they experienced as a meeting place for groups they belonged to. The village became interpreted differently because of belonging to different groups and thus creating different networks of meeting places.

While the above comments show that different groups within the village or on the estate add different meaning to specific places, Heddon-on-the-Wall and Wallington estate, seem to bring people together as well. Participants in both case study areas frequently commented on the place names or toponyms of places that surrounded them during the walks. While often they referred to the official toponym first, they would add that 'villagers or locals would call it something else' and then added a different toponym that was known to a wider set of people within the village (or so they thought at least):

'I think that is another place name we would probably meet people at the Knot Hall or 'The Shops', those are the places that everybody would know.'

(RF1 in Heddon-on-the-Wall)

In Wallington, this was supported by a participant while meeting other visitors on the estate. During the interview, the participant was told there was an issue with sheep further on the walk and visitors tried to explain to the participant where these sheep could be located. They tried this by pointing and by referring to generic landscape features, such as trees, hedges and fences. The participant, who worked on the estate, explained afterwards this happened to him almost every day and added that people who lived on the estate would have given him the name of the farm where the sheep had escaped from, he reflected on this by adding 'they would have known the place name'.

The above examples show that at the level of the village and the estate itself the same insider versus outsider idea of the groups at a smaller scale is influencing how participants were interpreting the landscape. They saw themselves as insiders and connected through the knowledge about the land, place names and the landscape and could inform each other on another level than they could do when having conversation with somebody from outside that group. It gives evidence that at the level of the village or the estate in general the different groups that have their own meeting places within the village and estate come together and share a part of their perception of the landscape or particular landscape features. The research here gives evidence for how particular features in landscape are given different value by different sets of people at different levels and scales. When it comes to the landscape as a whole the analysis revealed that participants started to think as being part of a wider group or collectives not necessarily related to their hobbies or interests anymore, as was the case in the previous finding about the smaller groups, but more location based and linked to the areas they lived in.

This was perhaps most apparent when participants were asked to describe the landscape surrounding them on the walks and most of them started their description by comparing what they saw to other types of landscape or to neighbouring villages, as could be seen in this statement:

'Let me explain by saying we are not in a working environment as we have in Throckley where they had a pit and a more working kind of community. And so, it was more commercial but it had a more active community in Throckley, this here in Heddon and we are more rural based more agricultural.'

(RF15 in Heddon-on-the-Wall)

This type of replies were very common within the Heddon-on-the-Wall case study and the comments suggests that a lot of assumptions are made when it comes to different parts of landscapes. They see themselves as part of a certain place and then make assumptions about neighbouring villages or 'the others'.

The way these participants expressed their descriptions suggests an 'insider' versus 'outsider' perspective exists during the perception process and it appears to exist at different scales. The overlapping interpretations of landscape between members of the same groups could be understood to have significant influence on how landscape is perceived by an individual. However, the above examples also showed how not belonging to a certain group and thus having not sharing identities or values with specific groups could lead to difficult conversations and even discussions about landscape.

The discussions about landscape and how they shape landscape perception were frequently observed throughout the study. Most participants identified ongoing discussions about landscape between different groups in the village. They expressed that these discussions were almost always related to planned development or recent changes. Several participants stressed how new housing development in the villages became an issue for them. Some of these were not only about the village of Heddon-on-the-Wall itself, but even about the neighbouring villages. Others however considered these new developments as new opportunities and welcomed them. Interestingly the discussions about landscape change were not always ongoing between groups of people with the same background, interests, hobbies or groups that are location specific as seen in before. While this is the case in certain occasions, in most cases those discussions led to the development of new groups or collectives existing out of people

that share similar opinions about landscape. Interestingly, when participants express how they were part of discussions about recent development works or planned changed to landscape they often switched between stating the opinions of the groups they belonged to and the groups with opposing views on the matter. This made them interpret the landscape from both sides, this is different to what was found before with the overlap in perception between members of groups that share common meeting places, here the 'others'' view was often not taken into account, as 'they would not see this the same way'. When it came to actual and real discussions about drastic changes to landscape this changed. A statement made by one participant about the new developments on the golf course while never having played golf before indicates how having an opinion about landscape make different groups join up to discuss about landscape with other groups that have different opinions.

'If they get it right golf course is probably one of the few sorts of urban developments you can get which actually provide green space and an attractive environment to look at when manicured a little bit. But if you keep wildlife sections and so on and do what I think the planners have done here I would agree. Let us try and engineer it in the natural landscape.'

(RF15 in Heddon-on-the-Wall)

This example indicates how participants perceived the surroundings and defined their priorities by accepting that golf is the best possible alternative in this case while reflecting on scenarios outlined by the opposing group of people.

The research indicates that most of the discussions on landscape are related to changes to visual characteristics. However, sounds and smells were also playing a significant role the visual impact of changes and management on landscape was a dominant and often recurrent subject for discussions about landscape. In most case the impact on the landscape of wind turbines was subject of the discussion. The study showed that interpretations of landscape were sometimes done by already adding some imagination of how it was going to look like after the changes took place. This was expressed by one of the participants too, he thought some of the discussions on the visual impact of new developments were not valid and stimulated by misinformation:

'People will complain about all the things traditionally they complain about wind turbines. Shadow, noise, visually a lot of stuff. And it has obviously visual impact to this landscape but

one was built after a planning appeal next to the pylons and the pylons are 45m the wind turbine 29, so it has no visual impact compared to the pylons at all.'

(RF15 in Heddon-on-the-Wall)

New developments or changes in landscape that have similar impacts to others, already existing infrastructure works are sometimes perceived and imagined as negative by different sets of people. It indicates how different features that might have the same physical appearance as other are being perceived in different ways by people with different opinions about them. The same was found when people expressed their concerns about the airport and the motorway that are both located just outside of Heddon-on-the-Wall. The noise that the air traffic and road traffic made often came up as a subject that led to discussion. One participant however showed how those different types of traffic could lead to surprising opinions about the similar issue of noise.

'*It is like the aeroplanes at this moment, if that counts in this discussion. We are on the plane paths and there is a big objection thing going on about it, I am not party to it as I do not think if you live six miles from an airport you can expect to be without noise. A bit of traffic and it is not as noisy as the motorway, cause that is there all the time, the A69 and is far worse.*'

(RF3 in Heddon-on-Wall)

This example shows how the interviewee suggest that the current ongoing collective discussion about the noise of the airplanes is not worth joining because 'we live that close to the airport, people should understand', but immediately adds another topic to it related to the same type of issue. Here as well, the village is located near the motorway A69, yet the quality of living was believed to be reduced because of the sounds coming of the motorway rather than the noise of the airplanes. This was a recurrent idea throughout this subtheme and showed how different opinions about specific features in landscape made were an influencing factor for how landscape was perceived by the participants as they focussed on points of discussion in landscape and singled those features out within their description of landscape.

Through the above examples the way constrasting opinions of landscape changes and landscape features is influencing the way people with shared opinions perceive their surrounding is of course directly in connection with the subtheme of 'personal opinion' (see section 6.3), this because these discussions are shaping and possibly changing and constructing participants' personal opinions. However, this subtheme stresses that people with similar opinions group up

and share their opinions and it stresses that people look through the eyes for the collective that shares those opinions in order to feel supported in 'being right'. This evidences how individuals interpret landscape differently because of the discussions they have with others about landscape.

6.4.3 Being part of a wider collective

So far, the indications of the research mainly focussed on how landscape perception was influenced because of being part of groups or collective on a local level, within the village or the estate or in reference to neighbouring villages or areas. However, within the theme of 'Collective' another subtheme emerged during the thematic analysis of the qualitative data. Almost all of the participants demonstrated that their look on landscape was influenced with what happened on a wider scale. Issues or discussions that take place at regional, national and even global level formed an important factor in how participants talked about the studied areas. One of these current issues were demographic and socio-economics changes, both of them often related to Brexit. Participants expressed their concerns about lives in the villages had changed over time and how this could lead to different dynamics in landscape. Especially during the Wallington cases study the participants reflected on how newcomers now commuted in an out of the city of Newcastle upon Tyne now and we not involved in working on the estate as such. Some of them also expressed how they could feel how the estate is managed in a different way to cater for the visitors' needs and for the benefits of the estate anymore. They saw this happening not only at Wallington, but also across other parts of the country (Kent was mentioned in particular), because of a change in how the countryside becomes a 'playground for people who live in the cities' (RF13 in Wallington). One of participants stated this by saying the following:

'(...) Wallington is becoming a theme park and there are elements of treating people as customers and pampering to their basic needs. Not allowing people to experience things on their own anymore. You have to have a guided experience and I think that is because of a changing society'

(RF14 in Wallington)

These examples indicate that participants look at changes in landscapes (and at changes in landscape managements) through the glasses of a wider perspective, because they experience

there to be a behavioural change in society that is translated towards the landscape that surrounds them.

Because of the timing of this project, in 2020, lots of participants also reflected on Brexit during the empirical study, nearly all of them could see the potential impacts of this political issue on landscape. Brexit was seen as a barrier towards further development of the country, a potential thread for new housing projects and further expansion of sustainable energy generating infrastructure. Because of Brexit, and other potential political issues (at that time the elections for a new government) participants started to imagine how the landscape they walked through would look like in the near future and linked this to changes in landscape from the past. While political issues in the past had caused a shift away from industry and mining and some of the older participants indicated that the area 'was still all about mining today' (RF15 in Heddon-on-the-Wall) the current issues were again understood as a potential driver for landscape change especially within the fields of agriculture. This participant expected more diversification in agricultural activities in the future:

'I think it could continue to diversify, I think is has to, to survive. Especially after Brexit I think that is probably the way they (the farms) are going to go and there might be more holiday lets and caravan sites, stuff like that.'

(RF13 in Wallington)

The examples and quotes evidence how political decisions at a national level caused participants to start imagining the future outlook of landscape and it could be understood to form a part of their understanding of the landscape of today.

Also, the current environmental issues and discussions about for example biodiversity and climate change were causing similar projections of future landscape. A major difference here is that while for social-economic and political issue were used to both reflect on past landscape and envision the future of landscape, when reflecting on environmental and more ecological oriented issues participants only looked forward.

The above findings all indicated that participants picked up on current issues on a regional, national and global level to reflect on the landscape on a local level. They interpreted their local level landscape with those issues in the back of their mind, but the research also indicated that landscape is perceived at different scale itself. While in the previous section it was discussed

how small groups of people came together to perceive their landscape in the same way at the level of the village, many of the participants gave evidence that there were more levels beyond the local. The shared identities of the different collectives at a local level then again came together and looked at 'differences' with groups at a wider scale. This became clear when participants compared aspects of landscape between the South of England and 'us' in the North. This often led to romanticising and exaggerating features in the landscape. Interesting for this scale was the finding that participants were not focussing on small features in landscape anymore but on the unique combinations of the aspects. In comparison to a local level that was used to discuss specific places or areas on the regional level participants were looking at landscape type and land use to compare. At a fourth and final scale the surrounding landscape was compared to other parts of Europe or the world where the participant had travelled to. In many cases there were comparisons made between the local landscape and touristic destinations such as the South of France, Spain or The Netherlands. Also, at this level there was a certain degree of imagination present while looking at and talking about landscape, participants referred to parts of landscape as if they were representing typical idyllic French landscapes for example in order to stress the beauty and the aesthetics of their own local neighbourhood.

These findings show that landscapes were perceived by participants at different levels depending on what they were comparing to and the scale at which they were talking. This is an interesting finding as it shows how participants are perceiving and interpreting the landscape as a system that is constructed through different interconnecting scales and layers.

6.4.4 Summary

This section illustrated the second of the key dimensions of landscape perception that emerged through the thematic analysis: landscape as seen through collective lenses. First the research indicated how belonging to different groups made participants created different mind maps about landscape. They all picked up on different features and parts of landscape because of belonging to different groups and collectives. It was also illustrated how at the level of the village and the estate itself these groups came together based on specific knowledge about the landscape giving them a feeling of being insiders of the village and the estate while people who did not have that specific knowledge (about place names for example) were often perceived to be outsiders. Furthermore, the section showed how participants not only belonged to collectives in landscape because of common interests or backgrounds, but other groups were developing interlinked the latter. These groups brought people with similar opinions about landscape issues

together. Participants who were involved in such discussion about landscape did interpret landscape from both their own views and the views of the opposite party. Which is an important difference as they here reflect on landscape form both in- and outsider perspective when it comes to specific issues. Finally, the section discussed how findings showed that landscape was perceived at different levels depending on the context. At a local level a more detailed perception of landscape was made leading on to perceiving landscape on a wider and larger scale when thinking about comparing it to other regions or countries.

6.5 Landscape in time and space

6.5.1 Introduction

This section will discuss the third and fourth dimensions of landscape perception. Research indicated however that these dimensions are heavily interlinked and thus they are discussed together within one section. First it will be discussed how it emerged from the analysis that the way landscape is perceived depended on the stage of life of the participant. Then, a subtheme emerged about how recurring events in landscape influenced how participants experiences their surroundings. The study illustrates how this happens at different (time) scales, ranging daily to annually. Finally, this section will describe how the physical landscape influenced participants' perception.

6.5.2 Past-Present-Future, a lifetime

A number of interviewees suggested that their understanding of landscape has changed during their lifetime. Most importantly the participants reflected on the differences between how they experienced landscape during childhood and how they are perceiving it during their adulthood today. Most of them noted that as a child they were not necessarily consciously paying attention to their surroundings or where they were playing or spending time. One of the participants underpinned this by indicating that as she was not really aware of where exactly she was playing yet she was 'more curious what was hidden behind the next corner' (RF11 – Wallington). The difference of looking at landscape and making use of it between childhood and adulthood was illustrated by this statement of one of the participants:

'As a kid, you look at different things. You are looking for a big stick to walk. If I just came to the river to splash, now I like looking at what is there and said and it is weird how you look at it in a totally different way.'

(RF25 in Wallington)

Many other participants reported on this in the same way. While the influence of childhood on landscape perception was already discussed in section 6.3, other phases and changes during a lifetime of the participant were also influencing the way they perceived landscape during the walk. Many participants reflected on having moved around during their life, but never really 'looked around'. One of the participants in particular mentioned how he had lived in Edinburgh for a very long time but never actually visited the castle over there, 'you take it for granted' he added (RF 1 in Heddon-on-the-Wall). Now, having moved back into the Tyne Valley while being retired, he starts to appreciate the landscape that surrounds and developed an interest in the history of the place partially because of the time he now has to do such things. Other participants however, reflected on how moving around specifically did change the way they experienced landscape through their life. For instance, one participant grew up as a child in a neighbouring town of Heddon-on-the-Wall, Throckley, she then moved to Edinburgh and only recently moved back to Heddon-on-the-Wall itself. She mentioned how living near the river Tyne again made her appreciate the area much more, 'because of this it feels as if I am home again while I never thought of it when I was younger' (RF6 in Heddon-on-the-Wall).

This leads towards another influencing factor of landscape perception that emerged from the research: familiarity with a place. Firstly, participants that were saying of themselves they were spending a lot of time outdoors and within the village or on the estate could orientate around the place very well, they often showed during the guided walks or where we should be walking and by referring where alternative routes would take them to. Secondly, these were the same people that often replied with 'I am so used to seeing all of this, but this walk has made me look at it from another angle and showed me new things' or 'I am seeing this every day, so I am not noticing the minor changes anymore'. This was different to people who lived in the area for about the same time (or during the same stages of their lives) but did not have the habit to spend their leisure time outdoors. They were often replying to questions in a more descriptional way, by only describing what they were seeing, without adding many emotions or meaning to each of the described features. Results of the study indicate that having a high(er) level of familiarity with landscape can make people walk on a kind of 'automatic pilot' in which they do not notice

the landscape that surrounds them actively. While people who do not have the same level of familiarity are actively looking and registering what they are seeing and sensing.

6.5.3 Reoccurring phenomena in landscape

A second subdimension that emerged from the thematic analysis that could be related to time and space was the participants' focus on recurring phenomena in landscape. The participants reflected on how, often natural aspects are recurring at different time intervals such as, hourly, daily, monthly, seasonal, annual or spread over more years which made them experience the landscape in different ways. This indicates that temporal changes in landscape were as important as more permanent landscape change.

One of the main events that was reflected upon by the participants was the tidal action of the Tyne River. Many participants made comments on how the tide changed how they were feeling about the landscape. They linked the tidal action often with their preference about the landscape as stated by this participant:

'At the moment, I do not think it is as pretty, it is low tide. You can see lots of rocks and stuff. (...) I would not necessarily take a picture at low tide to keep it as a souvenir.'

(RF23 in Heddon-on-the-Wall)

This participant commented on the tide in very clear and preferential way, in this case the interviewee expressed the preference of having a high tide. In this case this means the landscape will be looked at with different feelings for every timespan of six hours. Another participant alluded on how the combination of weather and the tide made the view across the Tyne Valley change.

'*Again, I think the view is always changing with the weather. The light and the river are always changing because it is tidal up to Wylam so you get that twice daily change is it low now, quite low*'

(RF1 in Heddon-on-the-Wall)

This quote also evidences that weather has a significant impact. While, not necessarily cyclic, weather was mentioned in many occasions by all of the participants. In various different ways, yet again most of the time it could be related to personal preferences. For instance, one of the participants preferred sunny days as it made some parts of the landscape 'look like the South

of France and it feels as if I am on a holiday' (RF10 in Heddon-on-the-Wall). Linked to more cyclic events, a number of participants used indirect references to weather and climate phenomena that reoccur on a seasonal scale.

'You know the rotation of the crops is interesting it is lovely just to stop and just admire and take in the different sounds and the smells. When the smells this week have been pretty bad because they have been spreading slurry and they have been putting fertilizer on the field. But the weather now is absolutely gorgeous for walks, I mean can you remember any other year with temperatures like this in February?'

(RF2 in Heddon-on-the-Wall)

As this quote is showing senses such as smells and sounds were mentioned in the context of this subtheme too. Surprisingly, a few of the interviewees were also expressing links between taste and recurring seasonal events landscape. They

'I personally like the autumn that is nice because of the huge numbers of blackberries and things, that grow sort of early autumn/late summer and I then taste them and use them in my cooking, I have my favourite spots for picking'

(RF3 in Heddon-on-the-Wall)

On a more annual timescale, annual events were mentioned linking memories to specific places in landscape. The specific locations at which the event was organised became triggers to talk about the events and not about the places themselves anymore. This suggests that looking at landscapes is also different for participants (and therefor people) that know these specific events exists. Most of these participants focus on how the social activities relating to landscape have changed through time. An example was giving about bonfires organised at the Close House Estate's walled garden at Heddon-on-the-Wall. Here the walled garden was mentioned as 'the place where the bonfire was held' rather than a walled garden (RF2 in Heddon-on-the-Wall). Few participants emphasised on how the events and thus the landscape brings people from further away because of annual events. The events are part of the place or become bigger than the place itself, people from outside the village begin to know the village because of the event.

'The dahlias in the Halls of Heddon are definitely coming back in September, when they are in flower. I brought friends up from everywhere just to show them. Friend who are not even gardeners, they knew Heddon because of the dahlias really'

(RF21 in Heddon-on-the-Wall)

The correlation between such recurring events and landscape is interesting because of the intangibility. The findings here evidenced that temporal changes in landscape are creating and constructing memories that influence the way participants were talking about their place.

6.5.4 Physical landscape and understanding

A final influencing factor of landscape perception that emerged through the research was the physical landscape, the natural aspect of the land that are the features of the site at both of the case study areas. These features physical features of the landscape were often mentioned by participants in a spontaneous way, without asking for a description of any kind. During these spontaneous interventions the participants were reflecting about the aesthetics of the views at particular point during the walks and some of these could also be found within the questionnaires. Interestingly however, when specifically asked to describe landscape, very few of the participants gave a description of the physical landscape, all of the descriptions were listing cultural aspects of the scene they saw around them. One of the participants can be quoted here as it gives a good overview of what was mentioned:

'(...) this landscape obviously is a lot of fields some of these are arable, these ones are wheat fields with nice hedgerows dividing it, but it is quite open with the odd tree. Kind of blocks of woodland some of them and might have been previous hedgerows or field divides and they are the ones that have survived. Or they could have been more like parkland here and they are more like parkland trees. So, there is a few just by themselves (...)'

(RF11 in Wallington)

As can be seen in the example, the participant mentioned the type of fields, giving an idea of the land use, he added to this explanation what type of field boundaries were used and whether there are differences between them. There is no mention at all about the topography of the land in most of the replies to this question. This is completely in contrast with the spontaneous reaction that occurred at specific and often the same locations during the walks, then only natural features and characteristics of the land were mentioned. Most of the time these reactions came up when participant had access to wide and open view (the Tyne Valley during the Heddon-on-the-Wall case study) or at vista points towards hilly scenery (at the back of the Hall during the Walling case study). In summary, the findings here give evidence that there are differences between the first split seconds of perceiving a new part of the landscape and when

participants had to actively think about what they saw. In the latter scenario it could be observed that knowledge of the place was taking over while the first reaction always happened in a more instinctive way. Only one time an exception to this rule could be found, during a walk in Heddon-on-the-Wall one of the participants expressed how he was looking at a steep hill:

'Well, it is ordinary English farmland all of it is farmland on a steep, a very steep bank. And then just meadow either side of this and a track (...)'

(RF7 in Heddon-on-the-Wall)

While the example gives an indication that the topography was one of the major characteristics of the site anyway, even in this case the participant referred to the cultural aspects of the land first before mentioning the physicality of the site.

'So, I am sometimes avoiding woodland hills because it is steep and there are two main pathways that the hikers use. One goes around that way and is steeper but shorter. But because it is steep some of the local kids used it as a mountain biking path (...)'

(RF7 in Heddon-on-the-Wall)

Interestingly, when specifically asked to describe landscape, very few of the participants gave a description of the physical landscape, all of the descriptions were listing cultural aspects of what they saw.

An final interesting finding that could be linked to this idea of the importance of physical characteristics of the landscape to how it is perceived is about how several participants referred to the view, and thus indirectly to the topography at specific location of the case study areas, as being unchanged and how they were ideal to imagine how it must have been like to walk through the Tyne Valley at different eras. These participants felt connected to their ancestors because of the realising they must have looked at the approximately the same view as they were today. One of the participants states this by saying the following:

'It is the fact we are on a hill and you have got an open vista around here into the Tyne Valley. There is a sense obviously of timelessness because you know that historically it is like we can go back in time to Roman times and people would be looking at this view too. And so, when you walk here you think you know just how many people have come down this hill historically and looked over there you know it is having a sense of the place and the place in time.'

(RF15 in Heddon-on-the-Wall)

This suggests that people not only feel the connection with the land and landscape but also feel connected to people that have perceived and have been at the place in the past.

A final remark that must be added to this subtheme is while other landscape features or landscape types were often subjected to both positive and negative opinions and/or preferences. Wide and open views were always talked about in a positive way. Not one participant referred to an open view that surrounded them in a negative way. Open views and wide vistas were the only constant subject throughout all of the walking and talking interview. All participants were triggered about them in some way or another, that was not the case for any other feature of characteristic.

6.5.5 Summary

This section gave an overview of how the third and fourth dimension of landscape perception emerged from the empirical study. First the research indicated how landscape perception is influenced by the experiences and memories participants built during their lifetimes. Participants reflected on how they add different meaning to features of the landscape near their homes before and after they had moved around or travelled to other places. Then the section outlined how participants expressed the way recurring events in time play a significant role in how landscape in interpreted. Both natural and cultural events that occur at regular and irregular intervals made participants perceive the landscape by actively expressing their feelings about those events. Especially the tidal events along the Tyne river were key examples in this dimension. Finally, the research indicated that physical features of the landscape, for instance the topography of a place, were mostly mentioned in a spontaneous manner. The analysis gave evidence there was a difference between the more instinctive and unplanned way physical or natural features of landscape were reacted upon and the reflective way this happened for culture or human made features in the landscape.

6.6 Conclusion

The findings in this chapter indicate that the way landscape was perceived by the participants was influenced by factors that could be categorised into four main dimensions. These four main dimensions emerged from thematic analysis on the data that was gathered through walking and talking interviews and map-based questionnaires in two case study areas: Heddon-on-the-Wall and Wallington estate in Northumberland. The four dimensions of landscape perception revealed by research were: personal, collective, time and space. Firstly, the personal dimension was discussed and illustrated. Within this dimension three subdimensions were identified:

background, memories and opinions. Evidence from the empirical study showed that the participant's background and more specifically the way landscape was used and experienced during childhood and youth had an important impact on how landscape was interpreted during the later stages of life. While these were also childhood and youth were the periods participants reflected most on when it came to memories, the research indicated that memories were connected to specific features and thus constructed throughout life. Memories caused participants to add specific meaning to features and locations often related to important events in during their own lifetimes. Besides background and memories, also personal opinions on landscape were expressed a lot by participants. This was reflected on for instance in terms of access to land and public right of ways. Then, the research demonstrated how the personal opinions of the participants were influences by the collective and groups they belonged to. Belonging to certain groups in the village or on the estate caused for the participants to focus on the groups' commonly used features of landscape more than on features used by the other groups. The findings illustrated that participant created maps of the village in their minds linked to how the villages was used by their own and other groups and reflected on the village in that way. While belonging to groups and collectives at a local level was always expressed by talking and pointing at individual features and the links between these features, the way participants talked about differences with neighbouring villages illustrated how there are different layers and scales in how landscape is interpreted through the sense of belonging to groups. Local groups seemed to have a common understanding of the village or the estate as a whole, for instance when participants reflected on how the rural characteristics of Heddon-on-the-Wall were different to the more urban one of neighbouring Throckley. There were even more broader scales identified as well when participants expressed how 'their' areas was different to the structure of the landscape in the south of England. Yet again, larger and more complex structures of landscape were used as examples to illustrate those differences. This gave more insight in how landscape is perceived at different scale depending on the base for comparison. Besides a sense of belonging to different groups, participants also showed how discussing about and finding people with similar opinions on landscapes did influence their interpretation of the landscape. The groups during these discussions seemed to be formed by people coming out of groups with different backgrounds or interests. Discussions about apparent issues in landscape seems to create new collectives through which participants were reflecting about landscape but were doing this from both sides of the arguments. This is contrary to what was emerging before when they mostly focussed on the features relating to their own group. This is relevant as it gives evidence that problems and issues about landscape change triggers landscape interpretation in a different way than there are no threads.

Next, time was demonstrated a third dimension of landscape perception. Time was already reflected on by participants through changes in the way landscape is interpreted during different stages in their lives. But mainly recurring events over time turned out to be very influencial. For instance, tidal action on the Tyne River was mentioned a lot and participants were reflecting on the opposite state of the landscape during these events. This caused for them to interpret the landscape more form the state of the landscape they preferred. This was not only the case for tidal events, but also for differences between night and day or sunrise and sunset. It revealed how perception of landscape was temporal and constructive on the one side as participants admitted they interpreted landscape differently over the course of their lifetime because of having moved or travelled. But also, temporal and recurring as participants reflecting on how they were experiencing and perceiving landscape differently at different times of day or different times of the year difference here was that they were then looking forward for the state of the landscape they preferred to come back rather than building on the experience they had in that moment.

Finally, the research indicated that the physical characteristics of a place and landscape have an impact on how it was perceived. When the topography of a place made it possible to have wide open view and vistas spontaneous reactions were expressed by the participants. These reactions were present during almost every interview at specific and almost predictable locations on the walks. This was shown to be different to when participants were asked to give a description of the surrounding landscape, then more culture or human made features were described. The results thus demonstrate that physical features in landscape, gave more instinctive reaction while more culture-based features or structures were reflected on from a more cognitive approach.

In summary, the way landscape was perceived by participants was a combination of one or more of those four dimensions and each of their subdimensions. The research shows how the separate dimensions were often location-based and thus linked to the character of the landscape with is combination of natural and cultural features. For instance, the physical dimension of landscape perception is more dominant when open views can be experienced while a combination of personal and collective dimensions seems to be more dominant within the village centre. By incorporating the empirical outcomes in a GIS dataset and geolocating the dimensions in which aspects or features of landscape were talked about by participants a data source for HLC can be created visualising the dominant dimensions of how landscape is

perceived by people in each of the HLC polygons. This is the objective of the spatial analysis described in the following chapter.

Chapter 7:
USING THE UNDERSTANDING OF LANDSCAPE PERCEPTION TO INFORM HLC

7 Using the understanding of landscape perception to inform HLC

7.1 Introduction

This chapters presents the findings of the spatial analysis conducted to investigate how the conceptual framework of public landscape perception could be operationalised to inform Historic Landscape Characterisation databases. This chapter has been divided into three main parts. The first part deals with the translation of the outcomes of the participatory and empirical study into spatial datasets within GIS. This section illustrates the mapping and visualisation of public landscape perception through the aspects of landscape mentioned by participants during the interviews and the aspects drawn by participants of the map-based questionnaire. It illustrates the frequency and distribution of the mentions of discrete and fuzzy aspects of landscape during the walks and talks interviews and questionnaires. Secondly, this dataset was used to inform the HLC of Northumberland through spatial analysis of the distribution of the mentions of aspects across the HLC polygons. To underpin the HLC database the distribution of the dimensions of landscape perception in which the aspects were mentioned by the participants were used as attributes of the character type polygons. Finally, the findings of the comparative analysis between the character types added to the mentioned aspects and the HLC types in which they were mentioned are discussed. This gave an indication whether participants were talking about the character type they were crossing while walking or whether they were not paying attention to the type itself and were talking about something else.

7.2 Mapping and visualising landscape perception through spatial transcripts

7.2.1 Introduction

As explained within the Methodology Chapter of this study (Section 5.6) the qualitative data gathered through the interviews and map-based questionnaire was integrated within a GIS in order to become usable within HLC projects. A first step towards compatibility of the data used the transcriptions of the interviews and the outcomes of the Maptionnaire to list all spatial aspects of landscape that were mentioned by the participants. Together with listing, the aspects of landscape were also classed as either discrete places or fuzzy components according to their mapability and categorised in different landscape types using a combination of pre-existing HLC-types of the Northumberland HLC-project and newly created types. Then, using the interviews' GPS-track and the locations mapped in the map-based questionnaire each of the

aspects were visualised in a GIS-database. Finally, making use of queries in the database, the aspects of landscape are related to the time and space in which they were mentioned. This section will look at the results of this process and support the analysis with illustrations from the GIS-database.

7.2.2 Walking routes and Maptionnaire outcomes

Before illustrating the outcomes of the spatial analysis of the empirical study an overview of the conducted walks and the collected spatial data of the map-based questionnaire is given.
In both case study areas two types of walks were undertaken, one walk in which the researcher was guiding the participant and another in which the participant was taking the interviewer on a walk of their own choice. While this technique was mainly used in order to familiarise the participant with the interviewer and the approach it is interesting to have a look at the differences in chosen walks. First, the researcher led walks carried out in Heddon-on-the-Wall started at the village hall located in the centre of the village (Figure 25 right). In Wallington the same type of walks left from the visitor car park (Figure 25 left). In three cases (one in each study area) an exception was made because of the physical abilities of the participant or weather conditions. Moving on to the walks guided by the participants, the participants were asked to take the researcher on a walk of around one hour long along a route and to locations that would have certain meaning to them. No instructions were given about the start or finish positions, but when comparing the two types of walks it becomes clear almost all participants chose to leave from the same starting point as their first walk (Figure 26). There was only one exception to this rule in Heddon-on-the-Wall and the rule was confirmed in every walk in the Wallington case study. Having the same starting point for both walks was already touched upon in the thematic analysis (see section on the theme of landscape as a collective) and is an observation that is inherent to the way the study was set out having two walks.

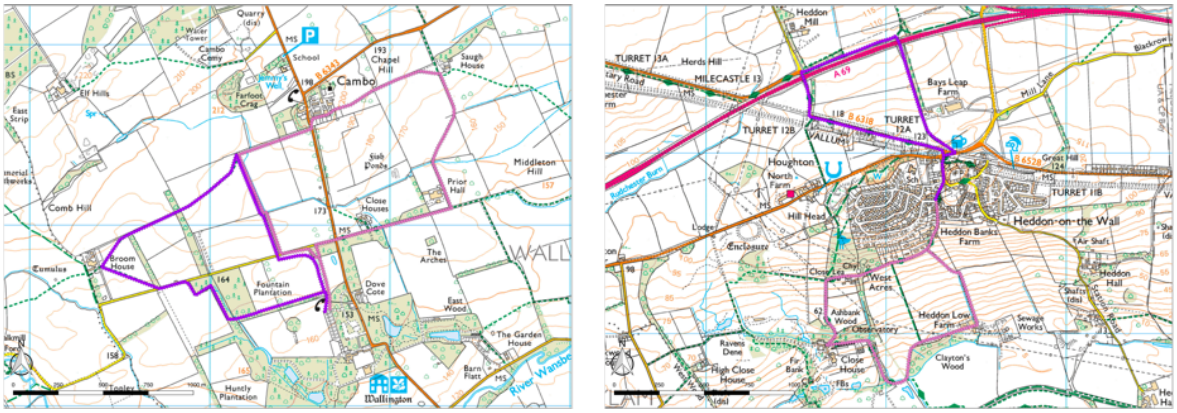


Figure 25: Pre-defined walks led by interviewer, left Wallington, right Heddon-on-the-Wall (Background: OS MasterMap)- More accessible route in purple.

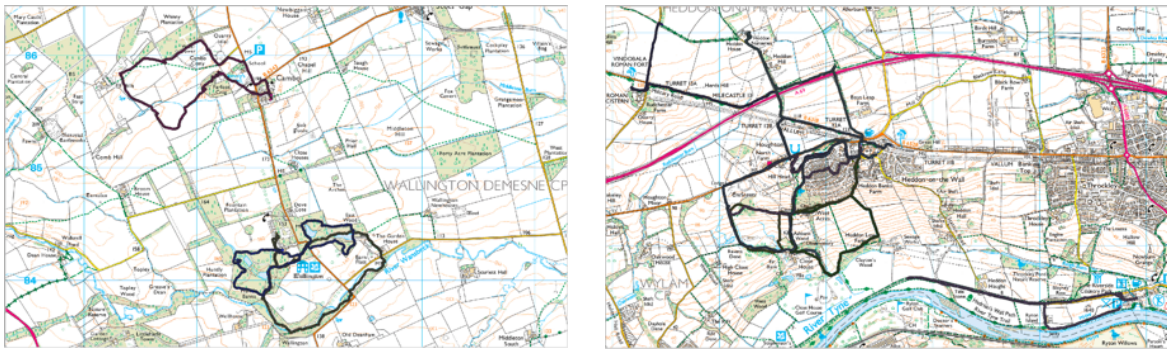


Figure 26: Walks led by participants, left Wallington, right Heddon.

The spatial outcomes of the map-based questionnaire show 126 polygons drawn by participants across all of the different questions. Seen the number of participants, 64, this averages approximately two polygons drawn by each of the participants. This is significantly less than anticipated, as there were nine or eleven questions (depending on the situation of the participant) in which participants could draw. For the case study of Heddon-one-the-Wall only five polygons were drawn (Figure 27) and the others were drawn by participants from the Wallington case study are (Figure 28), This is the reason why the spatial Maptionnaire data is combined with the spatial transcripts of the walking and talking interviews for this analysis and not analysed separately. Therefore, findings in this chapter are the results of the spatial analysis of the multi-method approach rather than an illustration of each of the approaches individually.

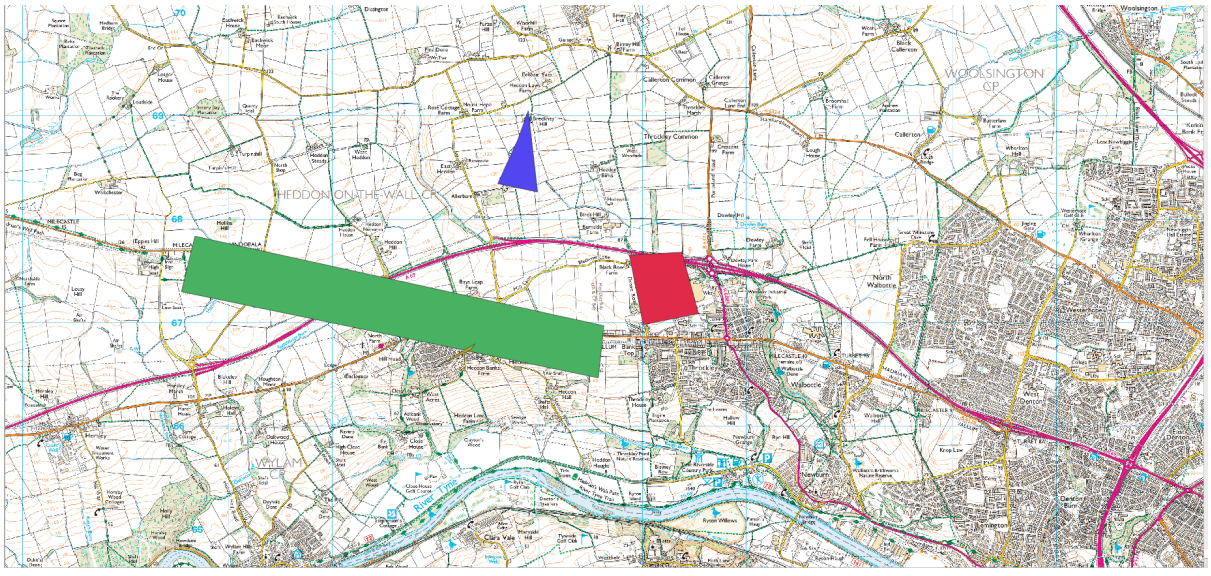


Figure 27: Spatial outcomes of the map-based questionnaire in the Heddon-on-the-Wall case study

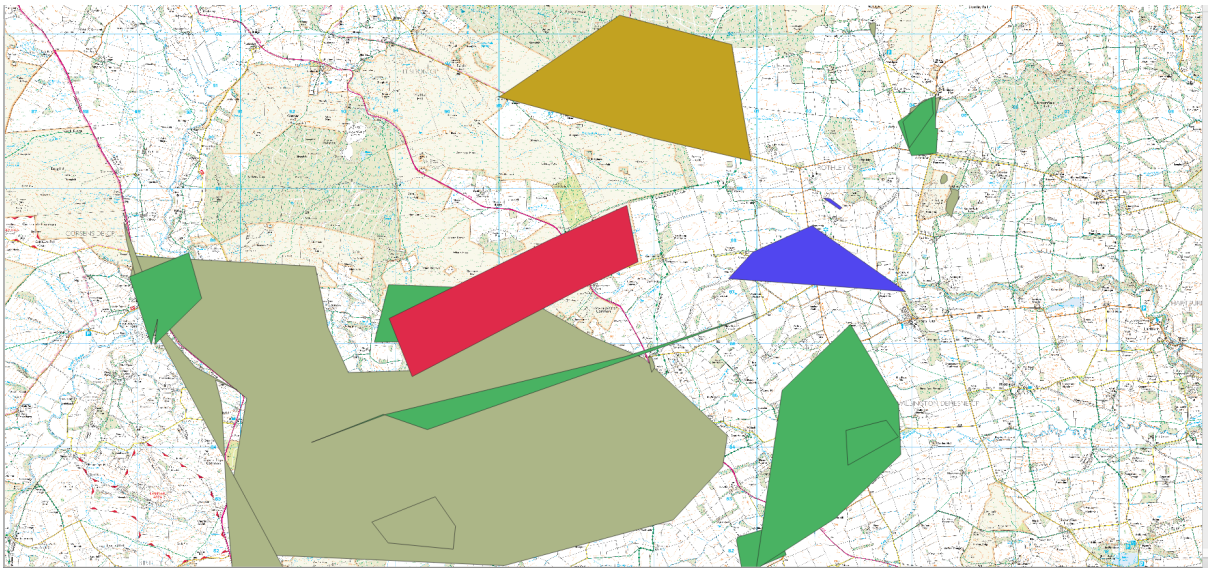


Figure 28: Spatial outcomes of the map-based questionnaires for the Wallington case study

7.2.3 Looking for landscape aspects in qualitative data: Fuzzy components and Discrete places

In order to integrate the outcomes of the thematic analysis into a GIS 'spatial transcripts' was created. This type of transcript can be seen as a GIS database that will make it possible to engage into a procedure of grounded visualisation to analyse and better understand the interview and data in the context of the case studies where it was collected (Jones & Evans, 2011). To start building this spatial transcript it was necessary to consult all of the transcriptions of each of the interviews and list all spatial aspects of landscape that were mentioned during the walks and talks and map-based questionnaires. This section will make an overview and analysis of the list of aspects.

Through the procedure of listing, aspects of landscape were grouped in two main categories of aspects mentioned by participants. First, there are discrete and defined places such as the school, the church or a petrol station and secondly there are what could be called fuzzy components that are impossible to map without adding a certain level of interpretation by the researcher. Fuzzy components could be views, smell, neighbouring villages or unspecified areas with similar land use such as 'woodland' or 'fields'. Also, in the table a type was added to each of the aspects that either correlated to the existing local HLC types or are new when non-existing in the local HLC's (see section 5.6 of the Methodology Chapter 5). The number of aspects mapped within each of the types can be found in Table 7.1 and Table 7.2 these tables show the combined totals of the interview data and the map-based questionnaires.

Looking at fuzzy aspects of landscape neighbouring villages were mentioned most, during all interviews and questionnaires neighbouring villages were mentioned and talked about 91 times. Followed by mentions of 'Roads' (62), 'Historic line features' (48), 'Topographic characteristics' (47) and 'Visual Characteristics' (46) (Table 7.1).

Table 7.1: Fuzzy aspects Types totals

Type	Count
City	43
Communications - Airport	7
Communications - Railways	11
Communications - Road	62
Communications - Utilities	17
Country	1
County	5
Historic feature	1
Historic feature - Line feature	48
Landmark feature	37
Natural feature	1
Neighbouring village	91
Ornamental designed landscape	3
Sense characteristic	4
Topographic characteristic	47
Unspecified Fields	2
Visual characteristic	46
Walking Route	28
Water – River (outside of case study area)	40
Water – Unspecified Artificial lake/ponds	2
Woodland - Unspecified	12

Within these types the individual components Hadrian's Wall (Historic line feature) was mentioned 47 times, Throckley (Neighbouring village) 37 times and Newcastle-upon-Tyne (City) also 36 times in Heddon-on-the-Wall. While in the Wallington, participants mentioned the estate as whole (Landmark feature) 33 times and the river walk (walking route) 13 times. This shows a difference in components mentioned in both case study areas, while participants in Heddon-on-the-Wall discussed a lot of aspects from outside the village itself in Wallington almost no fuzzy aspects from outside the study area were talked about. This is slightly different when it comes to discrete places (Table 7.2).

Table 7.2: Discrete places Types totals

Type	Count
Abandoned extraction site	43
Communications: Road	10
Farmstead	27
Fields other small surveyed fields	1
Fields surveyed enclosure straight edged	8
Historic feature	28
Horticulture	14
Industry Utilities	1
Landmark Building	127
Landmark Feature	5
Ornamental/Designed landscape	134
Public Footpath	2
Settlement C20	67
Settlement late 19thC	3
Settlement Post Medieval	6
Settlement pre-1860s	84
Sports Grounds	5
Surveyed Enclosure Straight Edged	4
Water artificial lake/pond	8
Water natural well	4
Water river	1
Woodland C19	2
Woodland C20	5
Woodland late 19thC	3
Woodland pre-1860	32

Across both case studies 'Ornamental designed landscapes' were mentioned 134 times, 'Landmark Building' 127 times and 'Settlement pre-1860s' 84 times. Looking at individual places 'the close House golf course' (Ornamental/Designed landscape) was mentioned 28 times in Heddon-on-the-Wall, closely followed by 'The Shops' (Settlement C20) (21 times) and 'Heddon Common' (Woodland Pre-1860) (20 times). In the Wallington case study, 'Village of Cambo' (Settlement pre-1860) was mentioned 33 times, Wallington Hall (Landmark Building) was talked about 10 times and the Walled Garden in Wallington (Ornamental/Designed landscape) was commented on 8 times. The reason for the lower frequencies of places in the Wallington case study is due to the lower number of interviews on the one hand and the way the frequency was counted. As explained in the Methodology chapter (Chapter 5, section 5.6), components and places that were mentioned more than once in a one-minute section within the same context were only counted once.

7.2.4 Geolocation of 'Aspects of landscape'

This section looks at the integration of the spatial transcripts into a GIS database, the essence here is a technique of matching the landscape aspects to their GPS location where they were mentioned and, in case of discrete places, their location. This process was carried out using the list of discrete places and fuzzy components mentioned in the previous section and the GPS tracks of the walks to create spatial transcripts. As described in the Methodology chapter (section 5.6) linking the qualitative content to GIS was done in four steps. First, the discrete places are mapped using their locations. For each time they are mentioned a point, containing a unique ID of the on-minute segment of the walk during which they were mentioned and their own ID was created on the location. Secondly, the discrete places were joined to the one-minute segments of the walks they were talked about using the unique ID of each of the one-minute intervals of the walks. Then, the fuzzy components were mapped in the same way creating a join between the one-minute segments of the walks and the one-minute intervals in which they were mentioned in the transcript.

Distribution of the discrete places

A first outcome of integrating the data gathered through interviews and questionnaire is found in mapping the locations of the discrete places and visualising the distribution of how many times the individual places are mentioned (Figure 29 and Figure 30). Mapped unique locations show clusters in the centre of the villages of both case studies (Heddon-on-the-Wall itself and Cambo village in the Wallignton case study). In the case of the Heddon-on-the-Wall study there are three interpretations possible, on the hand this cluster of discrete aspects reflects on the routes of the walks. Almost all walks left from the Knott Memorial Hall (Figure 26), which is at the centre of this the village and the cluster of mentioned aspects. Another explanation for the clusters to be located within the villages is that these areas are where the highest frequency of individual (and therefore discrete) buildings and features are located that could be mentioned by participants. Finally, also the lives and activities of the participant's daily lives are often linked to these villages. This last explanation is reflected in the Wallington case study, as contrary to the Heddon-on-the-Wall case, almost none of the walks crossed through Cambo village, yet the village was mentioned most during the walks because of the links to the uses of landscape or personal connection to the village. Besides the clusters in the villages, other smaller clusters of discrete places could be found near areas in the case studies that have specific aspects that could be mentioned or talked about easily while walking through or could be

pointed at during the Map-based questionnaire. For Heddon-on-the-Wall (see Figure 29) these are located at the golf course towards the south west of the village and the woodlands towards the west of the village. In case of Wallington (Figure 30) unique discrete places were mentioned around the walled garden (towards the east of the garden) and the hall and courtyard themselves.

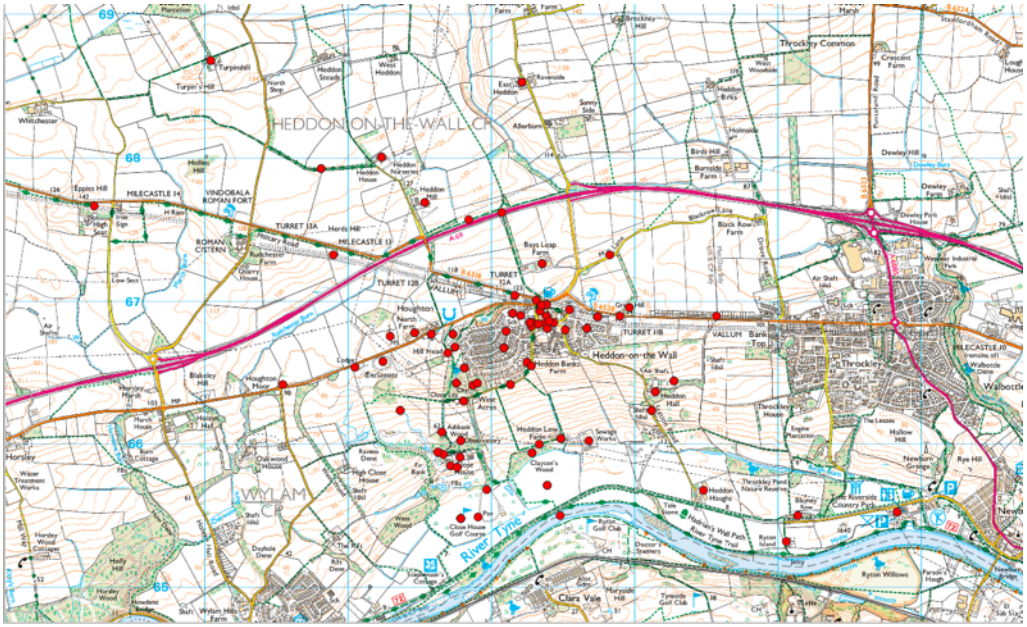


Figure 29: Unique Discrete places mentioned by participants in Heddon-on-the-Wall

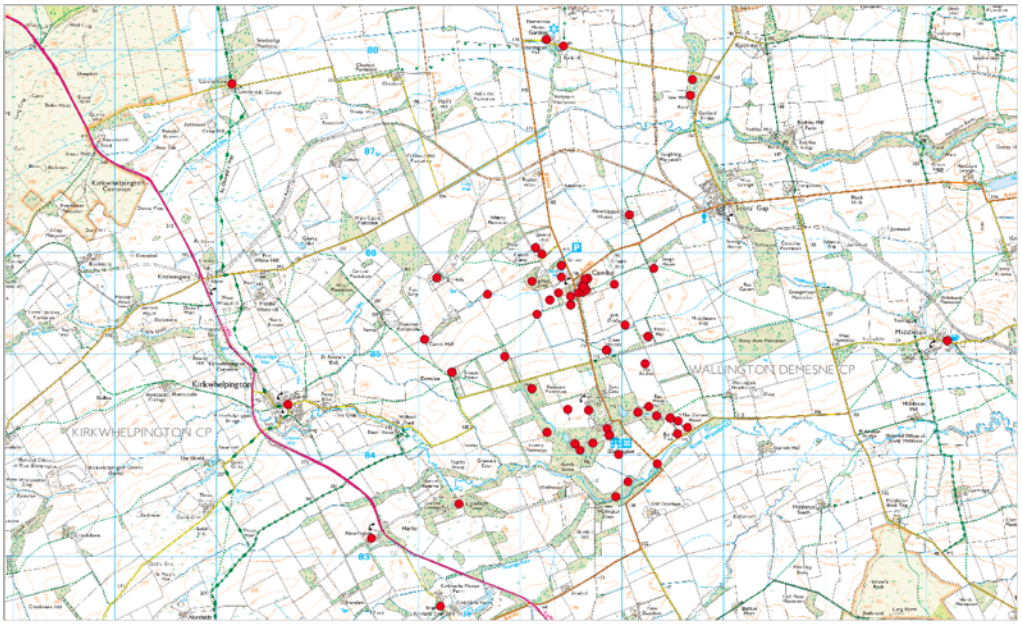


Figure 30: Unique Discrete places mentioned by participants in Wallington Estate

Turning to frequency of mentions, which is cumulating the mentions of individual discrete aspects, the same clusters are appearing. The main areas with unique discrete mentions are also the areas that light up as 'hotspots' when visualising the frequency. In Heddon-on-the-Wall one

of these hotspots is the most western edge of the village, a linkage of five different highlighted zones (A in Figure 31) are reflecting mentions to aspects were almost all linked to references to the changes in landscape because of the construction of the golf course at Close House Estate. The hotspot at the top highlights Heddon Common, a woodland at the edge of the village used a lot for daily activities such as dog walking. All five hotspots of area A however are along the route most of the of the walks took. This is not the case for the hotspots highlighted by rectangle B and C. Zone B shows a high frequency in mentions for the site of Hadrian's Wall in Heddon-on-the-Wall, this is a combination of mentions in walking and talking interviews and map-based questionnaire. And while the routes of the walks showed that almost all of the walks did not pass along the designated site of Hadrian's Wall in Heddon-on-the-Wall, this gives an indication about the importance of the site to residents of the village. The other hotspot, Zone C indicates the Halls of Heddon a well-known plant nursery in the area. Again, the Halls were mentioned in both questionnaire responses and during the interviews. Besides these hotspots that reflect a higher number of mentions, there are some individual farms mentioned as well as a former mining site on the most eastern edges of the village all of them are significantly smaller 'hotspots' however.

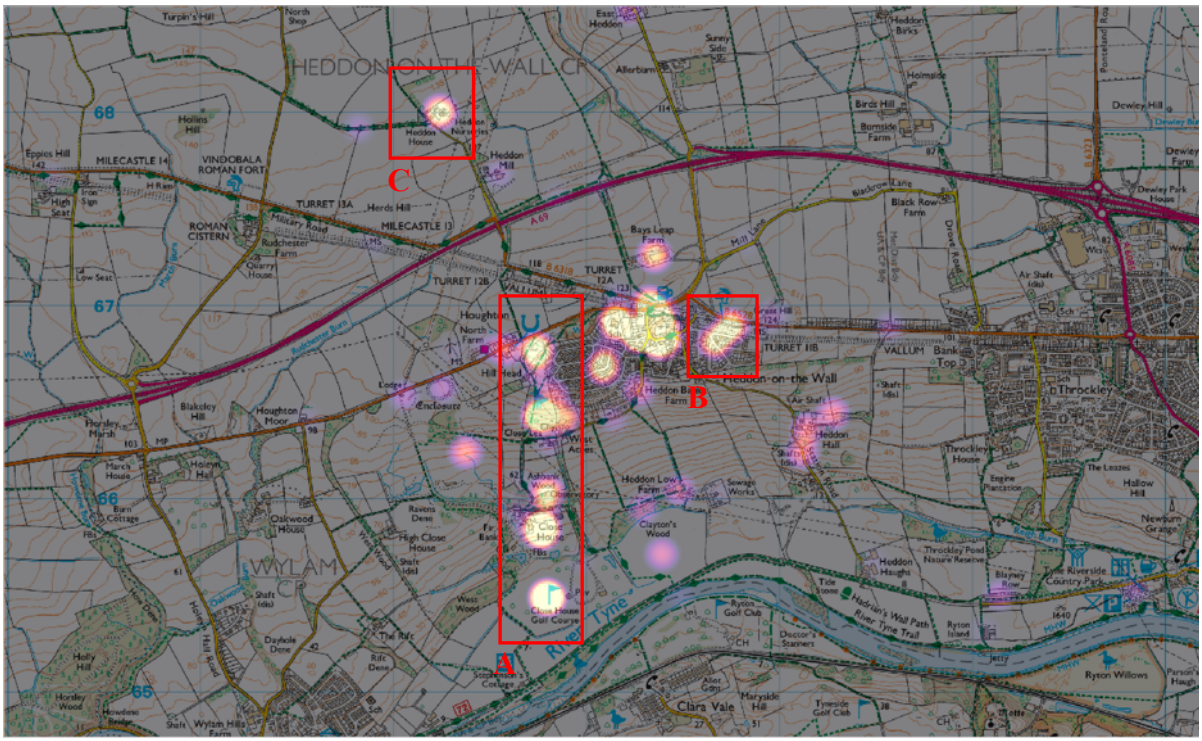


Figure 31: Frequency of discrete mentions in heatmap format (buffer of 10mm around individual points)- Heddon-on-the-Wall

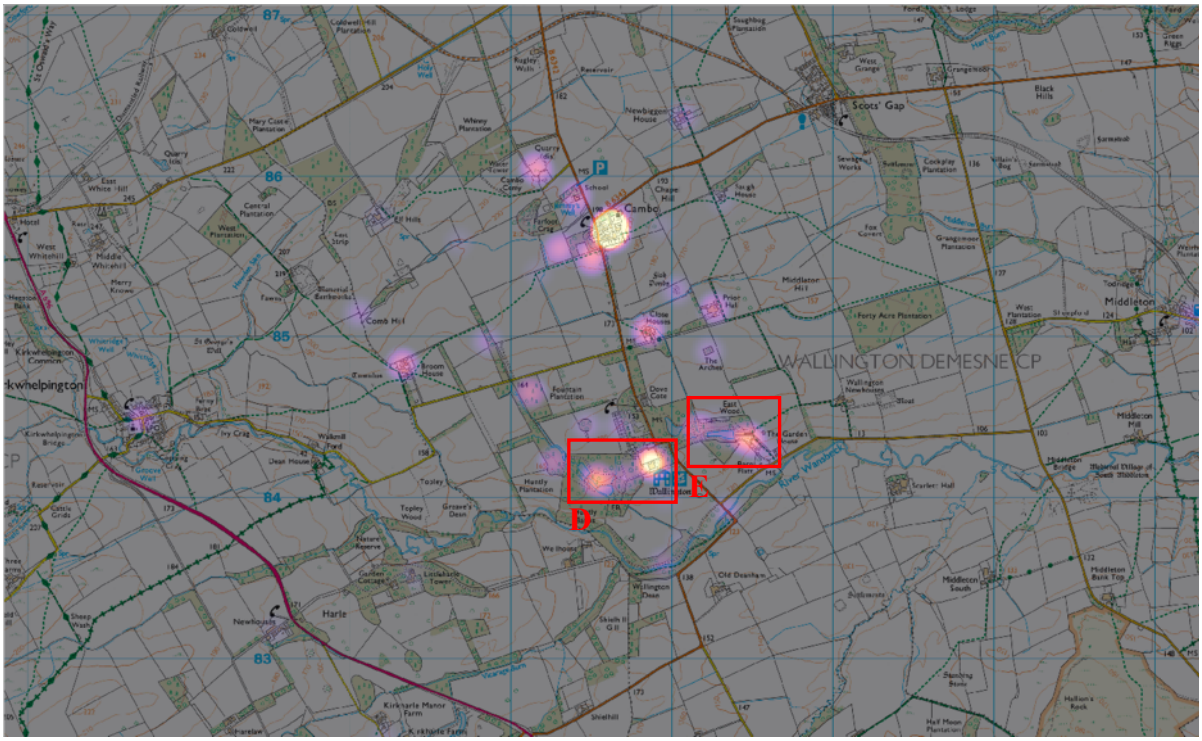


Figure 32: Frequency of discrete mentions in heatmap format (buffer of 10mm around individual points)- Wallington Estate

For the Wallington case study, besides the most important hotspot around Cambo village, discussed in the previous section. It is worth highlighting that the areas in what is called 'the Hub' by locals are mentioned across both interviews and questionnaire. This gives an indication

that the ‘Hub’ around the hall, including the garden and designed ornamental parkland is one of the areas most discussed and interpreted as being ‘Wallington’ by participants while other parts of the estate are often forgotten about. This hub is existing of Wallington Hall, the main building of the estate with its surrounding Westwoods (rectangle D in Figure 32) and also the area shaped by the East Woods together with the Walled Garden (Rectangle E). These two hotspots were mentioned most by participants in both walks and Maptionnaire. Also, in the case of Wallington, individual farms are mentioned to a certain extent, but again significantly less than the earlier mentioned hotspots.

A next step in this analysis was to join the list of aspects of landscape with the GPS-track of the interviews, using the segment and Unique IDs of the one-minute segments it became possible to map where participants referred to the discrete aspects along the walk. Figure 33 gives a general overview of this connection, describing each individual walk would lead too far but the locations (or one-minute segments) where discrete aspects were mentioned give an indication whether the aspects were visual or not during the mention. These findings will be discussed more in detail later on in this section.



Figure 33: One-minute segments in which mentions of discrete aspects took place (left: Heddon-on-the-Wall and right: Wallington Estate)

Also, these maps give an indication of where discrete aspects of landscape we mentioned in general. The frequency of mentions for Heddon-on-the-Wall show bright hotspots in the village centre (rectangle A in Figure 34), this is also relatable to the presence of most of the locations of the discrete places themselves. This indicated that the mentions of the discrete aspects can be linked to the visual presence of these aspects. Again here, the high frequency of mentions made within the centre is linked to the fact that this was the area visited on most of the walks. Therefore, it is interesting to see that also the zone around Close House Hall (rectangle B) is such a hotspot. At these locations, the village of Heddon-on-the-Wall was also visible because

of the valley. Because of this visual encounter the uphill section of the case study became an easier topic to talk about.

Similar conclusions can be found in the Wallington case study area. While there are not many clear hotspots visible on the map it is surprising to see the zone in between the village of Cambo in the north and Wallington Hall in the south (Rectangle C in Figure 35) is the most highlighted zone. Thinking about the topography of this zone and the routes of the walks a reason this is a highlighted area can be found in the visibility of both the village and the hall from this area and therefore participant picked up on these discrete aspects more often from here. Rectangle D refers to the village of Cambo itself, while not walked through many times, this village was the subject of many polygons drawn within the map-based questionnaire and therefore comes up as hotspot in this visualisation.

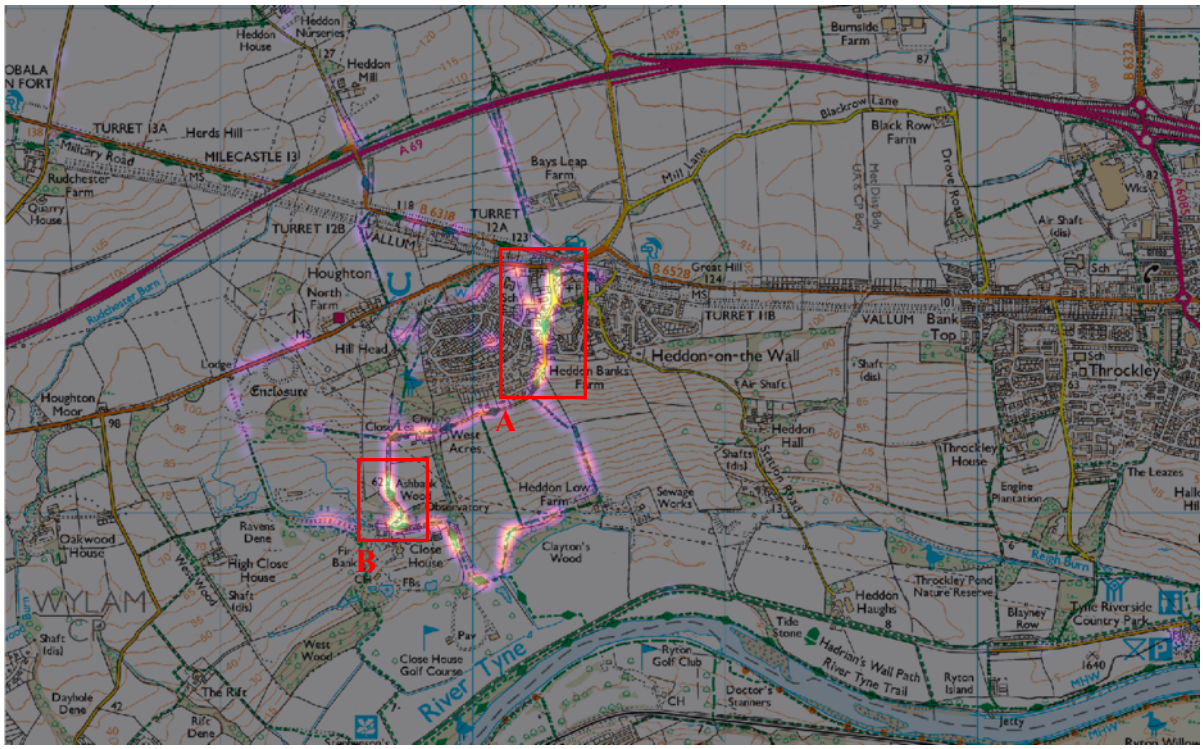


Figure 34: Visualisation showing the frequency of mentions of discrete aspects along one-minute segments of the walks in Heddon-on-the-Wall

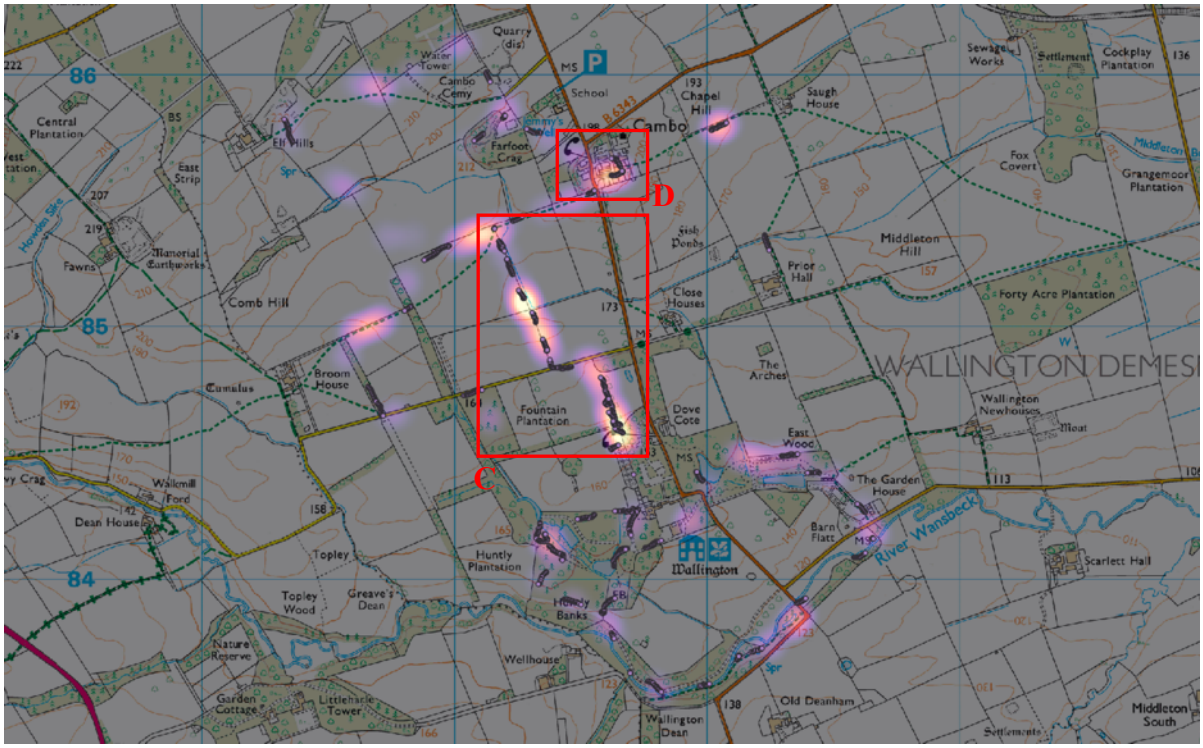


Figure 35: Visualisation showing the frequency of mentions of discrete aspects along one-minute segments of the walks in Wallington

The most interesting exploration of the mentions of discrete aspects was to analyse the average distance between the location of the mention and the discrete aspect itself. This was done

through the Distance Matrix function in QGIS using the centroids of each of the one-minute segments.

Place_UiD	Discrete Place	Dist (m)
P0027	Garden Cottage (Close House)	21.51
P0074	Sensory Garden	44.24
P0078	Play park next to school	68.98
P0042	Heddon Farm Cottage	81.46
P0062	Victorix	84.28
P0054	Score Hut	88.40
P0017	Clayton's Wood	92.68
P0053	Side of Clayton's Wood	115.43
P0077	Bus shelter (Heddon church)	131.57
P0076	Cottages towards the Tyne	140.93

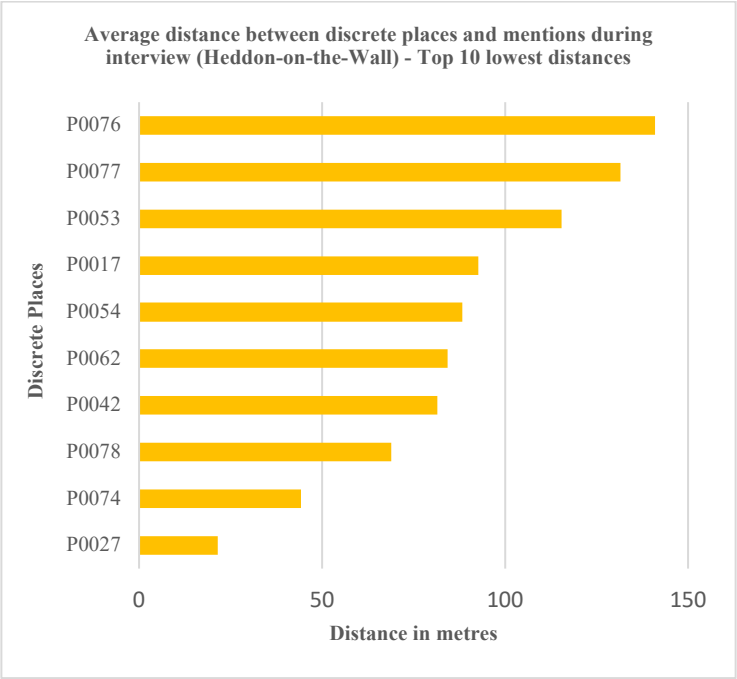


Figure 36: Top-10 lowest average distances from segment of mention to discrete aspect in Heddon-on-the-Wall

Place_UiD	Discrete Place	Dist (m)
P0016	Station Road	1375.03
P0010	Heddon Hall	1390.47
P0050	Gorse Hill	1418.81
P0039	The Royal French Arms	1538.86
P0035	East Heddon	1635.22
P0064	Tunnel under A69 (Heddon)	1698.94
P0058	Blue Bell Cottages	1873.08
P0070	Rochester Fort	1969.71
P0057	Turpins Hill	2153.28
P0072	Great Hill	2736.20

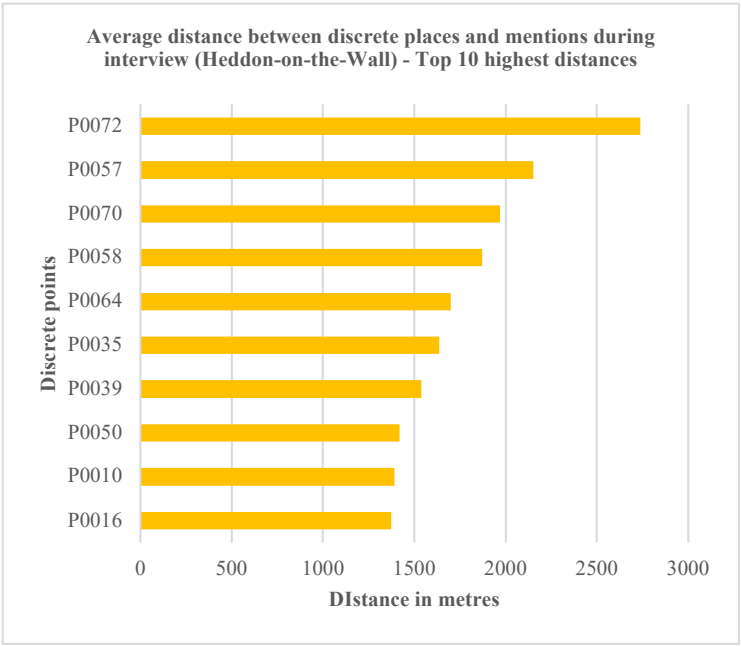


Figure 37: Top-10 highest average distances from segment of mention to discrete aspect in Heddon-on-the-Wall

Within the top 10 of lowest distances from the segment of mention to discrete place being discussed (Figure 36) at Heddon-on-the-Wall includes a few 'smaller' aspects, such as Victorix (P0062) (a statue of a Roman soldier), a historic score hut at the golf course (P0054), a bus

shelter in the village centre (P0077), and two smaller farm cottages (P0027 & P0042). This seems to suggest that these smaller features are only talked about when they are close enough to be seen. The top 10 of highest distances (Figure 37) however includes bigger landmark building such as Heddon Hall (P0010) and The Royal French Arms on the road to Throckley (P0039) at the edge of the bank, but also some historic features such as Rochester Fort (P0070) and Blue Bell cottages (P0058). More interestingly, some features with higher distances from the location of being mentioned are also the place names linked with smaller hills in the area, such as Great Hill (P0072), Turpins Hill (P0057) or Gorse Hill (P0050). For each of these hills the top was taken as the location of the discrete point, because these were also the locations that were visual from a lot of locations during the walks. The bigger farms and landmark buildings highlighted by the distance matrix also suggest that these were visual from various locations of the walk or are seen as examples during the interview because of their size and appearance. These findings show that visible and prominent aspects were talked about many more times during the walking and talking interviews than aspects that were not visibile or could not serve as landmarks in the area of Heddon-on-the-Wall (such as the Wall itself in fact).

Place_UiD	Discrete Place	Dist (m)
P0088	Corner house (Front Row in Cambo)	18.88
P0128	"Garden House"	77.21
P0127	"Doctor's House"	102.32
P0136	"Stack Corner"	115.98
P0146	Well West of Cambo (School)	134.95
P0140	Shelter belt west of Cambo	136.10
P0115	Garden Pond	194.42
P0080	National Trust car park	223.90
P0139	Fields just south of Cambo	240.07
P0141	Cambo Church	292.48

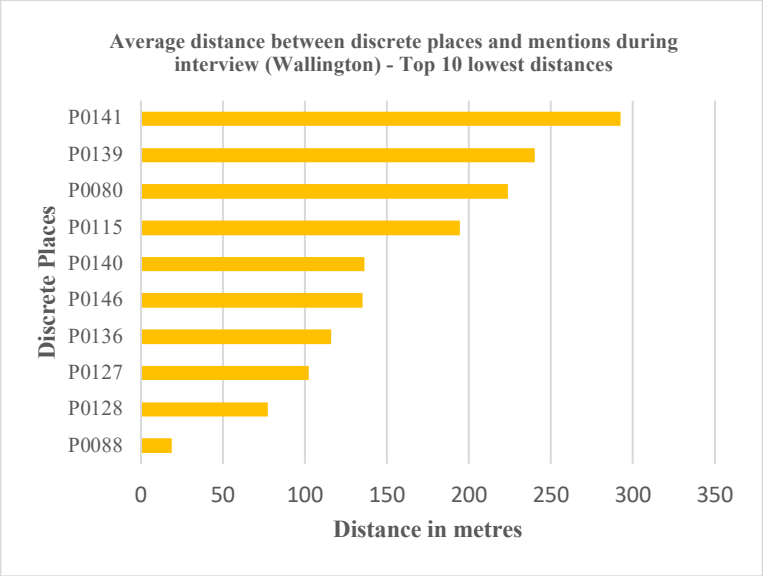


Figure 38: Top-10 lowest average distances from segment of mention to discrete aspect in Wallington

Place_UiD	Discrete Place	Dist (m)
P0125	The Ox Pub	3217.87
P0100	Hartington Hall	3438.55
P0097	Catcherside	3710.42
P0129	Saw mill woods	3800.67
P0106	Rothley Castle	4166.80
P0090	Capheaton	5268.76
P0109	Rothley Lakes	6247.68
P0107	Rothley Lake House	6266.56
P0104	Greenleighton Quarry	7096.93
P0108	Harwood Forest	8529.16

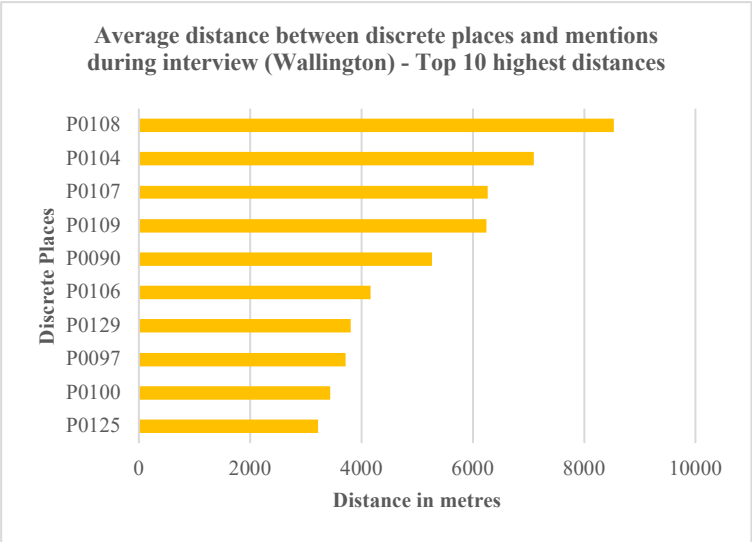


Figure 39: Top-10 highest average distances from segment of mention to discrete aspect in Wallington

In Wallington some similar observations can be made, within the lowest average distances (Figure 38 & Figure 39) more specific and individual houses could be found such as the 'Doctor's House' (P0127), the 'Garden House' (P0128) and the Corner House of Cambo (P0088). Small water features also are part of these ten features, a well west of Cambo (P0146) and the garden pond (P0115). However, a different conclusion can be made when it comes to Cambo Church (P0141) and shelter belts around Cambo (P0140). Here findings show a difference with the earlier mentioned results, while Cambo village and Hall were mentioned during many walks while not being passed on the walks themselves the finsings show that at the scale of Wallington these distances are significantly lower than the ten highest average mention distances (Figure 39). Distances here are significantly higher than in a smaller scale area such as Heddon-on-the-Wall, but similar features are discussed from further away. Findings show that landmark buildings such Hartington Hall (P0100), Rothley Lake House (P0107) and the ruins of Rothley Castle (P0106) are mentioned are within this top ten, while never passed by on any of the walks. Also, woodlands that form important visual boundaries in the landscape are mentioned even when not visible at all, such as Harwood Forest (P0108) or the woods near the historic sawmill (P0129). Also similar to Heddon-on-the-Wall is the fact that a pub makes it into this category (The Ox (P0125)), this gives evidence that places with a social function are mentioned while not in sight and are part of a more mind map related interpretation of landscape.

Distribution of fuzzy components

Moving on to the fuzzy components of the spatial transcripts, analysis was done through looking at the locations of the mentions of fuzzy components during the walks only. This because the main characteristic of these components is that these are not directly mappable without adding a certain level of uncertainty (or interpretation by the researcher). This made it impossible to look at distance between mentions of an aspect and the locations of the aspects themselves therefore the analysis looked mainly at the locations of these mentions and the findings show some interesting differences between the two case study areas.

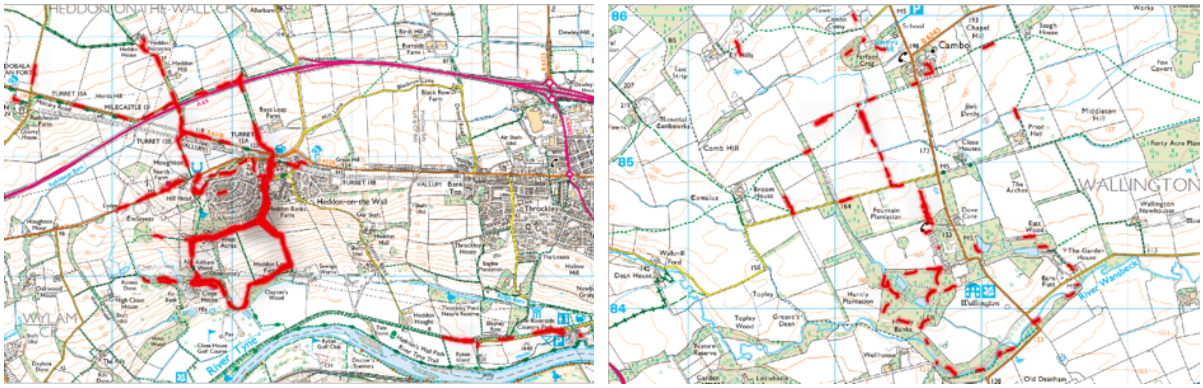


Figure 40: One-minute segments in which mentions of fuzzy aspects took place (left: Heddon-on-the-Wall and right: Wallington Estate)

Figure 40 shows the different one-minute segments of the walks in which fuzzy components are mentioned illustrating a difference in distribution of the mentions of fuzzy aspects during the walks in Heddon-on-the-Wall and Wallington. To interpret the maps, it may not be forgotten that an important factor here is the number of walks done in both case study areas. The interpretation could be altered because of the fewer walks carried out in Wallington (pictured on the right) than in Heddon-on-the-Wall (pictured on the left). This is one of the reasons why the Wallington map shows a wider spread of segments in which fuzzy aspects have been mentioned than the Heddon-on-the-Wall case where fuzzy aspects are found to be mentioned along the complete route of the walks. However, even while having less walks in Wallington the maps show a significant difference in how these segments are spread across the different walks. While in Heddon-on-the-Wall segments with mentions of fuzzy components are clustering around specific locations in the landscape while in Wallington such mentions are more scattered around. These conclusions could also be made when visualising the frequency of the mentions in the same manner as was done with the discrete aspects, only this time the frequency is calculated from the locations of the mentions.

The visualisation of the frequencies of mentions of fuzzy components of landscape along the walks (Figure 41 for Heddon-on-the-Wall and Figure 42 for Wallington Estate) could be interpreted as most of the mentions in Heddon-on-the-Wall were done at the edge of the village (rectangle A). As will be explained in a further stage of this study (see next section) the main reason for this phenomenon is the topography of this location. Here the valley tips towards the river Tyne and an open view across the valley appears, this view was mentioned by almost all participants. Rectangle B is highlighting another area in which a lot of participant mentioned a fuzzy aspect of landscape. This is the zone where pylons are crossing the Tyne valley and crossed above most of the walking routes. The buzzing sounds of the pylons led to discussions about the pylons themselves but also about sounds in landscape in general such as for example the planes coming from the airport that have their landing routes above the village. Here for the first time, the spatial findings show a clear relation between non-visual senses and the way landscape is perceived. A second place where non-visual senses were causing references of aspects was in Rectangle C, there two different smells caused the hotspots in mentions of fuzzy aspects. First, wild garlic was one of the smells (during the spring interviews) and secondly, the smell of foxes. These were of course not picked up by the map-based questionnaires and gave another dimension to the walking and talking interviews. The non-visual senses were less clear in Wallington, hotspot in rectangle D (Figure 42) mainly refers to the views across the estate at these locations.

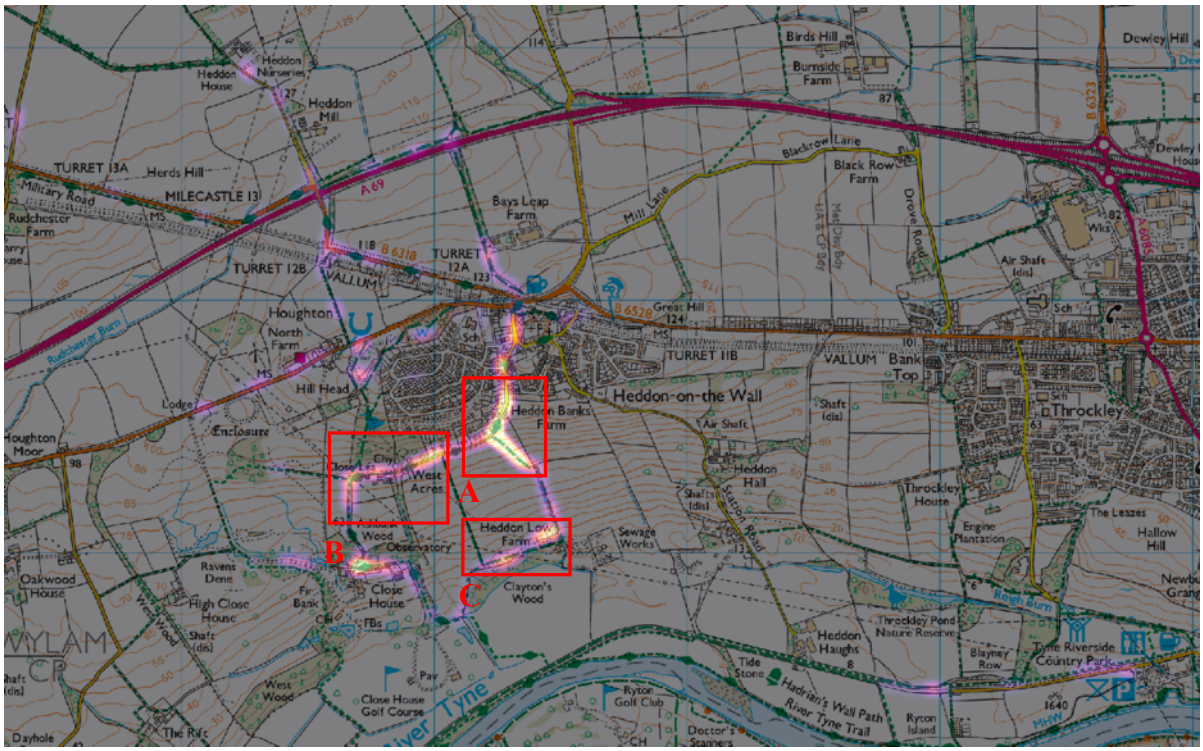


Figure 41: Frequency of mentions of fuzzy aspects of landscape visualised along on-minute segments of the walks in Heddon-on-the-Wall

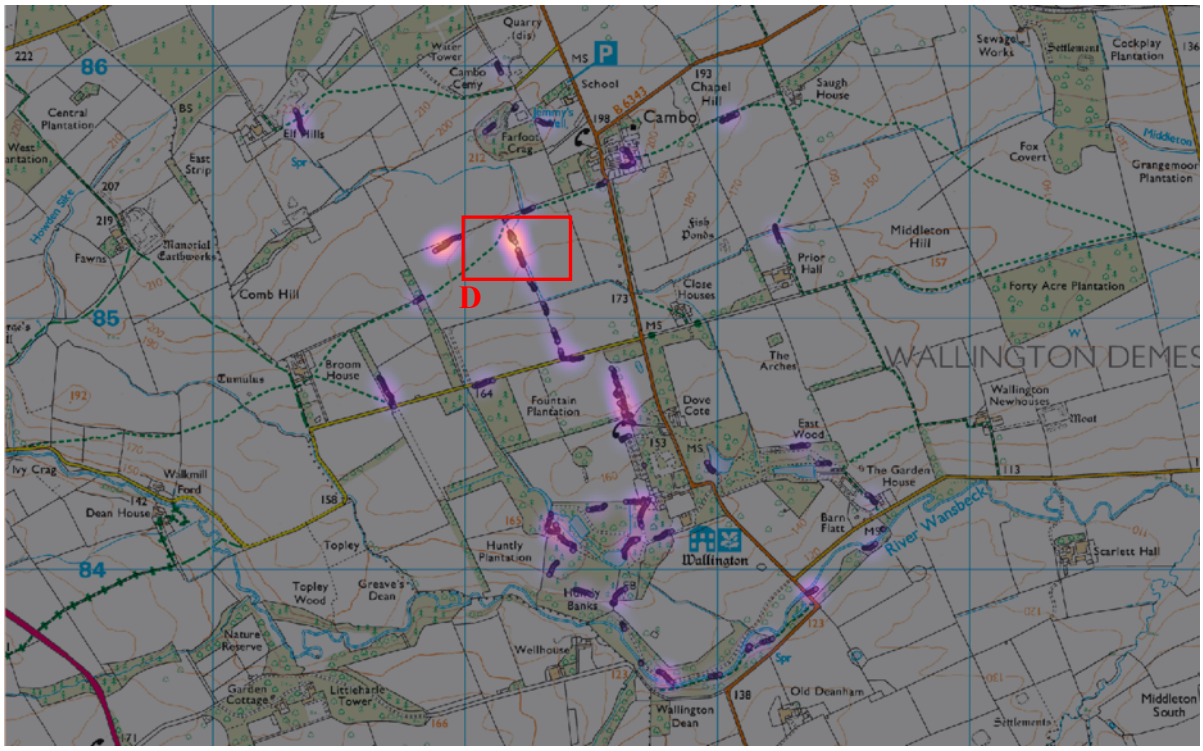


Figure 42: Frequency of mentions of fuzzy aspects of landscape visualised along on-minute segments of the walks in Wallington

7.2.5 Summary

The importance of the above section was to illustrate and map the mentions of aspect done in both walking and talking interviews and map-based questionnaire. The section looked at the integration of the gathered qualitative data into a GIS database creating spatial transcripts and a qualitative data source for other tools. First, the aspects of landscape mentioned in the walks and talks and the map-based questionnaires were listed and categorised as either discrete or fuzzy/variable aspects. Then these aspects were brought into a GIS database to be able carry out a spatial analysis on their location (for the discrete places) and on the locations of mention of the different aspects (for both categories of aspects). The rough data before GIS integration showed that neighbouring villages and visual characteristics were the most mentioned fuzzy components of landscape. While landmark buildings (buildings that are visible and prominent) and designed parts of the landscape are most mentioned as discrete places. Seen from the spatial distribution of the mentions of the fuzzy aspects, findings showed that this is dependent on the encounters of these aspects during the walks or the visibility on the maps during the questionnaire. Aspects that were visible from different locations were often mentioned in a spontaneous manner when these senses are triggered along the walk. However, not only visual senses trigger replies, during the walks and talks hotspots of mentions appeared when a sound (e.g. of the pylons) was heard or a smell is present, a sound (of the pylons) was heard. While more evenly distributed along the walks, mentions of discrete places show the same tendencies. Landmark buildings and places that are more physically present during the walk (visible or hearable (church)) than others are therefore also more mentioned during the interviews. On the other hand, small features that are more deeply buried in the landscape tissue are mentioned less or only mentioned when the walks pass by.

7.3 Qualitative GIS informing HLC: Grounded visualisation

7.3.1 Introduction

Having mapped and interpreted discrete and fuzzy aspects of landscape that came out of the empirical part of this study, this section will take this data a step further. The aspects of landscapes were now linked to the understanding of landscape perception developed in the thematic analysis chapter (Chapter 6) of this thesis. This relates the aspects of landscape to the dimensions and context in which they were mentioned in both the interviews and the

questionnaire in order to create a spatial generalisation of landscape perception to inform HLC. An analysis is made of the distribution of the different (sub)dimensions across both case studies and where the specific dimensions were mentioned during the walks or highlighted within the Maptionnaire.

7.3.2 Adding the dimensions of landscape perception to the spatial transcripts

The Excel spreadsheet containing the aspects of landscape was completed by adding the themes in which the aspects were mentioned (see Methodology chapter section 5.6). This was done using extra columns of data that were then imported into GIS so the data could be queried and analysed. Leading on from the thematic analysis the following themes and subthemes were added alongside each of the aspects:

Table 7.3: Dimensions of landscape perception

1. Landscape as a personal matter	a. Personal background b. Personal memories c. Personal opinion
2. Collective understanding op landscape	a. Meeting through landscape b. Discussing through landscape c. Experiencing landscape through the collective
3. Landscape in time	a. Past – Present – Future b. Re-occurring occasions
4. Landscape in space	a. Physical landscape b. Space mentioned as place

Together with the themes and subthemes from the thematic analysis (Table 7.3) also landscape types added to each of the aspects were considered in this section (see Methodology chapter section 5.6). These will be spatially analysed in connection with the distribution of the themes and subthemes and the existing character types in the HLC of Northumberland.

In order to analyse and illustrate the outcomes of the relevant queries this section is discussing the findings of this spatial analysis for both case studies separately first before summarising the results at the end of the section. Each of the themes or subthemes can be queried and visualised in the same way using the SQL capabilities of a GIS software package.

Heddon-on-the-Wall

Previous sections showed discrete places clustering in both the village centre of Heddon-on-the-Wall and along the western edge of the village. Looking at the distribution within these points of the dimension including all personal relations to landscape the same patterns appear. However, two areas are worth mentioning, first, the golf course and Close House Hall (Rectangle A on Figure 43) and the primary school in the village centre. A more detailed look at these findings however, shows that both were mentioned by participants in different context. While the golf course was most mentioned in the context of personal opinions (Figure 43, bottom right), the school was mentioned when referring to personal memories (Figure 43, bottom left). Findings here give evidence that querying the dimensions is not sufficient, also the subdimensions need to be taken into account when making interpretations.



Figure 43: Distribution of Discrete aspects within 'Personal' Theme - Under: Left, subtheme 'Personal Memories' - right, subtheme 'Personal opinion'

Next, visualisation shows of the 'Landscape as Collective' dimension also shows the importance of analysing the subdimensions to get a clear view on the distribution of the theme across the case study area. Figure 44 shows rectangles A and B, where rectangle A refers to the two estates on either side of the village centre, highlighted by rectangle B. While at first sight, most mentions in a collective context were made in the village centre it is important to note to big difference between discussion and meeting about landscape. A lot of the participants commented on the way most estates had different lifestyles and were not mixing that many times and were to a sense of belonging to either of these estates (discussion through landscape) (Figure 44 bottom right), while at the village centre people with different backgrounds were meeting in the pubs or churches (meeting through landscape) (Figure 44 bottom left).

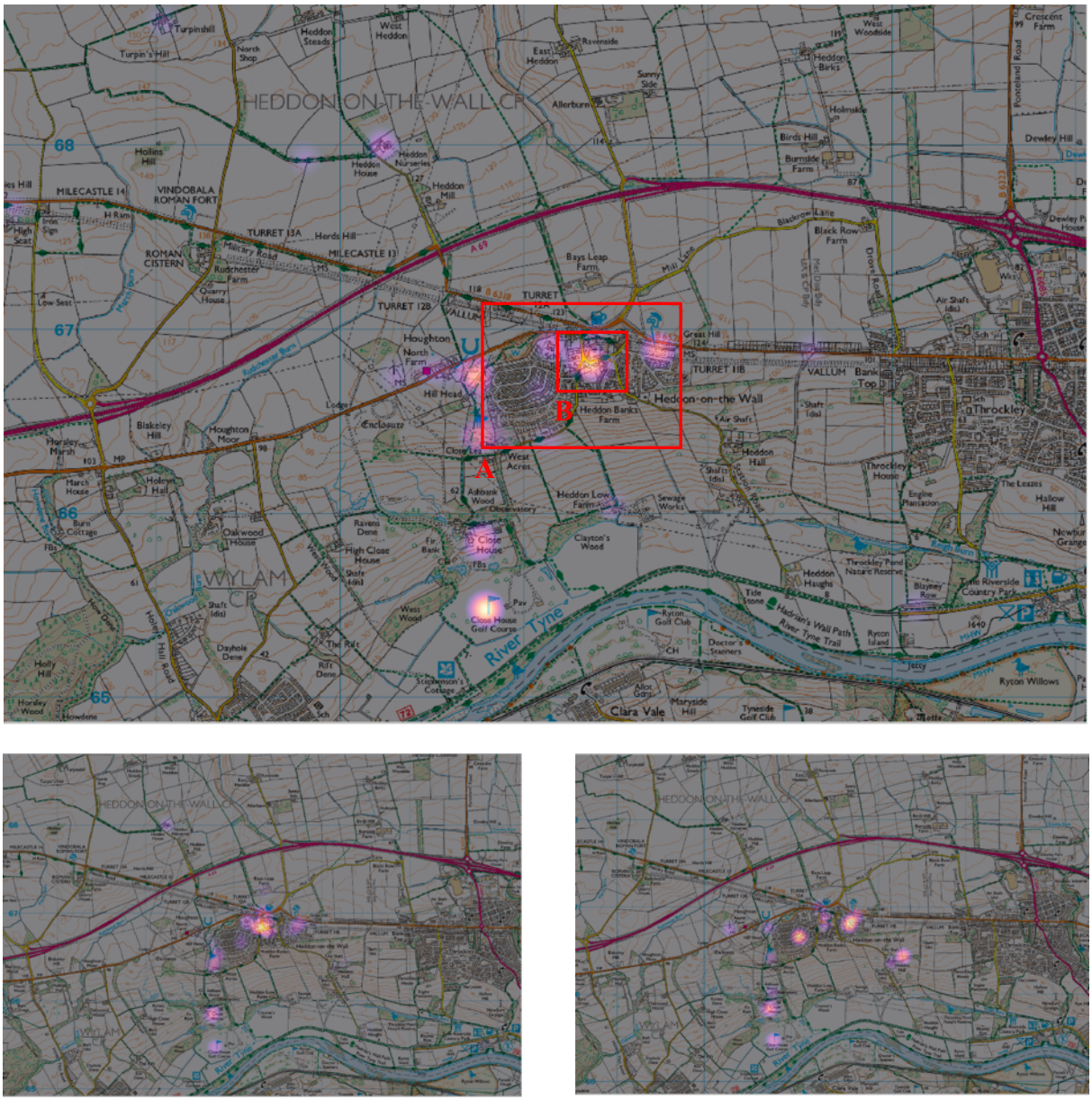


Figure 44: Distribution of Discrete aspects within 'Collective' Theme - Under: Left, subtheme 'Meeting through landscape' - right, subtheme 'Discussion through landscape'

Interestingly, most farms were part of mentions in a context of more national and wider discussions (see previous chapter on the thematic analysis of the empirical study). This was mainly because of references made to the farms while talking about the Foot and Mouth disease crisis. In other cases, such as the hotspot highlighted on the eastern edge of the case study area (Figure 45) were related to abandoned extraction site and socio-economic discussion about changes from industrial economy to a services economy in the UK.

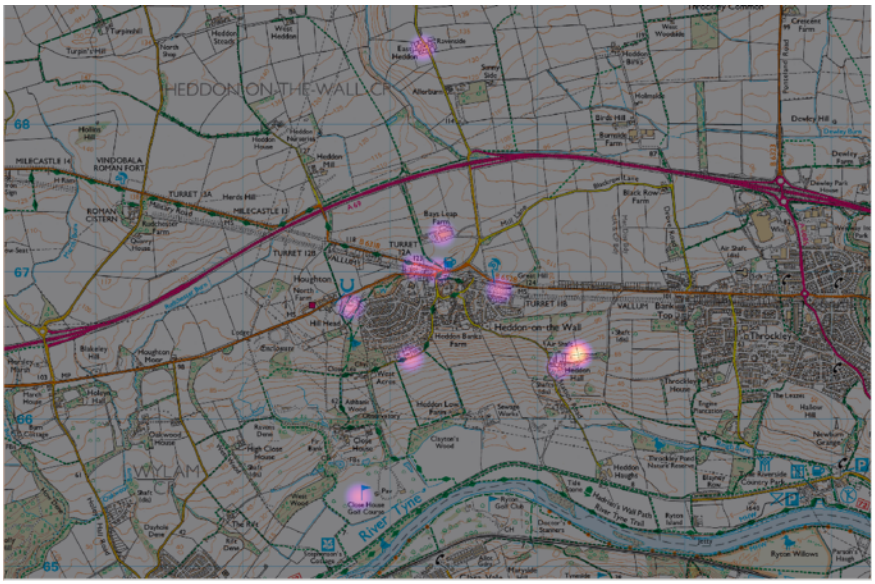


Figure 45: Distribution of Discrete aspects within 'Experiencing landscape through the collective'

These phenomena also appear when combining themes with each other, having the personal mentions combined with time related aspects and comparing them with the mentions in a collective/time context it appears that places such as the Halls of Heddon a plant nursery are mentioned in a more personal context referring to the past (rectangle A in Figure 46), while Hadrian's Wall (Rectangle B) is much more mentioned when talking about collective issues and landscape (Figure 46 on the right). This difference became apparent during the interviews for example because participants used either the first person singular or plural when talking about these aspects.

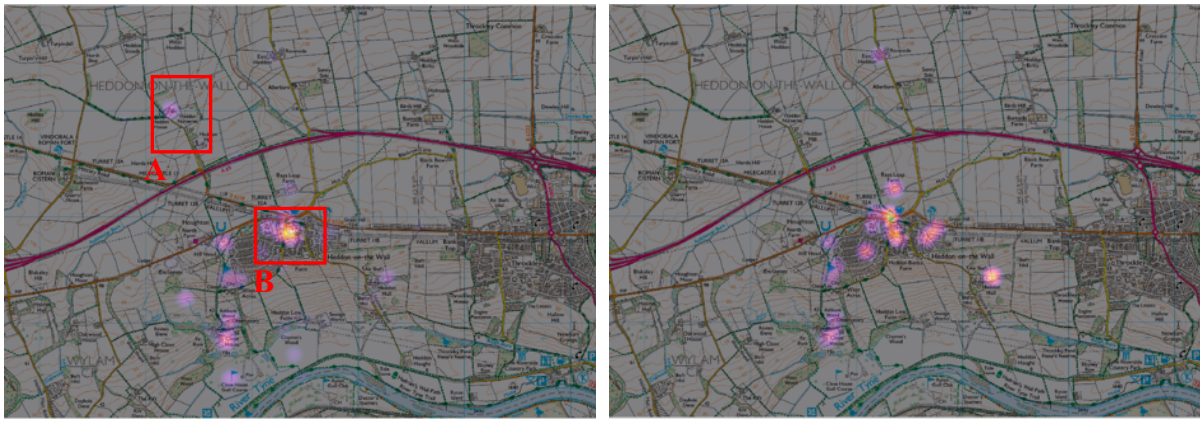


Figure 46: Discrete aspects in Personal/Time on the left and Collective/Time on the right context

Turning to the locations where the discrete aspects were mentioned in the specific contexts the same queries can be carried out. Interestingly and confirming the earlier made observation of distance between mentions of discrete places and the location of the mentions, most personal

mentions were made in the village centre (Figure 47 and rectangle B) and while walking along the golf course (Figure 47 and rectangle A).

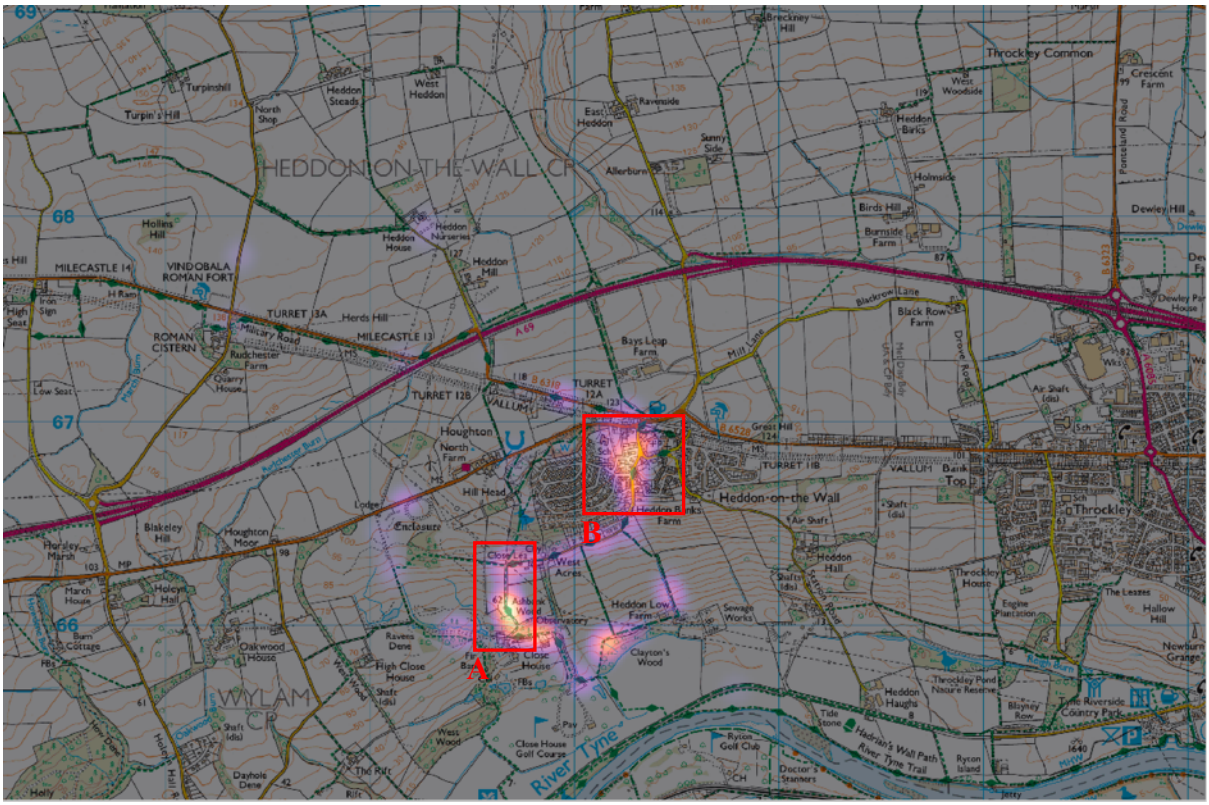


Figure 47: Segments with mentions of Discrete Places in a personal context.

Moving on to the mentions of fuzzy components only the locations of the mentions can be visualised. In order not to repeat the above made observations about the distribution of the different themes along the walks and in landscape. This section of the analysis will make use of a combination of the types of the mentioned aspects in relation to the dimensions and contexts in which they were mentioned. Interesting in this sense is the mentions of visual characteristics combined with the themes 'Personal' and 'Collective'. Comparing both shows that visual characteristics of landscape, such as views across the valley, towards Newcastle-upon-Tyne in the east (Rectangle B in Figure 48) or towards the North Pennines and Hexham (Rectangle A in Figure 48) are mentioned in either collective or personal contexts. The locations in Rectangle B are the locations where the valley dips from the village towards the river as seen earlier and show hotspots in both personal and collective contexts. However north of the village, views are also mentioned these are the views towards Cheviot Hill in the north and again the North Pennines and Hexham in the west, but this time these views are mentioned solely in a personal context (Figure 48 below). This suggests that the Tyne valley views are seen as a feature of Heddon-on-the-Wall that has appeal to everyone, while the views towards the north are more a

case of personal preference. Another possible reason is that the river Tyne plays an important role in the village's history and the view across its valley is memory of that.



Figure 48: Collective theme and 'Visual characteristics' Type (above) vs Personal theme and 'Visual characteristics' Type (under)

The same ridge and dip towards the Tyne river is highlighted when combining mentions of physical landscape and combining this with mentions of the 'Topographic Characteristics' -type. This suggest that steepness of the valley and the relief of the landscape is most mentioned when walking at the locations where these features could be seen or experienced (Figure 49).

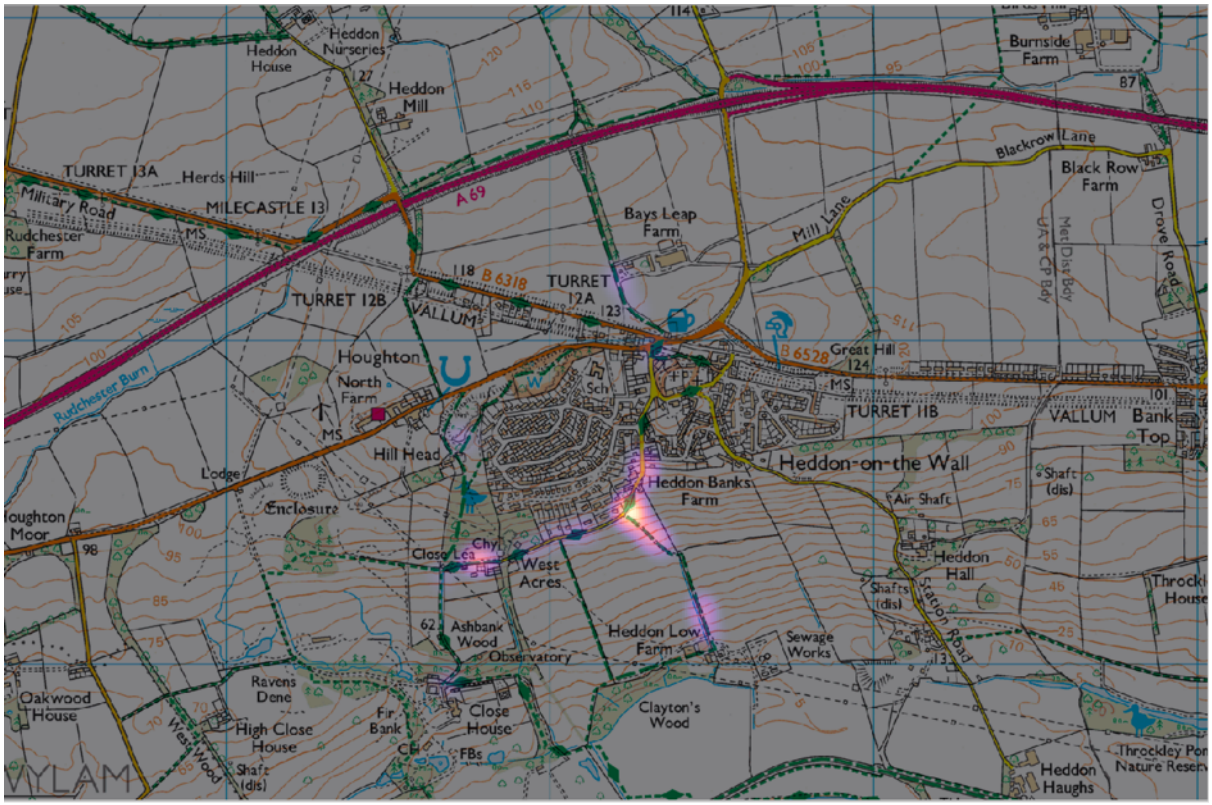


Figure 49: Mentions classed in the theme of Physical Space combined with aspects of the 'Topographic Characteristic'-Type

Wallington

The same analysis was carried out for the Wallington case study. This section will look at the most relevant and interesting queries and combinations of aspects and themes mentioned and the distribution of types of the mentioned aspects within the themes or subthemes for Wallington. Because of the scale of the case study area, some of the visualisation and descriptions will look at a small extent of the area as otherwise visibility of the results is difficult because of the zoom rate on the map.

First having a hotspot of discrete places in Cambo Village it was interesting to understand the context of these places (Figure 50). While most mentions were both in a personal and collective context, a small area just west of the Cambo church showed up when visualising both themes separately. The reason for this is a newly developed community orchard in the village at that

location. This orchard is bringing people together at this place and was only mentioned in a collective and ‘meeting through landscape’ context and not often in a personal context. This gives evidence for the statement made in Chapter 6 that specific aspects were mentioned in a more collective manner while also participation at an individual level is present.

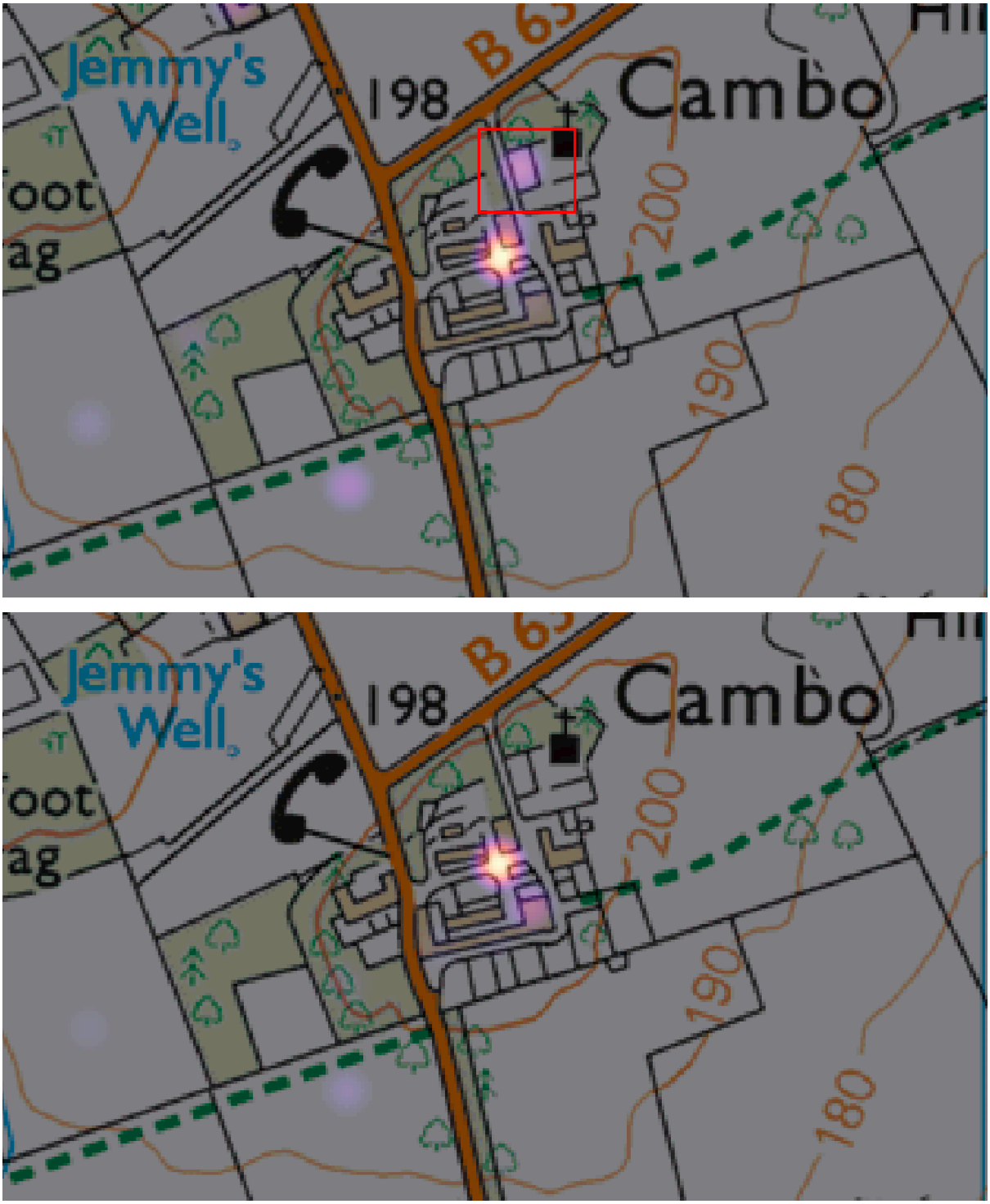


Figure 50: Distribution of Discrete Places in Cambo Village with ‘Collective’ context (above) and ‘Personal’ context (below).

The same two themes are also used as contexts for aspects around Wallington Hall, similar differences are visible (Figure 51). Aspects mentioned in a ‘personal’ context are the Hall itself (Rectangle A) and the Walled Garden in the east (Rectangle B). While in a ‘collective’ context the Courtyard in front of the Hall (upper hotspot in rectangle A), where the National Trust Café is located is mentioned more and also the play areas for children in the Westwoods (Rectangle C) are mentioned in a more social context.

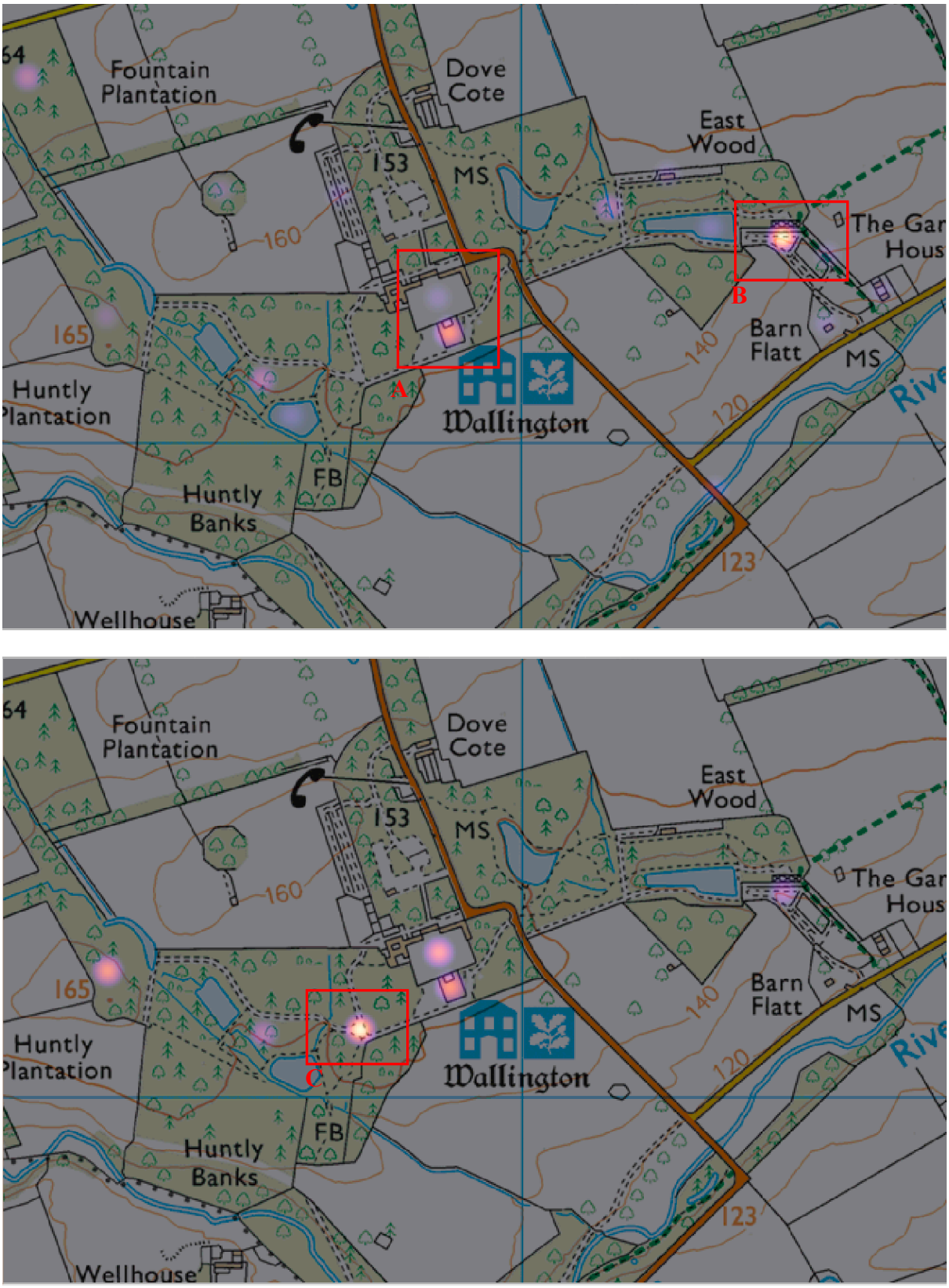


Figure 51: Discrete aspects in Wallington Hub, 'Personal' context (above) and 'Collective' context (below)

Having significantly less walks in Wallington is also reflected in the data and shows a limitation of the approach (as discussed in Methodology chapter – Section 5.8). Having less walks meant there is a smaller chance for individual walks and interviews to be averaged out. This shows

when querying for the locations of the mentions of aspects in a personal context and the same kind of locations of aspects mentioned in a collective context. Rectangle A in Figure 52, is highlighting the hotspot near the start and finish line of most of the walks. This suggests that a lot of personal background information (often the subject of the first questions) was given here which included a lot of references to spatial aspects. The same effect of can be seen in rectangle B of the same figure, in this area two participants met other people during the interview by coincide at roughly the same location. While the interviews were paused at the moment of the encounters, the replies given by both participants used examples that had no relationship to the surrounding landscape but were referring to components of landscape discussed during the meeting of the non-participating people. While these results could easily be taken out of the data, this was not done because these outcomes can also make it possible to refer to places that are possibly frequently visited by people. Further questions have to be asked in this case, was the area for the encounters purely coincidental? Or is this an area that is just more visited and walked than other areas in the surroundings. In this case, the encounters took place along a public footpath that is now part of an extended walking route organised by the National Trust and is frequently used by walkers and visitors of the National Trust site at Wallington. Reading the data with this thought in mind puts the outcome in a different perspective and perhaps makes deleting the data from the dataset a mistake.



Figure 52: Distribution of segments along which Discrete Points are mentioned in a 'Personal' Theme (above) and a 'Collective' Theme (below)

Looking at locations of the mentions of discrete aspects within a 'Time' context, and specifically the 'Past, Present, Future' subtheme also showed the hotspot near start and finish point of the walking routes, but also gives a hotspot to the north of this zone (Figure 53). This

was the area in which most participants discussed the disappearance of the mines to the south of Cambo village and in most interviews and questionnaires this was referred to as one of the areas that went through the most changes on the estate.

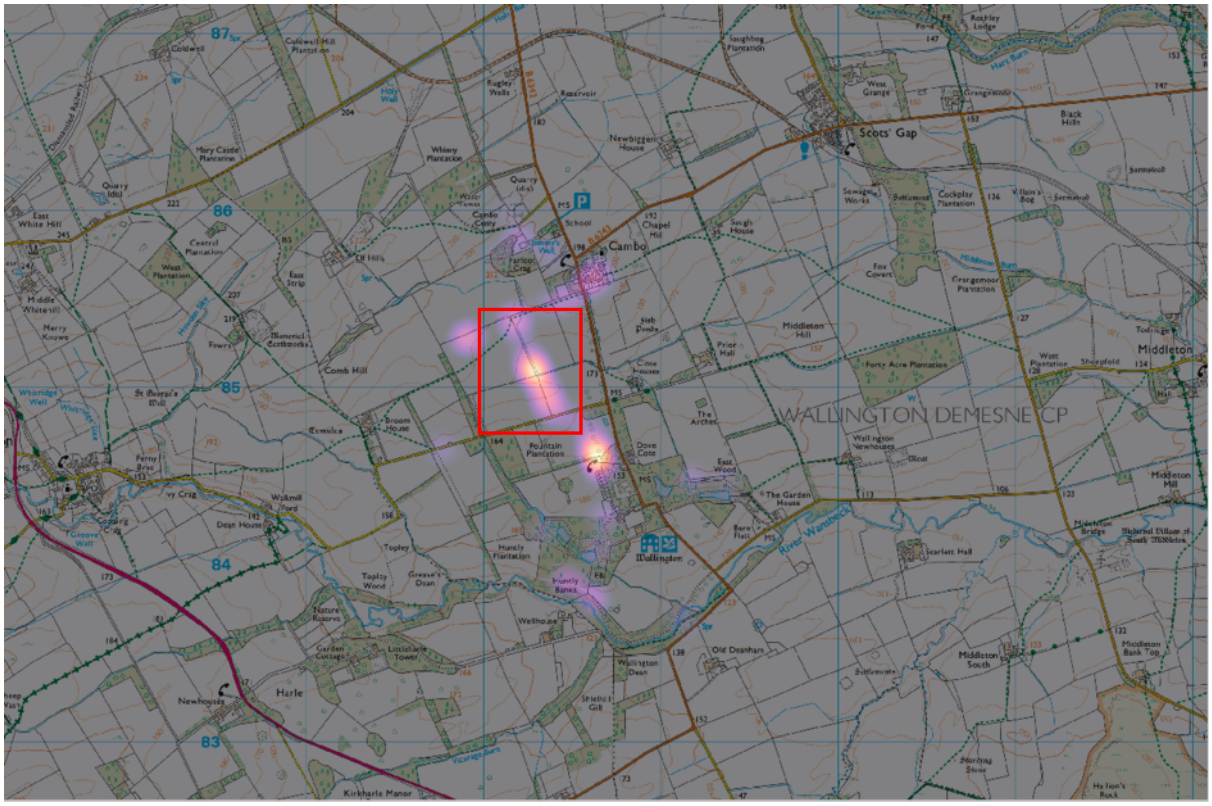


Figure 53: Distribution of segments where Discrete aspects mentioned within 'Time referring to Past, Present of Future' context.

An interesting finding is that within the fuzzy aspects mentioned in a 'personal memories' context no hotspot is visual around or near the Hall or Courtyard of the estate. This is however not surprising as these hotspots are created along the routes of the walks and not many of the walks have crossed the courtyard or passed along the Hall (Figure 54). The findings thus show that more walks give more interpretation possibilities.

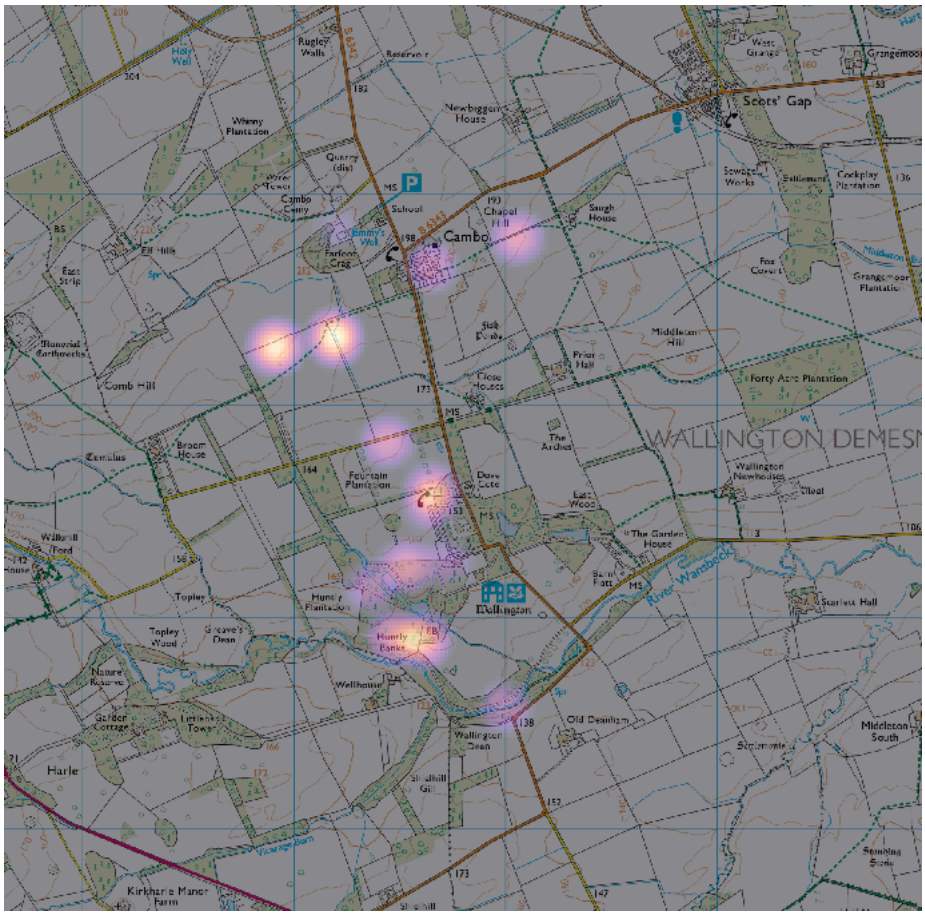


Figure 54: Distribution of segments where fuzzy aspects mentioned within 'personal background' context.

7.3.3 Summary

This section linked both spatial transcripts and outcomes of the map-based questionnaire to the dimensions of public landscape perception derived from the thematic analysis in Chapter 6. The section highlighted the importance of the subdimensions in order to understand the different mentions of aspects of landscape. While personal and collective mentions of aspects appear everywhere along the walks it is only while looking at the subdimensions of each of these themes that a better insight could be given about why specific aspect were mentioned at specific locations in landscape. The spatial distribution of aspects linked with the dimensions of the public perception generalise individual responses so a more general overview of how landscape is perceived by people and specific locations can be mapped. These findings could now be used to inform HLC in the next section.

7.4 HLC polygons and participatory outcome

7.4.1 Introduction

The third step and using the above spatial analysis, the existing HLC of Northumberland will be enriched by attributing the new data to the HLC database. Having added the new data to the existing database an analysis was done to better understand how the conventional HLC character types are represented in the qualitative data and to be able to recognise whether participants have similar interpretations of landscape to the expert who developed the existing HLC. Having spatially analysed the distribution of mentions of landscape aspects and the location of discrete aspects commented on during the interviews and in the questionnaire. A third step towards solving the research question to inform existing and forthcoming Historic Landscape Characterisation projects is to analyse how the qualitative data gathered in the empirical study is related to the HLC in place at the case study areas. Used for this analysis is the countywide HLC project developed for Northumberland by the Northumberland Country Council Archaeological service. Also, here the analysis is done using visualisation of the spatial data included both spatial transcripts and the HLC project. First this was done for the case study in Heddon-on-the-Wall then the same was looking at the Wallington case study.

7.4.2 Correlation of the qualitiative GIS and the HLC polygons

Heddon-on-the-Wall

For the purpose of this study, the HLC-data of Heddon-on-the-Wall was clipped out of the HLC Northumberland project data. The modern types show a mix of fields, settlement, woodland and ornamental landscape (Figure 55). Overlaying these polygons with the discrete aspects mentioned by participants gives an indicated of which of the polygons was central across of the interviews and within the map-based questionnaire. Most points are included in the polygon used to characterise the ‘ornamental designed landscape’ of the Close House Estate golf course in the southeast corner of Heddon-on-Wall (Figure 56). This is closely followed by the zone of Heddon Common to the east of the village centre and the village centre itself. Important to notice are the polygons that are visualised using the hatched zones. These are highlighted in this way because in this case there is only one possible reason for the absence of discrete places in these polygons and this is not one discrete place is mentioned in either of these polygons, this was different later on in the analysis when locations of mentions of aspects were looked at.

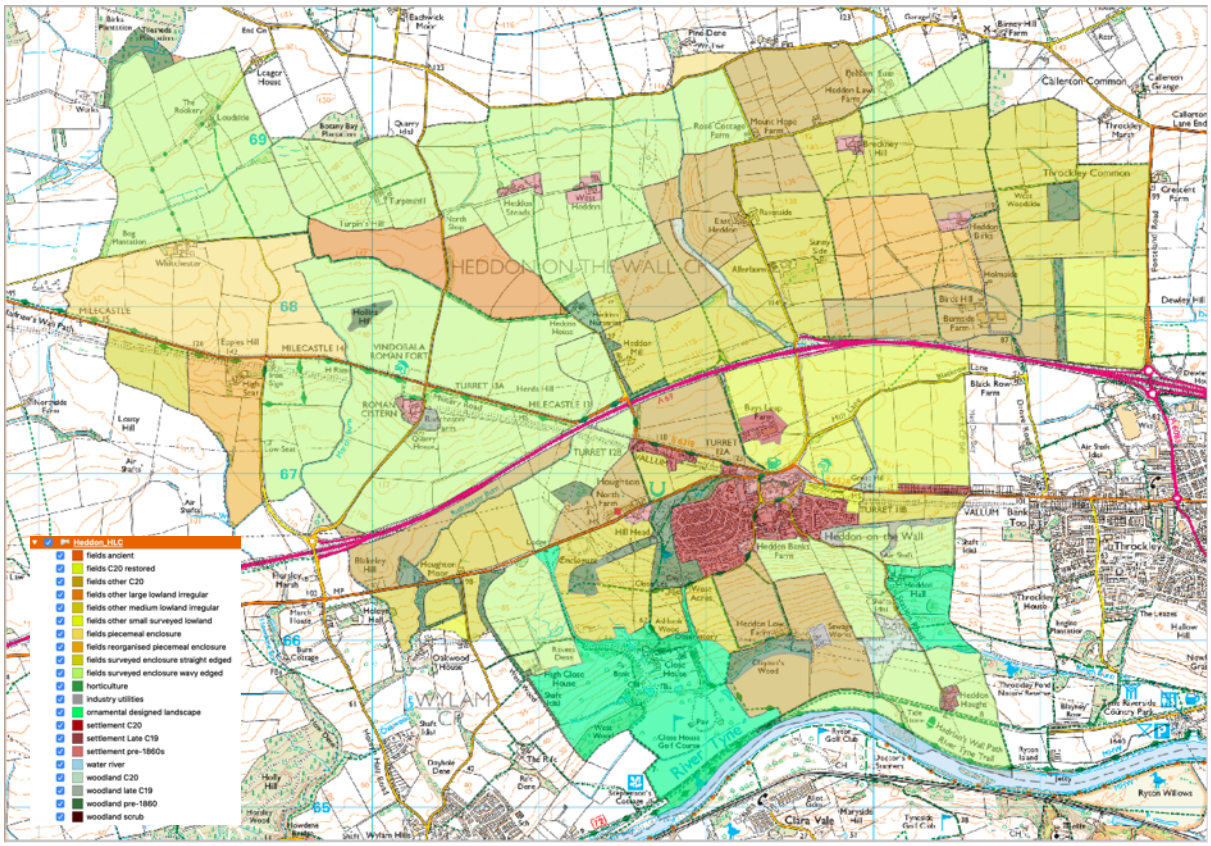


Figure 55: Modern Types for Heddon-on-the-Wall parish (Northumberland HLC)

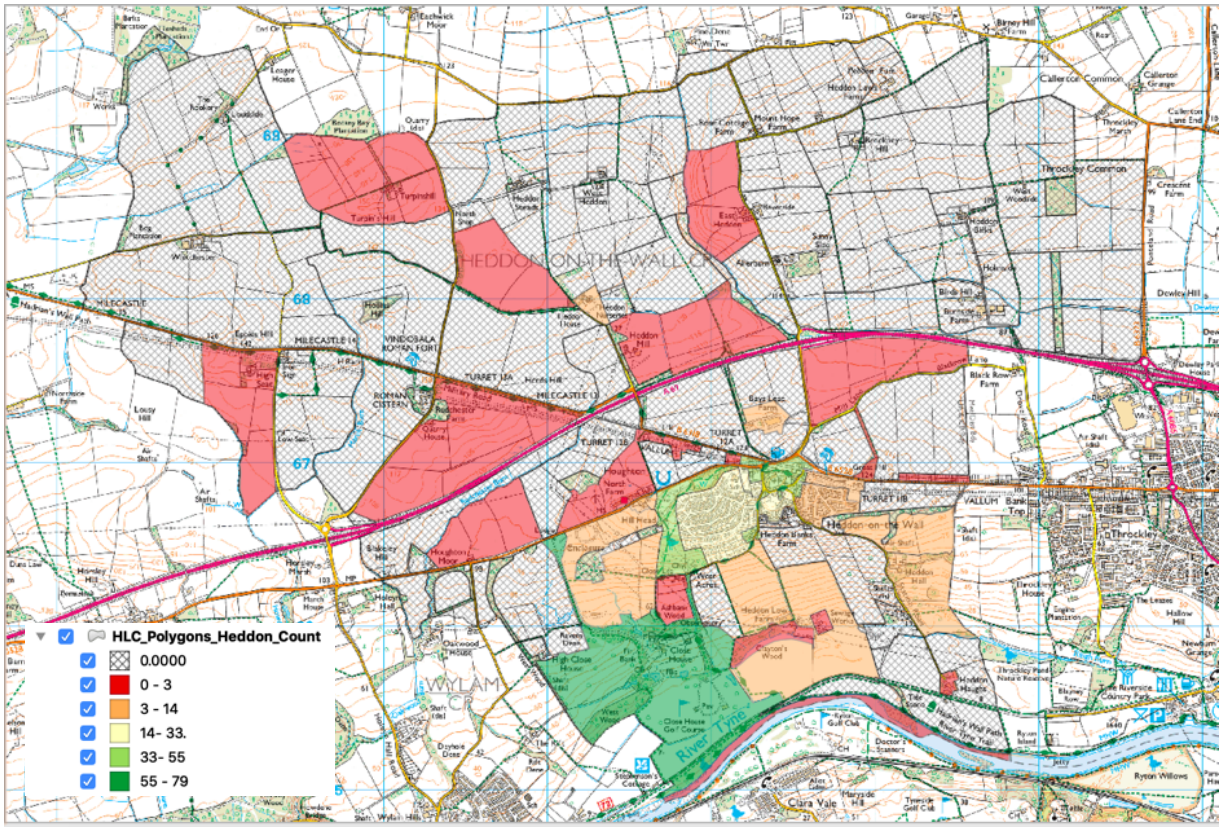


Figure 56: Distribution of Discrete places for each HLC polygon (Classified using Natural Breaks function in QGIS)

A second visualisation of the discrete points is visualising the analysis of the Types added to each of the aspects and how these types relate to the types given to the polygons in HLC. First, the discrete aspect can be linked with the polygons that are defining the polygon's character type in which they are included (Figure 57). Here the green dots are visualising the 'Discrete aspects' that refer to the embracing polygons. The red dots are referring to aspects that are part of the polygons and of the characteristics of these polygons but are not defining the type of that polygon as such. This results in the observation that Discrete aspects mentioned by participants and also included in the HLC are mostly settlement related (e.g. farmsteads) or industrial sites. Hardly any fields or field structures were pointed at in a specifying way.

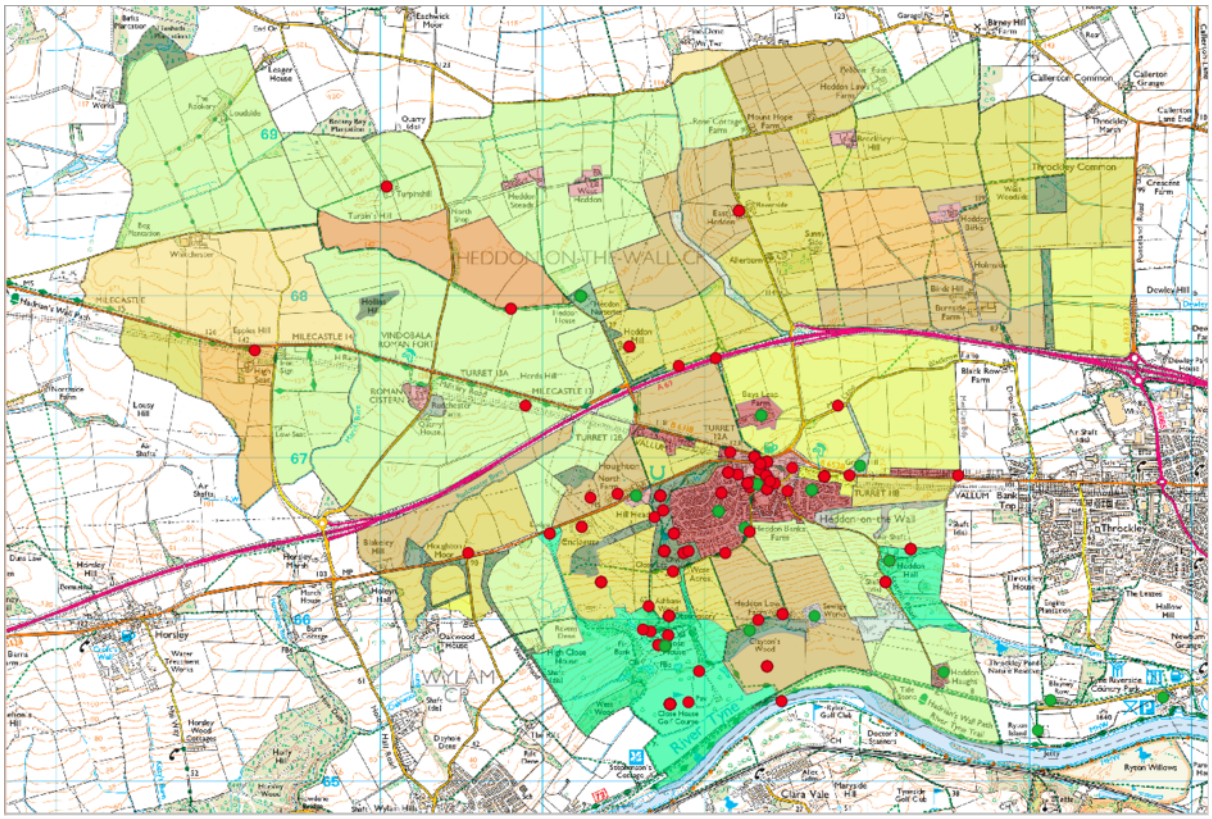


Figure 57: Discrete aspects referring to HLC polygons. (Green dots are referring to the same character type as the enclosing polygon).

Turning to the locations of the mentions of discrete aspects and their distribution across the HLC polygons (Figure 58). Again, as in the previous section, the count of these locations depends on the routes of the walks covering the area. But having the different routes chosen by the participants themselves (and thus not solely walks that walk pre-defined similar routes) this gives a clear indication of how the mentions could relate to the HLC polygons as also in thinking about a route a decision was made by the participants to specifically show certain discrete aspects. A limitation of analysing the locations of mentions against the HLC polygons

using a 'Count of Points in Polygon' function is the way HLC polygons are mapped (see Methodology chapter). In many cases HLC polygons are not joint, meaning they leave space in between the polygons when the boundary of these polygons runs along a road or line feature of a substantial width. Some of these roads or line features (e.g. bridle paths) are however used during the walks. This led to points of the walk segments to fall in between polygons rather than in one of the polygons on either side of the route. A solution for this was found in creating buffers (10m) around each of the points of all interview segments. Using functions in QGIS the point was then counted into the polygon that was best covered by the buffer. This is not a perfect and watertight solution, but it gives a better outcome than leaving these points out of the equation at all.

Seen from the count it could be observed that most mentions were done while near the Close House Estate, while also the village centre is an area where a lot of mentions of discrete places occurred. While the 0-value polygons reflected on polygons without discrete aspects previously, here this interpretation needs to be changed. Reason for 0-valued polygons is two-fold in this case. It is possible that for a polygon along the walks there was no mention of a discrete place, but it is also possible none of the empirical approaches touched on the polygon.

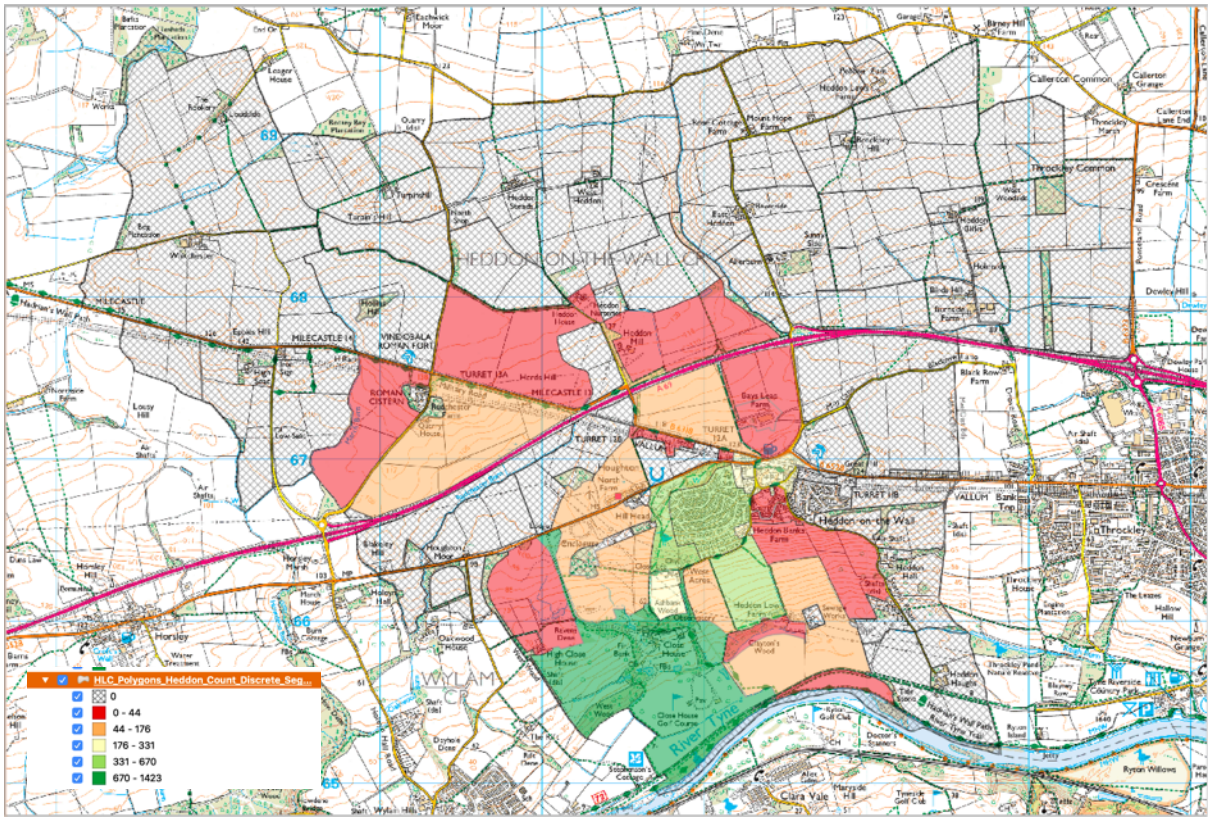


Figure 58: Maps visualising the count of locations of mentions of discrete aspects of landscape across the HLC polygons.

Same visualisation was made for the fuzzy components (Figure 59). Here there is a better spread of the locations of mentions across the polygons. Only remark that could be made with this visualisation is the lower count of mentions of fuzzy aspects near or in Close House Estates. A suggestion that was made here is that it is impossible to mention other aspects of landscape while focussing on specific locations or areas. As seen earlier, the golf course at Close House Estate is subject to a lot of discussion and preference conversations, so while walking through or discussing the estate in the questionnaire there is a sole focus on the estate and the golf course as discrete places themselves. Same goes for the field just south of the village centre, while there are fewer discrete aspects surrounding the route or subject to discussion in the questionnaire focus will go towards the fuzzy aspects of landscape. In this case the open fields led to conversation about views and neighbouring villages.

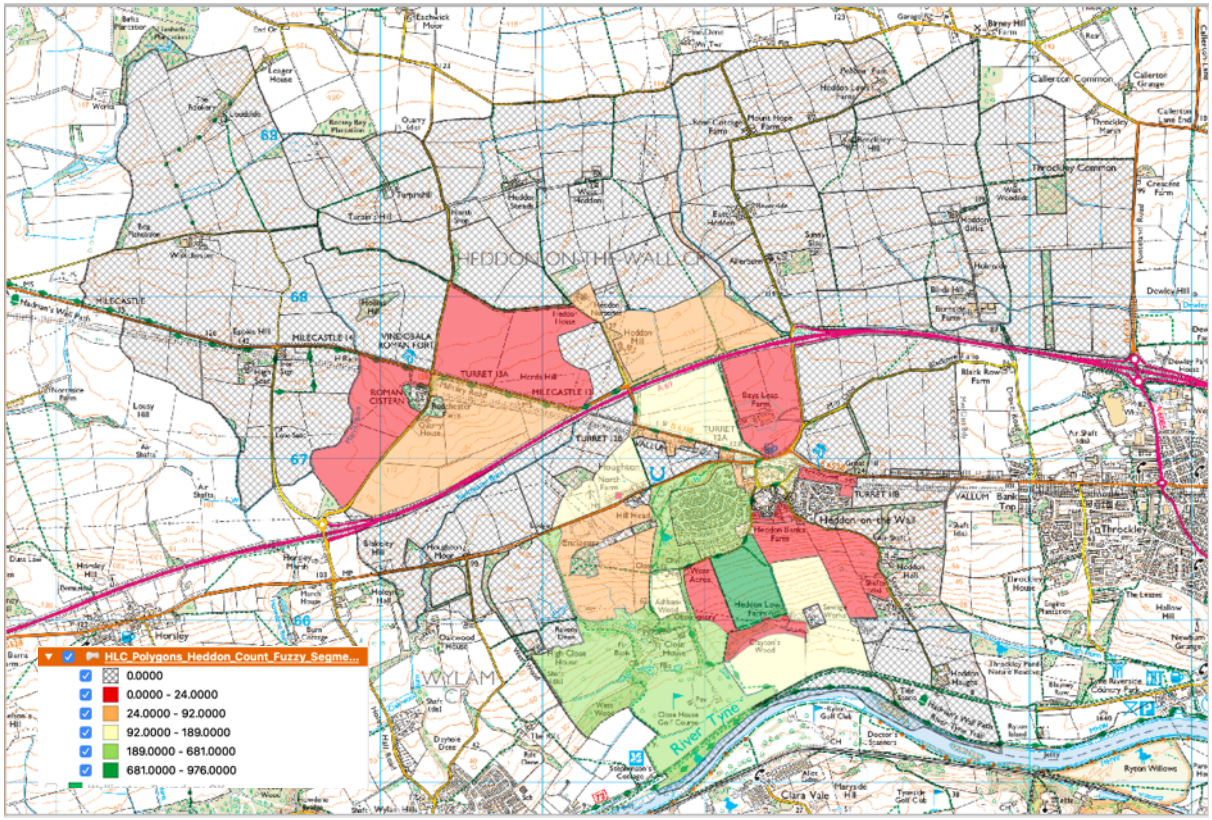


Figure 59: Locations of mentions of fuzzy aspects within the HLC Polygons (Natural breaks in QGIS)

Wallington

For the Wallington case study, the boundaries of the Wallington estate were used to clip the area out of the Northumberland HLC shapefile and used as a background to analyse the relationship between the mentioned aspects of landscape and the HLC outcomes.

Modern Types in the HLC showed that the landscape mainly exists out of field and field structures (Figure 60). Remarkable is that the areas around Wallington Hall are joined into one polygon characterised as a 'ornamental/designed' landscape. A further division or polygon might have been necessary here. Diversifying the different woodlands that are present from the river valley where also more industrial elements are present. This might change the interpretation of the results looking at the comparison between interpretation of landscape of the participations and the characterisation made by the expert developing the HLC.

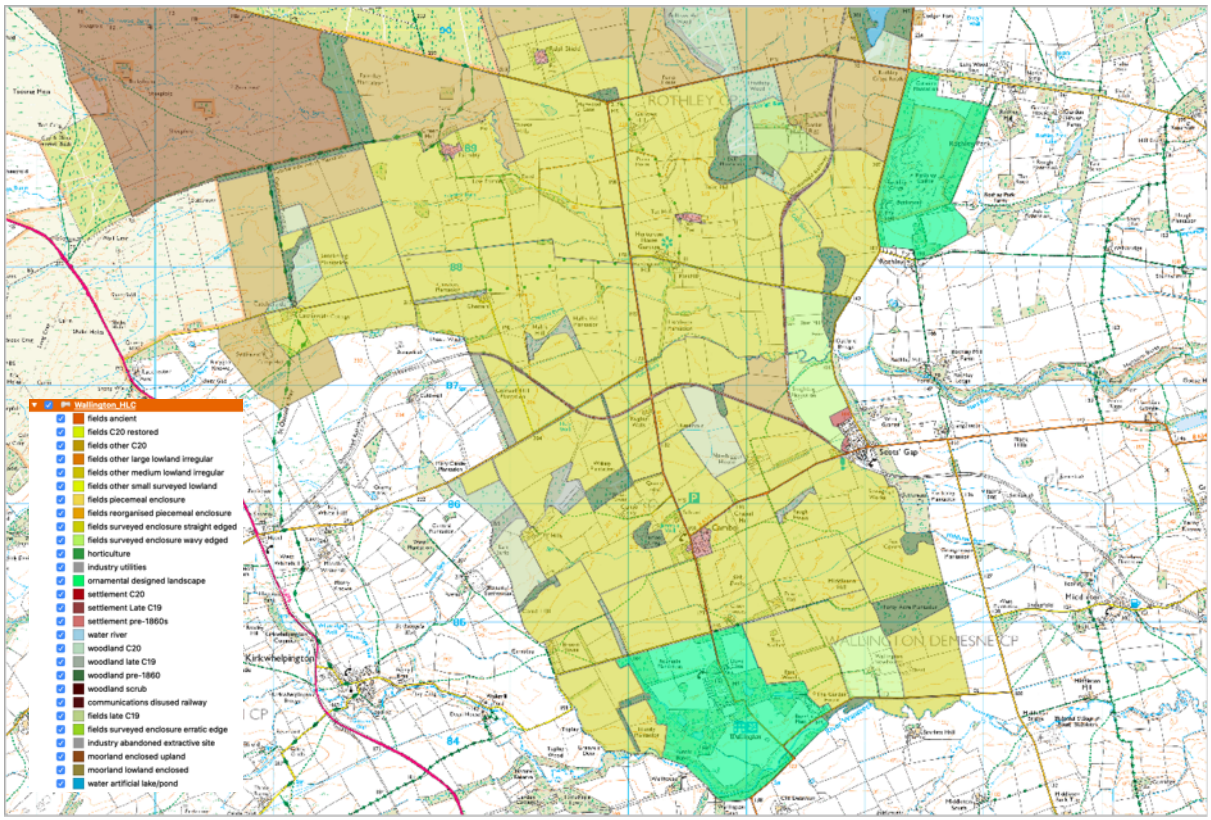


Figure 60: Modern Types for Wallington estate (Northumberland HLC)

Using the HLC polygons as an input for counting the locations of mentions of aspects of landscape and the locations of the discrete aspects mentioned in the interviews and questionnaires gave the outcome visualised in Figure 61. The area around Wallington Hall is mentioned most during the participatory exercise followed by the fields to the west of Cambo village. A more in-depth analysis would have been possible here is the area around the Hall

would have been further broken down into different character types as was mentioned before. It must be noted that the polygons that received a value (non-hatched polygons) are mostly referring to the areas that were crossed by most of the walks. Note that there are also mentions of the polygons towards the most northern edge of the estate. Walks have never reached those areas, so these must be discrete aspects mentioned in one of the interviews or places marked during the Maptionnaire.

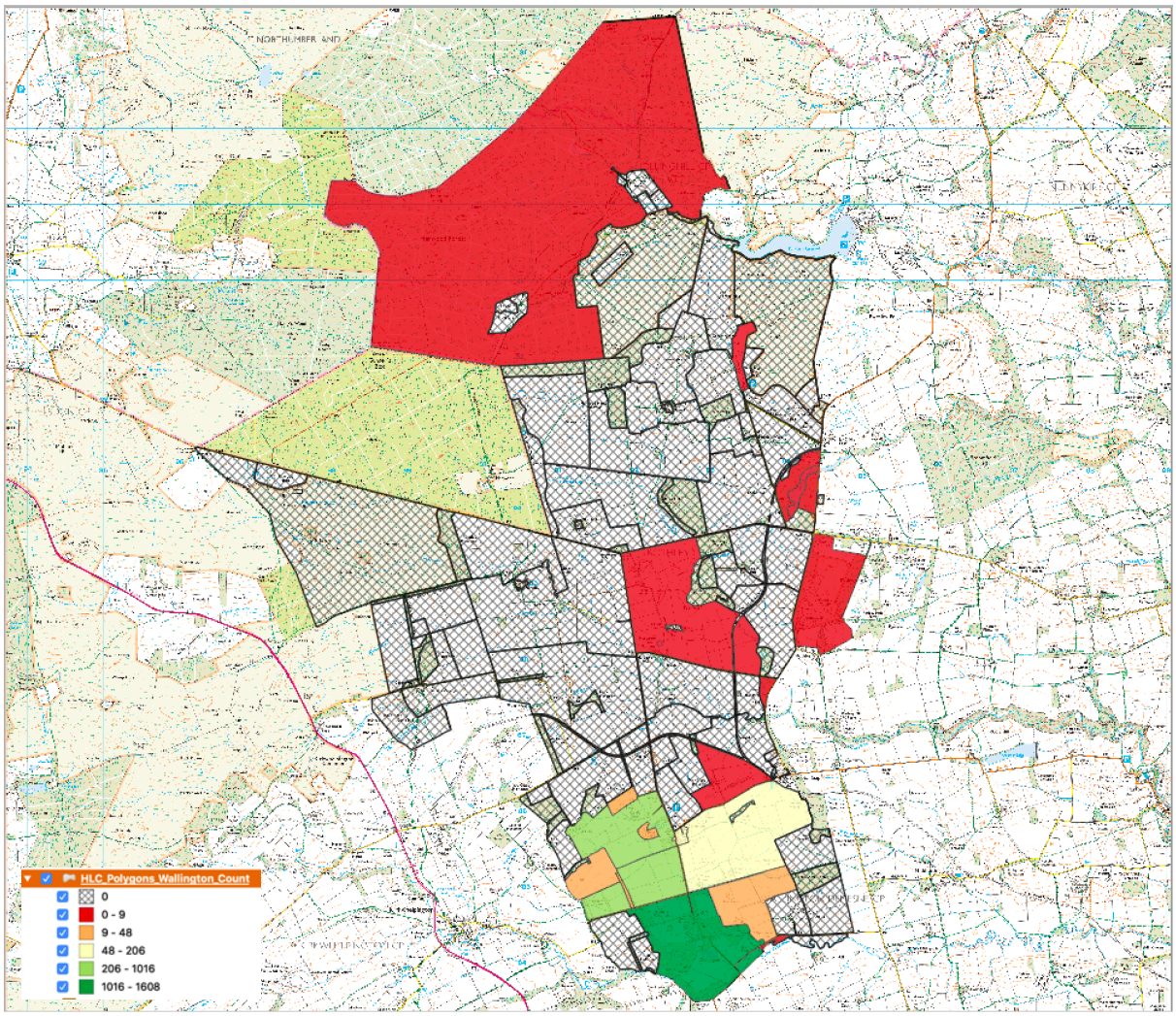


Figure 61: Distribution of locations of mentions and discrete aspects in Wallington counted within HLC Polygons (Natural Breaks function in QGIS was used to classify)

Looking at the discrete aspects that refer directly to the character type in which they are located it could be observed that most farms were given their own HLC polygon this is a difference to the Heddon-on-the-Wall case study (Figure 62). This is interesting as it could influence the interpretation of the outcomes when informing HLC.

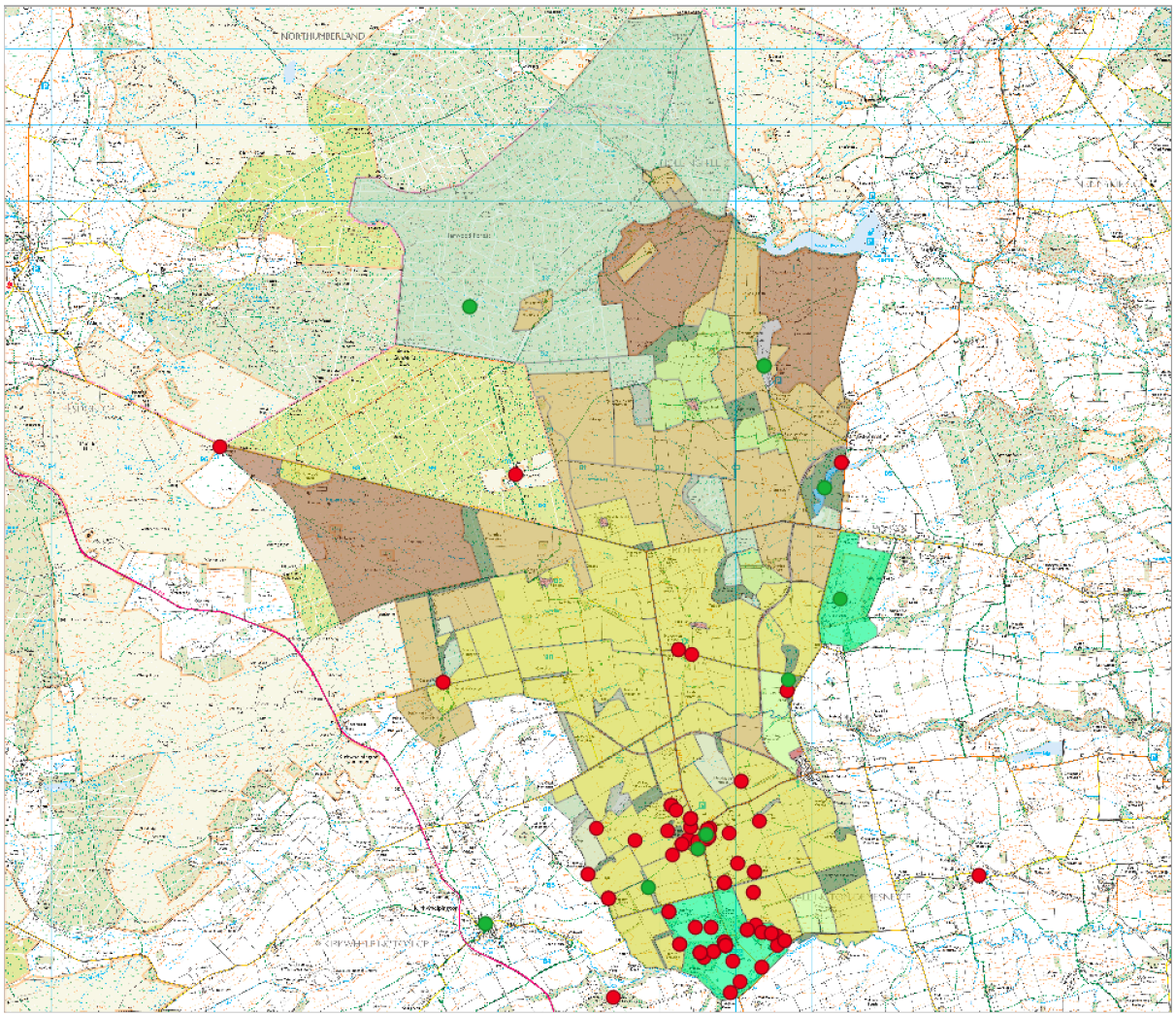


Figure 62: Discrete places referring to HLC polygons. (Green dots are referring to aspects with the same character type as the enclosing polygon).

Looking at the distribution of the mentions of discrete aspects in the HLC polygons gave the interesting result that the so called 'Hub' around Wallington Hall was the area for most of the mentions of that category of landscape aspects (Figure 63). This is remarkable, as not all of the walk crossed the Hub, more than half of them did not, but this is due to the mentions of the Hub coming out of the Maptionnaire data. This is also confirmed by the polygon to the east of the Hub in which almost no discrete aspects are mentioned, here all walks that crossed through the home grounds also crossed this area but different to the hub almost no discrete aspects were mentioned. There is thus a clear link between the type of landscape that surrounds people on the walk and how they talk about landscape at those locations.

Another difference that can be noticed here comparing the HLC extent to the one of Heddon-on-the-Wall is the line features that are polygons in this case. However, a decision was made

to use the same buffering technique around the locations of the mentions as was done in Heddon-on-the-Wall giving the possibility to interpret the outcomes in the same manner.

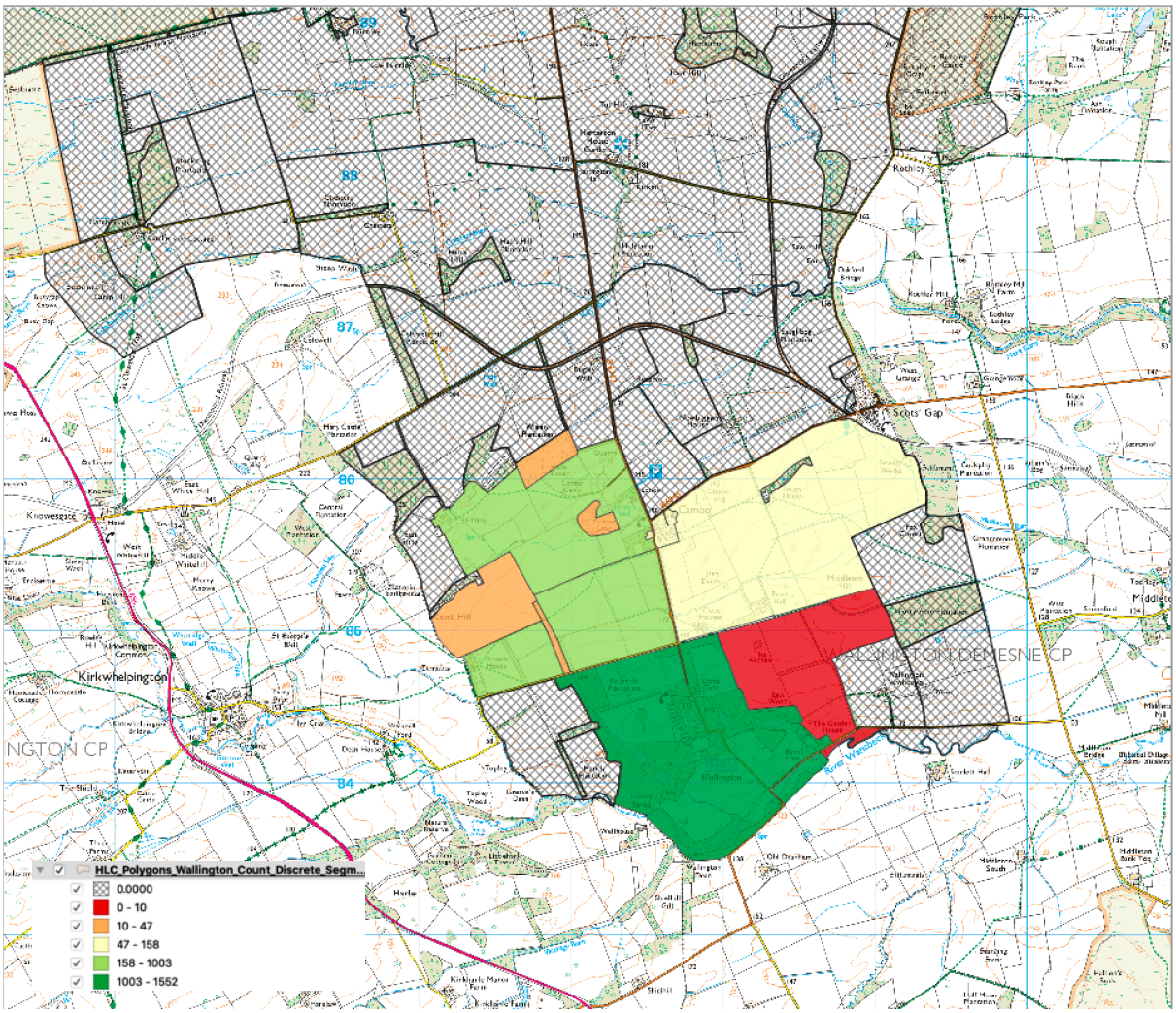


Figure 63: Locations of mentions of discrete aspects within the HLC Polygons in Wallington (Natural breaks in QGIS)

A last visualisation to look at the connection between the spatial transcript data and the existing HLC project was looking at the locations of mentions of fuzzy aspects (Figure 64). An interesting finding was how only a very low number of fuzzy aspects were mentioned within the Wallington case study. There are multiple areas of the south of the estate that were crossed by the walks but have a 0-value. Yet again, it must be added that most other parts with a 0-value had this value because of no walks passing through them and they were not mentioned in the Maptionnaire part of the study.

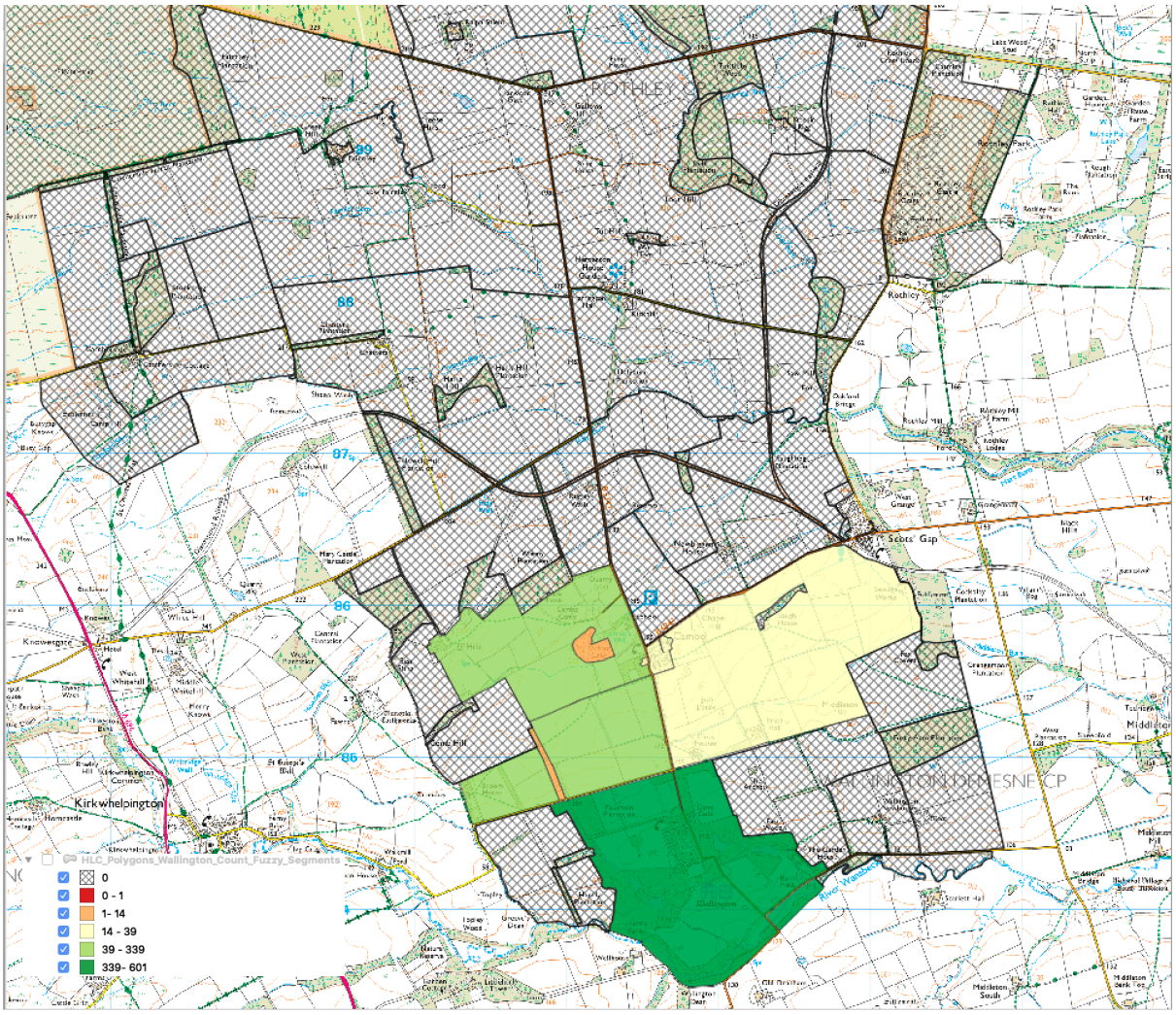


Figure 64: Locations of mentions of fuzzy aspects within the HLC Polygons in Wallington (Natural breaks in QGIS)

7.4.3 Informing the HLC of Northumberland: adding new attributes

This last section illustrates how the results of the above sections are used to inform and enrich the database of the conventional HLC of Northumberland and add to this HLC the participatory outcomes. This made it possible to visualise the interpretations of landscape made by the participants in the same way as an HLC database could be queried for any other of its attributes (see Chapter 4 – section 4.4.4). The generalising approach of the HLC technique was used to go beyond the individual interpretation of landscape of each of the participants. This was done by informing the HLC database on the contexts in which each of the landscape aspects were referred to rather than putting the focus on what aspect was mentioned. Therefore, the themes of the thematic analysis and thus the dimensions and subdimensions of how participants perceived landscape were used as new attributes in the HLC database. Results show what extent locations within the different character polygons where the background for each of the

dimensions. The results of this last step towards a participatory HLC are now discussed briefly as the most interesting findings have been touched upon in the previous sections. This will be done using the individual dimensions of public perception, it is important to understand that also each of the individual subdimensions could be visualised in the same way.

First, the personal dimension of landscape perception for Heddon-on-the-Wall visualised through using the polygons of the Northumberland HLC project (Figure 65). As could be expected from the number of references to aspects of landscape throughout the golf course (the most southern polygon) this is also the character polygon in which the aspects of landscape were most often referred to in a personal context. An interesting finding is that the personal dimension is used more often within the golf course than within the centre of the village itself for example. The findings also shows that some individual polygons, further away from the village were mentioned in personal context. While this might be because individual participants have mentioned particular memories about those places, this could also be because people expressed strong personal opinions about some areas due to the noise coming from the Motorway A69. Secondly, this phenomenon is less visible within the map that visualises the distribution of the collective dimension of landscape perception as an attribute across the HLC polygons (Figure 66). Here almost none of the polygons along the A69 are highlighted, only a higher number of participants must have mentioned the Halls of Heddon (polygon in the middle of the map with a road leading the motorway) in a collective way, this was mentioned before in the previous section too. Interesting here is that mentions in the collective context are more centred around the village and the golf course and are not bringing up more individual polygons further away from this core. Finally, there appears to be some variation within the polygons that are mentioned within time or space context (Figure 67 and Figure 68). While the core of the village and the golf course are again highlighted more than others, aspects of landscape in a context that refers to the physical landscape is more appearing more in both north eastern and south western corners of the case study areas. This is linked with the views participants got from those locations, these results indicate that these views are triggers for the interpretation of multiple participants during this study. Another interesting find is that the L-shaped polygon towards the east of the golf course received higher numbers of mentions in a time/space context that related to personal or collective dimensions. As discussed before this mainly could be explained by the clear view across the river Tyne from this polygon and participants referring to the tide and different experiences to landscape because of the tidal action.

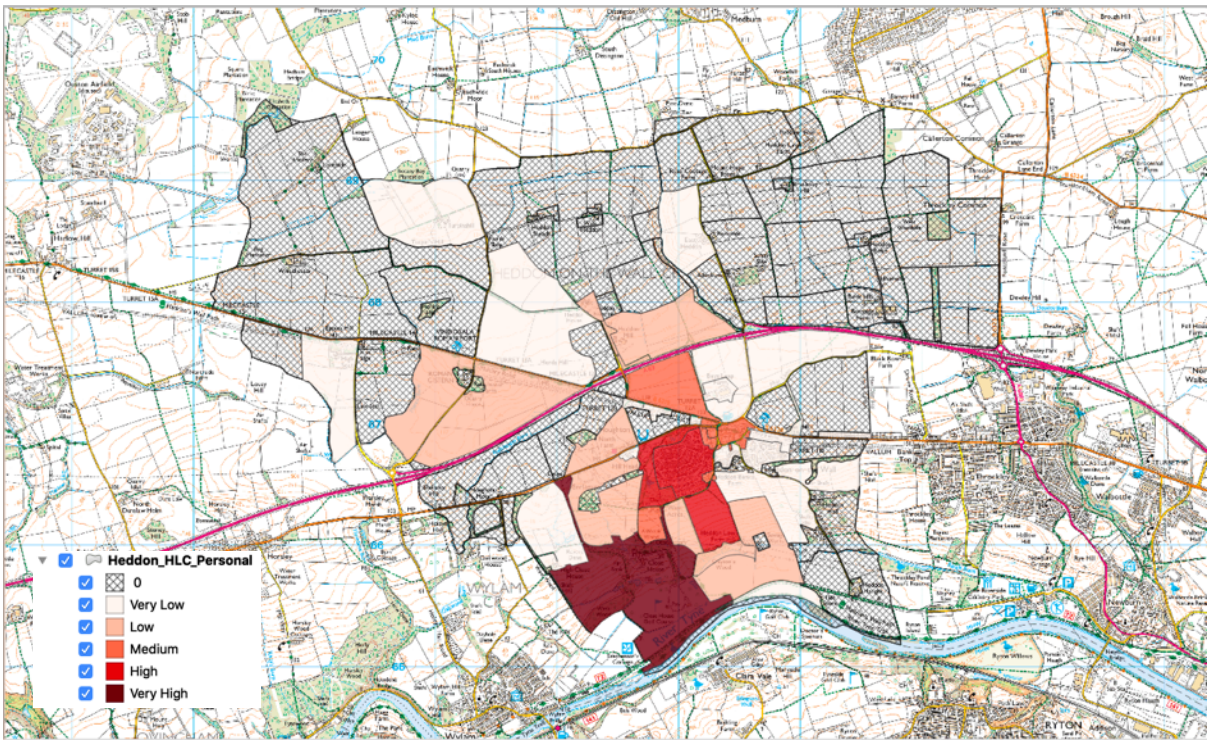


Figure 65: Northumberland HLC for Heddon-on-the-Wall aspects of landscape mentioned in a personal dimension.

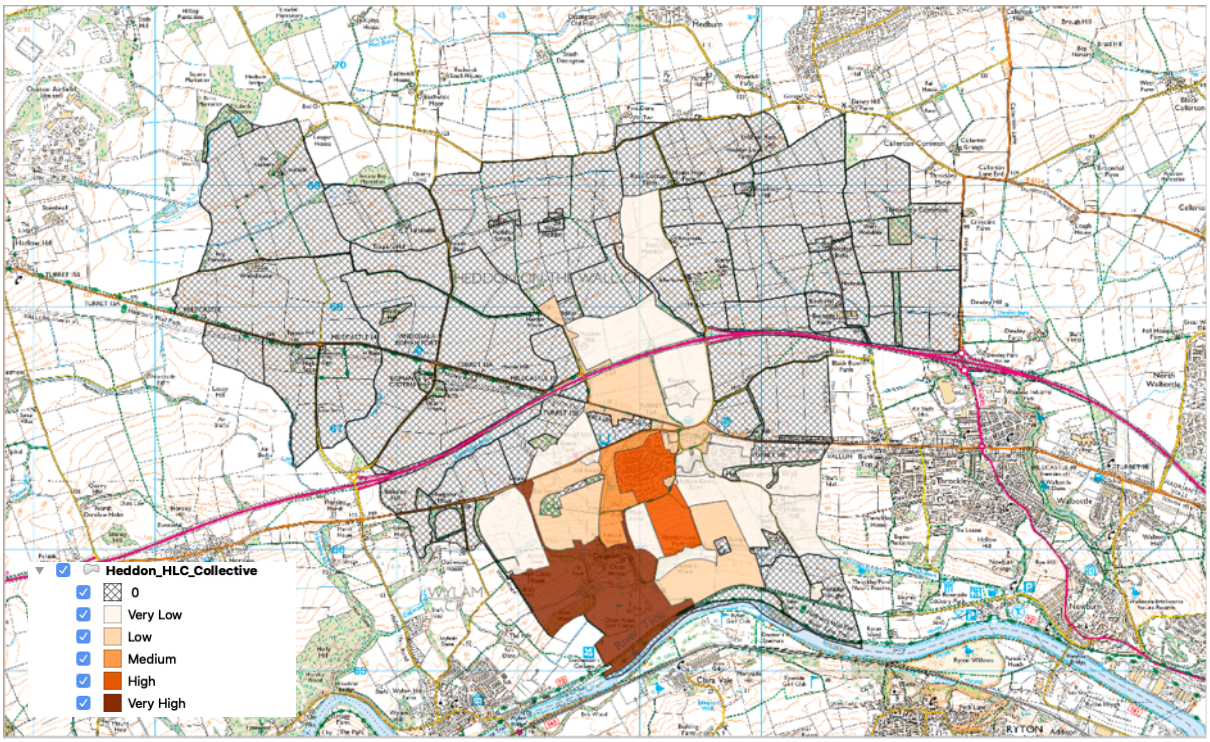


Figure 66: Northumberland HLC for Heddon-on-the-Wall aspects of landscape mentioned in a collective dimension.

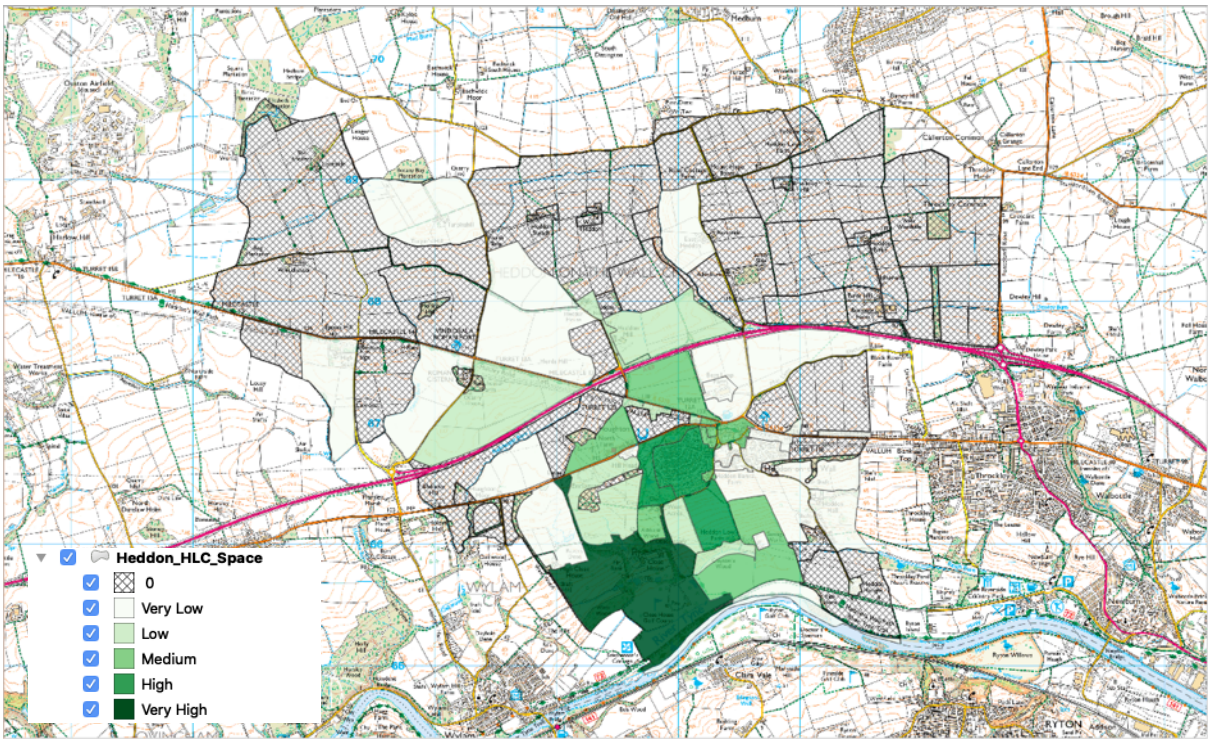


Figure 67: Northumberland HLC for Heddon-on-the-Wall aspects of landscape mentioned in a space dimension.

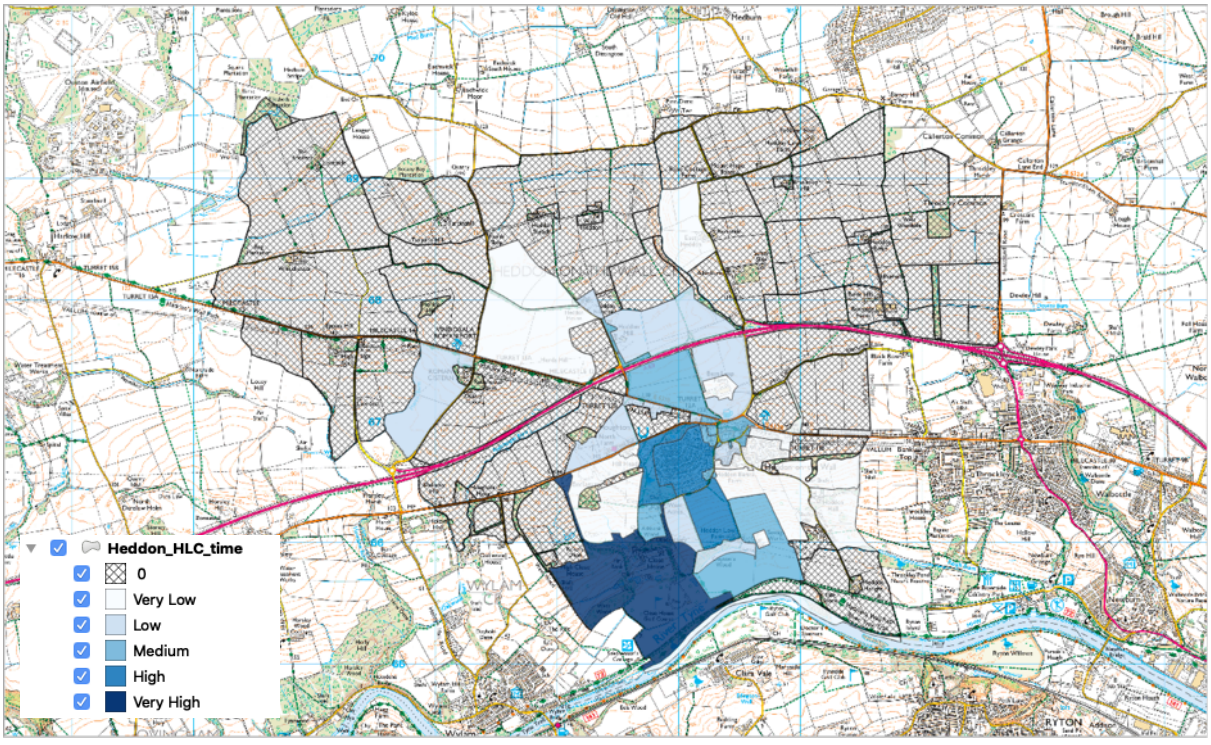


Figure 68: Northumberland HLC for Heddon-on-the-Wall aspects of landscape mentioned in a time dimension.

The same reflection could be made at the Wallington Case study. Polygons with the highest number of mentions within a personal context are situated around the main hub of the estate

around the Hall, this is of course also the area that was crossed by most of the walks (Figure 69). Furthermore, the maps shows that the polygons used to define the character of the Rothley Lakes area (to the west of the estate in the middle of the map) are also given a higher value when it comes to the personal theme attribute. This is interesting as none of the walks passed by Rothley Lakes, yet the other ways of interpreting what participants perceive in landscape (discrete aspect and or the Maptionnaire) did pick up on these polygons. As with Heddon-on-the-Wall more individual polygons, the ones surrounding Cambo village for example, were mentioned in a personal context and do not show up in a more collective way (Figure 70). In a collective context, polygons around the hub and Cambo village itself got the most mentions. A difference between Heddon-on-the-Wall and Wallington is that participants specifically mentioned what they could see within the views, rather than generically referring to the view. This is visualised in Figure 71 as well, as the woods and areas towards the north of the estate were mentioned sometimes when participants were able to look across. Less references to time were found at Wallington than in Heddon-on-the-Wall in general, but these do not show any particular situations. As could be expected most mentions in a time context are given about the Hub and the woodlands that surround the Hall and Courtyard (Figure 72).

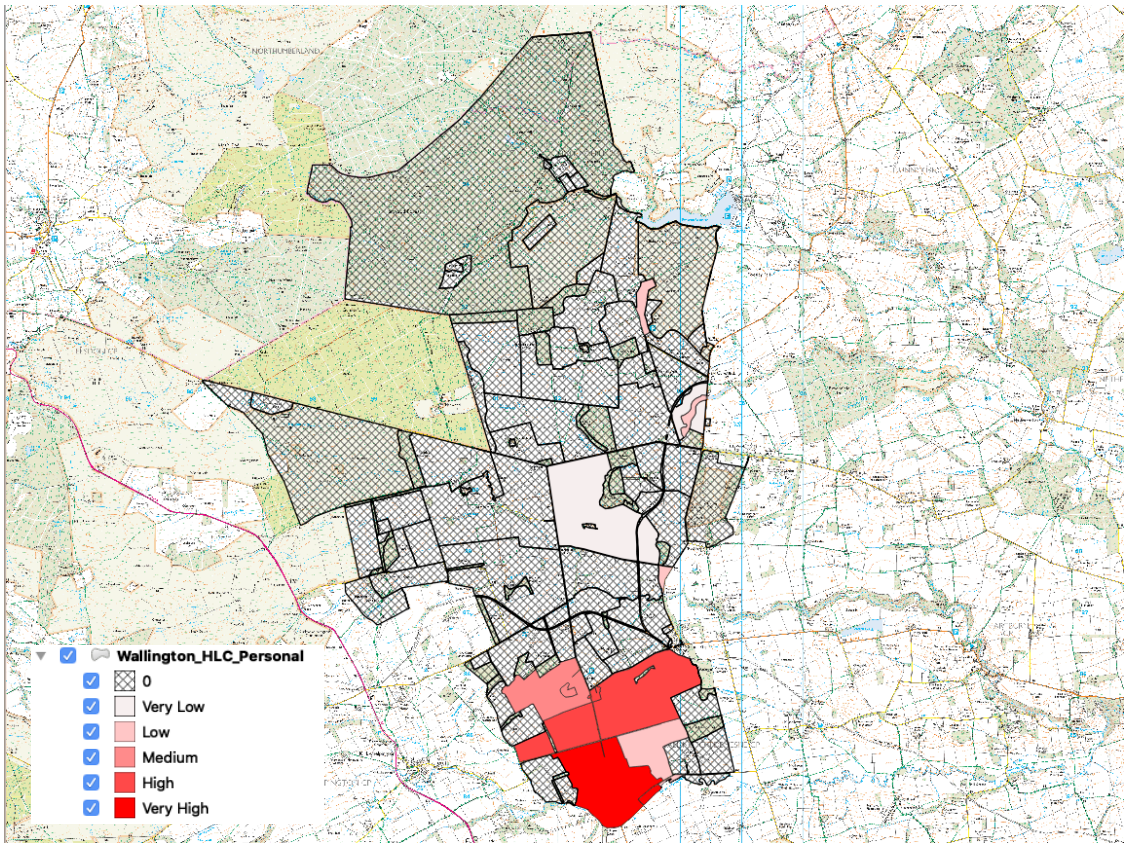


Figure 69: Northumberland HLC for Wallington aspects of landscape mentioned in a personal dimension.

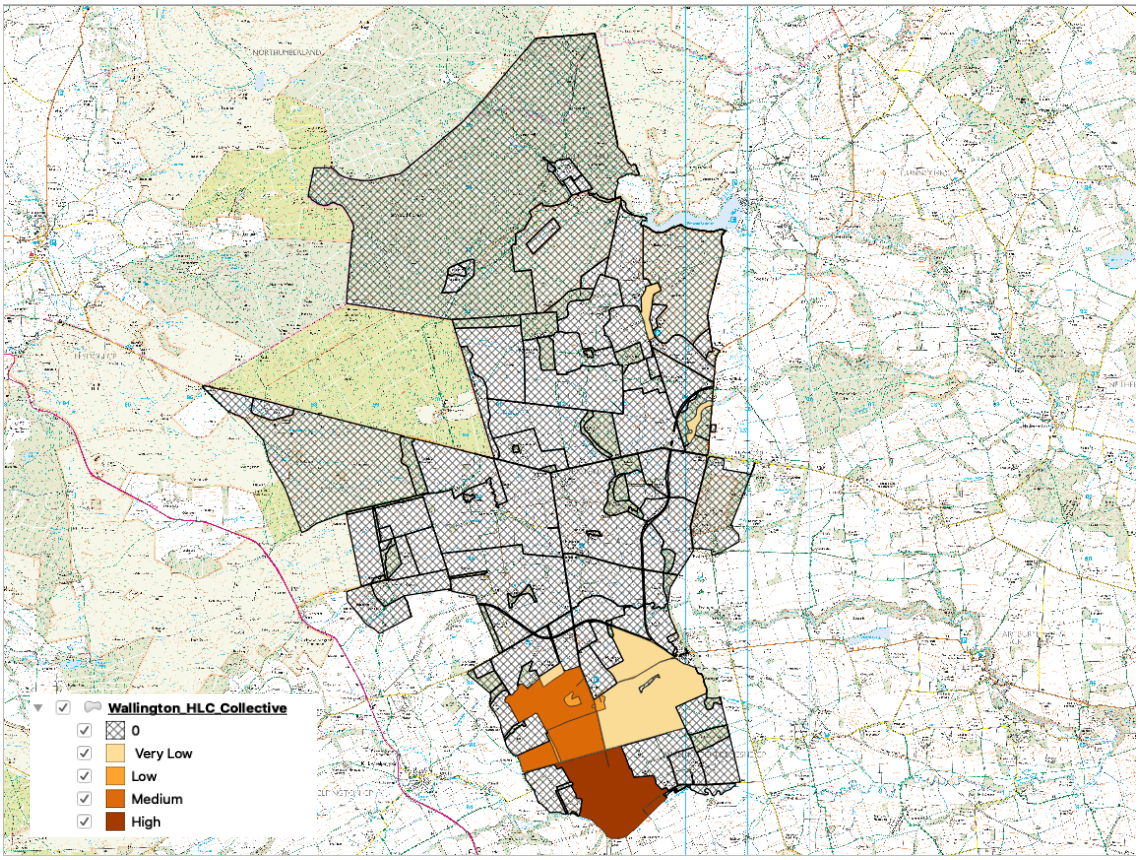


Figure 70:Northumberland HLC for Wallington aspects of landscape mentioned in a collective dimension.

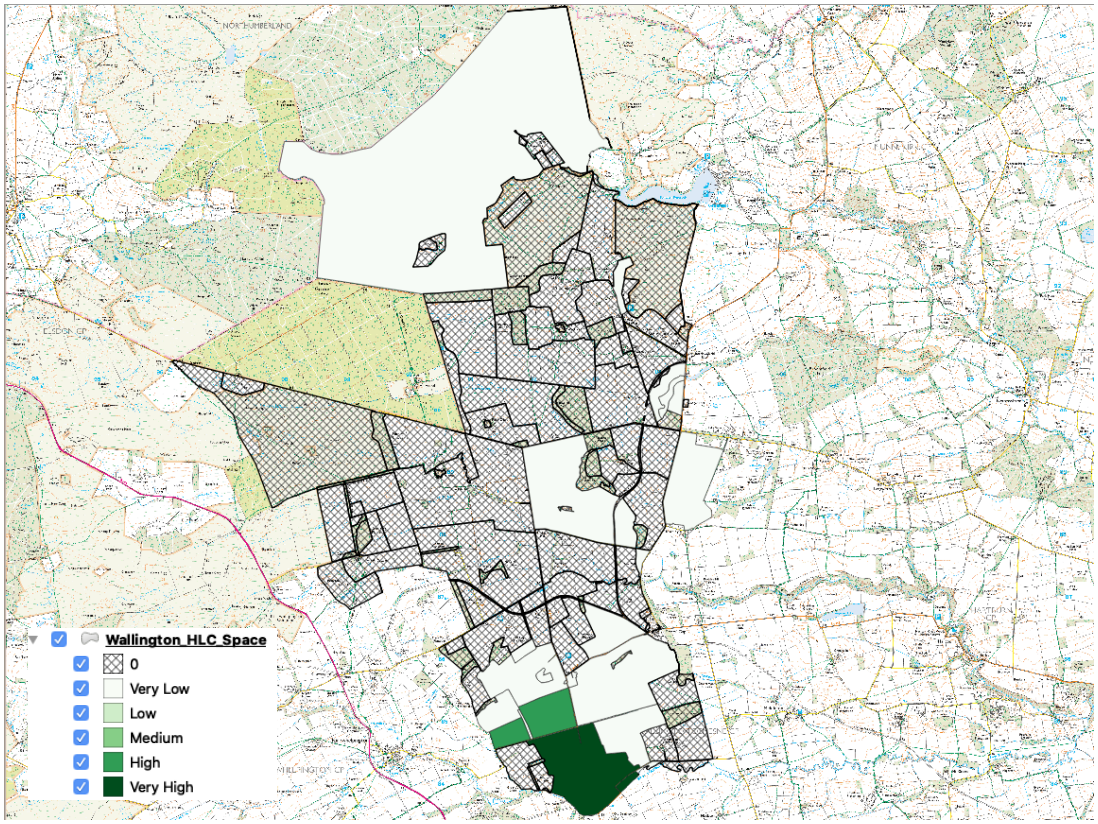


Figure 71: Northumberland HLC for Wallington aspects of landscape mentioned in a space dimension.

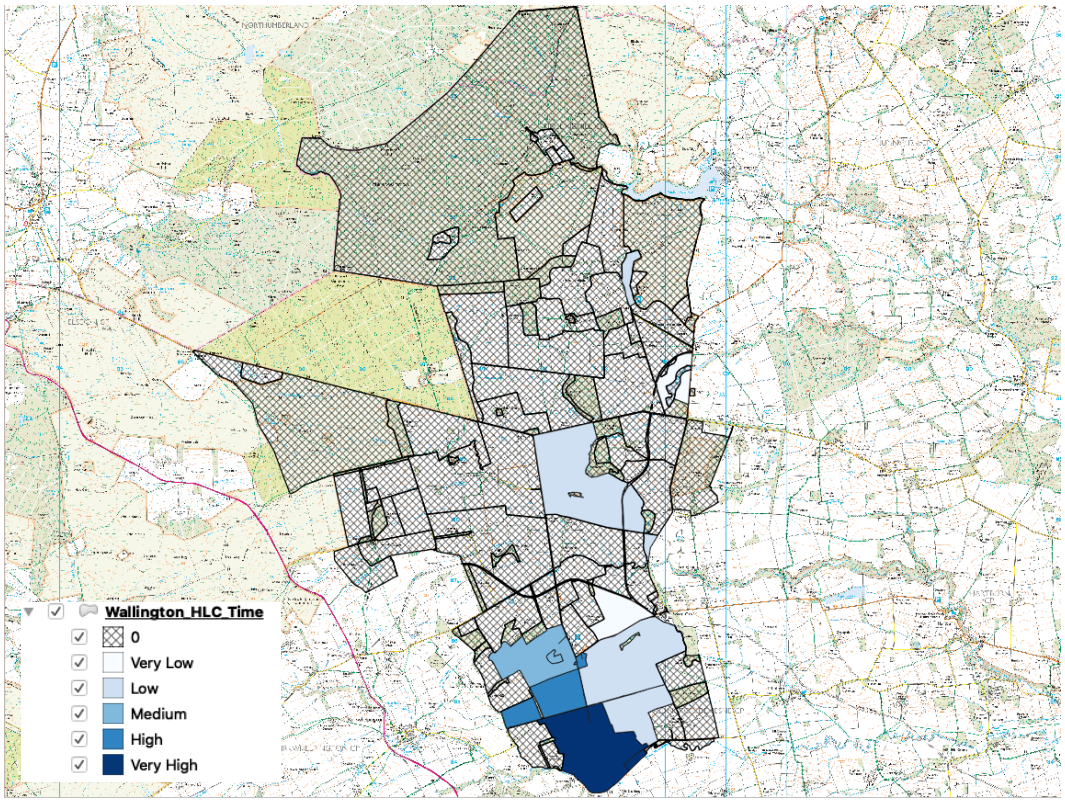


Figure 72: Northumberland HLC for Wallington aspects of landscape mentioned in a time dimension.

7.4.4 Character Types of the aspects of landscape and HLC Types

The final step of this spatial analysis chapter will give an indication about how the conventional HLC types are part of the mentions and references by the participants in the participatory approaches. Figure 73 and Figure 74 give an overview of the relationship between the conventional HLC polygon's character type and the number of times an aspect of landscape was mentioned that was categorised and classed as the same type of this polygon. This first of all gave an indication about where mentions of aspects of landscape were of the same type as the character types of the HLC, but also the opposite could be illustrated this way. This gave an answer to the question: where have participants talked or referred to completely different types of landscape not mentioning the character type they were walking through or looking at on the map at all? In order to do so, the polygons of the HLC were given a 30m buffer zone around each one of them, this to be able to capture the mentions that were done at the borders of each of them yet not included by them. However, since participants could have been talking about all of the polygons that were on either side of the road or path this gives a better indication of the similarities in character types rather than only counting the included points.

For Heddon-on-the-Wall it is clear that most participants recognised the village centre as a coherent landscape that connects with the Settlement character type of the HLC database. By far the highest number of similar types could be found in the mentions of participants here than for any other character type polygon in the case study area. This is an interesting observation as the village centre was not the aspect of landscape that was mentioned most in general, that was the golf course, however, the references made within the village are turning out to be referring more to the village in itself. Whereas the mentions on the golf course are still referring to the golf course a lot but could be understood to be less similar in types too. An example could be found in participants referring to the surrounding fields that could be seen while walking through the golf course. Other interesting observations are made towards the south of the case study area, the fields that are characterised as such within the HLC of Northumberland are hardly ever the subject of mentions within the interview or the questionnaire. The same goes for the red zone just north of the A69. This is because most of the participants here mentioned the look toward the Tyne and the sound of the A69 in these places and were almost never referring to the type of landscape that was closely surrounding them at that point.

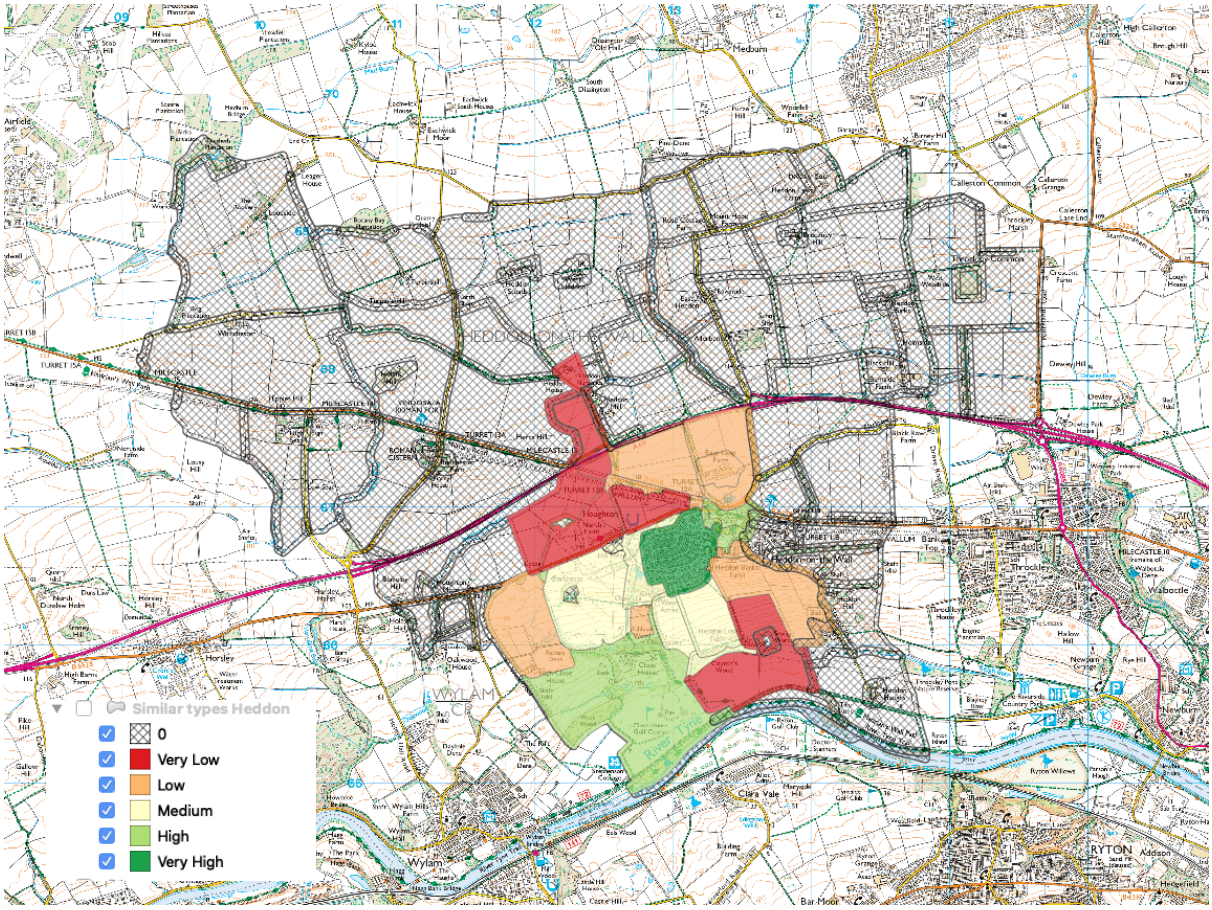


Figure 73: Comparison between the character types as mentioned by participants and the character types in original HLC – Heddon-on-the-Wall

The same calculation and visualisation were made for Wallington, however due to the scale and the size of the original HLC polygons, the maps give fewer possibilities for interpretations. One observation that could be made is that the Hub is mentioned most in similar ways between participants and the expert that developed the HLC. This means the Hub (or aspects of the Hub) was mentioned most while walking through it. Surprisingly however is that the Eastwoods, the wooded area to the south east of the case study area does not received a high number of similar types between the mentions and the conventional HLC types.

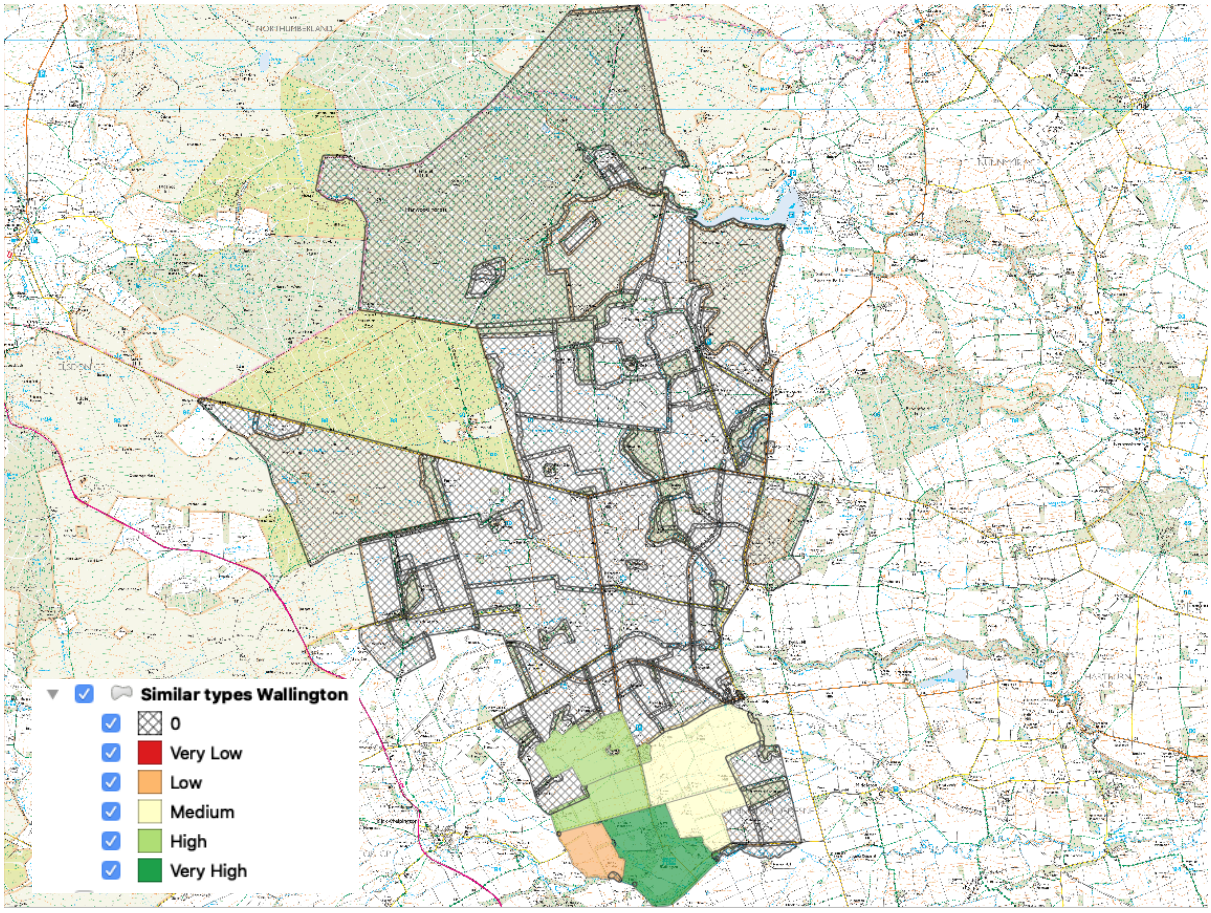


Figure 74: Comparison between the character types as mentioned by participants and the character types in original HLC – Wallington

7.4.5 Summary

This section used the visualisation of the participatory outcomes to inform and enrich the existing HLC of Northumberland. First, the overview of the HLC polygons gave a better understanding of how the mentions of landscape aspects were distributed across the HLC polygons. This was done for both discrete and fuzzy aspects of landscape. For Heddon-on-the-Wall it became clear that the woodland area along the edges of the village and the golf course were both mentioned most and the locations where most mentioned took place. The same could be said for Wallington, the core of the case study area (Hall and Courtyard of the Estate) are

mentioned most or are the area in which most of the mentions took place. Secondly the dimensions of landscape perception, derived from the thematic analysis on the participatory and qualitative outcomes of the empirical study, were added as attributes to the HLC database. In doing so the contexts in which participants were talking during the interviews or have filled out the questionnaires could be visualised within each of the polygons of the HLC. This gave a better definition to the character of the landscape in each of the polygons as these now represent also how participants talked about the surrounding landscape within them. Finally, a comparative analysis was made between the character types that were link to each of the mentioned landscape aspect and the conventional HLC character types. While difficult to formulate any conclusion, it seems that some of these polygons could be reshaped to follow and include more about how participants perceived landscape at those places. As some of the character types were not subject of any of the mentions while walking through them or drawing them on the map.

7.5 Conclusion

This chapter looked at the how the outcomes of the thematic analysis could be operationalised to inform Historic Landscape Characterisation projects. First the transcriptions of the walking and talking interviews and the results of the map-based questionnaire were combined into one spatial dataset. In doing so a spatial transcription of the interviews was made connection the references participants made to aspects of landscape to the locations where these references were made on the walks. It turned out two different categories of landscape aspects were mentioned: discrete and fuzzy. The discrete aspects could be mapped without the need to interpret the quotes of the participants or changing any of the polygons drawn during the questionnaire. Each of these discrete aspects could also easily be connected to the location where it was mentioned. This was different for the fuzzy aspects, these landscape aspects are not mappable in a straightforward way without the need to interpret the words of the participants. Therefore, only the location at which they were mentioned was mapped and not the location of the aspects itself as this would overcomplicate the dataset unnecessarily. Both location of mentions and the aspects themselves were used as the base for the rest of the analysis. Findings within this section showed the importance of the combination of the senses in landscape perception. Not only the visual, but also smells and sounds formed important factors in how participants experienced and reacted to the landscape. Findings evidence how both visual and non-visual ‘landmarks’ can exists in the landscape.

Secondly, the spatial dataset that includes all locations of mentions of landscape aspects was completed with adding to each of the aspects in though which of the dimensions of landscape perception they were mentioned. This step was taken in order to inform HLC with the distribution of the dimensions of landscape perception and not with the individual replies given by participants. In this way the interpretation of landscapes by participants was generalised across the number of participants and individual replies were averaged out. The results show that HLC polygons could now include the outcomes of the participatory approaches without single out any replies. The generalisation of how landscapes are interpreted by the participants could be done by visualising the numbers of mentions for within each of the landscape perception dimensions and subdimension across each of the HLC polygons. This way an indication could be given about the importance of the polygons on an individual or collective level and whether this is because of more physical or time related features of the landscape. Importance in this case however is that findings only show an indication for each of the polygons and should be looked at more in depth when discussion proposed changes to landscape in the future.

Finally, the types given to the mentioned landscape aspects was compared to the conventional HLC types. In doing so it became better known which of the types was talked about by the participants when walking through them or by including them into a polygon during the Maptionnaire. While it is difficult to formulate a conclusion about this final step, the findings suggest that the core of each of the case study areas (village – settlement in Heddon-on-the-Wall and the Hub – Hall/Courtyard area for Wallington) is mentioned most related to the type given within the HLC of Northumberland. The types in the HLC that are referring to fieldscapes are almost not mentioned in reference to those character types by participants. This is mainly due to their location, in Heddon-on-the-Wall, the fields that were crossed during the walks were both the location where participants got views across the river Tyne or across to the north. These views were mentioned more within those fields than the type of the fields, the field boundaries or the field structure combined. However, this was related to the structure of the case study in Heddon-on-the-wall rather than a general conclusion.

Chapter 8:
DISCUSSION

8 Discussion

8.1 Introduction

While the previous two chapters communicated and interpreted the results of the thematic (Chapter 6) and spatial analysis (Chapter 7) this chapter will move on to discuss these analyses and interpretations and contextualise them. In order to make this discussion chapter comprehensible and in line with the rest of the thesis, the interpretations will be discussed in the same structure as the literature review, methodology and analysis parts of this thesis. This structure was set up based on the two main research aims. First, this chapter questions the complexity and inseparability of the four key dimensions of perception by discussing overlapping subjects found throughout the findings (Chapter 6) in relation to the ideas on landscape perception and landscape as part of people's identity drawn from the theoretical framework (Chapter 3). Then this chapter will discuss whether the participatory approaches and understanding of landscape perception reached the research objective to provide a way to integrate people's views about landscape in Historic Landscape Characterisation projects (Chapter 7). Finally, this chapter will reflect on the findings of the research by revisiting the original principles of HLC and considering how the empirical work has added information to the characterisation approach.

8.2 Landscape perception: making sense of landscape

8.2.1 Introduction

The findings in Chapter 6 of this thesis revealed that landscape perception can be understood as the interplay between four dimensions: personal experience of landscape (section 6.3), a collective experience of landscape (section 6.4), the experience of landscape through time (section 6.5) and the physical characteristics of the land (section 6.5). During the thematic analysis these dimensions were divided into further, more detailed, subdimensions. These (sub)dimensions are interpreted as the factors influencing the way landscape was looked at by participants. Landscape perception is thus not a solely physiological concept. It is more than 'looking' at landscape. From the results it becomes clear that perceiving landscape is learnt, it is a selective and dynamic process, it is about memories and interaction with others as much as it is about the interaction with the land itself. But, and perhaps most importantly, it is and stays very personal at every scale or phase. Everybody perceives his or her surroundings in a different way, even though in reality the same aspects or combination of aspects are present and sensible. Besides this finding that perceiving landscape is a personal matter, another important finding

of the study showed that most of the influencing factors of landscape perception are shared between people. This implies that landscape perception is only personal to a certain extent and it becomes a more communal or collective matter on for example wider scales and larger areas. This first part of the discussion chapter addresses this dilemma between the individuality and communality of landscape perception. First, personal and collective landscape ideas will be considered. Looking at how childhood memories play a more important role than other phases in the lives of participants during the empirical study. Also sense of belonging, being part of a collective, is taken up as a key factor to how people experience landscape. Together with this, the section considers how important the role of leisure activities (individually or in group) is in changing landscape perception. Secondly, landscape will be discussed as space as findings showed that one dimension of landscape perception is the structure of landscape itself. The physical features that give structure to landscapes are the elements that participants referred to in a spontaneous way, which gave an indication about the differences between how natural or cultural features in landscapes are perceived. Finally, landscape perception will be discussed as a dynamic concept because in many of the findings, time played a key role. Two key aspects related to time are identified from the analysis section, first the relationship between the past, the present and the future and second the recurring 'cycles' in landscape. Tidal, seasonal and daily changes in landscapes are also causing landscape experiences to vary accordingly and thus also the way landscapes are perceived is different at each stage of those cycles.

8.2.2 Personal and collective ideas of landscape: shaping place

As seen in the literature review, the European Landscape Convention (ELC) places perception at the centre of the definition for landscape (CoE, 2000). In order to be able to understand landscapes a detailed analysis of what exactly influences landscape perception was necessary. Landscape perception is seen from a holistic point of view in this study, landscape perception is not only the act of 'looking' at the land and interpreting it, not just a sense-related perception as described in natural sciences. Perception of landscape is more complex and multifaceted (Clementsen et al., 2011). The results of the study confirmed the way participants talked about landscape was multifaceted both at a personal and collective level. One interesting finding about the influence of personal memories on landscape perception is that childhood and youth memories were mentioned many more times than memories coming from other phases of participant's lives. This finding was consistent with that of Ward Thompson et al. (2004) who labelled this the childhood factor in predicting people's landscape preferences during adulthood. Related to this is the finding that there is a difference in references to childhood

memories between people who have lived in the case study areas all their lives and other who have moved to the area at a later stage. The first group mentions changes in landscape 'this was not here when I was young' or 'as a child, the valley was covered with mines and industrial activities'. The second category however, referred to more emotional memories of their past 'the valley reminds me of where I grew up' or 'this woodland is just like the one I played in when I was a child'. In the latter group, these references were there to describe an emotional bond between the person and the area he was living in at the present. A possible explanation for differences between these groups is that these people are looking for a sense of belonging to their new place, whether they have lived here for a long period or only for a short one. They are shaping this by re-calling memories of their childhood and meanings they added to those landscapes in the past. This is in line with Rishbeth & Powell (2013) who found a similar recall of memories with first generation immigrants. These results further support the idea that the length of residency as an influencing factor on perception and attachment on a local scale as stated by Altman & Low (1992) must be understood as the different paths of a person's life that are coming together at the new location more than only just the time of residency itself. This study therefore suggests that childhood could be one of the most important stages along those paths and the landscape people grow up in has an important influence on how they perceive and reflect on the landscapes they live in later on in their lives.

As mentioned in the previous section, the length of residency in one of the case study areas, together with the personal background of the participants, play an important role in how they perceive and use their surroundings. However, more than the length of residency, one of the interesting findings of this study is the importance of the familiarity of participants with the area. As the analysis section of this study shows, this familiarity with the landscape can influence the way people look at landscape in both negative and positive manners. The link between familiarity and the way landscape is perceived seems to be understudied in the literature. Some literature is referring to familiarity as a factor that individuals or groups need to turn a space into a place, and thus into a landscape they can connect with, that feels as if they belong to it (Tuan, 1977). Familiarity with a landscape is also seen as an influencing aspect when it comes to landscape and visual preferences (Svobodova et al., 2010) but the effect of familiarity on the perception of landscape remains doubtful. While results of this study suggest that familiarity with an area matters in how the landscape was perceived they could not be linked with Dearden (1984) who came to the conclusion that people make comparisons based on information of the area with which they are most familiar. The results indeed show evidence that comparisons are made between landscapes participants knew and are familiar with,

however the findings do not give evidence this only happened with the landscape they are most familiar with. Within the results of the studies were more based on memories and similarities in landscape structure than on familiarity as such. The study produces results which corroborate the findings of Nieman (1980) however, who understood that familiarity with landscapes could make some features in landscape 'invisible' and states that some parts of landscape can be interpret differently because of having to go through that process too often for the same features. This was found in this study too, the participants often explicitly expressed that 'they knew the area too well to be able to see changes'.

While the results show that personal memories, background and opinions are subdimensions of landscape perception, it became clear that these subdimensions are nearly always found as a translation of the individual as part of a wider group or collective. As seen in the literature review, landscape is the result of the forum where individuals meet other people and are able to discuss different topics that are directly or indirectly related to the land that surrounds them. Based on the empirical research the current study indicates that the way landscape is perceived is something individual. It thereby reflects other studies (Fairclough and Swanwick, 2018), but also adds to the understanding that besides the personal factors, memories and opinions also collective and cultural factors play a part in how landscape is perceived. As could be anticipated the Findings chapter (Chapter 6) gives an insight into how the individual views of the participants on the surrounding landscape were nearly always shaped by the collective(s) in which they worked, lived or spent time with. This finding is consistent with the way Stobbelaar and Pedroli (2011) explained the cultural-existential side of how landscape is part of people's identity. This study confirms the statement of Pedroli and Stobbelaar (2011) who found that the understanding of landscapes and therefore the way landscapes are perceived is shared amongst members of the same collectives or groups. The current study adds to this understanding that this process takes place at different scales; a first scale was found on the local level of the village (Heddon-on-the-Wall in this case) itself where many times the participants referred to the village as 'our village' and pointed at the differences of that village with 'the other' neighbouring villages. On a second scale the sense of belonging to a group in the landscape was found within the village itself, on the scale of the neighbourhoods. An example of this is the many mentions about there being 'two different estates' in the village. While the participants mentioned the visual differences first, these were almost always followed by a reply that focussed on a 'we' versus 'them' thinking. Besides residential areas, at this scale places used for commemorative (e.g. churches) or recreational (e.g. pubs or restaurants) events were often mentioned. Different religious groups using particular churches or groups frequenting

particular pubs indicated that these were also significant points; the fact that a participant belonged to either of those groups meant they understood the landscape in a particular way. This finding concurs with the statement of Buchecker, (2005) which indicates that specific locations in landscape are symbols of a sense of belonging for specific groups and are given particular meanings by those groups of people.

A third and fourth scale, can be described at more regional and national levels. The results of this study provide evidence that landscape is perceived at different scales depending on the scale of comparison. Participants perceived landscape scales depending on their own association with a particular scale. This accords with the literature. Loupa Ramos et al. (2016) state that scale is one of the constituent elements of landscapes as part of people's identities. However, while Loupa Ramos et al. (2019) understand that the factors of landscapes that shape people's identities (and thus the way they perceive landscapes) are those with 'an outstanding social value for a wider group of people that is not belonging to the same group as themselves' (p.333). This is not the case in this study, an example for this can be found at Heddon-on-the-Wall. Hadrian's Wall, which runs through the village is a classified monument and on the list as UNESCO World Heritage, but it was almost never specifically mentioned when participants talked about the village and when mentions were made about how the village differs from other villages in the region. A similar finding can also be made when looking into the routes of the different walks; only two of the walks deliberately focussed on the Wall as the most important aspect of Heddon-on-the-Wall, all other participants did walks that focussed on other parts of the village. Interestingly, these other parts of the village were often more closely linked to them as a person or as individuals within the group. These included the local school, the local orchard (in Wallington case study), local church where participants got married, local playground where they have played themselves and now their children are playing or a landscape view that they found particularly beautiful. It was often only when comparing the region to other regions in Britain, or when asking about the reasons to visit the area, that Hadrian's Wall came to the foreground and participants sometime actively said "Ow, now I realise that I have not included the Wall in my walk".

This study therefore suggests that perceiving landscape is different at different scales and that individual and personal factors have more influence on a local level while collective factors and how landscape is discussed and used by a group is more important on a wider, more regional level to strengthen the sense of belonging to that specific group**.** A possible explanation for this is that participants are taking for granted aspects of landscape that have no direct function for

them personally; these aspects are there, but only in the back of their mind. These aspects of landscape are then not necessarily what matters for them in both a negative and positive sense. It is only when it comes to actively becoming a member of a certain group or when they have to reaffirm their shared identity with others that these aspects are part of their mind map. This is in line with the way Stobbelaar and Pedroli (2011) describe the way scale plays an important role in how people add value and meaning to aspects of landscape that is different at different scales and within different groups. This study shows that this is also noticeable in the way they see their surroundings. This implies that scale and focus is of major importance when integrating people's views in planning tools. These findings could help in planning future projects, for example local and small projects do not necessarily have to focus on the aspects of landscape that are recognised by everybody and are even known to outsiders. On a local level there are different factors in play and different, more individual understandings of landscape to be captured than on a wider, regional scale where individual participants seem to refer to 'the others' in order to describe the characteristics of their own areas and groups. Another implication of this finding is that national or internationally recognised and designated aspects of landscapes (or combinations of them) are often not immediately regarded as 'special' by local residents and how they understand 'their' landscape. This indicates the importance of inclusivity and integration of participation to achieve successful characterisation of planning processes.

8.2.3 Landscape as space

The previous section discussed how personal and collective backgrounds can be understood as two major factors in the way participants perceived their landscape. The section discussed and put into context how each individual has its own understanding of landscape and translates this into how they look at landscape and thinks about it. While being part of different groups or communities means that individual members start to think very similarly about certain places or aspects of landscape, personal backgrounds and character are still in balance with the associations added to landscape from within the collective mindset. However, the study found that there is more to landscape perception than just those two dimensions. The participants all reacted in very similar ways to the physical features of the land that surrounded them during the walks. Almost all participants had similar positive ideas about open and wide views, hilly (rolling) scenery, vista points to overlook the area and views towards the River Tyne (in the Heddon-on-the-Wall case study). This finding indicates there may be commonalities in landscape perception, a level of biological inheritance in looking at our environment that

everyone shares. This also accords to earlier observations which showed that landscape perception is different from one observer to the other, but that our history as humankind leads to a (mostly unconscious) common pattern of perception (Kaplan & Kaplan, 1989). Based on the findings from the walking and talking interviews and the map-based questionnaires, participants spontaneously refer to open views and vistas from certain points without being asked anything. Besides these spontaneous notions of the natural aspects of landscape, most participants also referred to the view and the vistas along the valley of the River Tyne as most characterising aspects of landscape for the Heddon-on-the-Wall case study area. The same ideas can be found in the Wallington case study where the views, topography and even soil characteristics play an important role. While these are most often spontaneous mentions made by the participants, contradicting replies are given when they are specifically asked to describe what they see around them along the walks (even when views are also part of the scenery). Then, the findings show participants mention almost solely cultural aspects of landscape such as observed land use, field boundary types, key landmarks or infrastructure. Nevertheless, these findings add to the understanding that perceptions of physical aspects of landscape are part of a more instinctive interpretation of landscape whereas cultural aspects come in when we start thinking more actively about landscape and our surroundings. In the literature this is often explained through the understanding of the human-landscape relationship of early prehistoric humans. The perceptual capabilities are evolved to meet the survival needs of these periodic humans and while our modern needs are completely different, these 'survival needs' are said to be still present on a psychological and unconscious level (Kaplan and Kaplan, 1989; Appleton, 1975; Hägerhall 2000 & Hunziker et al., 2007). The study therefore certainly did give evidence of the division between this 'instinctive' part of landscape perception and the influence of social and cultural background; both were found to be interlinked at all times as the spontaneous reaction was often followed by reactions to the cultural influences on those natural process. Therefore, this study agrees with the literature that landscape perception is partially biological and inherited, but this could be present in a larger or smaller extent within different individuals and can be subjected to other characteristics of the person and the way this individual behaves when accompanied by other people (in this case the researcher). In this sense it must be understood that these spontaneous interventions and reactions to landscape might not come up in interviews when participants do not feel empowered to speak out, or where participants are shy in general.

While these spontaneous mentions of the physical landscape could not immediately be linked to the claims of inheritance made in the literature it was clear that every one of those mentions

was talked about in combination with positive and active adverbs and verbs. Participants' use of language was interesting. Those views of 'rolling hills' made participants feel at home, feel active and seemed to add to the general 'morale' of the participant. This was an interesting finding that could be made by comparing the different sets of quotes and analysing the different verbs and adjectives used in them. All of those verbs were active verbs, used in a positive way, while all the adjectives were reflecting an up-beat, happy mental state. This suggests that these type of aspects of landscape add to the mental well-being of the participants in a positive way. This finding suggests there is an overall positive reaction to open views, wide vistas, valleys and perhaps even nature in general. This is consistent with the literature and especially the work of Knez and Eliasson (2017) who, amongst others (Ulrich, 1981; Bowler et al., 2010 and Carrus et al., 2015), saw a positive relation between nature, health and well-being. This signifies that taking into account the 'space' dimension of landscape perception and the location of participants when talking about the environment may be important.

8.2.4 Landscape perception dynamic in time

Today, landscape is understood as a dynamic concept and landscape is continuously changing. These changes are seen by people and can be interpreted as improvements to the land or deterioration of the previous state according to Antrop (1998). He also states that these changes are not perceived by everyone in the same manner; what is positive for some might be negative for others. This study adds to this understanding that the moment of perceiving changes in landscape is crucial in that process because the aspect of change is also present in perception in itself. Findings (Chapter 6) show that participants understood and experienced landscape in a different manner when they were a child or an adult; landscape is perceived in a different way at different stages of a lifetime of the same person. While not immediately evidenced by this research (there were no participants under the age of 18), this observation was made based on how participants reflected on the differences of how they used landscape as a child and how they talked about landscape during the interviews. An interesting finding in that respect was that almost all of them referred to how they played outside when they were young 'in the woods', 'in the water' or 'discovering the neighbourhood', often followed by the suggestion that this would be too dangerous or not allowed by the parents nowadays. To support this, a couple of interviewees also mentioned they know of young people riding their bikes through the woods behind the village and indicate that they think this is too dangerous or suggest that they are lucky that no one got injured so far. These findings seem to suggest that as children, they might have looked at the environment in a completely different way and they are more

cautious about this now. Other empirical studies seem to support this statement. Yamashita (2002) sees a clear difference between the children's and adult's perception of the Japanese landscape. In which he states that children perceive landscapes through lenses with a shorter history and less knowledge than adults. Children do not see the risk involved in certain activities. Adults however bring with them the baggage of personal and collective memory as earlier discussed. The same understanding was also given by Zube et al. (1983) in their research on landscape perception. So, while this study was not explicitly investigating the differences in perception between children and adults, the findings suggest there are differences. These could be explained by how participants' assessment of situations may change over time. Participants evaluated playing outside as being more dangerous today because of changes in social behaviour and transportation (e.g. more cars on the road). That landscape is perceived differently at different periods of a lifetime is also supported by some of the topics discussed in earlier sections of this Discussion Chapter. Perception is an active process that is constructed throughout the lifetime of an individual. This implies that there is a need to not only monitor landscape changes but also monitor changes in perception as people go through various stages of their lives.

Besides these aspects of time inherent to life as an individual (within a wider collective), there are other time related factors influencing landscape perception. One of the interesting results was that phenomena that are recurring over time influenced how participants looked at their surroundings more than is often suggested in literature. The effect of seasons was the most quoted in this regard. Participants were referring to the area with 'this is different in summer' or 'this looks and smells different in spring' amongst other mentions with similar meaning. The same can be found in for example changes between morning and evenings or even changes between tides (in particular in Heddon-on-the-Wall) when tidal changes on the River Tyne cause visual changes in the landscape. These findings suggest that time has an influence on landscape perception in more than just a past-present-future related way. Also, these daily, monthly or annual natural cycles play a significant role in how participants experienced and perceived their landscape. Specific areas in the landscape were understood to be more influenced by this factor than others; participants added time-related references when mentioning these aspects. Examples could be found in 'In the morning, this place is lovely because of its location in the sun', 'The valley is simply more attractive when the tide is high, when it is low it looks more dark and muddy' or 'During summer this place really looks like the South of France, I would not want to be anywhere else then'. An explanation for this could be found when looking at these 'cycles' in landscape and understanding them as changes to the

landscape's physicality and their relation to mental distress. Albrecht (2010) recognises that when landscape changes over time it has the potential to create 'solastalgia'. This relatively new concept is used in literature to understand the links between climatic and environmental change on mental and emotional health (Galway et al., 2019). It can be seen as having homesickness while not leaving home, but not being able to relate to a place anymore because of the changes due to environmental factors (Butler & Sarlöv-Herlin, 2019). In the literature solastalgia is used to talk about landscape changes that are often experienced over longer time scales, this study suggests a similar process exists when looking at physical recurring cycles that take place in landscape. Findings in this study must be seen at a shorter time scale than the impacts often described when looking at solastalgia. But changes in landscape through the seasons on a daily basis, or because of natural processes such as tidal action, also trigger emotions in the participants perceiving landscape. The changes that those recurring factors cause in landscape also had an impact on people's mental state. Some of the participants directly referred to a state that could be understood in very similar way to solastalgia where the change is 'giving meaning and clarity to environmentally induced distress' (Albrecht, 2010). These findings have to be looked at with caution however. The above link with solastalgia is not to be understood in a way that recurring aspects of time in landscape are causing the same level of distress as landscape change due to for example climate change. These finding suggest that daily, monthly, annual and regular events in general have an unexpected effect on how participants reacted to their surroundings. It can therefore be assumed that participants would have referred to different aspects of landscapes if the interviews or questionnaire had been undertaken at a different time of day or year. An implication of this is that the moment at which the research is undertaken is more crucial than was expected at the beginning of the study.

8.2.5 Conclusion

Findings have showed that the way landscape is perceived is constructed through time. It can be understood as the dynamic synergy between the four dimensions found within the thematic analysis of this study. The combination of those dimensions and their subdimensions is different for every individual and in different situations. Uzzell (1991) reminds us that different people experience differently landscape at the same location and time. The findings of this study add to this statement as landscape perception is constructed through the lifecycle of the individual and further moulded by the collectives the individual is part of. Yet very few have questioned what phases during an individual's life play more important roles than others in relation to landscape perception. The findings of this research suggest that childhood and youth are crucial factors in the way people understand and add meaning to their surroundings. This outcome was

also linked to familiarity to landscape, the extent to which people engage with landscape is seen as a steering component of landscape perception. This personal dimension is indicative for the way people perceive landscape through their own personal identity of which it forms a part. Evidence then suggests that this individuality in landscape perception is shaped by the need of people to belong to groups or collectives. When belonging to groups, the findings of this study suggest landscapes are discussed at different scales depending to the collective is represented in the statement. Landscape then becomes an arena in which topics are discussed between groups and in which people come together with others who share the collective identity. Although landscape perception is a personal matter, it then becomes coloured by the collective attitudes to landscapes. Furthermore, landscape perception is also inherited from the past; findings suggest that some aspects of the physical landscape are crucial for an individual's mental well-being. An understanding that can also be found in the understanding that landscape perception is changing through time, both in terms of reliving the past and envisioning the future and in experiencing recurring events in the environment. The idea of solastalgia is potentially useful in considering landscape perception as the effect of environmental changes on mental health needs to be seen in a wider perspective than solely irreversible changes due to environment and climate changes.

All of the above suggests that landscape when perceived by people brings people together, adds to well-being and form part of people's identities. The four dimensions of landscape perception that were discussed in this Discussion Chapter cannot be understood as stand-alone dimensions and must be seen as an interlinked network of dimensions and influencing factors. However, the study suggests that different aspects of landscape come to the foreground when one of the dimensions becomes the dominant factor in the combination. This conceptual understanding of landscape perception can facilitate the integration of people's ideas about landscape in characterisation processes. This will be further discussed in the next section.

8.3 Integration landscape perception in Historic Landscape Characterisation

8.3.1 Introduction

Within the literature review of this study (Chapter 4) it became clear that one of the main critiques about the Historic Landscape Characterisation approach is the sole focus on the expert's view on landscape rather than integrating the multiplicity of views of local inhabitants

and other stakeholders (Austin, 2007; Willamson 2007). Therefore, the second aim of this thesis was to formulate an answer to research questions that emerged from this critique and to develop a methodology that joins up the above understandings gained about landscape perception and characterisation. Many attempts have been carried out to integrate people's view on landscape in the HLC process, but so far, none have been successful or convincing (Fairclough and Swanwick, 2018; Turner, 2018). This discussion aims to consider and frame the novelty of this research and reveal how the approach that was taken differs from the more conventional approaches towards integration of participatory elements in a landscape characterisation context.

The previous sections of this chapter and the analysis chapter (Chapter 6) showed how landscape perception can be better understood as the interplay between four dimensions. It was suggested that each of those dimensions is more prominent when participants mentioned different aspects of landscape. This prominent dimension was not necessarily the same for everyone for the same aspect. This understanding was then used in a spatial analysis of how participants talked about their landscape, what did people talk about? Where did they talk about it? And in which context or combination of dimensions did they talk about it (Chapter 7)? By translating the outcomes of the interviews and map-based questionnaires into maps and spatial transcripts in GIS the analysis showed how people are interacting with landscape while walking, talking or thinking about it. In a last step these visualisations of the qualitative output of the study were used as a way to conceptualise and generalise the participant's views on landscape as is done with more conventional attributes in Historic Landscape Characterisation. Through this conceptualisation and generalisation some of the context of the data is inevitably lost, as discussed later on, but it then becomes possible to articulate the aspects of landscape that were used as subjects in both interviews and questionnaires within the polygons of an existing HLC project. This discussion reflects on the approach used and on the results of this integration. First, the section will look at how the output of the participatory approaches was turned into spatial data, especially focussing on the further use of the data in the HLC database. Then, the chapter will focus on how differences in mapability of the qualitative data asked for a difference in mapping, turning the data into discrete and fuzzy aspects of landscape. Then, this section will look at how the new data source adds value to the overall HLC project and how conventional polygons of landscape types may have to change because of the addition of participatory information. This discussion will conclude with a reflection on the differences between the approach that was used here and the approaches that are used in Landscape Character Assessment (LCA), the other main characterisation method in England.

8.3.2 Turning participatory and qualitative data into spatial data.

In order to reach the second aim of the study the participatory output needed to be integrated into an existing HLC database. This way it could be tested whether the conceptualisation of landscape perception could facilitate finding a way to integrating people's views in HLC in a more comprehensive and fitting way. As described in the Methodology chapter (Chapter 5) and used in the Analysis chapter (Chapter 7) a spatial transcript was developed to visualise mentions of spatial features (and the dimensions in which they were mentioned) in GIS. The result was a qualitative GIS database that is able to show what aspects of landscape have been talked about or mentioned by the participants and the locations of where those mentions can be located. To do this, the aspects of landscape were divided into two categories, discrete aspects of which the precise location could be mapped these are most of the time referring to places (e.g. the school, the church, the garage and shops). A second category of how aspects were mentions could be referred to as 'fuzzy'. These aspects were not precisely mappable, an interpretation would have to be made by the researcher to map what exactly the participant meant by mentioning these aspects. Examples of fuzzy aspects found in the interviews are, amongst others, the views along the River Tyne, 'the fields', neighbouring villages, powerlines and references to certain smells or sounds in landscape.

These spatial transcripts gave some interesting findings in this study. One of them was landmark buildings and ornamental or designed landscapes are the types that are mentioned far more than any other type of discrete aspects. While this seems very intuitive and logical, it is most interesting because they are also mentioned a lot while not in direct eyesight or contact to the participants, this became clear by relating the location of the mention to the location of the discrete place. The average distances between the locations of the aspects and the locations of the mentions showed that on average some discrete places in Heddon-on-the-Wall were mentioned while more than two kilometres away from the location at which they were mentioned. In the Wallington case study this distance became even more significant as the average distances of some mentioned went up to six, seven and more than eight kilometres. While there also seems to be no consistent pattern in the distances between the discrete place and where the discrete place was mentioned this finding seems to be unable to demonstrate the statement of Jones and Evans (2011). They understood landmark buildings were mentioned more than other, smaller discrete features, because of their visibility. In this case visibility certainly plays an important role in the number of mentions, but the distances at which the discrete places were mentions suggest that these buildings or locations play a role within the

general understanding of the landscape of the participants. Some of the distances are too far away to visually see the features, so this study suggests that some aspects of landscape are built into the mental picture of the landscape participants have and they mention those places more than others because this is a way to navigate (refer to in stories), a base for comparison or a source of memories. This aligns almost perfectly with how Lynch (1960) understands the legibility of landscape but, while Lynch's study was conducted in a city centre, this study suggests the same patterns in how participants talk about their surroundings in a more rural context. The consistency in findings is also taken further than only individual landmarks, while looking at the fuzzy aspects of landscape findings show that line features (Roads, Historic Line features and rivers) are also mentioned more frequently, these can be understood through Lynch's (1960) concept of paths through landscape. This study however adds to the theory of Lynch (1960) by suggesting that the mental maps through which participants perceive their landscape is shaped as much by visual as by non-visual factors. While the findings chapter (Chapter 7) does not necessarily focus on this topic, the landmarks, paths or edges are also often formed by smell and sound. Hotspots of mentions linked with non-visual senses show that the mental map in Heddon-on-the-Wall often includes the sounds of the planes coming from Newcastle Airport that fly across the village. So, while not seeing the airport, participants were spontaneously referring to the sounds of the airplanes and therefore indirectly to the airport itself. The same can be said about the sound of the powerlines that are running through the village. Participants almost always mentioned the pylons while walking underneath them because of the sounds they made and not necessarily because of them being visual in the landscape. However, it can be suggested here that a combination of senses is in play in this case. Another trigger to form a mental picture of landscape can be smells. On the maps in the findings (Chapter 7) it becomes clear at which locations smells were specifically mentioned, again without asking about them. It could be suggested that smells help to develop the mental map and are used to define edges in landscapes, to link it into Lynch's concepts. Unfortunately, these findings are rather difficult to interpret more in depth as this was not the prime focus of the research and they come in as an interpretation based on grounded visualisation of the aspects in a GIS database. Nevertheless, it could conceivably be hypothesised that legibility of landscape is not only a matter of visual sense, but also of non-visual senses such as smell and hearing.

8.3.3 Integration of Landscape perception in HLC

While international and national guidance often sees landscape character as a way to better understand the human – environment interactions and underlines the need to consider public

perceptions of the landscape (Council of Europe, 2000; Swanwick, 2002; Dalglish and Leslie, 2016) very little was found in the literature on the integration of interpretations of landscape that lay beyond those of specialists who create (historic) landscape characterisation databases (Scott, 2011; Dalglish and Leslie, 2016; Turner, 2018). A reason for this lack of public participatory input into HLC projects could be due to the primary objectives of many of those characterisations. These objectives are focussing on the tangible evolution of landscape and its patterns through time. Therefore, the intangible side of landscape, associations or meanings people add to landscape are not necessarily included in such projects. Chapter 4 shows that the inclusion of participatory input in the landscape characterisation processes is perhaps one of the main differences between HLC and LCA but also in LCA perception of landscape is often restricted to visual aesthetics (Butler and Berglund, 2014). Also, in LCA guidance and expert-led characterisation remains the base of the projects and the participation of stakeholders is seen as added information only. This study was set out with a similar aim which is to integrate participatory input into the existing HLC databases and thus not developing a new approach to characterise landscape from a public point of view, as was attempted by Dalglish and Leslie (2016). As explained in the introduction of this thesis, adding data into the conventional HLC dataset rather than creating a new approach would give two major benefits. First, the conventional HLC projects are used as a base for interpretation of the new participatory information and secondly, the HLC spatial dataset structure can be updated with the new data rather than having a new approach that is incompatible with the already existing GIS databases and planning process. From the outset this integration of participatory input and thus qualitative data into HLC databases and a GIS environment brought out two main issues. First, there is the diversity in perspectives of people on landscape and secondly there is the relation between the discrete or fuzzy aspects of landscape participants have mentioned, the locations where they have mentioned them and the context in which they have mentioned them (Chapter 7).

The findings of this study show that the conceptualisation of landscape perception within the thematic analysis of the interviews and questionnaire was an interesting base to start thinking about visualising and integrating this data into GIS and HLC databases. Using the understanding that landscape perception is about both good and bad feelings towards aspects of landscape (see earlier in this Discussion Chapter) the study found that the way the diversity in views on landscape could be translated in a database was to generalise the views themselves. Visualising the way the participants look at landscape is not necessarily mapping what participants preferred in landscape or what they valued most. It was as much about what they did not like, what they had bad memories about and where they had strong discussions about

with others. In this sense the most important finding is that values or connotations people added to various aspects of landscape were not necessarily the most important parts of the interviews. It turned out that it was much more important to visualise and map what participants were talking about and through which of the dimensions they were mentioning those aspects. To give an example of this the following quote can be used: 'I do not like the sound coming off the pylons' by looking at what aspect was mentioned (the pylons) and in what (sub)dimension of landscape perception it was mentioned (personal opinion) the visualisation of what the participants add meanings to in landscape was possible. In this case the sound of the pylons was clearly given a negative association by the participant, but in many cases this interpretation would not as straightforward. By leaving out these interpretations altogether it becomes possible to create maps and query the spatial transcripts to analyse where there are 'hotspots' in landscape of places and locations that are given are seen in a more personal dimension whereas others might be mentioned more in a collective way or a combination of the different dimensions. The findings in the analysis chapter show that this way of mapping participant's ideas of landscape is taking a neutral stance and the researcher is not intervening in how much value is added to particular aspects of landscape. This leads to a more rapid participation process and could be used as a base for further, more detailed discussions on specific places. This is completely in line with how other attributes are integrated within HLC databases. As for the other, more conventional HLC attributes, the new landscape perception-attribute is mapped using a defined and limited number of categories (the dimensions) to identify in which context the aspects of landscape have been mentioned (Turner, 2018).

As the literature review and the above sections of the discussion chapter pointed out the landscape is not solely the physical environment but is instead dependent on individuals and society to add meaning to this environment (Antrop, 2000; Butler and Berglund, 2014). Also, the ELC (CoE, 2000) underlines that landscape is about the perception of an area and not solely about the nature of the area itself. As seen and discussed in the previous sections, perception in this study is used in a holistic manner. Perception here is about more than only the visual preferences of people but it is about the physical contact of people with landscape experienced through all of their senses, reflected through their memories and associated through their social interactions. Integrating this perception into HLC meant not strictly integrating what people talk about but also in which context they have talked about it and linking the spatial and physical references in the conversations to the context in which they were mentioned. Context here means to what extent the dimensions of landscape perception were used while talking about certain aspects of landscape. The findings show that this leaves the end-user of such HLC

database with hotspots within the landscape of what people have talked about and through which lens they were looking while they have talked about it. However, it is important to note and to understand that at no point in the database it becomes clear whether people have talked about those hotspots in a negative or a positive way. The reason behind this is twofold, first this is completely in line with the philosophy behind characterisation approaches. Characterisation aims to identify the landscape of different types (in this case the (sub)dimensions of landscape perception) in order to analyse what made the area into what it is today without making the distinction between 'better' or 'worse' landscape (Swanwick, 2002 & Turner 2008). This approach is in line with that idea as it helps to understand what the key aspects of landscape there are for the participants, both in a negative or a positive sense. This way, the characterisation process is still able to be at the start of the discussion on landscape issues and is not steering those discussions in a direct manner. This is a novel way of thinking about participatory input in characterisation, in most cases (Dossche et al., 2016) it is the value that people add to specific locations in or parts of the landscape that is central in the participatory process. This implies that it becomes impossible to integrate the outcome of such processes within the characterisation database as there is a significant difference in content of the data itself as it would only look at the aspects of landscape people regard as positive values (and thus better than other parts). The approach proposed in this study does not have this issue and makes it possible to integrate the 'hotspots' and the dimensions of landscape perception in which they have been mentioned to the characterisation polygons without a valuation issue.

8.3.4 The added value of participatory input in HLC

Several reports have shown that the landscape is multifunctional and ever changing and it requires a bottom-up governance rather than a solely expert based sectorial approach (Antrop, 2007; Selman, 2006; Primdahl & Kristensen, 2016). As mentioned in the literature review of this thesis, this issue is also reflected in the European Landscape Convention (ELC) which defines landscape as 'an area as perceived by people…' (Council of Europe, 2000). It is also recognised that today's landscape policy and planning need to integrate the multiplicity of perceptions, preferences and visions in an inclusive manner (Primdahl & Kristensen, 2016). The present study was set out with the aim to include such views on landscape within the HLC approach for the first time. This was done in order to turn HLC further into a tool that provides more complete information on landscape so it could inform and be the start of debate on future landscape planning by also including and visualising what matters to people.

This study shows that by conceptualising landscape perception it becomes possible to integrate people's view on landscapes within the conventional HLC methodology. The deconstruction of the dimensions leads to an attribute-based model of landscape perception that is similar to the approach that conventional characterisation uses. This is contrary to what Dalglish and Leslie (2016) indicate which suggests that HLC is framing character too narrowly and in a non-inclusive or qualitative way. This study argues that the HLC approach is an open and cooperative method that can be amended and adapted in the way necessary to reach the aim and purpose of the characterisation project. However, similar to Dalglish and Leslie's (2016) interpretation of landscape character, the outcomes of querying the new HLC layers also show what parts of the landscape matter. The results show that it is possible to visualise and understand the multitude of relationships and interactions with different dimensions the participants have with respective places and locations in landscape integrated within the conventional HLC database and thus usable immediately within planning processes and debates on landscape. And while the resulting HLC database is able to visualise the different dimensions of landscape perception for each of the character polygons, a note of caution is due here. The newly added participatory data is not covering the whole of the area and therefore leaves gaps of 'no data' polygons within the HLC layer. It is uncertain whether this is due to a low number of the participants in this study or whether there those polygons are genuinely less 'important' in the understanding of the landscape of people in both case study areas. As a result of the random selection of the participants and the balance in gender and age in this study it can be suggested that a representative group of stakeholders has been selected. It can therefore be assumed that a larger number of participants would not have changed the outcome of the study significantly. It would only have stressed certain patterns, but the insights on what matters in landscape from a general point of view would have stayed the same. The combination of the walks and talks and the map-based questionnaire also reduces the risk of not covering all of the area. However, one of the issues that emerges from these results is that the routes along which participants have walked are clearly overrepresented in the outcome. While this was overcome by having participants walking and guiding the researcher along a route of their own preference as a second walk. This means that they could have walked towards the zones that now appear as 'no data' on the HLC maps but chose not to.

The outcome of this study integrates participatory data on how people perceive landscape to a conventional HLC database. As was stated by Turner (2018) the participatory input in HLC turns the dataset into a richer and more inclusive project. The analysis chapter of this study (Chapter 7) shows that the participatory data can be used as a standalone dataset as well as a

data source for HLC databases. The reason behind this is because there was no intention to use the existing HLC as a starting point for the questionnaire or walking and talking interviews. Using the participatory input into the study as feedback on the HLC and character type polygons would have been a contradiction to the understanding of the ELC's definition of landscape. This is in line with the way Olwig (2007) describes how the meaning of landscape does not emerge from an established top-down examination but from perceptions, interests and practices and in such a way landscape should be understood from "public discursive practice, rather than scientific reasoning" (Olwig 2007, p. 580). Not using the HLC as a base for the interviews and letting the participants argue with the mapped character of landscape would have also been contrary to the idea of landscape as a continuous and multi-layered concept as seen by Antrop (2000). Therefore, the choice was made only to use the participatory output as a source of information for the HLC rather than the HLC being a base for people to review. Given the results, a better understanding was created as to what matters for people in landscape than would have been the case when they only would have had the chance to discuss the HLC polygons. This approach is also different to the two common approaches in landscape characterisation because as seen in the literature review (Chapter 4) participation is more common in the LCA characterisation approach and the LCA methodology could have been used as a source of inspiration to integrate people's views on landscape into HLC. However, Butler & Berglund (2014) reviewed the LCA methodology and divided the public involvement in two categories. In the first category there is the LCA project where the public are involved to provide feedback about the landscape itself (and thus the public participation is then a primary data source to create the LCA). In the second category there was the LCA project where the public engagement was only at the very end of the project to give feedback on the assessment. As discussed earlier, in this latter example, while the HLC does not have the assessment stage of the LCA approach (Chapter 4) this can be seen as asking participants for feedback on the delineation of the HLC polygons and their description. On the other hand, this study did not choose to use public's views as the base for a completely new HLC dataset as is done in some LCA projects. Two explanations for this exist: First, it was never the aim to create a characterisation database that was solely based on the perception of the participants and secondly the character type delineated within the HLC are more detailed and more culture focussed than the character areas of the LCA and therefore more usable to add or integrate new data on the public's understanding of landscape. It was deemed necessary that the new approach could be used outside of an academic setting and should be cost efficient enough to be carried out in a planning process. Therefore, a standalone participatory approach where the results could be integrated in the HLC-polygons was seen as most effective. This is certainly a

limitation of the research as it could be argued that the existing HLC polygons are not representative of the way participants perceived landscape and the way landscape matters to people is overgeneralised in HLC. However, the same thought process is used for all of the attributes taking into account in HLC and the HLC database gives a user the possibility to make alternation to the boundaries of the polygons when this is deemed necessary because of newly introduced attributes. Because of the flexibility and possibility to monitor the landscape of an HLC database, these alternations could be made to either add data to the database or visualise a different interpretation of landscape of the end-user.

8.3.5 Summary

These final sections of the discussion chapter have shown that to be an integral part of the characterisation approach, landscape perception of the participants was conceptualised (see previous sections) and generalised as is done with all of the attributes used in the characterisation process. This attempt at conceptualising participatory output in order to integrate this data into the HLC geodatabase is a novel approach that serves as an answer to the critique towards HLC mentioned in the literature review of this thesis (see Chapter 4). Many attempts have been carried out in the past to integrate people's view on landscape in the HLC methodology, yet none was successful or convincing enough (Turner, 2018). A novelty in this study when compared to others is that no attempt has been made to include the replies of participants into HLC in a literal way. The interviews and questionnaires were analysed using the conceptualised understanding of landscape perception. In doing so, through the four dimensions and underlying subdimensions it became possible to generalise the views of participants across the HLC polygons as is done with the more conventional landscape features. Conceptualising perception has of course been done before (Zube et al., 1983; Fry 2001; Tveit et al. 2006; Hedblom, 2020). The difference here is that it becomes possible to visualise and integrate the outcomes into existing HLC projects. While this approach has its limits, due to the way landscape character types are mapped in HLC and due to the time and money restrictions it gives a general overview of what matter in landscapes and what should be the basis for further discussion when it comes to planning and future projects.

8.4 Conclusion

This discussion has pulled out key issues related to integration of the multiplicity of views on the landscape in Historic Landscape Characterisation. In the past some of the approaches completely rethought the process of characterising (Dalglish and Leslie, 2016) others only use

participation as a consultation providing feedback on the resulting characterisation database (Scott, 2011; Butler & Berglund, 2014). HLC is assumed as a tool that communicates landscape character and sees character as a result of human and environment interactions. It cannot be restricted to solely the view of the expert. Yet, few researchers and practitioners have questioned how people's views on landscape can be conceptualised to work with the HLC methodology and therefore included within the resulting databases. As a result, many of the existing HLC projects are restricted to a top-down view on landscape and the potential for HLC to be a participatory tool in the planning process is overlooked. This study therefore understands perception to be about the interaction between an individual and the environment influenced by the individual's characteristics and the identities shared with the collectives the individual belongs to in combination with the physical character of the land and time. This reflects that landscape perception is constructed and dynamic, it is individual and collective at the same time and integrates both positive and negative encounters with landscape aspects. When translating landscape perception into 'what matters to people in landscape', perception could be generalised and seen separate from the individual ideas of the participants. This resonates with the principles of HLC rather than valuing landscape to be 'better' or 'worse' landscape types are delineated by the differences between them and the unique combination of attributes within them.

The above discussion showed the difficulties of the approach and the limitations that exist. However, the evidence shows that not only the mapping of the mentioned discrete places is of importance, but the locations of where discrete and fuzzy aspects have been identified are crucial. These aspects give insight in the how landscape is perceived through all the senses and especially within the mind, which creates mental maps of the area. Although the study visualised and integrated people's views on HLC and therefore formulates a reply to the critique on the approach (Williamson, 2007), perceiving landscape is as much about the self and other people as it is about the physical characteristics and the combination of these lenses through time. Landscape perception is thus not solely a people-environment related concept, but also a concept that must be understood in a people-people interaction related manner. Literature does not often focus on landscape perception in this way, but the outcome of the study and the idea of integration within the HLC can be used as the basis for a discussion about landscape and not as a definite base for decisions in planning or construction of infrastructure.

This chapter has discussed and reflected upon the implications of this research and upon the existing body of knowledge. The final chapter provides a conclusion to the thesis as a whole.

Chapter 9:
CONCLUSION

9 Conclusion

9.1 Introduction

This thesis has looked at the way people perceive and understand their daily landscape and explore manners in which that perception can be visualised and mapped to inform landscape management. The principal aims have been: (1) to develop a better understanding of people's perception and interpretation of landscape and landscape character and (2) to map and operationalise people's perception of landscape to underpin Historic Landscape Characterisation. The main objectives were: To conduct participatory approaches to better understand how people perceive their landscape in two case study areas; to map and visualise in a GIS database the outcomes of the empirical study and to inform existing HLC projects about how character types are triggering people's perception of landscapes. Returning to these objectives also posed at the beginning of this study, it is now possible to state what the influencing factors on the way landscape is perceived are and how these can be used to inform HLC to come to a participatory HLC. The study is able to reveal how and why landscapes are perceived in different ways by everybody and how using the context in which landscape is perceived as the main source to inform characterisation approaches can be a solution to develop more participatory HLCs. This chapter outlines the key findings of this thesis and examines how these conclusions can be taken forward in the form of landscape perception and characterisation research recommendations. The chapter also reviews how the research objectives outlined in Chapter 1 and the methodological framework proposed in Chapter 5 determined the shape of the research. The aim of this concluding chapter is to discuss whether the research objectives have been reached and how the approaches used to answer them were successful.

9.2 Key conclusions: Understanding landscape perception

9.2.1 Landscape perception as a construction

The following key conclusions can be identified:

- Four key dimensions are influencing the way landscapes are perceived: a personal, collective, time and space dimension

- Landscape perception is the result of a dynamic synergy between these four dimensions throughout a person' lifetime
- The combinations of the dimensions that are influencing landscape perception is location-specific and different for each individual

This study has indicated that the way landscape is perceived by individuals is influenced by four key dimensions. First, a personal dimension that consists of an individual's background, personal memories and personal opinions plays a role in the way landscape was interpreted and talked about. Some key factors were shown to have a major impact on this dimension, such as how landscape is used and accessed throughout childhood and youth and the construction of memories linked to aspects of landscape throughout a lifetime. Next, a collective dimension emerged, participants were interpreting the landscape through the lenses of different groups and collectives they belonged to. This collective dimension is understood to be steering the personal one, because of the shared identities within the groups. Thirdly, space is understood as an influencing factor, more specifically the physical characteristics of landscapes. These characteristics were reflected on at a more spontaneous level, whereas more cultural features in landscape could be related to a more cognitive process of looking at landscapes. Finally, time is recognised as a factor that plays its role in how landscapes are interpreted by people. Not only the age and phases of people's life change the way landscapes are perceived, the research evidenced that landscapes are perceived differently during childhood and adulthood for example, but also recurring events in time are critical in the process of landscape perception. Tidal events can be highlighted in this sense, as participants interpreted the landscape as if they imagined both tides to be present at the same time.

One of the more significant findings of the research is that the four dimensions cannot be seen to be separate from each other. Landscape perception is therefore an interlinking process of the influencing factors or dimensions. As a consequence, landscape perception is understood to be a dynamic synergy between these key dimensions. The synergy and interaction between the dimensions are changing throughout an individual's lifetime as new experiences are built, new memories are constructed and opinions are changing because of belonging to new and different cultural collectives. In this respect familiarity with landscapes was understood to be central in perception. While familiarity could impact on the interpretation being expressed as a stronger bond with landscapes it also often led to a generalisation of the landscape that made participants with higher level of familiarity lose out on the details the landscape offered.

While the dimensions are interlinked at all times, the results and the responses of the participants in this study showed that one (or a combination of) (sub)dimension always dominated the others in each of the replies of the participants. This was almost always location-based, specific locations either triggered the landscapes to be perceived through individual glasses (e.g. a specific memory linked to a certain location), collective glasses (a location in the village was understood as a common meeting place and always referred to as such), time glasses (e.g. specific places in the landscape were referred to because of their particular smells at certain times of the year) or space glasses (e.g. open vistas were always mentioned because of their beauty of in a spontaneous way) or combinations of the dimensions.

In general, therefore, it seems that the multi-method approach that combined walking and talking interviews and map-based questionnaires has revealed landscape is perceived in a dynamic and often location-based way and is different for each individual given a unique combination of the four key dimensions.

9.2.2 Scales in landscape perception

- Landscapes are perceived through different integrated layers at different scales
- Landscapes are interpreted by thinking about similar types of landscapes elsewhere

One of the more significant conclusions to emerge from the study is that belonging to a collective does not only influence landscape perception it also causes landscapes to be perceived through different layers and at different scales. The study identified three different scales at which belonging to collectives made a difference to the understanding of landscape: Local, regional and national level. The shared identities of the collectives systematically joined up to form the understanding of landscapes at the higher level. This means that different groups with a different understanding of landscapes at a local level joined up to develop similar interpretations of landscapes at a regional level and this was also the case on a national level. The results show however that at all levels, landscape is defined by thinking of 'the others' and the comparison between the use of landscape by different groups. The study showed that landscape is both a meeting place, that is constructed through collective memories and opinions and a place for discussion at which these different groups come together to interpret it through their own lenses. These findings have significant implications for the understanding of how landscape is perceived by everyone individually, yet it has a significant part that is a cultural given and is influenced by the individual's sense of belonging to specific groups in society.

Overall, the study strengthens the idea of different layers and scales that influence the way landscape is perceived. Different dimensions of landscape perception are therefore only becoming active at different scales of looking at landscapes. Yet again, this is often triggered by making a comparison to other landscapes elsewhere. The scales mean that the more individual dimensions of perceiving landscape are prominent when interpreting landscape through a more detailed mind map at local levels, whereas comparisons are being made with other groups and thus a more collective mindset is developed when interpreting or understanding landscapes at regional or national scale. This implies that participatory work done in landscape planning and policy must not only look at the specific scales independent from each other but must have an integrated focus. Consequently, if an inclusive and holistic approach is the aspiration for landscape planning, policy can be developed that articulates these ideas into practices. This could for example be done in the case of characterisation approaches by developing more local or regional HLCs that are not restricted to county boundaries.

9.2.3 Finding common grounds in perceiving

- There is a common ground that is shared by everyone in landscape perception
- Landscapes play a significant role in people's (mental) well-being
- Landscapes are perceived through all the senses (at once)

The study has provided evidence that indeed different landscapes and landscape types matter to different people or different groups of people, as was already referred to in the anecdote within the Introduction to this thesis (Chapter 1). However, many of the responses reviewed in this work presented views on landscape that show there exists a common ground in the way specific types and landscapes are perceived or in the process of perceiving in general. The current research highlights how comments on the physical characteristics of the case study area were almost always expressed in spontaneous ways, while the cultural activities that have changed these physical characteristics over time (e.g. the Tyne valley and the industrial buildings referring to an industrial past) were reflected on in later stages of perceiving the surroundings.

Whilst the spontaneous references to physical characteristics of landscape could be understood to be a common ground in landscape perception, the thesis gives an insight in how landscapes are causing a direct impact on people's mental well-being. This was particularly discussed in

relation to particular physical characteristics such as open views or vistas and the topography around the case study area. The availability or access to waterbodies such as Rothley Lakes in Wallington and the Tyne River in Heddon-on-the-Wall were all reflected on in connection to how participants felt happier for living near them or only just seeing them. On the other hand, several changes in landscapes, such as the development of energy landscapes (building of wind turbines) and housing developments were often avoided because of the unfavourable feelings they gave people. Evidence collection for the relation between mental well-being and landscapes has increased over the last five to ten years, but there are still gaps in knowledge as the extent to which landscapes are playing a role in mental well-being was shown to be defined on an individual level. This mean that while this acknowledges the impact of landscapes on people's mental well-being is universal it is still very difficult to develop integrated practices and tools to take this further as it impacts everybody in different ways.

A final common ground in landscape perception is that landscape is perceived through all senses, not solely the visual one. While the study shows that the 'seeing' turns out to be the most used verb within their responses of the participants, smelling and hearing are adding to the interpretation of landscape to an extent too. Yet again, as with physical characteristics, hearing and smelling were often the verbs used during spontaneous mentions of aspects of landscape. Sounds and smells were noticed during the walks and were often interpreted by participants, shortly to be followed by trying to visually confirm what they were sensing. Smells and sounds were enriching the way participants experienced landscapes. This outcome could only be identified because of the multi-method approach used for this study and by taking participants into those landscapes. Landscape perception thinking and participatory landscape studies in particular may therefore need a change in tools. Thinking away from the conventional approaches in which participants are often kept remotely from the discussed subject: the landscape and going towards more in-situ approaches that are able to grasp all of the senses at once.

9.3 Key conclusions: participatory Historic Landscape Characterisation

9.3.1 Mapping the outcomes of the empirical study: towards a source of information for HLC

- Landscape is perceived through the use of a mind map, including visual and non-visual aspects of landscapes.

- Integrating people's interpretation of landscape can be done by looking beyond the individual responses

The study found that landscape is being talked about in two aspects of landscape. Discrete aspects on the one hand, these could be defined in time and space; and fuzzy aspects on the other hand, these aspects are not or only partially spatially defined. The evidence shows that for discrete aspects, landmarking buildings or objects are mentioned most often, even while not visible. In the fuzzy category line infrastructures such as roads, railways and waterways are mentioned most often. Interestingly however is that the evidence shows not only visual links with these aspects of landscape (they are not always visible from where they have been mentioned), but also smells and sounds are often linked with these aspects. The existence of a mind map is clearly supported by the study and findings add to the understanding of mind maps that they are made up of experiences of both the visual and non-visual senses. By focussing on attributing the context (dimensions and subdimensions) in which aspects of landscapes were mentioned, the 'hotspots' at which the different mind maps of participants and therefore what mattered for all participants, could be visualised as heatmaps. In doing so, locations that were often mentioned in specific contexts are highlighted. The methodology used for this research allows for a study to highlight those zones without having to indicate whether they are understood to be 'better' or 'worse' by the participants. This way the visualisation was not taking into account individual standpoints or views of landscape but was generalising the way landscape was perceived across the participants. An implication of this is the possibility of the integration of the interpretation of landscape from all participants could be visualised and queried across the dimensions rather than the aspects, the locations of the aspects or the participants individually. The resulting maps are therefore ideal tools that could inform planners or policy makers about the sensitivities in landscapes when it comes to potential changes or planning issues in the future. Then these maps could be used to introduce the debates on the possibilities by showing whether the locations were found to be more important in the personal context of the participant or must be understood to be more crucial to the community in general.

9.3.2 Participatory Historic Landscape Characterisation

- Generalisation of the dimension of landscape perception leads to new attributes in HLC
- Only certain historic landscape character types are noticed by the public

This thesis has treated public's view on landscapes as any other factor that has an impact on the character of landscapes, this way the multiplicity of views could be integrated within conventional HLCs without the need to develop whole new methods and tools. This means that by making a generalisation of the dimensions of landscape perception for each of the individual character polygons of the HLC of Northumberland it was possible to interpret in which context each of the polygons was mentioned relatively compared to the others. This means that by querying the HC database, it becomes possible to interpret which of the polygon's internal character is experienced through the 'time' or 'space' dimension more than other (or from a combination of each of the dimensions). The resulting participatory HLC is therefore not completely recreated but adds another layer to the conventional HLC that visualises what matters to the public within the case study areas. However, the resulting participatory HLC is not aspiring to be a map that lets planners and policy makers interpret the 'only' valuable places in landscape of the local people but give an indication to what types of character and areas are in need of more thorough discussions when planning issues need to be resolved or policy decisions need to be made.

The research also made clear how difficulties still exist between the existing character polygon databases made by a small expert team and how others interpret that same landscape. Several of the character types that were walked through or could be seen on the map-based questionnaire were never mentioned by the participants as such. While the process described here is a useful one for existing HLC projects, these conclusions imply that it could be worth bringing the participatory approach developed in this thesis forward in the HLC process. In doing so, the delineation of the character polygons could not only based be on historic character but also on how it was understood or mentioned by the participants.

9.4 Review of the approach

The methodological structure developed for this project outlined in Chapter 5 provided a number of ways for data collection. The methods used and the line of questioning developed enabled this thesis to examine the research objectives outlined in Chapter 1 and provided this thesis with a clear understanding of the complex individual, cultural and natural interactions that influence the way landscape is perceived and how this understanding could be used to come to a participatory Historic Landscape Characterisation. This structure allowed the thesis to investigate what factors cause that landscape is perceived differently by different people, how different those different interpretations of landscape can be mapped and visualised and how the

mapping of public perception of landscape through its influencing factors can be used for participatory Historic Landscape Characterisation. The analysis and discussion in Chapters 6,7 and 8 give a better understanding of each of these areas in providing information that can be fed into debates about landscape and landscape character.

The use of a multi-method approach enabled different sources of data to be collected, thus providing insightful discussions of the process and construction of landscape perception. The complementary roles of in-situ one-on-one and digital community engagement data sources enabled this research to compare data from walking and talking interviews and map-based questionnaires. The research may however have benefitted from a greater level of participation at the level of the map-based questionnaires. Unfortunately, time and access constraints limited the level of training that could be given so potential participants could be guided through the questionnaire and digitising process within the software. The data however provided a number of interesting themes for discussion which helped to integrate some of the wider debates on participation and landscape planning outlined in this thesis. Consequently, further data sources could have been explored and a greater number of case studies, in example a more urban based case study area, could have been examined. Yet again, time constraints limited this process. However, this thesis acknowledges that a greater number of case study analyses could have provided further qualitative and spatial data for interpretation, which would have aided the discussion made in Chapter 7.

Overall, the multi-method approach together with the spatial analysis of the collected data used within this thesis provided sufficient data that enabled the research objectives outlined in Chapter 1 to be analysed. I feel that the approaches utilised in this thesis have enabled a clear and insightful discussion about landscape perception and how it is possible to come to participatory Historic Landscape Characterisation. In hindsight, improvements could be made to the way participants were guided through the Maptionnaire software to end up with a larger group of participants that filled out the questionnaire appropriately. As for the walking and talking interviews, time must be discussed as an underestimated factor as the postprocessing of the interviews took about three times as much time as the walks themselves. However, to obtain the level of data gathered for this research, a wide range of sources needed to be targeted, thus the broad nature of the research and the multi-method approach were deemed the most appropriate method to collect this data.

9.5 Contribution to knowledge

The thesis has contributed in several ways to the understanding of the way in which landscape is perceived and how public involvement could be used to underpin landscape characterisation and identification. Since the introduction of the European Landscape Convention in 2000, these questions were central to debates on the notion of landscape and landscape management in practice. The research identified the lack of public involvement in characterisation approaches and more specifically within the Historic Landscape Characterisation approach, one of the instruments used to implement the ELC within the UK. The study did not dispute the HLC approach or its importance and did not doubt the difficulty in providing an answer to the present criticism. Rather, it has advanced the methodology from an approach that solely relied on the expert's view towards an approach underpinned with what matters in landscape to local stakeholders. In order to do so, it has emphasised the generalising manner of dealing with landscape in characterisation approaches in general and HLC in more detail. If in developing an HLC project it is desirable to integrate the multiple interpretations of landscape by different people, it must also be accepted that this view might not be the expert's view or our own or include every individual interpretation of landscape. Therefore, the study provides a new framework to better understand the factors that influence how people interpret landscape and operationalised this understanding to be in line with the value-free philosophy of HLC.

The study has gone some way towards enhancing our understating of landscape perception through an in-situ participatory approach. Four dimensions emerged from the findings that are inherent to the differences in perceiving landscape: a personal, collective, space related and time dimension. Firstly, this study has provided additional evidence with respect to the influences personal background, personal memories and personal opinions have on how landscape is perceived. In particular the study extends our knowledge of the influence of childhood memories on how landscape is experienced in later stages of life (Ward Thompson, 2013).

Secondly, the personal background, memories and opinions are evolving because of the individuals' being part of groups and society in general. The thesis confirms previous contributions to the fields of landscape perception and identity (Stobbelaar & Pedroli, 2011) and contributes additional evidence that suggests that landscape is understood at different scales. This study has revealed that talking about and interpreting landscape is as much about the discussion between groups and collectives themselves rather the objects or features within

landscape. These findings provide strong empirical confirmation that landscape is a platform for debate between different groups of stakeholders and layers of society on social issues and future challenges.

Thirdly, the present study extends the knowledge of the impact of the physical features or 'the world out there' (Appleton, 1975) on landscape perception. The findings have shed a more contemporary light on the contentious issue of spontaneous reactions of people to specific combinations of features in landscape due to our past as humankind. Those types of landscape that were referred to in a spontaneous were often perceived as being natural features of the landscape, such as hills, watercourses and open vistas. The study should prove to be particularly valuable to further establishing the links between mental well-being and landscape as these particular types of landscapes were suggested as causing a rather positive impact on how people reacted to their surroundings.

Finally, this study has found a time dimension in landscape perception. It was able to indicate that the concept of solastalgia (Albrecht, 2010) cannot only be used for the impact of climatic and environmental change on mental health. This is the first study that shows that the idea of solastalgia could also be related to cyclic events in landscape, such as sunrise and sunset, seasonality and tidal action. These events could influence the way people understand and look at landscape by influencing their emotions and feelings.

In combining these dimensions this research confirms previous findings and contributes additional evidence that suggests that perceiving landscape is a matter of both physiological and psychological processes (Uzzell, 1991). It enhances the understanding of differences in ways of perceiving landscape by different people. However, the present study provides significant evidence that also within individuals the perception of landscape is different according to the location and the time at which they interpret the landscape. This illustrates how public involvement in landscape studies is a matter of timing and taking snapshots of how people perceive landscape at a specific moment of the day or a crucial moment during their lives. Furthermore, the study adds to the growing body on landscape perception (Howard, 2013) that perceiving landscape is not only a matter of 'looking at' landscape, but that landscape is perceived and interpreted through all senses.

To overcome these issues in non-problem-oriented approaches, or approaches that want to take into account the public's view on landscape long before a problem can be identified, this study

has operationalised landscape perception through its dimensions rather than through the individual responses during the empirical study. Establishing this understanding of the influencing factors of landscape perception has significant implications for the debates about public involvement in landscape management. As through this framework of perception this study has offered a new way to explore people's view on landscape away from landscape preferences and problem focussed approaches. In doing so, the study was the first to inform and include within HLC projects information on how specific types of landscape are perceived by participants.

This is the first study to successfully establish an approach to include people's view on landscape in a conventional HLC project, staying true to the core intentions and principles of HLC. The study showed that in generalising people's views on landscape and not focussing on individual differences between these views is an indication of what matters to people in local case study areas could be included in these GIS-based projects. This is without having to change or adapt the characterisation process drastically or move it within the overall time schedule of the planning process.

9.6 Recommendation for further research

A number of diverse areas of research have been presented and analysed within this thesis. It does not want to pretend to have addressed all answers to questions on landscape and landscape perception research. Outlined below are some areas where further landscape perception and character-based landscape research would provide further data to support its development conceptually and in practice.

- The thesis has given evidence that childhood memories play a significant role in how landscapes are is perceived during adulthood. Nevertheless, further work needs to be done on the extent to which an individual's connection to landscape and memories at particular stages in life have an influence on the perception of landscapes at further stages in lives of people. Future studies could focus on how children perceive landscapes during their childhood themselves as this seems to be understudied at present. Or they could emphasise on how age is playing a role in the perception of landscapes.

- The study presented landscape perception to be scale dependent. Different aspects of landscape are coming to the fore while talking about a local, regional or national scale. The study evidenced that this mainly has to do with people's shared identities coming from their belonging to specific groups and collectives. Further studies need to be carried out to validate these findings in other regions or countries. It would be interesting to see whether this sense of belonging was particularly strong within this part of England or if similar conclusions could be made elsewhere. This could lead to specific types or features in landscape to be discussed at different levels when planned changed in landscapes occur.

- The study has shown that space and features in landscape themselves play a significant role in landscape perception with participants particularly focusing on 'natural' features in landscape such as topography, watercourses and wide-open vistas; this could be a fruitful area for further investigation. Further investigation on how physical characteristics play a role in landscape perception could look into the links between these features and mental well-being. This type of studies could underpin future management of landscape as it could lead to better understanding of the links between well-being and particular landscape types.

- On a more general note, this study evidenced that landscape perception is subjected to all senses of people but this is still heavily understudied in literature. While this research found that the visual sense to be overpowering all other senses in most cases, the other senses formed an integral part of the landscape experience and interpretation during the walking and talking interviews. Further work is required to better understand the impact of sound, smell, touch and taste on the interpretation of landscape. In particular future studies could focus on to what extent the way mental maps of landscape are influenced by other senses. As this study showed evidence that mental maps of landscape are an integral part to how landscape is interpreted by people.

- To further develop Historic Landscape Characterisation and characterisation approaches in general further research based on the conclusions of this study could be whether specific reactions and tendencies towards reactions are related to specific landscape types. If this is the case, it could become possible to make prediction models of landscape perception that then could be verified and tested by local people during the planning process, this would save time and money during the characterisation process.

- A recommendation for HLC projects that need to be developed in the future would be to first conduct the participatory approach conducted and presented within this study and only in the next phase base the characterisation process not only on the historic layers of landscape, but also take into account the mapped and visualised aspects of landscape that formed the qualitative outcome. This would resolve some issues that were discussed in the discussion chapter of this thesis (Chapter 8) and were related to the experienced difficulties when informing a characterisation database in which the mapping approach is not covering roads and line structures in the landscape.

9.7 Conclusion

In conclusion, the progress made in developing an evidence base for the influencing factors of how landscape is perceived and using these factors in informing participatory Historic Landscape Characterisation means that it becomes possible to have more people recognising themselves in the outcomes of participatory processes. Progress has been made in the understanding of landscape perception and in how Historic Landscape Characterisation approaches could become more participatory in a number of ways. However, for progress on HLC to continue towards a more inclusive and democratic tool, participation initiatives need to be integrated in the characterisation process from the beginning. The inclusion of references to public perception and character of landscape in current policy and research gives an indication that the integration of both will continue. (Historic) Landscape Characterisation must be understood as an approach that could help with integrating this more effectively in the future. By promoting participatory Historic Landscape Characterisation as a tool in landscape planning and management for the future, this thesis wants to emphasise the importance of future debates about landscapes. Landscape management is about debate, discussion and reaching consensus while having as many people as possible represented at the table. The approach presented here could be at the start of those debates.

REFERENCES

10 References

Aitken, S.C. & Wingate, J. (1993). A Preliminary Study of the Self-directed Photography of Middle-class, Homeless, and Mobility-impaired children. *Professional Geographer, 45(1),* 65–72.

Albrecht, G., Sartore, G.M., Connor, L. (2007). Solastalgia: The Distress Caused by Environmental Change. *Australasian Psychiatry*, *15,* S95-S98.

Albrecht, G. (2010). Solastalgia and the creation of new ways of living. In: S. Pilgrim & J.N. Pretty (Eds*.). Nature and Culture: Rebuilding Lost Connections.* (pp. 207-234). London: Earthscan.

Aldenderfer, M. (1998). Quantitative Methods in Archaeology: A Review of Recent Trends and Developments. *Journal of Archaeological Research, 6(2),* 91-120.

Aldred, O. & Fairclough, G. (2003). *Historic Landscape Characterisation: Taking Stock of the Method – The National HLC Method Review*, London: English Heritage and Somerset County Council.

Altman, I. & Low, S. (Eds.) (1992). *Place Attachment; Human Behaviour and Environments.* New York, Plenum Press.

Anderson, J. (2004). Talking Whilst Walking: A Geographical Archaeology of Knowledge. *Area. 36.* 254 - 261.

Andrews, M. (1989). *The Search for the Picturesque: landscape aesthetics and tourism in Britain, 1760–1800.* London: Scolar.

Antonson, H. (2009). Bridging the gap between research and planning practice concerning landscape in Swedish infrastructural planning. *Land Use Policy, 26*, 169–177.

Antrop, M. (1997). The concept of traditional landscapes as a base for landscape evaluation and planning. The example of Flanders Region. *Landscape and Urban Planning, 38*, 105-117.

Antrop, M. (1998). Landscape change: plan of chaos?. *Landscape and Urban Planning, 41,* 155–161.

Antrop, M. (2000). Background concepts for integrated landscape analysis. *Agriculture, Ecosystems and the Environment, 77,* 17-28.

Antrop, M. (2001). The language of landscape ecologists and planners. A comparative content analysis of concepts used in landscape ecology. *Landscape and Urban Planning, 55,* 163-173.

Antrop, M. (2005). Why landscapes of the past are important for the future. *Landscape and Urban Planning, 70,* 21-34.

Antrop, M. (2007). *Perspectieven op het landschap. Achtergronden om landschappen te lezen en te begrijpen.* Ghent: Academia Press.

Antrop, M. (2013). A brief history of landscape research. In P. Howard, I. Thompson, & E. *The Routledge Companion to Landscape Studies* (pp. 12-22). Routledge, London.

Antrop, M. & Rogge, E. (2006). Evaluation of the process of integration in a transdisciplinary landscape study in the Pajottenland (Flanders, Belgium). *Landscape and Urban Planning, 77,* 382-392.

Appleton, J. (1975). *The Experience of Landscape.* London: Wiley and Sons

Armstrong, H. (2004). Making the Unfamiliar Familiar: research journeys towards understanding place and migration, *Landscape Research, 29(3)*, 237–260.

Ash, M.G. (1998). *Gestalt Psychology in German Culture 1890-1976. Holism and the Quest for Objectivity.* Cambridge University Press, Cambridge.

Austin, D. (2007). Character or caricature? Concluding discussion. *Landscapes, 8(2),* 92-105.

Atik, M. & Karadeniz, N. (2018) New approaches for new regions: Turkey. In: G. Fairclough, I. Sarlöv Herlin, & C. Swanwick (Eds.). *Routledge Handbook of Landscape Character*

Assessment: Current Approaches to Characterisation and Assessment (pp. 69-79). London, UK: Routledge.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84*(2), 191–215.

Barker, R. (1976). On the nature of the environment. In: H. Proshansky, W. Ittelson & L. Rivlin (Eds). *Environmental Psychology: People and Their Physical Settings*. New York: Holt, Rinehart & Winston.

Bartelse, G. (2016). The 'genius loci' concept in contemporary landscape architecture In: T. Collins, G. Kindermann, C. Newman & N. Cronin (Eds). *Landscape Values: place and praxis. Conference, Galway, 29th June – 2nd July, 2016 (*pp. 26-30). Centre for Landscape Studies, NUI Galway.

Bell, S. (1999). *Landscape: Pattern, Perception and Process.* London: E & FN Spon.

Bell, S. (2004). *Elements of visual design in the landscape (Second Edition).* London: Spon Press.

Bell, S., Morris, N., Findlay, C., Travlou, P., Montarzino, A., Gooch, D., Gregory, G. & Ward Thompson, C. (2004). *Nature for People: The importance of green spaces to East Midlands communities. English Nature Research Report no567.* Peterborough: English Nature.

Bender, B. (ed.) (1995). *Landscape Politics and Perspectives*. Oxford: Berg.

Bender, B. (1998). *Stonehenge: Making Space.* Oxford: Berg

Boerwinkel, H. (1994). Identiteit in de landschapsplanning. *Tijdschrift Landschap, 11,* 33–42.

Bourassa, S.C. (1991). *The aesthetics of landscape.* London and New York: Belhaven Press.

Bowler, D., Buyung-Ali, L., Healey, J.R., Jones, J.P.G., Knight, T. & Pullin, A.S. (2010). The evidence base for community forest management as a mechanism for supplying global environmental benefits and improving local welfare. *CEE review 08-011* (SR48).

Boyatzis, Richard. (1998). Transforming Qualitative Information: Thematic Analysis and Code Development. London: Sage Publishing.

Bradley, G.A. & Kearne, A.R. (2007). Public and Professional Responses to the Visual Effects of Timber Harvesting: different ways of seeing. *Western Journal of Applied Forestry, 22(1)*, 42–55.

Brassley, P. (1998). On the unrecognized significance of the ephemeral landscape. *Landscape Research, 23,* 119-132.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3(2),* 77-101.

Breakwell, G. M. (1986) *Coping with Threatened Identity*. London: Methuen.

British Sociological Association, 2017. *Statement of Ethical Practice for the Bristish Sociological Association.* Durham, p.a range.

Brook, I. (2000). Can 'Spirit of Place' Be Guide to Ethical Building? In: W, Fox (Ed.). *Ethics and the Built Environment.* (pp. 139-152) London and New York, Routledge.

Brown, G. (2012). Public Participation GIS (PPGIS) for regional and environmental planning: Reflections on a decade of empirical research. *URISA Journal, 25(2),* 5–16.

Brown, G. & Kyttä, M. (2018). Key issues and priorities in participatory mapping: Toward integration or increased specialization?. *Applied Geography, 95,* 1-8.

Brown, G. & Fagerholm, N. (2015). Empirical PPGIS/PGIS mapping of ecosystem services: a review and evaluation. *Ecosystem Services, 13,* 119–133.

Brown, G., Weber, D., de Bie, K. (2014). Assessing the value of public lands using public participation GIS (PPGIS) and social landscape metrics. *Applied Geography, 53,* 77–89.

Buchecker M. (2005). Public place as a resource of social interaction. In: P, Turner & E, Davenport (Eds.). *Space, spatiality and technology*. Dordrecht: Kluwer.

Buijs, A.E., Pedroli, B. & Luginbühl, Y. (2006). From Hiking Through Farmland to Farming in a Leisure Landscape: Changing Social Perceptions of the European Landscape. *Landscape Ecology, 21,* 375–389.

Bunkše, E. (2007). Feeling Is Believing, or Landscape as a Way of Being in the World. *Geografiska Annaler. Series B, Human Geography, 89(3),* 219-231.

Butler, A. (2014). *Developing Theory of Public Involvement in Landscape Planning – Democratising landscape.* Uppsala: Swedish University of Agricultural Sciences. (Unpublished PhD-Thesis).

Butler, A. (2016). Dynamics of integrating landscape values in landscape character assessment; the hidden dominance of the objective outsider. *Landscape Research, 41,* 239–252.

Butler, A. & Berglund, U. (2014). Landscape character assessment as an approach to understanding public interests within the European Landscape Convention. *Landscape Research, 39,* 219–236.

Butler, A., Sarlöv-Herlin, I., Knez, I., Ångman, E., Ode Sang, Å & Åkerskog, A. (2018). Landscape identity, before and after a forest fire. *Landscape Research, 43(6),* 878-889.

Butler, A. & Sarlöv Herlin, I. (2019). Changing landscape identity, practice, plurality and power. *Landscape Research, 44(3*), 271-277.

Buhyoff, G.J., Wellman, J.D., Daniel, T.C. (1982). Predicting scenic quality for mountain pine beetle and western spruce budworm damaged forest vistas. *Forest Science, 28,* 827-838.

Burgess, J. (1998). But Is It Worth Taking the Risk? How Women Negotiate Access to Urban Woodland: a case study. In: R. Ainley (Ed.). *New Frontiers of Space, Bodies and Gender* (pp. 115–128). London: Routledge.

Camaioni, C., D'Onofrio, R., Pierantoni, I. & Sargolini, M. (2016). Vineyard landscapes in Italy: cases of territorial requalification and governance strategies. *Landscape Research, 41(7),* 714-729.

Carles, J.L., Barrio, I.L. & de Lucio, J.V. (1999). Sound influence on landscape values. *Landscape and Urban Planning, 43,* 191-200.

Carlson, A. (1995). Nature, Aesthetic Appreciation and Knowledge. *Journal of Aesthetics and Art Criticism, 53(4),* 393–400.

Carrus, G., Scopelliti, M., Lafortezza, R., Colangelo, G., Ferrini, F., Salbitano, F., Agrimi, M., Portoghesi, L., Semenzato, P., & Sanesi, G. (2015). Go greener, feel better? The positive effects of biodiversity on the well-being of individuals visiting urban and peri-urban green areas. *Landscape and Urban Planning, 134*, 221-228.

Carvalho Ribeiro, S.M., Loupa Ramos, I., Madeira, L., Barroso, F., Menezes, H. & Pinto Correia, T., (2013). Is land cover an important asset for addressing the subjective landscape dimensions?. *Land Use Policy, 35,* 50–60.

Caspersen, O.H. (2009). Public participation in strengthening cultural heritage: the role of landscape character assessment in Denmark. Geografisk Tidsskrift-Danish Journal of Geography, 109(1), 33-45.

Conzen, M.R.G. (1969). *Alnwick, Northumberland: A Study in Town-plan Analysis.* London: Institute of British Geographers.

Conzen, M.R.G & Whitehand, J.W.R. (1981). *The Urban Landscape: Historical Development and Management.* London New York: Academic Press.

Cooper, M.C. (1995). *House as a mirror of self: Exploring the deeper meaning of home.* Berkeley, CA: Conari Press.

Countryside Council for Wales (1999). *LANDMAP (the landscape assessment and decision-making process), Initial draft handbook (Bangor, Countryside Council for Wales).*

Countryside Council for Wales (2001) The LANDMAP Information System. Bangor: Countryside Council for Wales.

Clark, J., Darlington, J & Fairclough G. (2004). *Using Historic Landscape Characterisation, English Heritage Review of HLC Applications.* Preston: English Heritage and Lancashire County Council.

Clark, A. & Emmel, N. (2008). Participatory walking interviews: More than walking and talking? In: *'Peripatetic Practices': a workshop on walking*. London.

Clemetsen, M., Krogh, E & Halvorsen Thorén, K. (2011). Landscape perception through participation: developing new tools for landscape analysis in local planning processes in Norway. In: M. Jones & M. Stenseke (Eds.) *The European Landscape Convention: challenges of participation* (pp.219-237). Dordrecht: Springer.

Cosgrove, D. (1984). *Social Formation and Symbolic Landscape.* London: Croom Helm Ltd.

Cosgrove, D & Daniels, S. (Eds.) (1988). *The Iconography of Landscape.* Cambridge: Cambridge University Press.

Council of Europe (2000). *European Landscape Convention, European Treaty Series 176 (Florence Convention).* Strasbourg: Council of Europe.

Council of Europe (2005). *Framework Convention on the Value of Cultural Heritage for Society, European Treaty Series 199 (Faro Convention).* Strasbourg: Council of Europe.

Council of Europe (2011). *Council of Europe in brief. Retrieved from:* http://www.coe.int/aboutCoe/index.asp?page=nosObjectifs&l=en.

Countryside Agency and Scottish Natural Heritage (CA/SNH) (2002). *Landscape Character Assessment: Guidance for England and Scotland*. Cheltenham: Countryside Agency and Edinburgh: Scottish Natural Heritage.

Creighton, O. (2009). *Designs Upon the Land: elite landscapes of the Middle Ages.* Woodbridge: Boydell

Dabaut, N. & Carrer, F. (Forthcoming). Historic Landscape Characterisation: technical approaches beyond theory. *Landscapes*.

Daniel, T.C. & Boster, R.S. (1976). *Measuring scenic beauty: the scenic beauty estimation method. USDA Forest Service Research Paper RM-167.* Fort Collins, CO: Rocky Mountain Forest and Range Experiment Station.

Dalglish, C & Leslie, A. (2016). A question of what matters: Landscape characterisation as a process of situated, problem-oriented discourse. Landscape Research, 41(2), 212-226.

Darby, W.J. (2000). *Landscape and Identity. Geographies of Nation and Class in England.* Oxford: Berg.

Day, S. (2012). A Reflexive Lens: Exploring Dilemmas of Qualitative Methodology Through the Concept of Reflexivity. *Qualitative Sociology Review, 8(1),* 60-85.

Dearden, P. (1984). 'Factors Influencing Landscape Preferences: an empirical investigation', *Landscape Planning, 11,* 293–306.

De Lucio, J.V & Mugica, M. (1994). Landscape Preferences and Behaviour of Visitors to Spanish National Parks. *Landscape and Urban Planning, 29,* 145–160.

DeLue, R & Elkins, J. (eds.). (2008). *Landscape theory.* Abingdon: Routledge.

Devine-Wright, P. & Lyons, E. (1997). Remembering pasts and representing places: the construction of national identities in Ireland. *Journal of Environmental Psychology, 17,* 33–45.

Dixon, J. & Dürrheim, K. (2000). Displacing place-identity: a discursive approach to locating self and other. *British Journal of Social Psychology, 39,* 27–44.

Dobson, S. (2010). *Evaluating Historic Landscape Characterisation in Practice: An action research approach.* University of Sheffield. unpublished PhD thesis.

Dobson, S. (2012). Historic Landscape Characterisation in the urban domain, *Urban Design and Planning, 165(1),* 11–19.

Dossche, R., Rogge, E & Van Eetvelde, V. (2016). Detecting people's and landscape's identity in a changing mountain landscape. An example from the northern Apennines. *Landscape Research, 41, 934–949.*

Dossche, R. (2016). *Towards a sustainable rural mountain landscape. Exploring the (hi)stories of Val Borbera (northern Apennines, Italy).* University of Genoa. Unpublished PhD thesis.

Drobnick, J. (2002). Toposmia: Art, Scent, and Interrogations of Spatiality. *Angelaki, 7(1),* 31-47.

Dupont, L., Antrop, M. & Van Eetvelde, V. (2014). Eye-tracking analysis in landscape perception research: Influence of photograph properties and landscape characteristics. *Landscape Research, 39(4),* 417-432.

Egoz, S. (2013). Landscape and Identity: beyond a geography of one place. In: P. Howard, I. Thompson & E. Waterson (Eds.). *The Routledge companion to landscape studies* (pp. 272-285). Abingdon: Routledge.

Eiter, S. (2010). Landscape as an area perceived through activity: implications for diversity management and conservation. *Landscape Research, 35(3),* 339-359.

English Heritage (2002). *Historic Landscape Characterisation: template project design*. London: English Heritage.

Ernoul, L., Mathevet, R., Wardell-Johnson, A., Sandoz, A. & Willm, L. Boutron, O. (2018). Integrative Science to Achieve Long-Term Impact in Conservation: The Use of Participatory Mapping to Improve Trans-disciplinarity. *Frontiers in Ecology and Evolution, 6,* 1-4.

Evans, J. & Jones, P. (2011). The walking interview: methodology, mobility and place. *Applied Geography, 31(2),* 849-858.

Fairclough, G. (1999). *Historic Landscape Characterisation "The State of the Art".* London: English Heritage.

Fairclough, G. (2006). Large Scale, long duration and broad perceptions: scale issues in Historic Landscape Characterisation. In: G. Lock & B. Molyneaux (Eds.). *Confronting Scale in Archaeology: Issues of Theory and Practice* (pp. 203–215). Dordrecht: Springer

Fairclough, G. (2008). 'The Long Chain': Archaeology, historical landscape characterization and time depth in the landscape. In: G. Fairclough, R. Harrison, J. Schofield, J.H, Jameson (Eds.). *The Heritage Reader* (pp.408-424). London: Routledge.

Fairclough, G., Lambrick, G., & Hopkins, D. (1999). *Yesterday's World, Tomorrow's Landscape (The English Heritage Historic Landscape Project 1992-1994).* London: English Heritage.

Fairclough, G., Lambrick, G., & Hopkins, D. (2002). Chapter 8: Historic Landscape Characterisation in England and a Hampshire case study. In G. Fairclough & S. Rippon (Eds.). *Europe's cultural landscape: Archaeologists and the management of change (EAC occasional paper no 2)* (pp. 69–83). Brussels: Europae Archaeologiae Consilium.

Fairclough, G. & Wigley, A. (2005). Historic Landscape Characterisation: An English Approach to Landscape Understanding and the Management of Change. In: M. Ruiz del Arbol & A. Orejas (Eds.). *Landscapes as Cultural Heritage in the European Research - proceedings of the Open Workshop Madrid, 29th October 2004* (pp.87-106). Madrid.

Fairclough, G & Herring, P. (2016). Lens, mirror, window: interactions between Historic Landscape Characterisation and Landscape Character Assessment. *Landscape Research*, *41(2),* 186–198.

Fairclough G., Sarlöv Herlin I. & Swanwick C. (2018). Landscape character approaches in global, disciplinary and policy context: an introduction. In: G. Fairclough, I. Sarlöv Herlin, & C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp. 3-20). London: Routledge.

Fairclough, G., Sarlöv-Herlin, I. & Swanwick, C. (Eds.). (2018). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment (1st ed.).* London: Routledge.

Finch, J. (2007). Wider famed countries: historic landscape characterisation in the midland shires. Landscapes, 8(2), 50–63.

Fisher, B.S & Nasar, J.L. (1992). Fear of crime in relation to three exterior site features: prospect, refuge and escape. *Environment and Behaviour, 24 (1),* 35-65.

Foo, P., Warren, W.H., Duchon, A. & Tarr, M.J. (2005). Do humans integrate routes into a cognitive map? Map-versus landmark-based navigation of novel shortcuts. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 31(2),* 195–215.

Forman, R.T.T. & Godron, M. (1986). *Landscape Ecology.* New York: John Wiley and Sons.

Fry, G. (2001). Multifunctional landscapes: towards transdisciplinary research. *Landscape and Urban Planning*, 57, 159-168.

Galindo Galindo, M.P. & Corraliza Rodríguez, J.A. (2000). Environmental aesthetics and psychological wellbeing: relationships between preference judgements for urban landscapes and other relevant affective responses. *Psychology in Spain, 4,* 13-27.

Galindo, M.P. & Hidalgo, M.C. (2005). Aesthetic preferences and the attribution of meaning: environmental categorization processes in the evaluation of urban scenes. *International Journal of Psychology, 40(1),* 19–26.

Galway, L. P., Beery, T., Jones-Casey, K., & Tasala, K. (2019). Mapping the Solastalgia Literature: A Scoping Review Study. *International Journal of Environmental Research and Public Health*, *16*(15), 2662.

García-Díez, V., Garcia Llorente, M. & González, J. (2020). Participatory Mapping of Cultural Ecosystem Services in Madrid: Insights for Landscape Planning. *Land, 9,* 244.

Garcia-Martin, M., Fagerholm, N., Bieling, C., Gounaridis, D., Kizos, T., Printsmann, A., Müller, M. Lieskovsky, J. & Plieninger, T. (2017). Participatory mapping of landscape values in a Pan-European perspective. *Landscape Ecology, 32,* 2133–2150.

Gastaldo, D. (2015). *Elements for writing up a qualitative methodology chapter in a doctoral dissertation. NUR2014: Foundations of qualitative inquiry.* Toronto, Canada: University of Toronto.

Gibson, J.J. (1966). *The Senses Considered as Perceptual Systems.* Boston, MA: Houghton Mifflin.

Gibson, J.J. (1979). *The Ecological Approach to Visual Perception.* Boston, MA: Houghton Mifflin.

Gibson, J.J. (1986). The theory of affordances. In: J.J. Gibson (Ed.). *The ecological approach to visual perception* (pp.127-143). USA: Lawrence Erlbaum Associates Inc.

Graumann, C.F. (1983). On multiple Identities. *International Social Science Journal ,35,* 309–321.

Groening, G. (2007). The 'landscape must become law' – or should it?. *Landscape Research, 32,* 595–612.

Gualtieri, A. R. (1983). Landscape, consciousness and culture, *Religious Studies, 19,* 161–174.

Giuliani, M.V. & Feldman, R. (1993). Place Attachment in a Developmental and Cultural Context. *Journal of Environmental Psychology, 13,* 267-274.

Granö, J.G. (1929). *Reine Geographie. Eine Methodologische Studie Beleuchtet mit Beispielen aus Finnland und Estland.* Helsingfors, Helsinki.

Granö., J.G. (1997). *Pure Geography*. Edited by O. Granö & A. Paasi, translated by M. Hicks. Baltimore and London: The John Hopkins University Press.

Haartsen, T., Groote, P. & Huigen, P.P.P. (Eds.). (2000). *Claiming Rural Identities.* Assen: Van Gorcum.

Hägerhäll, C. (2000). Clustering predictors of landscape preference in the traditional Swedish cultural landscape: Prospect-refuge, mystery, age and management. *Journal of Environmental Psychology, 20,* 83-90.

Hall, T., Lashua, B. & Coffey, A. (2008). Sound and the Everyday in Qualitative Research. *Qualitative Inquiry, 14(6),* 1019-1040.

Harris, O. (2010). Emotional and Mnemonic Geographies at Hambledon Hill: Texturing Neolithic Places with Bodies and Bones. *Cambridge Archaeological Journal, 20,* 357 - 371.

Hedblom, M., Hedenås, H., Blicharska, M., Adler, S., Knez, I., Mikusiński, G., Svensson, J., Sandström, S., Sandström, P. & Wardle, D.A. (2020). Landscape perception: linking physical monitoring data to perceived landscape properties. *Landscape Research, 45(2),* 179-192.

Heddon-on-the-Wall Parish Council. Retrieved from: http://www.parish-council.com/heddononthewall/

Heft, H. and Nasar, J.L. (2000). Evaluating environmental scenes using dynamic versus static displays. *Environment and Behavior, 32,* 301–322.

Heidegger, M. (1962). *Being and Time.* Oxford: Basil Blackwell.

Herring, P. (1998). *Cornwall's Historic Landscape, Presenting a Method of Historic Landscape Character Assessment*. Truro: Cornwall County Council.

Herring, P. (2013). Valuing the whole historic landscape. In P. Howard, I. Thompson, & E. Waterton (Eds.), The Routledge Companion to Landscape Studies (pp. 166–178). London and New York: Routledge.

Hesse, R. (2010). LiDAR-derived Local Relief Models – a new tool for archaeological prospection. *Archaeological Prospection, 17(2),* 67-72.

Historic England. *Historic Landscape Charactersation*. Retrieved (21/04/2019) from https://historicengland.org.uk/images-books/publications/using-historic-landscape-characterisation/.

Holmes, A. (2020). Researcher Positionality - A Consideration of Its Influence and Place in Qualitative Research - A New Researcher Guide. *Shanlax International Journal of Education, 8,* 1-10.

Howard, P. (2011). *An introduction to landscape.* London: Ashgate Publishing, Ltd.

Howard, P. (2013). Perceptual Lenses. In: P. Howard, I. Thompson, & E. Waterton (Eds.), *The Routledge Companion to Landscape Studies* (pp. 43-53). London and New York: Routledge.

Hummon, D. (1992). Community Attachment: Local Sentiment and Sense of Place. In: I. Altman & S. Low (Eds.) *Place Attachment.* New York: Plenum Press.

Hunt, J. D. & Willis, P. (Eds.) (1988). *The Genius of the Place: English Landscape Garden, 1620-1820.* Cambridge, Massachusetts and London: MIT Press.

Hunziker, M., Buchecker, M. & Hartig, T. (2007). Space and place - Two aspects of the human-landscape relationship. In: F. Kienast, O. Wildi & S. Ghosh (Eds.). *A changing world. Challenges for landscape research* (pp. 47–62). The Netherlands: Springer.

ICOMOS (2008). *Introduction to Urban Cultural Landscapes & the Spirit of Place. ICOMOS, 18th General Assembly and Scientific Symposium, Quebec 2008*. Also available at: http://www.international.icomos.org/quebec2008/cd/toindex/77_pdf/77-hFCw-13.pdf.

Inglis, F. (1987). Landscape as Popular Culture. *Landscape Research, 12(3),* 20–25.

Ingold, T. (2000). *The Perception of the Environment. Essays in Livelihood, Dwelling and Skill.* New York: Routledge.

Ingold, T. (2007). *Lines: A Brief History.* London: Routledge.

Ingold, T. (2011). *Being Alive: Essays on Movement, Knowledge and Description* (1st ed.). London: Routledge.

Ingold, T., & Vergunst, J.L. (Eds.). (2008). *Ways of Walking: Ethnography and Practice on Foot (1st ed.).* London: Routledge.

Jackson, J. B. (1980). *The necessity of ruins.* Amherst: The University of Massachusetts Press.

Jacobs, M. (2006). *The Production of Mindscapes: A Comprehensive Theory of Landscape Experience. Wageningen.* Retrieved from http://edepot.wur.nl/40182.

Jakobsson, A. (2009). *Experiencing Landscape While Walking: on the interplay between garden design, sensory experience and medical spa philosophy at Ronneby Spa.* SLU, Uppsala. Unpublished PhD Thesis

Jakle, J. A. (1987). *The Visual Elements of Landscape.* Amherst: University of Massachusetts Press.

Jansson, M. (2010). Attractive Playgrounds: some factors affecting user interest and visiting patterns. *Landscape Research, 35(1),* 63–81.

Janssen, J. (2004). Forced farewell- on the rise of the superfarmer. *Oase Architectural Journal, 63,* 32-61.

Jiven, G. & Larkham, P.J. (2003). Sense of Place, Authenticity and Character: A Commentary. *Journal of Urban Design, 8,* 67–81.

Johnston, R.J. (1986). *On Human Geography.* Oxford: Blackwell.

Jones, M. (2003). The concept of cultural landscape: discourse and narratives. In: H. Palang & G. Fry (Eds.). *Landscape Interfaces: Cultural Heritage in Changing Landscapes* (pp. 21-52). Dordrecht: Kluwer Academic Publishers.

Jones, M., (2004). Seasonal landscapes in Northern Europe. *Diedut, 3,* 11-38.

Jones, M. (2007). The European Landscape Convention and the question of public participation. *Landscape Research, 32(5),* 613-633.

Jones, M. & Stenseke, M. (2011) The issue of public participation in the European Landscape Convention. In: M. Jones & M. Stenseke (Eds.). *The European Landscape Convention: challenges of participation* (pp. 1-26). Dordrecht: Springer.

Jorgensen, B. S. & Stedman, R.C. (2001). Sense of Place as an Attitude: Lakeshore Owners Attitudes Toward Their Properties. *Journal of Environmental Psychology, 21(3),* 233-248.

Kahila-Tani, M., Broberg, A., Kyttä, M. & Tyger, T. (2016). Let the Citizens Map—Public Participation GIS as a Planning Support System in the Helsinki Master Plan Process. *Planning Practice & Research, 31(2),* 195-214.

Kaltenborn, B. P. (1998). Effects of sense of place on responses to environmental impacts: a study among residents in Svalbard in the Norwegian High Arctic. *Applied Geography, 18(2),* 169-189.

Kaplan, R. & Herbert, E.J. (1987). Cultural and sub-cultural comparison in preferences for natural settings. *Landscape and Urban Planning, 14,* 281-293

Kaplan, R. & Kaplan, S. (1978). *Humanscape: environments for people.* USA: Duxbury Press.

Kaplan, R. & Kaplan, S. (1989). *The experience of nature: A psychological perspective.* New York: Cambridge University Press.

Kaplan, R., Kaplan, S. & Ryan, R.L. (1998). *With People in Mind.* USA: Island Press.

Kaplan, S. (1975). An informal model for the prediction of preference. In: E.H. Zube, R.O. Brush & Fabos, J.G. (Eds.). *Landscape Assessment: values, perception, and resources* (pp.92-101). Pennsylvania: Dowden, Hutchinson & Ross Inc.

Karjalainen, E. & Tyrväinen, L. (2002). Visualization in forest landscape preference research: a Finnish perspective. *Landscape and Urban Planning, 59(1),* 13–28.

Kaymaz, I. (2012). *Landscape Perception, Landscape Planning*. InTech.

Knez, I., & Eliasson, I. (2017). Relationships between personal and collective place identity and well-being in mountain communities. *Frontiers in Psychology, 8,* Article 79.

Knigge, L. & Cope, M. (2006). Grounded Visualization: Integrating the Analysis of Qualitative and Quantitative Data through Grounded Theory and Visualization. *Environment and Planning A: Economy and Space, 38(11),* 2021-2037.

Korpela, K.M. (1989). Place-identity as a product of environmental self-regulation. *Journal of Environmental Psychology, 9,* 241–256.

Korpela, K.M., Hartig, T., Kaiser, F.G. & Fuhrer, U. (2001). Restorative experience and selfregulation in favorite places. *Environment and Behavior, 33,* 572–589.

Krauss, W. (2006). Of Otters and Humans: an approach to the politics of nature in terms of rhetoric. *Conservation and Society, 3(2),* 354–70.

Krauss, W. (2010). The Dingpolitik of Wind Energy in Northern German Landscapes: an ethnographic case study. *Landscape Research, 35(2),* 195–208.

Kusenbach, M. (2003). Street Phenomenology: The go-along as ethnographic research tool. *Ethnography, 4(3),* 455-485.

Kyttä, M., Kahila, M. & Broberg, A. (2011). Urban infill policy and the perceived quality of the environment. *Urban Design International, 16(1),* 19–35.

Land Use Consultants (1994). *The Landscape of Bodmin Moor*. Countryside Commission.

Larkham, P. J. (1996). *Conservation and the City.* London and New York: Routledge.

Lawrence, D.H. (1991). *Studies in Classic American Literature*. London and New York: Penguin.

Lee, G. (2018). On calling place: language, naming and the understanding of landscape character attributes of cultural places in the Asia-Pacific region. In: G. Fairclough, I. Sarlöv Herlin, & C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp.217-233). London: Routledge.

Leeman, A.D. (1990). *Wolters' Beknopt Latijns-Nederlands Woordenboek.* Groningen: Wolters-Noordhoff bv.

Lefebvre, H. (1991). *Production of Space.* Oxford and Victoria: Blackwell.

Li, K., Woudstra, J. & Feng, W., (2010). "Eight Views" versus "Eight Scenes": the history of the Bajing tradition in China'. *Landscape Research, 35(1),* 83–110.

Little, B.R. (2010). Opening space for project pursuit: affordance, restoration and chills. In: C. Ward Thompson, P. Aspinall & S. Bell (Eds.). *Open Space: People Space 2: Innovative Approaches to Researching Landscape and Health* (pp.163-178). London: Routledge.

Liu, J., Kang, J., Luo, T., Behm, H. & Coppack, T. (2013). Spatiotemporal variability of soundscapes in a multiple functional urban area. *Landscape and Urban Planning*, *115*, 1-9.

Loupa Ramos, I., Bernardo, F., & Van Eetvelde, V. (2016). Landscape identity: Implications for policymaking. *Land Use Policy, 53,* 36–43.

Loupa Ramos, I. & Pinto-Correira, T., (2018). Landscape Character Assessment across scales: insights from the Portuguese experience of policy and planning. In: G. Fairclough, I. Sarlöv Herlin, & C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp.106-117). London: Routledge.

Loupa Ramos, I., Bianchi, P., Bernardo, F. & Van Eetvelde V. (2019) What matters to people? Exploring contents of landscape identity at the local scale. *Landscape Research, 44(3),* 320-336.

Lowenthal, D. (1986). Introduction. In: *E.* Penning-Rowsell & D. Lowenthal (Eds.) *Landscape meanings and values* (pp. 1-2). London: Allen & Unwin.

Lowenthal, D. (2005). Natural and cultural heritage. *International Journal of Heritage Studies, 11,* 81-92.

Lynch, K. (1960). *The image of the city.* Cambridge, MA: MIT Press.

Macinnes, L. (2004) Historic Landscape Characterization. In: K. Bishop & A. Phillips (Eds.). *Countryside Planning: New approaches to management and conservation*. London: Earthscan.

Macpherson, H. (2008). I don't know why they call it the Lake District they might as well call it the rock district! The workings of humour and laughter in research with members of visually impaired walking groups. *Environment and Planning D: Society and Space, 26*, 1080–1095.

Macpherson, H. (2010). Non-representational Approaches to Body-Landscape Relations. *Geography Compass, 4(1),* 1–13.

Macpherson, H. (2016). Walking methods in landscape research: moving bodies, spaces of disclosure and rapport, *Landscape Research, 41(4),* 425-432.

Manzo, L. C. (2003). Beyond House and Haven: Toward a Revisioning of Emotional Relationships with Places. *Journal of Environmental Psychology, 23(1),* 47-61.

Marr, D. (1982). *Vision: a Computational Investigation into the Human Representation and Processing of Visual Information.* San Francisco: Freeman.

Martin, J. (2004). Applications of Landscape Character Assessment. In: K. Bishop, A. Phillips (Eds.). *Countryside Planning* (pp.203-221). Earthscan: London.

Matsinos, Y.G., Mazaris, A.D. & Papadimitriou, K.D. *(2008).* Spatio-temporal variability in human and natural sounds in a rural landscape. *Landscape Ecology, 23,* 945–959.

Maulan, S., Sharifi, M.K.M. & Miller, P.A. (2006). Landscape preference and human wellbeing. *International Journal on Sustainable Tropical Design Research & Practice, 1(1),* 25-32.

Meinig, D. (1979). The beholding eye: ten versions of the same scene. In: D. Meinig (Ed.) *The interpretation of ordinary landscapes: geographical essays* (pp. 33-50). New York: Oxford University Press.

Merleau-Ponty, M. (1962). *The Phenomenology of Perception.* London: Routledge.

Mitchell, D. (2001). The Lure of the Local: landscape studies at the end of a troubled century. *Progress in Human Geography, 25,* 269–281.

Moles, K.A. (2008). Walk in Thirdspace: Place, Methods and Walking. *Sociological Research Online*, *13(4),* 31-39.

Moore, R. & Cosco, N. (2007). What makes a park inclusive and universally designed? A multi-method approach. In: C. Ward Thompson & P. Travlou (Eds.). *Open Space: People Space* (pp.85-110). London: Taylor & Francis.

Moore, R. & Cosco, N. (2010). Using behaviour mapping to investigate healthy outdoor environments for children and families: conceptual framework, procedures and applications. In: C. Ward Thompson, P. Aspinall & Bell, S. (Eds.). *Open Space: People Space 2: Innovative Approaches to Researching Landscape and Health (*pp.33-73) London: Routledge.

Muir, R. (1999). *Approaches to Landscape.* London: Macmillan Press Ltd.

Mücher, C.A., Klijn, J.A., Wascher, D.M. & Schaminée, J.H.J. (2010). A new European Landscape Classification (LANMAP): a transparent, flexible and user-oriented methodology to distinguish landscapes. *Ecological Indicators, 10,* 87–103.

Myers, M.S. & Ward Thompson, C. (2003). Interviews and questionnaires. In: S. Bell (Ed.) *Crossplan: Integrated, Participatory Landscape Planning as a Tool for Rural Development.* (pp. 17-29). Edinburgh: Forestry Commission.

Naveh, Z. (1995). Interactions of landscapes and cultures. *Landscape and Urban Planning, 3,* 43-54.

Naveh, Z. (2000). What is holistic landscape ecology? A conceptual introduction. *Landscape and Urban Planning, 50,* 7-26.

Naveh, Z., (2001). Ten major premises for a holistic conception of multifunctional landscapes. *Landscape and Urban Planning, 57,* 269-284.

Naveh, Z. (2005). Toward a transdisciplinary landscape science. In: J. Wiens & M. Moss (Eds.). *Issues and Perspectives in Landscape Ecology* (pp. 346-354). Cambridge: Cambridge University Press.

Naveh, Z. & Lieberman, A. (1994). *Landscape Ecology: Theory and Application.* New York: Springer-Verlag.

Nieman, T.J. (1980). The visual environment of the New York coastal zone: user preferences and perceptions. *Coastal Zone Management Journal, 8(1*), 45-46.

Nijhuis, S., Van Lammeren, R. & Van der Hoeven, F. (2011). *Exploring the visual landscape: Advances in physiognomic landscape research in the Netherlands.* Amsterdam: IOS Press BV.

Nogué, J. & Sala, P. (2018). Landscape, local knowledge and democracy: the work of the Landscape Observatory of Catalonia. In: G. Fairclough, I. Sarlöv Herlin, C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp. 265-278). London: Routledge.

Norberg-Schulz, C. (1980). *Genius Loci: Towards a Phenomenology of Architecture.* New York: Rizzoli

Ode, Å., Tveit, M.S. & Fry, G. (2008). Capturing landscape visual character using indicators: touching base with landscape aesthetic theory. *Landscape Research, 33,* 89-117.

Oldenburg, R. (1989). *The great good place.* New York: Paragon House.

Olwig, K. (1996). Recovering the substantive nature of landscape. *Annals of the Association of American Geographers, 86,* 630-653.

Olwig, K. (2002). *Landscape, Nature and the Body Politic. From Britain's Renaissance to America's New World.* Madison: The University of Wisconsin Press.

Olwig, K. (2003). Landscape: the Lowenthal legacy. *Annals of the Association of American Geographers, 93,* 871-877.

Olwig, K. (2006). Place contra space in a morally just landscape. *Norwegian Journal of Geography, 60(1)*, 24–31.

Olwig, K. (2007). Multiple interfaces of the European Landscape Convention: the European Landscape Convention as "interface". *Norsk Geografisk Tidsskrift, 6*, 214-215.

Olwig, K., Dalglish, C., Fairclough, G. & Herring, P. (2016). Introduction to a special issue: the future of landscape characterisation, and the future character of landscape – between space, time, history, place and nature. *Landscape Research, 41(2),* 169-174.

Ottoson, J. & Grahn, P. (2008). The Role of Natural Settings in Crisis Rehabilitation: how does the level of crisis influence the response to experiences of nature with regard to measures of rehabilitation?. *Landscape Research, 33(1),* 51–70.

Paasi, A. (2002). Bounded spaces in the mobile world: Deconstructing 'regional identity'. *Tijdschrift voor Economische en Sociale Geografie, 93,* 137–148.

Palang, H., Fry, G., Jauhiainen, J.S., Jones, M. & Sooväli, H. (2005). Editorial: landscape and seasonality – seasonal landscapes. *Landscape Research, 30,* 165-172.

Palang, H., Printsmann, A., Koivupuu, M., Lang, V. & Konsa, M. (2007). The veiled patterns of power. Changes in the marginalised countryside of Estonia and local identity. In: B. Pedroli, A. Van Doorn & D. Wascher (Eds.). *Europe's Living Landscapes. Essays Exploring Our Identity in the Countryside* (pp. 243–258). Wageningen and Zeist: Landscape Europe/KNNV Publishing.

Palmer, J.F., Hoffman, R.E. (2001). Rating reliability and representation validity in scenic landscape assessments. *Landscape and Urban Planning, 54,* 149-161.

Passini, R. (1996). Wayfinding design: logic, application and some thoughts on universality. *Design Studies, 17,* 319–331.

Patterson, M.E. & Williams D.R. (2005). Maintaining Research Traditions on Place: Diversity of Thought and Scientific Progress. *Journal of Environmental Psychology, 25(4),* 361-380.

Pennartz, P.J.J. & Elsinga, M.G. (1990). Adults, Adolescents and Architects: differences in perception of the urban environment. *Environment and Behaviour, 22,* 675–714.

Pereira-Roders, A. (2007). *RE-ARCHITECTURE: Lifespan Rehabilitation of Built Heritage.* Eindhoven: Bouwstenen Publication.

Porteous, J.D. (1985). Smellscape. *Progress in Human Geography, 9(3),* 356–378.

Prieur, M. & Durousseau, S. (2006). Landscape and public participation. In: Council of Europe. *Landscape and sustainable development: challenges of the European Landscape Convention.* (pp. 165- 207). Strasbourg: Council of Europe Publishing.

Primdahl, J. & Kristensen, L. (2016). Landscape strategy making and landscape characterisation: experiences from Danish experimental planning processes. *Landscape Research, 41(2),* 227–238.

Primdahl, J., Kristensen, L., Busck, A.G. & Vejre, H. (2010). Functional and Structural Changes of Agricultural Landscapes: how changes are conceived by local farmers in two Danish rural communities. *Landscape Research, 35(6),* 633–653.

Proshansky, H. M. (1978). The City and Self-Identity. *Environment and Behaviour, 10,* 147-169.

Proshansky H., Fabian A.K. & Kaminoff R. (1983). Place-identity: Physical world socialization of the self. *Journal of Environmental Psychology, 3,* 57–83.

Purcell, A.T. (1987). Landscape perception, preference and schema discrepancy. *Environment and Planning, Planning and Design, 14,* 67–92.

Rodaway, P. (1994). *Sensuous Geographies: body, sense and place*. London: Routledge.

Relph, E. (1976). *Place and placelessness.* London: Pion Limited.

Riley, M. & Harvey, D. (2005). Landscape Archaeology, Heritage and the Community in Devon: an oral history approach. *International Journal of Heritage Studies, 11(4),* 269–288.

Rishbeth, C. & Powell, M. (2012). Place Attachment and Memory: Landscapes of Belonging as Experienced Post-migration. Landscape Research. *Landscape Research, 38,* 1-19.

Sarlöv Herlin, I. (2016). Exploring the national contexts and cultural ideas that preceded the Landscape Character Assessment method in England. *Landscape Research, 41(2),* 175-185.

Sarlöv Herlin, I., Nord, J. & Qviström, M., (2018). Landscape characterisation in Sweden: landscape in the planning system. In: G. Fairclough, I. Sarlöv Herlin, & C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment.* (pp. 53-68). London: Routledge.

Sauer, C.O. (1925). The Morphology of Landscape. *University of California Publications in Geography, 2,* 19-53.

Schacter, D. L., Addis, D. R., Hassabis, D., Martin, V. C., Spreng, R. N. & Szpunar, K. K. (2012). The future of memory: remembering, imagining, and the brain. *Neuron*, *76(4),* 677–694.

Schama, S. (1995). *Landscape and memory.* London: Harper Collins.

Scott, A. (2011). Beyond the conventional: Meeting the challenges of landscape governance within the European Landscape Convention?. *Journal of Environmental Management, 92,* 2754–2762.

Scott, A., Carter, C., Brown, K. & White, V. (2009). "Seeing is Not Everything": Exploring the landscape experience of different public. *Landscape Research, 34(4),* 397–424.

Selman, P. (2006). *Planning at the landscape scale.* London: Routledge.

Selman, P. (2010). Landscape planning: preservation, conservation and sustainable development. *Town Planning Review, 81(4),* 382-406.

Setten, G. (2004). The Habitus, the Rule and the Moral Landscape. *Cultural Geographies, 11,* 389–415.

Setten, G. (2005). Farming the Heritage: on the production and construction of a personal and practised landscape heritage. *International Journal of Heritage Studies, 11(1),* 67–79.

Sevenant, M. (2010). *Variation in landscape perception and preference. Experiences from case studies in rural and urban landscapes observed by different groups of respondents.* Ghent: Ghent University. Unpublished PhD-thesis.

Sevenant, M. & Antrop, M., (2009). Transdisciplinary landscape planning: Does the public have aspirations? Experiences from a case study in Ghent (Flanders, Belgium). *Land Use Policy, 27,* 373-386.

Shore, N. (2007). *Whose Heritage? The Construction of Cultural Built Heritage in a Pluralist, Multi-Cultural England.* University of Newcastle upon Tyne, School of Architecture, Planning and Landscape. Unpublished PhD thesis.

Simensen, T., Halvorsena, R. & Erikstad, L. (2018). Methods for landscape characterisation and mapping: A systematic review. *Land Use Policy, 75,* 557–569.

Smith, J. A. & Shinebourne, P. (2012). Interpretative phenomenological analysis. In: H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.). *APA handbooks in psychology. APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (p. 73–82). American Psychological Association.

Soini, K. (2004). Between insideness and outsideness—studying locals' perceptions of landscape. In: H. Palang, H. Sooväli, M. Antrop, G.Setten (Eds.). *European Rural Landscapes. Persistence and Change in a Globalising Environment* (pp.83-97). Dordrecht/Boston/London: Kluwer Academic Publishers.

Solnit, R. (2000). *Wanderlust: A history of walking*. New York: Viking.

Stanners, D. & Bourdeau, P. (Eds.). (1995). *Europe's environment, The Dobris Assessment*. Copenhagen: Phare and European Environment Agency.

Stedman, R. C. (2002). Toward a Social Psychology of Place: Predicting Behaviour from Place-Based Cognitions, Attitude, and Identity. *Environment and Behaviour, 34(5),* 561- 581.

Stephenson, J. (2008). The cultural values model: an integrated approach to values in landscapes. *Landscape and Urban Planning, 84(2),* 127-139.

Stobbelaar, D. J. & Pedroli, B. (2011). Perspectives on Landscape Identity: A Conceptual Challenge. *Landscape Research, 36(3),* 321–339.

Stokols, D. & S. A. Schumaker (1981). People in Places: A Transactional View of Settings. In: J.H. Harvey (Ed.). *Cognition, Social Behaviour and the Environment.* (pp. 441-488). New Jersey: Lawrence Erblaum Associates.

Sugiyama, T. & Ward Thompson, C. (2007). Measuring the quality of the outdoor environment relevant to older people's lives. In: C. Ward Thompson & P. Travlou (Eds.). *Open Space: People Space.* (pp. 153-162). London: Taylor & Francis.

Svobodova, K., Vondrus, J., & Filova, L. & Besta, M. (2010). The Role of Familiarity with the Landscape in Visual Landscape Preferences. *Journal of Landscape Studies, 4,* 11-24.

Swaffield, S., Challenger, N. & Davis, S. (2018). *He tangata, he tangata, he tangata*: landscape characterisation in Aotearoa-New Zealand. In: G. Fairclough, I. Sarlöv Herlin & C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp.187-202). London: Routledge.

Swanwick, C. (2002). *Landscape Character Assessment – Guidance for England and Scotland: Topic Paper 1 – Recent Practice and the Evolution of Landscape Character Assessment*. Cheltenham: Countryside Agency and Battleby: Scottish Natural Heritage.

Swanwick, C. (2004). The assessment of countryside and landscape character in England: an overview. In: K. Bishop & A. Phillips (Eds.). *Countryside Planning—New Approaches to Management and Conservation* (pp. 109-124). London: Earthscan.

Swanwick, C. & Land Use Consultants (2002). *Landscape Character Assessment - Guidance for England and Scotland*. Cheltenham: Countryside Agency and Battleby: Scottish Natural Heritage.

Swanwick, C., Fairclough, G. (2018). Landscape character: Experience from Britain. In: G. Fairclough, I. Sarlöv Herlin, C. Swanwick (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp. 21-36). London: Routledge.

Terkenli, T.S., Gkoltsiou, A. & Kavroudakis, D. (2021). The Interplay of Objectivity and Subjectivity in Landscape Character Assessment: Qualitative and Quantitative Approaches and Challenges. *Land, 10,* 53.

Thomas, K. (1984). *Man and the Natural World: changing attitudes in England 1500–1800.* Harmondsworth: Penguin.

Thomas, J. (1993). The politics of vision and archaeologies of landscape. In: B. Bender (Ed.). *Landscape: Politics and Perspectives.* Oxford: Berg.

Thompson, I. (2003). What use is the Genius Loci?. In: S. Menin (Ed.). *Constructing Place - Mind and Matter* (pp.66-76). London and New York: Routledge.

Thompson, I., Howard, P. & Waterson, E. (2013). Introduction. In: P. Howard, I. Thompson & E. Waterson (Eds.). *The Routledge companion to landscape studies* (pp. 1-7). Abingdon: Routledge.

Thompson, S.C. & Barton,M.A. (1994). Ecocentric and Anthropocentric Attitudes toward the Environment. *Journal of Environmental Psychology, 14,* 149–157.

Thwaites, K. & Simkins, I. (2006). *Experiential Landscape: An Approach to People, Place and Space*. London: Routledge.

Tilley, C. (1994). *A Phenomenology of Landscape: Places, Paths, and Monuments.* Oxford and Providence: Berg.

Tilley, C. (2004). *The materiality of stone: explorations in landscape phenomenology.* Oxford: Berg Publishers.

Tolia-Kelly, D. (2004). Landscape, Race and Memory: biographical mapping of the routes of British Asian landscape values. *Landscape Research, 29(3),* 277–292.

Tress, B. & Tress, G. (2003). Scenario visualisation for participatory landscape planning – a study from Denmark. *Landscape and Urban Planning, 64,* 161-178.

Tress, B., Tress, G. & van der Valk, A. (2003). *Interdisciplinary and transdisciplinary landscape studies: potential and limitations.* Wageningen: Alterra Green World Research.

Troll, C. (1939). Luftbildforschung und Landeskundige Forschung. Erkundliches Wissen. Wiesbaden: F. Steiner Verlag.

Tuan, Y. (1974). *Topophilia: study of environmental perception, attitude and value.* New Jersey: Prentice-Hall.

Tuan, Y. (1975). Images and mental maps. *Annals of the Association of American Geographers, 65,* 205-213.

Tuan, Y. (1977). *Space and Place: The Perspective of Experience.* Minnesota: University of Minnesota Press.

Tuan, Y. (1980). *Rootedness versus Sense of Place. Landscape, 24,* 3-8.

Tudor, C. (2014). *An approach to landscape character assessment. Natural England.* Retrieved March 13, 2020, from https://www.gov.uk/government/publications/landscape-character-assessments-identify-and-describe-landscape-types.

Turner, S. (2006). Historic Landscape Characterisation: A landscape archaeology for research, management and planning. *Landscape Research, 31,* 385–398.

Turner, S. Historic landscape characterisation: an archaeological approach to landscape heritage In: G. Fairclough, I. Sarlöv Herlin, & C. Swanwick, (Eds.). *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment* (pp.37-50). London: Routledge.

Tunstall, S., Tapsell, S. & House, M. (2004). Children's Perceptions of River Landscapes and Play: what children's photographs reveal. *Landscape Research, 29(2),* 181–204.

Tress, B. & Tress, G. (2001). Capitalising on multiplicity: a transdisciplinary systems approach to landscape research. *Landscape and Urban Planning, 57,* 143-157.

Tveit, M., Ode, Å. & Fry, G. (2006). Key concepts in a framework for analysing visual landscape character. *Landscape Research, 31,* 229-255.

Twigger-Ross C.L. & Uzzell D.L. (1996). Place and identity processes. *Journal of Environmental Psycholog, 16,* 205–220.

Ulrich, R.S. (1979). Visual landscapes and psychological well-being. *Landscape Research, 4,* 17-23.

Ulrich, R.S. (1981). Natural versus urban scenes: Some psychophysiological effects. *Environment and Behaviour, 13,* 523-556.

Ulrich, R.S. (1993). Biophilia, biophobia and natural landscapes. In: S.R. Kellert & E.O. Wilson (Eds.). *The Biophilia Hypothesis* (pp. 73-137). Washington DC: Island Press.

UNESCO 1972. *Convention Concerning the Protection of the World Cultural and Natural Heritage*. Paris: UNESCO. Retreived from: http://unesdoc.unesco.org/images/0011/001140/114044Eb.pdf.

UNESCO 2003. *Convention for the Safeguarding of Intangible Cultural Heritage*. Paris: UNESCO. Retreived from: http://unesdoc.unesco.org/images//0013/001325/132540e.pdf.

UNESCO 2011. *Recommendation on the Historic Urban Landscape, Including a Glossary of Definitions*. Paris: UNESCO. Retreived from: http://unesdoc.unesco.org/images/0021/002150/215084e.pdf#page=52.

Urry, J. (2000). *Sociology beyond societies.* London: Routledge.

Uzzell, D. (1991). Environmental psychological perspectives on landscape. *Landscape Research, 16,* 3-10.

Van Eetvelde, V. & Antrop, M. (2004). Analyzing structural and functional changes of traditional landscapes: two examples from Southern France. *Landscape and Urban Planning, 67 (1-4),* 79-95.

Van Eetvelde, V. & Antrop, M. (2009). Indicators for assessing changing landscape character of cultural landscapes in Flanders (Belgium). *Land Use Policy, 26,* 901–910.

Van Mansvelt, J. D. & Pedroli, B. (2003). Landscape, a matter of identity and integrity. Towards sound knowledge, awareness and involvement. In: H. Palang & G. Fry (Eds.). *Landscape Interfaces* Dordrecht, Boston, MA and London: Kluwer.

Van Putten, S. (2020). Perception verbs and the conceptualization of the senses. The case of Avatime. *Linguistics: an International Review, 58 (2),* 425-462.

Van Zoest, J.G.A. (1994). *Landschapskwaliteit. Uitwerking van de kwaliteitscriteria in de nota landschap.* Wageningen, Staring Centrum.

Vervoort, P., Dabaut, N., De Meyer, S., De Schepper, C., Cordemans, K., Walpot, O. (2021). Karakterschets: Landschappen leren karakteriseren. *Ruimte, 48,* 68-71.

Wagner, M.M. & Gobster, P.H. (2007). Interpreting landscape change: Measured biophysical change and surrounding social context. *Landscape and Urban Planning, 81(1),* 67-80.

Walter, E.V. (1998). *Placeways: A Theory of Human Environment.* Chapel Hill, NC: University of North Carolina Press.

Ward Thompson, C., Aspinall, P., Bell, S., Findlay, C., Wherrett, J. & Travlou, P. (2004). *Open Space and Social Inclusion: Local Woodland Use in Central Scotland.* Edinburgh: Forestry Commission.

Ward Thompson, C. (2013). Landscape Perception and Environmental Psychology. In: P. Howard, I. Thompson, & E. Waterton (Eds.). *The Routledge Companion to Landscape Studies* (pp. 25–42). London and New York: Routledge.

Wascher, D.M.E. (2005). *European Landscape Character Areas – Typologies, Cartography and Indicators for the Assessment of Sustainable Landscapes. Final Project Report as deliverable from the EU's Accompanying Measure project European Landscape Character Assessment Initiative (ELCAI), funded under the 5th Framework Programme on Energy, Environment and Sustainable Development (4.2.2).* Wageningen: Alterra.

Wessel, A. (2010). We are what we grow: Reading a tastescape as a text of cultural history. In: A. Wessell & D.L. Brien (Eds.). *Rewriting the menu: The cultural dynamics of contemporary food choices.*

Wheeler, R. (2014). Mining memories in a rural community: Landscape, temporality and place identity. *Journal of Rural Studies, 36,* 22–32.

Willis G., Schechter S., and Whitaker K. (1999). A comparison of cognitive interviewing, expert review, and behavior coding: What do they tell us? In: *Proceedings of Survey*

Research Methods Section of the American Statistical Association (pp. 28-37). Washington, DC: American Statistical Association.

Williams, L. (2015). *Northumberland Historic Landscape Characterisation (HLC)*. York: Archaeology Data Service.

Williamson, T. (2007). Historic landscape charactersation: Some queries. *Landscapes 8 (2),* 64-71.

Winterburn, E. (2008). Historic landscape characterization in context. *Journal of the FORUM EJournal, 8.* 33-46.

Worskett, R. (1969). *The Character of Towns.* London: Architectural Press.

Wylie, J. (2002). An essay on ascending Glastonbury Tor. *Geoforum, 33(4),* 441-454.

Wylie, J. (2007). *Landscape.* London: Routledge.

Wylie J. (2012). Dwelling and displacement: Tim Robinson and the questions of landscape. *Cultural Geographies*, *19(3),* 365-383.

Wylie, J. (2013). Landscape and phenomenology. In: P. Howard, I. Thompson & E. Waterson (Eds.). *The Routledge companion to landscape studies (*pp. 54-65). Abingdon: Routledge.

Yamashita, S. (2002). Perception and evaluation of water in landscape: Use of Photo-Projective Method to compare child and adult residents' perceptions of a Japanese river environment. Landscape and Urban Planning. *Landscape and Urban Planning, 62*, 3-17.

Zonneveld, J.I.S. (1985). *Levend land. De geografie van het Nederlandse landschap.* Utrecht/Antwerpen: Bohn, Scheltem & Holkema.

Zonneveld, I.S. (1988). Landscape Ecology and its application. In: M. Moss (Ed.). *Landscape Ecology and Management.* (pp. 3-15). Montreal: Polyscience Publications Inc.

Zonneveld, I.S. (1995). *Land Ecology. An Introduction to Landscape Ecology as a Base for Land Evaluation, Land management and Conservation.* Amsterdam: SPB Academic Publishing bv.

Zube, E.H., Pitt, D.G., Anderson, T.W. (1974). *Perception and Measurement of Scenic Resources in the Southern Connecticut River Valley (Pub. No. R74-1).* Amherst: University of Massachusetts, Institute for Man and Environment.

Zube, E. H., Pitt, D. G., & Evans, G. W. (1983). A lifespan developmental study of landscape assessment. *Journal of Environmental Psychology*, 3(2), 115–128.