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UNITED KINGDOM · CHINA · MALAYSIA

MORPHOLOGICAL, SOCIAL AND PERCEPTUAL DIMENSIONS OF PUBLIC PLACES IN BRITISH NEIGHBOURHOODS

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BArch (Hons) PG Dip MAUD UDGRP

*Thesis submitted to the University of Nottingham
for the degree of Doctor of Philosophy*

TURAS
TRANSITIONING TOWARDS URBAN
RESILIENCE AND SUSTAINABILITY

EPSRC
Engineering and Physical Sciences
Research Council

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ACRONYMS

CABE: Commission for Architecture and the Built Environment
CERPHi: Ensenada Commission for the preservation of historic heritage
DfT: Department for Transport
EPSRC: Engineering and Physical Sciences Research Council
EU: European Union
NP: Neighbourhood Plan
NEDDC: Northeast Derbyshire District Council
NPPF: National Planning Policy Framework
NPPG: National Planning Policy Guidance
OPUN: Design Council for the East Midlands
RIBA: Royal Institute of British Architects
SEA: Strategic Environmental Assessment
SD: Supplementary Document
SG: Steering Group
SSPLDD: Site Specific Planning Local Development
SuDS: Sustainable urban drainage system
TURAS: Transitioning towards Urban Resilience and Sustainability
UDN: Urban Design Network

OPENING STATEMET

Abstract

This study sits within the socio-political and legislative context of a transition time worldwide, when globalisation, a communication revolution, mass migration, climate change and economic rebalancing are changing the face of the world. This work aimed to resolve some of the challenges urban practice is facing to adopt complex, systemic and multidisciplinary appraisal processes that could help deliver more sustainable neighbourhoods, looking at public life in the public realm in British neighbourhoods.

The study adopted the concept of neighbourhood coined by Barton (2000): the physical environment; the community; and human perceptions of their area. All encapsulated within six core dimensions of place proposed by Carmona et.al (2010): 'morphological', 'social', 'perceptual', 'visual', 'functional' and 'temporal' dimensions. This research concerns the first three dimensions.

Traditionally, urban studies, design guidance and planning policy in Britain have been largely dominated by morphology literature. More recently, methods for appraising the quality of the public realm were developed. However, these approaches focus on the physical aspects of place neglecting other dimensions.

The core element of this research involved the adaptation of social sciences' tools and their application to appraise two urban neighbourhoods in Nottingham, and two semi-rural towns in North East Derbyshire. The empirical study applied a variety of methods including quantitative analysis and phenomenological interpretation.

The adopted social tools were tested in professionally-led, community-led and authority-led engagement processes to inform planning policy. The correlated findings demonstrated that all three dimensions are strongly interconnected: road hierarchy, social spheres and enclave-belonging behaviours correlated; informal contact at a street level was strongly related to street patterns; public building provision was associated with the creation and development of social networks; and the value that neighbours gave to public places had correlation with certain urban characteristics of place but not with professional evaluations of urban quality.

This new knowledge made two main contributions to urban practice: methodological, with the introduction of feasible ways to appraise the social and perceptual dimensions of place in neighbourhoods; and empirical, with evidence based validation of existing synergies between three dimensions of place in neighbourhoods. It also contributed to urban literature and opened channels for further research.

This thesis demonstrated that studies that neglect social and perceptual dimensions, emphasising on morphology, might result in uncomprehensive or incomplete interpretations of place. An assumption can be made on the basis of these empirical findings that other dimensions of place that escaped the scope of this research are equally important. Following this work, field practitioners and authorities are urged to note the relevance of multi-dimensional approaches to urbanism, an urgent reform that needs to be catalysed in urban policy and practice.

I dedicate this thesis to the memory of my mother, Maria de los Angeles Lardelli (R.I.P.), who taught me to empathise with others, to pursue social justice and equity and to care for our environments. To my father, who taught me about self-discipline, commitment and work ethic. To my husband Jared Goodhead, without whom this thesis would not have been possible; and to my children, Marina and Sebastian, to encourage them to fight for causes they believe could make the world a better place for all.

Acknowledgements

I want to thank the University of Nottingham for inviting me to be part of their skilful team. I would also like to thank the Engineering and Physical Sciences Research Council (EPSRC) for the financial support that allowed the development of this work. In addition, I would like to thank the European Commission for funding the project TURAS (Transitioning towards Urban Resilience and Sustainability, Grant No 282834) that supported the research.

I also want to express my gratitude to Professor Nick Ebbs, CEO Blueprint, for inviting me to work as part of his enthusiastic team. To all the community members and professionals who kindly gave their time and energy to inform this thesis: The Meadows, Sneinton, Dronfield and Killamarsh communities and their groups and leaders, OPUN Design Council and North East Derbyshire County Council.

I am also grateful to my supervisors Dr Katharina Borsi and Dr Lucelia Rodrigues for their support during this study. My family for allowing me the time to work without complaint. Thank you all, for believing in me.

Having had the opportunity to conduct this research has been a life changing experience. Working with communities and aiming to contribute to knowledge has been a joy. But particularly emotional is knowing that I had an opportunity to look at ways in which we can be more socially sustainable, create fairer, more equitable places and ultimately, work to build a better world. This thesis has, sincerely, given meaning to my life. For that, I am forever grateful to those who made this study possible.

Preface

As a student in Argentina back in the late 1990s, I volunteered to work as a consultant to the local authority, which gave me a good level of understanding of people's real needs, political frameworks and governance challenges, and how the combination of these might translate into the urban form. I was also a founding member and Vice-president of the charitable organisation CERPHi (Ensenada Commission for the preservation of historic heritage) dedicated to the preservation of local heritage. In my role, I worked closely with communities appraising local assets in various projects nationally and internationally.

Since I immigrated to the United Kingdom, I built up a ten-year career as an Architectural Technologist and Urban Designer. Firstly working in self-employment and later on as an employee in large commercial firms. In 2004 I joined the Urban Design Group and since, I have actively worked as a volunteer for the charity, becoming the Regional Convenor for the East Midlands in 2008 and I was amongst the first Recognised Urban Design Practitioners in 2009. During this period in the UK, I gained an invaluable amount of knowledge about professional urban practice in this country; from legislation and governance to resources and current trends. I believe this background knowledge was a key element in achieving a realistic and pragmatic view on Urban Design matters, a valuable skill for producing applicable theory.

In the course of my professional career in two diverse countries, the issue of sustainability was always central to my work and therefore I opted to make a knowledge contribution to achieving more sustainable ways to deliver urban design. Also, I am aware that one of the biggest challenges of contemporary urbanism in the UK is that the construction industry is currently not able to meet the housing demand. After the economic recession, and with a large

volume of social housing having recently become inhabitable, the pressure to build new residential developments is increasing every year (Heath, 2014). Between 2013 and 2015 at least 100 people were evicted from their homes every day in the UK (Shelter, 2015). On the surface, rapid reaction might appear as the solution to the problem, but the real socio-economic cost of these programmes is still not clear. Looking at this scenario, it appears that a high priority in UK was to focus the study on residential neighbourhoods, especially since the neighbourhood also emerged as the optimum scale of analysis for social and perceptual dimensions during the literature review.

Through this thesis I aimed to open some avenues that helped lead academics and practitioners to more sustainable ways of urbanism. As urban life becomes more challenging in the face of overpopulation and climate change, societies need to become more resilience and capable of adapting to change. In order to become more resilient, it is necessary to understand what assets communities have that can be built upon. During the in-depth review of contemporaneous literature, I confirmed that urban practice still focuses primarily on the morphological aspects of place, neglecting or undermining the relevance of other dimensions. A common problem in urban practice is that professionals are not familiar with the concepts and techniques of social sciences and many local authorities do not have the necessary skills to conduct comprehensive place analyses. In neighbourhoods however, the social and perceptual dimensions are essential components of place because at the community level we form social structures, support networks, shared memories and social identities. At a neighbourhood scale, where our home is, our place emotions are also often stronger.

The first case study to be considered for this thesis was The Meadows, an area where I had lived when I first moved to Nottingham, from 2004 to 2008.

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Throughout the thesis, I remained interested to discover whether I knew my own neighbourhood as much as I thought, making a deliberate conscious effort to avoid bias and any preconceptions I might have about the place. I was thrilled to discover a vast amount of new knowledge that confirmed neighbourhoods are often shared by a wide range of lifestyles that connect to place in different ways. This thesis explores the many place interpretations residents can have, their emotional connections with place and how they might socialise. It also explores some of the highlights that we all have in common, which are mechanisms of human ecologies.

INTRODUCTION
0. Thesis Overview

This chapter starts with a brief introduction of the research context that framed the study, expanded in Chapter 1, and a concise summary of the findings. It then goes onto describing the approach to this thesis and how the problem was identified. It explains the selection of case studies and the methodologies applied to collect data. Then the scope and limitations of the study are explained, the thesis structure is summarised and finally, the main contributions to knowledge are highlighted.

0.1 Research context and summary

"Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature"

(Principle 1, Rio Declaration, 1992, p.1).

Traditionally, urban studies tend to focus primarily on the morphological dimension. Design guidance and planning policy in the UK have been largely dominated by literature focusing on issues like access, urban massing, scale and streetscape, often drawing upon well known-to-work theories to construct appraisal models. For example, Lynch (1960) described legibility as the ability to recognise the component parts which help us map spatial patterns and navigate the place; edges, landmarks, centres, focal points and paths, all help us do that but they must form part of a coherent system in order to allow the mental interpretation (Ewing and Clemente, 2013). These ideas are at the heart of guidance and appraisal tools published by CABE, such as Building for Life 12 (2012), and they are reflected in the design guidance principles, for example in the form of Legibility. More

recently, Marshall and Corcoran (2014) found that 85% of their surveyed population felt that the quality of the public realm had a direct impact on their lives. Correspondingly, a range of methods for appraising the quality of the public realm were developed, for example 'Character Appraisal', 'Qualityreviewer', 'Capacitycheck' and the widely used 'Placecheck'. Marshall and Corcoran (2014) however, argued that these approaches are no longer appropriate on their own, as they only focus on the physical aspects of place neglecting perceptual and social dimensions.

A literature review helped establish a research framework that brings together urban design analysis and social sciences tools. The core element of this research involved the adaptation of social sciences tools and their application in combination with tested urban design techniques to appraise public life in the public realm in four British neighbourhoods. This work included a morphological analysis conducted with standard urban design practices but also added a new element to urban design appraisals by considering the social and perceptual dimensions as well as morphology.

An introduction to this work frames the research by exploring the legislative response to recent theoretical advances in social sustainability in urban practice. This literature review showed that engagement and participation processes, and more crucially governance, are essential to deliver sustainability and to strengthen social resilience; and that these are also linked to individual and social psychologies associated with place at a local level. Figure 0.1 illustrates the areas of study and the application case studies.

This thesis applied a variety of tools and methods, including quantitative analysis and phenomenological interpretation. According to Cohen, Manion

and Morrison (2011), this is necessary to study the subjective experience of

DIMENSION	MORPHOLOGICAL	SOCIAL	PERCEPTUAL
VARIABLES	Road hierarchy Building defining spaces Plot patterns Public space network	Informal contact Organised activities Social networks Social cohesion	Mental mapping Place attachment Place care Social value of place

CASE STUDIES	THE MEADOWS SNEINTON	DRONFIELD KILLAMARSH
LED BY	Researcher Community	County Authority
TYPE	Urban neighbourhood Nottingham	Semi-rural area North East Derbyshire

individuals, which is as important as any other data.

Figure 0.1: Thesis areas of study.

This was inevitable given the range of fields and approaches the study aimed to cover. Comparisons and relations were possible between phenomena and statistical analysis, which confirms Hernandez's (2014) views that using both empirical and qualitative analysis could facilitate the transferability of measures between different fields of study. Qualitative studies helped understanding place psychologies in a more comprehensive way because verbal and graphic tools were very effective to compliment empirical analysis.

Additionally, the work looked at the process of application of social sciences' tools in urban practice. It did this by testing the adopted social tools in professionally-led, community-led and authority-led engagement processes

to inform policy. The appraisal explored four variables for each one of three of Carmona et.al's (2010) six key dimensions of place: morphological, social and perceptual. The variables were appraised in four UK neighbourhoods: two urban residential areas in Nottingham, and two semi-rural towns in North East Derbyshire. The results emerging from the analysis of all three dimensions of place in the four case scenarios were correlated. The findings demonstrated that all three dimensions are strongly interconnected and that studies that neglect social and perceptual dimensions, putting more emphasis on the morphology, might result in uncomprehensive or incomplete interpretations of place.

According to the core findings of this study, residential neighbourhoods need to be appraised with consideration of multiple dimensions, and not solely with a focus on morphological issues. The stronger correlations found amongst the various variables analysed in all four case studies revealed that:

- Road hierarchy was a fundamental parameter that determined physical and social fragmentation in neighbourhoods

- Cadastral patterns mediated more casual, informal contact at a street level than other patterns; cul-de-sacs scoring the lowest rates.

- Public buildings were crucial to facilitate the creation and development of social networks that led to social cohesion and support networks.

- The value neighbours gave to public places did not correspond with the place quality as evaluated by urban professionals.

0.2 Problem definition process

"The key message is that there is no single or simple

solution: the problem is complex and multifaceted and requires

an ecological approach to change."

(Hunter et al., 2009, cited in: Marshall & Cocoran, 2010, p.7)

This section describes the general approach to the research process and how the gaps found through the literature review led to the formulation of a specific question that drove the research towards the integration of social sciences tools and methods into urban practice. The first stage of the research was an exploratory literature review, explained in point 0.2.a below. This was done to identify the core gaps in urban design practice. Then, an in-depth literature review, explained in point 0.2.b below, was designed and conducted to narrow the focus of the research. The final research aims and objectives are summarised in point 0.2.d and the concepts and definitions adopted for this thesis are explained in point 0.2.e below.

0.2.a First research stage: *exploratory literature review*

This study commenced with a broad exploratory literature review of the legislative framework in Europe and in the UK, in the past 25 years. This revealed that incorporating the social dimension of sustainable development in urban studies was complex and therefore rare in urban practice.

One of the key findings referred to the emerging social resilience paradigm, which involved an understanding of the essence of place, the key aspects that give places identity both in landscape and cultural networks (Hester, 2006). It also involved an understanding of assets, threats and processes of change (Colantonio and Dixon, 2012). Instead of looking for resources reserves, assets were seen as potential for growth (Hauser-

Kastenberg and Norris, 2005; Colantonio and Dixon, 2012) and the ability to adapt became an essential tool for communities (Hester, 2006). This shift meant an approach more focused on processes than results. An epistemology concerned with developments and relations, rather than assets and outcomes. Adopting this upcoming paradigm of resilience obliged the selection of an optimum ontology for the study: an *ecological urban model,* a theoretical framework where people (individually and collectively) are in symbiosis with the physical environment and dynamic relationships are established between place and people. Scholars agree that this model is best to achieving sustainability and that an integral ecosystem approach to social sustainability is essential (Leopold, 1949; Feld and Basso, 1996; Folke et al., 2002; Berkes et al., 2003; Anderies et al., 2006; Hester, 2006; Walker et al. 2006; Brand and Jax, 2007; Dale, Ling and Newman, 2008; Fuad-Luke, 2009; Haigh and Amaratunga, 2011; Murray K and Zautra A., 2012; Ellin, 2013; H. Erixon , S. Borgström & E. Andersson, 2013; Mclean, Chuthill and Ross, 2013; Pickett et. al, 2013; Wu and Wu, 2013; Kearns et al., 2014).

After this exploratory Literature review, an in-depth literature review discussed in Chapter 1 framed the core aims and objectives of this work. Table 0.1 summarises the key literature review findings, Figure 0.2 illustrates the literature review process that determined the focus of this thesis.

0.2.b In-depth literature review

The first part of the review revealed how legislation progressed to deliver sustainable development and what complexities were encountered to translate systemic models into urban practice. It discussed how social sustainability and resilience were being appraised in urban design and what the constraints to delivering sustainable development were. This framed the

core focus of this work and it is discussed in Chapter 1.

The second part of the literature review narrowed the research to debates surrounding the notion of social capital and social networks. Findings framed the social dimension of place around concepts of social cohesion and patterns of social activity in the public realm. It also looked at how social sciences were approaching the appraisal of the core social dimensions of place. This is discussed in Chapter 2.

Table 0.1: Exploratory literature review question, objectives and key findings summary

EXPLORATORY LITERATURE REVIEW QUESTIONS

How did the sustainability agenda emerge in Europe and the UK?
Is sustainability being fully achieved in urban design? If not, what are the pitfalls?

GENERAL OBJECTIVES	KEY FINDING
To highlight key approaches, movements and paradigm shifts in academia, core emerging theories, concepts and models that might have had a major impact on sustainable urban practice and law.	Emerging paradigm: social resilience. Optimum model: urban ecosystem.
To identify key turning points where new trends or measurables were emerging in Europe.	More multidisciplinary approaches and bifocal analysis including quantitative and qualitative data were needed to deal with processes. Social structures were being overviewed, particularly in residential areas.
To identify potential gaps in knowledge and practical constraints that might be preventing or limiting the delivery of sustainability.	
To find dynamics and synergies between academia and legislation, exploring the existence of possible delays and barriers in the translation of theory into practice and legislation.	Slow translation into practice and law due to the lack of empirical data as indicators and variables were difficult to choose.
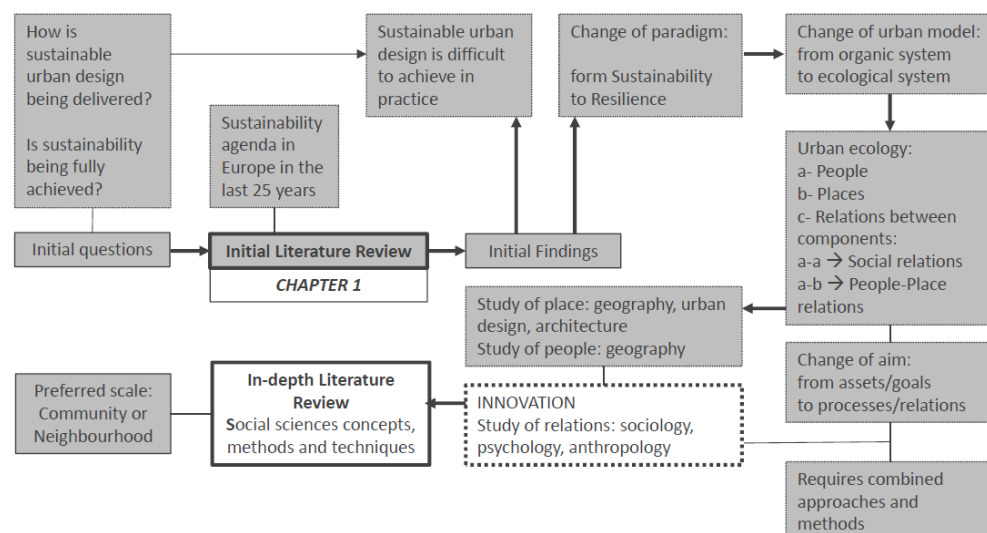
Figure 0.2: Exploratory literature review development diagram

The third part of the literature review explored how communities and individuals relate to their physical environment. It looked at principles of place attachment, psychologies of affect, cognitive perception and the notions of land management and land ownership, stewardship and appropriation of public spaces. It also looked at how social sciences were approaching the appraisal of the core perceptual dimensions of place. This is discussed in Chapter 5.

0.2.c Research question

Following the findings of the literature review, the work focused on the core part of this research: the appraisal of neighbourhood to inform policy, development and regeneration. Ginige and Amaratunga (2013) stated that communities can only build up capacity, and therefore resilience, through the in-depth understanding of their values and motivations, their social relationships and their social capital. Developing capacity in a society, they said, is a process involving four stages: analysis, creation, utilisation and retention. Unfortunately, although essential, the first stage is sometimes underestimated. Understanding existing community assets and vulnerabilities can lead to more efficient and effective, therefore more sustainable, forms of development (Ginige and Amaratunga, 2013; Ortwin Renn, 2005; O'Hara, Shandas and Velazquez, 1999; Middlemiss and Parrish, 2009; Hamdi, 2010). For these reasons, this work concentrated on the appraisal stage and on the main focus of urban practice: public places. Having established a suitable platform for the research on the basis of the socio-political context of the study, the focus of the thesis was narrowed to the following question:

How could urban practice improve the appraisal of the key

dimensions of public places in British neighbourhoods?

0.2.d Research aims and objectives

In-depth literature review demonstrated the need to account for social and perceptual dimensions in neighbourhoods, this is explained in more depth in forthcoming chapters. Table 0.2 shows the aims and objectives that resulted from the literature review.

Table 0.2: Thesis aims, objectives and methods summary

THESIS AIMS	
To find out the benefits of appraising the social and perceptual dimensions of place in UK neighbourhoods, with a focus on public life in the public realm.	

THESIS OBJECTIVES	METHOD
To find practical and applicable ways to appraise two of Carmona's et. al. dimensions of place and Barton's dimensions of neighbourhoods in the UK: social and perceptual.	Literature review. Place surveys; Mapping. Unobtrusive observations. Community events. Questionnaires; Interviews.
To explore the benefits of this addition to current morphological appraisal methods.	Correlation of the results of standard appraisal methods with the additional social and perceptual dimensions appraisal.
To test how practical it could be to apply these integrated appraisal methods in real cases in urban practice.	Implementation of the combined appraisal method in community-led and authority-led processes and evaluation of the results.

0.2.e Concepts and definitions

In this work, the author applied an urban ecology model where people are in symbiosis with their environment. With that in mind, this research adopts the following definitions and concepts (in alphabetical order): community, neighbourhood, place, place dimensions, public life & public realm, residents, sustainable urban design, social capital.

COMMUNITY

For this study, the author adopted a widely applied socio-ecological approach definition involving: the people, the place, and the connections between

people and with their place (Christensen and Robertson, 1980, cited in: Kirmayer et al., 2009; Jewkes and Murcott, 1996; Hamdi, 2010; Ginige and Amaratunga, 2013; Creasy, Gavellin and Potter, 2008; Rowson, Broome and Jones, 2010; Colantonio and Dixon, 2012; Giuffre, 2013; Ophiyandri, 2013).

NEIGHBOURHOOD

Barton (2000) said 'neighbourhood' can signify different things to different people in accordance with their memories, culture and value systems. For some, neighbourhood might bring back memories of childhood and loved ones whilst for others it might imply segregation. Barton (2000) stated that there are three dimensions to the concept of neighbourhood: the functional aspect: locality and the physical environment; the community: the people themselves; and the place: made by human perception and appreciation of their home territory. Barton (2000) further explained that unfortunately, these three aspects of the neighbourhood are normally addressed by separate literature and not studied as a unit, and that the combination of all dimensions is a fundamental step in achieving sustainability at a neighbourhood level. Crilly and Mannis (2000) agree, they stated that in order to achieve an integrated approach it is necessary to overlap the geographical and physical mapping with both the social and psychological dimensions. This study addresses this issue, accounting for all three of Barton's dimensions.

PLACE

Human beings need to anchor memories on physical things, on something that persists through time and that serves as a reminder that triggers that memory in the future; place can do this. Place is a space where humans have had experiences and where they have therefore attached some significance (Zeisel, 2006). Place however, does not only refer to a physical location but also to virtual spaces where we belong amongst certain social order, a realm

of personal concerns (McClay, 2014; Schulman, 2013). People need the security of place so that they can take some risks and pursue discovery and adventure (Leach W., n.a.; cited in: McClay, 2013). A stable sense of place signifies 'roots', an emotionally secure spot from where we can exercise our freedom (McClay, 2013). A place encourages us to 'move', to circulate it, establishing a relation between the space and our bodies, and triggering the use orientation strategies that makes us apprehend the surroundings. It is through this process that we assign meaning in order to navigate, and the features that become relevant trigger feeling and emotions on us establishing the link. Tring to find our way around spaces is the mechanism that connects us with it and this results in our interpretation of place (Schulman, 2013). When we feel disconnected we cannot find our place, which causes anxiety and stress as the senses of stability and security are lost (Schulman, 2013). Place offers comfort, it is familiar; space is an unknown world and it is perceived as dangerous (Yi-Fu-Tuan, 2013). The ideal urban place offers a combination of memories and excitement of future adventure, anchoring personal emotions and allowing for exploration and adventure (McClay, 2013). *"We shape our buildings; thereafter they shape us"* (Winston Churchill; cited in: McClay, 2013, p.250).

PLACE DIMENSIONS

Carmona's et.al (2010) morphological, social and perceptual dimensions of place coincide with Barton's (2000) view of the composition of neighbourhoods: functional (place); community (social); and place (perceptions), therefore this study focused on these three dimensions. The morphological dimension is the most broadly understood in urban practice in Britain and therefore, where the focus of analysis often lies. This study applies standard urban practice to appraise the morphological dimension in

neighbourhoods in the UK in accordance to Carmona's et.al (2010) theoretical discussions. It also aims to look at how a multi-dimensional integrated approach could be feasible. Due to time and resources constraints, the focus of this thesis was the three dimensions more intimately concerned with the neighbourhood scale: morphological; social and perceptual.

PUBLIC LIFE & PUBLIC REALM

Carmona et.al. (2010) explained that the public realm has a physical dimension, which is the space it occupies - the public space - and a social dimension, which relates to the activities that occur in that publically accessible space. However, although public life includes the social dimension of the public realm, it also includes activities that occur in private spaces, or spaces with controlled access such as pubs, cafes and community buildings, to name some. Public life can be segregated into various parts for the purpose of analysis. Carmona et.al. (2010) classify a 'formal' public life in relation to institutions and organisations and an 'informal' public life, which includes casual encounters and spontaneous activities. These concepts are adopted for this study.

RESIDENTS

In this study, the terms 'users', 'occupiers', 'neighbours', 'residents' and 'inhabitants' are used compatibly and refer not only to the people who live or work within or close to the public places subjected to analysis, but also to passers-by, workers, shoppers and any other person making use of the places analysed.

SUSTAINABLE URBAN DESIGN

Carmona et.al (2010) identified the six key dimensions of place to achieve sustainable urban practice. They believe that for the purpose of

understanding the issues, these dimensions can be studied in isolation. However, they insist that a systemic approach that integrates all of these dimensions and looks at them holistically, is essential to achieve sustainable urban design. This thesis is limited with time and budget constraints and therefore only looks at three of the six dimensions, arguing that all dimensions should be incorporated in urban studies although more research is necessary to identify simple ways to achieve this in practice.

SOCIAL CAPITAL

Social capital emerged as one of the most relevant features of communities in social studies. The definition adopted by a number of scholars (Putman, 1995; Elkington, 1997, p.85; MacGillivray, 2004; Halpern, 2005; Hester, 2006; Colantonio and Dixon, 2011; Ferragina, 2012; Tallon, 2013) and applied for this study assumes its core components are: social norms and trust, social relationships and networks.

Table 0.3 summarises the models, concepts and definitions adopted for this research.

Table 0.3: Theoretical framework and definitions adopted for this thesis, summary

MODEL/CONCEPT	DESCRIPTION/DEFINITION
Ontology	Urban ecology.
Paradigm	Social resilience.
Epistemology	Complex systemic model of relations and processes.
Neighbourhood Barton's (2000, pp. 4-5)	Formed by: the functional aspect: locality and the physical environment; the community: the people themselves; and the place: made by human perception and appreciation of their home territory.
Community Broadly adopted	Involving: the people; the place; the connections between people, and with their place.
Public realm	Formed by: the physical space that it occupies; the activities and public life that occur within it.
Public life	Formed by activities that occur: in public spaces; in internal public spaces (libraries, etc.); and in quasi-public spaces (cafes, bars, etc.)
Carmona et.al's (2010, p.viii)	
Public place Zeisel (2006, pp.356-358)	Public space with meaning, hosting public life.

Sustainable Urban Design Carmona et.al's (2010, p.viii)	Six key dimensions of place: 'morphological', 'social', 'perceptual', 'visual', 'functional' and 'temporal'.
Social capital Broadly adopted	Formed by: social norms and trust; social relationships and networks.

0.3. Case studies

This section explains how the case study neighbourhoods and the geographical boundaries for the study were selected.

0.3.a Selecting the neighbourhoods

The methods imported from various fields were applied to four British case studies: The Meadows and Sneinton, in Nottingham; and Dronfield and Killamarsh, in North East Derbyshire.

Working closely with communities required the establishment of rapport through a great deal of contact with the researcher, and effective communication channels. For this reason, the location of the case studies was key to the success of the research, particularly because budget restrictions prevented multiple long distance commutes.

Finding communities and authorities keen to applying non-tested tools in real life practice was challenging. This was especially difficult because political and social tensions were present in the neighbourhoods, as they were undergoing re-structuring or renovation. The tight deadlines of the doctoral thesis versus the great length of participatory processes in urban practice also posed a challenge.

The Meadows, Nottingham

The proposed methodology was first tested in a live case study: The Meadows, in Nottingham; where the author had been a resident for four years in the past. The neighbourhood had been recently the subject of other studies by academics of the University of Nottingham and it was undergoing regeneration. One of the best ways to understand place attachment is to research amongst groups that have these place emotions on the surface because their places are either under threat or because they lost them, for example after disasters, large neighbourhood developments or if people lost their bodily ability forcing them to re-establish their relationship with the physical environment (Mihaylov and Perkins, 2014; and Toombs 2001; Forester, 2006; cited in: Seamon, 2014).

Sneinton, Nottingham

At the time of the study, colleague academics at the University of Nottingham and Nottingham Trent University were also working alongside a Community Interest Company in Nottingham that was becoming renowned for their achievements and their innovative way of working: Sneinton Alchemy. One of the group's leaders was approached and, after an initial discussion and a meeting with a number of community members, the group accepted to test the proposed methodology. As the schedule of work and the progress expected from this community group lined up with the thesis programme, Sneinton became one of the case studies. The findings emerging from this study informed their Neighbourhood Plan, which was in the initial stages of development at the time.

Dronfield & Killamarsh, North East Derbyshire

Later on, the Regional Design Council OPUN Design East Midlands, offered the

author (who was a member) the possibility to work in the production of the Development Frameworks for two towns in North East Derbyshire: Dronfield and Killamarsh. OPUN accepted the opportunity to include this work as case studies for this thesis. North East Derbyshire County Council, the client had a schedule in line with the thesis programme, and they accepted the opportunity but within the limits of contractual obligations, point discussed further in chapter 8. The outcomes of the application of the thesis method informed the Regeneration Frameworks later adopted by the Local Plans. This offered the possibility to test how the method in practice and to see how key the findings could be transferred into legislation. The two cases offered the possibility to work in the region

Conclusions

Having case studies with contrasting demographics was initially seen as a constraint, as socio-economic factors were assumed to be linked to some of the measurable. However, the reality of urban design is that methodologies and studies need to be flexible enough to adapt to a variety of scenarios, specifically regarding communication and languages used in practice to appraise neighbourhoods. For this reason, the challenge of working with different demographics was upon reflection seen as a parameter that could give the body of research some strength, both in terms of testing methodologies and processes, and in terms of correlating results obtained in various population conditions. This is expanded on in chapters 2, 4 and 6 and a full socioeconomic analysis is discussed in Chapter 4, section 2.i.

The methodology had to be flexible in order for it to be tailored to the different delivery approach variance in the number of residents of all neighbourhoods, quantitative variables were worked as a value per inhabitant in order to allow comparisons.

Table 0.4: Case studies summary

CASE STUDY	POPULATION *(ONS 2011)	DOMINANAT DEMOGRAPHIC TRAIDS	PROCESS LED BY	APPLICATION
The Meadows Nottingham (Urban)	15,536	Low incomes, high crime rates and immigrants %	Researcher	Thesis
Sneinton Nottingham (Urban)	10,097 (Sneinton Alchemy, 2015)	High unemployed rates and minority groups	Community	Neighbourhood Plan
Dronfield North East Derbyshire (Semi-rural)	21,177	Majority of white British employed home owners with high education levels	County Authority	Regeneration Frameworks
Killamarsh North East Derbyshire (Semi-rural)	9,415	High percentage of with British in working age but on benefits		

0.3.b Defining the geographical boundaries

A complex issue regarding ecosystem approaches is that physical boundaries and constraints from the geographical place need to be taken into account (Colantonio and Dixon, 2011). The National Strategy for Neighbourhood Renewal (Social Exclusion Unit, 2001) explained why the concepts of neighbourhood and its boundaries are so difficult to define, concluding that political and geographical boundaries sometimes do not match the social cohesion or the residents' perception of where their neighbourhood starts and end. Dan Slone (1993) however, denies the existence of 'sustainable areas'; sustainability, he says, extends beyond the urban boundaries onto a wider framework and broader systems have to be considered in studies. Ellin (2013) explains that urbanism should work with boundaries and edges, however not as limits but as tools to enhance the zone value and identity by integrating without destroying the differences. Cadenasso et al. (2013) sustain that analysing cities thought pure land use mapping as it has been the norm in the past is not adequate as it ignores the heterogeneity of urban systems, that simply adding more variables to the analysis would not solve the issue

and that the most suitable approach is a truly ecological view of the city, which could be achieved through capturing patches[1] within an urban structure and analysing how and when their boundaries and internal attributes have changed.

Permeable membranes and thresholds are valuable tools for urban design and are also encountered in natural ecosystem models. Latest ecology models accept that communities rarely live in isolation but that the diversity of a community is a result of its species interactions, their dispersal and the regional map, and therefore community studies should consider both the local and regional scale (Mittelbach, 2012). Pickettet al (2013; McGrath, 2013) explain that ecological science has changed in recent years and that these new paradigms were translated into urban design theories to understand the way cities work with a view that the entire urban system needs to be studied, giving way to a much more comprehensive and interdisciplinary approach to research.

The geographical boundaries adopted for this study matched the respective legislative boundaries of each case study. This facilitated correlations between the results of this research and other studies taking place in all neighbourhoods by a multiplicity of fields. It also allowed the application of the findings in real life policy at local and regional levels, as explained in depth in Chapter 8.

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[1] Patches are geographical zones where variables manifest. D. Grahame Shane applied the patch analysis to study resilience in London concluding that the most valuable attribute was the multiplicity of different but overlapping ecologies of the city (2013).

0.4. Research methodology

This section explains the approach to the methodology and the techniques used to capture data. It discusses how each one of the variables for the three dimensions of place appraised was measured and concludes with a summary of the quantity and type of data achieved for each variable in each case study. This thesis used a mixed research method, combining quantitative and qualitative studies. This approach is favourable to deal with the nature of data analysed for this research. A literature review specific to each dimension is included in chapters 2, 3 and 5, which gives justification to the selection of the mixed approach, the key variables and the appraisal methods from a theoretical perspective.

The data collection consisted of a combination of traditional urban design appraisal methods (labelled UD) and the addition of social sciences techniques (labelled SS) to capture social and psychological dimensions of place and some of the synergies between communities and public places. The methodology was designed aiming to facilitate easy, low-budget place appraisals in urban practice. The techniques applied are described below and summarised in Table 0.5 on page 20, where the scope of application is also listed.

0.4.a Urban Design techniques (UD)

UD.i Historic archive and mapping analysis, and historic literature review
This stage of research aimed to understand processes and transformations over time. Historic archives and literature review were included because these can reveal some of the main values, concerns, assets and threats that 'glued' communities together over time, and how these might have changed

or evolved. Correlating these findings with in-depth historic mapping analysis can reveal many of the most evident people-place dynamics in the area, some of which might have persisted over time.

Table 0.5: Scope of application of various methodologies

Method	Area applied to
UD.i Historic archive and mapping analysis, and historic literature review	Whole neighbourhood
UD.ii Socioeconomic analysis	Whole neighbourhood
UD.iii Character appraisal and mapping analysis	Whole neighbourhood
UD. iv Quantitative urban design qualities appraisal*	Key public places
UD.v Walkabouts*	Key public places (Dronfield and Killamarsh only)
UD.vi We come to you	Key public places (Dronfield and Killamarsh only)
SS.i Observations & ethnographic	Whole neighbourhood
SS.ii Walk along	Key public places
SS.iii Interviews*	Key actors within networks
SS.iv Focus groups*	Volunteer participants
SS.v Community Life Questionnaire*	Postal survey (The Meadows) Random sampling (all cases)
SS.vi Public Place Questionnaire*	Postal survey (The Meadows) Random sampling (all cases)
* Available in Appendix 2	

UD.ii Socioeconomic analysis

An analysis of relevant socioeconomic variables helped contextualise some of the findings. However, it must be noted that census data was available at specific points in time and for electoral ward boundaries. This might not have been truly representative of the actual population at the time of the study. Also, geographical boundaries between the work area of concern and the census data not always lined up. In addition, some areas were popular amongst students and tenants, and many of the residents moved home very often. These potential time and boundary discrepancies can mean that population samples for the study might not have correlated exactly with the

socioeconomic analysis sample. Nevertheless, contextualising the study in the contemporaneous socioeconomic framework available was extremely necessary and therefore it was an essential part of this study.

UD.iii Character appraisal and mapping analysis

An in-depth understanding of the physical aspects of the neighbourhood was also vital part to the study. This analysis provided a picture of the contemporaneous status of the areas and highlighted recent and potential future transformations to the physical structures. The method use was the authors' take on the Oxford Character Appraisal Toolkit. The adaptation is explained in more detail in Chapter 3.

UD. iv Quantitative urban design qualities appraisal

This analysis involved the identification, mapping and rating of public places where neighbours could potentially meet and interact, both indoors (e.g. community centres, churches, clubs, etc.) and outdoors (e.g. parks, commercial areas, playgrounds, etc.). A list of key urban qualities was surveyed by the researcher and logged on a tailor made form (see Appendix 3.b) applying Ewing and Clemente's (2012) rating scale and measuring system. The scale goes from 0 to 5: none, poor, average, good, very good, and excellent respectively. Ewing and Clemente's (2012) demonstrated that the rating method gave consistent results independently of the assessor's skills. A standardised assessment form containing a list with the name and description of each measurable quality and the rating scale was used to capture this data in each public place identified. The level of public activity was also recorded on this form. This technique allowed a systematic collection of quantitative data in relation to public place qualities, permitting correlations with other place and social data.

UD.v Walkabouts

Sue to low participation levels, walkabouts with groups of neighbours were organised in Dronfield and Killamarsh to capture people's perception of their neighbourhoods. This added a 'local knowledge' element to the research. Conversations that occurred during the walk and at specific stops in public places, indicated the perception and level of emotional engagement of residents with their neighbourhoods. Professionals and participants completed the task together to make more efficient use of time. Groups discussed their views on specific points illustrated in a map; and the discussions were logged in tailor made forms (see Appendix 2.i).

UD.vi We come to you

This task was added during the process to increase participation, due to the low levels of attendance to events in Killamarsh and Dronfield. It consisted of going to the places with high levels of activity mapped during surveys and observations, and directly approaching people randomly, asking them to complete self-written questionnaires and to answer key questions about their places.

0.4.b Social sciences techniques (SS):

Key variables relating to the social dimension of sustainable development were incorporated as addit in parallel with a variety of combined techniques. This included self-written questionnaires, semi-structured interviews and community events or focus groups. Site observations were also carried out with a diversity of methods as discussed later on in chapter 3.

A Facebook network analysis method was designed for this study. The results of the analysis were exp

SS.a Posted Questionnaires

Based on an urban appraisal of the structure of one of the neighbourhoods, the area was sub-divided in sub-areas based on edges, nodes, character and identity[2]. Self-written forms were distributed through area probability sampling and returned by pre-paid post on in The Meadows only due to budget and time constraints.

SS.b Random Sample Questionnaire – 10 in each public place found

Self-written forms were distributed through random selection sampling. Members of the public were approached whilst they were using public places in neighbourhoods.

SS.c Interviews

Interviews were conducted informally with crucial actors of key social networks identified in the neighbourhood. Photo elicitation[3] (current and historic) was also used to discover information about place attachment as a platform to discuss place meaning and social powers or hierarchies, and to stimulate people to participate in shaping their places; a method recommended by Stedman et al. (2014).

SS.d Focus Groups

Community networks were invited to participate in focus groups involving semi-structured discussions and self-written questionnaires. Focus groups provided rich data, packed with intention and personal perspectives, which enabled the researcher to capture information which would have been

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[2] This sub-division was done to avoid basing the study by sampling neighbours from a characteristic area who might have similar socioeconomic or cultural characteristics.

[3] Images can be used as a component of an interview, asking participants either open questions about the image to trigger more detailed responses, or more focused questions for specific images.

otherwise lost using purely questionnaires, as Pretty (2003) suggested, the body expression and the language used during activities showed how individuals built up a personal position and a relationship with place.

Each component of the social study listed and described above (*SS.a*-*SS.d*) was coded with a specific place-related name. This was necessary in order to ease the data processing and to guarantee the individualisation of each set of responses. The following session of this chapter discusses how these techniques were tailored to capture specific variables to fill some of the gaps in current urban design practice.

Table 0.6 on page 24 shows the constraints found during the data collections process in each case study, which meant adaptations to the methodology were at times necessary. Table 0.7 on page 25 shows a quantification of the data collected for all case studies. Chapter 8 looks at the issue of participation in more depth.

Pre-tests and method validity

In order to validate the method prior to its application in the case studies, the survey questionnaires and interviews were pre-tested in a small random population which did not belong to the study sample. This exercise aimed to find out any issues with the design of the survey and data collection methods. Questionnaires (Available in Appendix 2) were distributed to ten randomly selected individuals, who answered about their own neighbourhoods.

Table 0.6: Constraints found during the data collection process and measures taken to adapt the method

DIMENSION	VARIABLE	THE MEA-DOWS Researcher led	SNEINTON Community led	DRONFIELD Authority led	KILLAMARSH Authority led

Morpho-logical	No engagement (No constraints, no adjustments required)				
	Urban qualities	None	None	disregard for method	disregard for method
Social	Informal contact	None	None	No quantitative data due to time constraints. Qualitative data allowed the interpretation of phenomena.	
	Organised activities	None	None		
	Social networks	None	Data provided by the community in open interview format		
	Social cohesion	None			
Perceptual	Mental mapping	None	None	None	None
	Place bonding	None	Data provided by the community in open interview format	No quantitative data due to time constraints. Qualitative data allowed the interpretation of phenomena.	
	Place care	N/A		N/A	N/A
	Social value of place	None		None	None

The respondents were requested to complete the questionnaire in solitude 'thinking aloud'. During the process of completing the questionnaires, all ten respondents were requested to add comments at the end of the forms if they considered it necessary; only two respondents added comments. Participants reported to have taken an average of five minutes to complete each questionnaire. All respondents found the questions easy to understand and did not have any issues in responding with the exception of two respondents who thought it would be good to have an intermediate option between monthly and annually in one of the batteries of requests, the participants said:

P1: *"I found 'annually' a bit unclear – I presumed it meant once a year, but then wondered whether it meant a few times a year."*

P2*: "There should be an intermediate option between a month and a year."*

Table 0.7: Data collected for each variable in all case studies.

Method	The Meadows	Sneinton	Dronfield	Killamarsh

UD.i Historic archive and mapping analysis, and historic literature review	Yes			
UD.ii Socioeconomic analysis	Yes			
UD.iii Character appraisal and mapping analysis	Yes The Meadows and Sneinton were surveyed in the summer months (July to September); Dronfield and Killamarsh were surveyed in autumn (October and November); this might have had an impact on the measurements taken as people tend to spend more time outdoors in better weather conditions.			
UD. iv Quantitative urban design qualities appraisal*	22 public places	14 public places	11 public places	7 public places
UD.v Walkabouts*	N/A	N/A	13	2 (bad weather)
UD.vi We come to you	N/A	N/A	34	35
SS.i Observations & ethnographic	Two 10 minute visits to each place took place during the week: mid-morning, to capture dynamics during working hours; and late afternoon, to capture after school hours. Two visits to each place also took place during weekends to capture family and recreation time. That gives a total of four visits to each key public place; all streets were also observed four times.			
SS.ii Walk along	Done simultaneously with SS.i			
SS.iii Interviews*	17	500	5	6
SS.iv Focus groups*	3 Focus groups (17 participants in total)	N/A Validation of data through event attended by over 100 neighbours	3 Focus groups (40 participants in total)	3 Focus groups (25 participants in total)
SS.v Community Life Questionnaire*	81 in total (346 distributed by post with 64 returned + 17 at events)	544 (500 provided by Sneinton Alchemy + 44 collected in public places)	N/A	N/A
SS.vi Public Place Questionnaire*	220	140	110	70
Social networks	14	1 representing and joining all groups in the neighbourhood	16	
Virtual networks (Facebook)	1		62	20
Total number of participants	301	544-640	110	113
% population engaged overall	2.83	3.50	0.50	1.20
* Available in Appendix 2 - *For participation rates refer to Appendix 4*				

In response to the comments, the categories were changed as follows:

Initial categories:

Never	Annually	Monthly	Weekly	Daily

Revised categories:

Never	Less than once a month	Once a month or more	Once a week or more	Once a day or more

The interviews were carried out on an individual basis (on key actors) and also in focus group sessions, where questions and possible answers are openly discussed amongst the respondents. This is to minimise the possibilities of the interviewer influencing or having a psychological impact on individual participants and to contemplate the possibility that people might answer differently when participating in groups.

The possibility of introducing 'test re-test' was considered but the study variables relate to emotional and cognitive values, which might change over time. Multiple measures on the same population might not provide a more reliable result than one measure, as feelings or opinions might also be subject to change. For this reason, the values were collected in a 'single measure' and longitudinal approaches would be better used to evaluating cognitive change and networks development rather than to test method reliability. Therefore, all forms were designed according to the findings of a methodology literature review, aiming to ensure method validity but also providing a convenient, easy to use tool for application in urban design practice.

According to Aldrige and Levine (2001) the order in which batteries of requests appear, and the order of questions within batteries, can have an impact on the participants' responses and the design of the batteries of requests is a key factor to minimise method effect. This was also pre-tested

with volunteer respondents. Community Life and Public Place questionnaires validity was checked using a multi method, multi-trait, three-split-ballot approach. Three different versions of the questionnaire were repeated in various orders within three population samples of ten people each. There was no variance in the results obtained with each one of the questionnaire form variations and therefore it was decided that one questionnaire would suffice, making the method simpler for application in practice.

0.4.c Measuring the three dimensions

This section explains how the measurements were done for each one of the four key variables of the three place dimensions explored in this study. Each section concludes with a summary table indicating how much data was achieved applying this method for each case study.

0.4.c.i Morphological dimension variables

The study focused on appraising four main variables: Road hierarchy, Building defining spaces, Plot patters and Public space networks.

Road hierarchy

It was mapped following the Manual for Streets (2007; 2010, p.53) designation: boulevard, high street, residential street, mews, square.

Buildings defining spaces

The analysis looked at heights and relative massing, through mapping the number of storeys (1-2; 3-4; 5 or more) and buildings' footprints in a three tear scale: up to 100m^2; 101 to 250m^2; and more than 250 m^2.

Plot patterns

These were analysed through an urban grain mapping exercise and looking at the relationship between buildings and the street (e.g. perimeter block, fragmented building line, etc.)

Public space networks

The study looked at both outdoors and indoors spaces. Outdoor spaces were mapped, including streets, green areas, urban squares and other functional spaces such as car parks and transportation hubs. Key public buildings that provided internal public space to host activities were also mapped. In order to visualise the numerical results in a graphic way that made all cases and variables comparable, a Public Building Provision Index was calculated by dividing the number of public buildings by the population in each neighbourhood and multiplying it by 100.

Public Building Provision Index = <u>Number of public buildings x 100</u>

Number of residents

Equation 0.1: Public Building Provision Index (by the author).

The first stage of the study involved a historic archive and mapping analysis, and a historic literature review. These were key steps to understanding the neighbourhoods' transformation and growth processes over time. A socio-economic study was also key to help contextualise the findings.

An in-depth understanding of the four variables in all four case studies was achieved through a desktop study and a detailed survey of the neighbourhoods. The site appraisal commenced on the southern point of each neighbourhood, continuing by circulating around the perimeter in a clockwise circuit, and then following the main roads across the areas, observing all secondary roads on both left and right flanks in order to spot potentially hidden public places. Maps and data matrixes were used as aids during the survey to ensure all areas were fully observed. Photographs were taken in key points. There was no interaction with the public at this stage.

This surveying process ensured a consistent and systematic recording of the data.

For The Meadows and Sneinton, both quantitative and qualitative analysis took place. The nature of the data collected for Dronfield and Killamarsh was more qualitative than quantitative, this is because both the County Council authorities and OPUN Design Council preferred to work on the basis of understanding phenomena rather than numerical facts. This was seen as positive move in the direction of socially sustainable approaches to urban practice and it lines up with the findings of the initial literature review, which demonstrated that observational processes are often more relevant than numerical results. This decision to almost abandon quantitative data collection did not represent a problem for the morphological analysis. The survey and mapping of all areas could be achieved and correlations between all areas were drawn from qualitative data.

0.4.c.ii Social dimension variables

The study focused on appraising four main variables: Informal contact, Organised activities, Social networks and Social cohesion.

Informal contact

The informal contact variable was determined by the average number of daily informal contact events observed in each sample public place location, measured from July to December 2014 in Nottingham, and in July to September 2015 in North East Derbyshire. In key public places, data was also captured through the use of questionnaires randomly distributed to 10 participants in each location whilst they were using key public places, but also by speaking to participants during consultation events. The question formulated to capture the informal contact variable was:

B - In this place I come across: neighbours, relatives, other people I know (0 = never; 5 = always) (participants must tick one)

This question aimed to find the level of activity in public places and their current capacity to mediate informal contact opportunities, including streets, and to assess the relative capacity of places to act as social hubs, to trigger new relationships and to consolidate existing ties. Places where people casually connect are vital to establish stronger relations which in turn, lead to social support networks and close ties. Correlating this information with the urban quality assessment could help identify places that are underperforming but that have the potential to become more socially positive through small physical interventions.

Ethnographic research was used to understand the way people behaved and how they interacted and socialised in public places. Chen, Orum and Paulsen (2013) believe this type of study can generate rich data which could explain particular phenomena in urban settings. A technique called 'Go-Along', developed by Kusenbach (2003), was also used (see Introduction). It consisted of accompanying participants as they carry on with everyday life tasks. Asking the neighbours questions and observing their behaviours help researchers gather data that participants might not reveal in more formal interviews (Chen, Orum and Paulsen, 2013). A combination of approaches, with the observer being silent at times and visible at other times, was applied to reduce any possibility of social desirability bias. Observations took place at different times of the week: on working days and weekends; and the day: quiet times and rush hours. An Informal Contact Index was created by the author to be able to visualise the correlation of all variables in a graphic form. This was achieved by dividing the average measure by 1000.

Informal Contact Index = Average number of informal contact events observed

1000

Equation 0.2: Informal Contact Index (by the author)

Organised activities

The types of activities organised both for and by residents were also noted, as well as where and how often these activities occurred, how well attended they were, who the key contacts were and which organisers were involved. A list of key social networks with the type of activities they conducted was produced alongside location maps showing where these activities took place (see Appendix 1.b). In order to correlate the programmed social activity across neighbourhoods, the measure for this variable was calculated by a formula designed by the author: an Organised Activities Index. This index was generated by the addition of the mean value of two indicators: average weekly number of hours of organised activity and number of organised activities. To make this value comparable across neighbourhoods, the value was divided by the number of residents. In order to visualise this variable graphically in comparison with other variables, the result was multiplied by 100.

Organised Activities Index =

= (Average weekly No of Hs of organised activities + No of Hs of organised activities) x 100

Number of residents

Equation 0.3: Organised Activities Index (by the author)

Social networks

The social networks study started by finding out which social networks were active in the neighbourhoods. This was done by contacting community centres, libraries, one stop shops and other public buildings and by walking

around asking and consulting residents casually on the streets. An online search was also conducted. A list was produced including names of the groups found, their main purpose, contact details and addresses where social networks operated from. In social sciences, the measurement of social networks is normally approached with two different data collection methods: *socio-metric*, which is used to analyse the entire network; and *ego-metric*, which focusing on one individual and his or her contacts. The latter cannot reveal the actual structure of the whole network but can give snap shots and can be very useful to study local networks (Newman, 2010). This research applies a modification of Newman's (2010) snowball ego-metric random-walking sampling technique for revealing actors. The method was based on finding one key member of each network and, during a semi-structured interview, asking them for the contact details of other members. Newman then conducted interviews with the other members whilst the author decided to carry out focus groups with these contacts in order to make the process more efficient and to encourage group discussions which may have proven to be richer than one-to-one interviewing. This technique of group consultation is supported by Pretty et. al (2003) as the data it provides can be packed with intention and personal perspectives. This enables the researcher to capture local socio-political information which may have been otherwise lost. The bodily expressions and the language used during group activities can show how individuals build up a personal position and a relationship with other group members. Constructing the entire network was not necessary in order to understand spatial relations. The resources and cost of these tasks, and the improbability to reach every single member of the networks in the community meant a socio-metric analysis would be unsuitable.

Direct observation is a valid method for constructing social networks

of small groups, but it is time consuming and part of the information concerning the nature of the interaction might not be reachable solely by observation (Newman, 2010). This technique was used in combination with self-written questionnaires and semi-structured interviews during focus groups and community events. Studying the way people perceive their networks can lead to their understanding, as networks are cultural formations by being embedded in peoples' stories (Riles 2001; cited in: Edwards, 2010, p.23).

Snijders (1999; cited in: Van Der Gaag and Snijders, 2005, pp.1-29) proposed a combination of the name generator[4] and the position generator[5] method called 'resource generator'. The technique collects information about access to a set list of resources therefore measuring the tie strength and covering several aspects of social capital. An adaptation of this method[6] was used to capture social dynamics and individual roles and identities in the networks. This thesis applied different sets of data to study the same phenomenon: questionnaires, observations, interviews and focus groups. This is a strategy called triangulation, and is very popular in network analysis (Edwards, 2010).

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[4] The 'name generator' or 'interpreter' approach is the oldest method to network mapping. The technique consists of asking a participant to make a visual map of their social networks in a paper, which can end up being very detailed and informative (McCallister and Fischer, 1978; Marsden, 1987; cited in: Van Der Gaag and Snijdersb, 2005) as it gives not only the information needed but also helps appreciate the intentions, perception and understanding of the participant (Emmel, 2008; Emmel and Clark 2009; cited in: Edwards, 2010).

[5] The 'position generator' method measures access to actors in a network through their position and hierarchy relatively to other members (Lin and Dumin, 1986; Lin et al., 2001; cited in: Van Der Gaag and Snijders, 2005).

[6] Van Der Gaag and Snijders (2005, pp.1-29) affirm that the resource generator needs to be adjusted to each study, primarily because of selection of the variables that constitute social capital is relative to the population and secondly because the cultural dependence of this selection, for example, the meaning of the term 'friend' varied amongst cultures (Fischer, 1982; Höllinger and Haller, 1990; cited in: Van Der Gaag and Snijders, 2005).

The semi-structured interviews were designed for this study to find out the origin, nature and dynamics of networks and to trigger conversations about participants' engagement and other affiliations they might have had. Other data such as the length of participation, nature and tightness of relations and social dynamics within the neighbourhood was also collected during the interviews. Stedman et al.'s (2014) method of current and historic photo elicitation was also applied. It involved using images as a component of the interview to trigger conversations. This helped discovering further information about public place uses during the focus groups. Photos offered a good platform to discuss place meaning, social powers and hierarchies, and they stimulated people to participate. Semi-structured interviews were designed for crucial actors of community social networks. Community groups and residents were invited to participate in focus groups and community events where further semi-structured discussions took place.

Social cohesion

Burt (1992) believes social cohesion is the most valid indicator of social network efficiency. However, a lot of emphasis was recently put on the structure of social networks and less on the ways in which ties and networks can be an asset to individuals (Flap, 1999; cited in: Van Der Gaag and Snijdersb, 2005). This study aimed to capture variables that have shown a place association but that have also had meaning to individual's lives. The Social Cohesion Index was worked out as a mean value of three indicators: 'close ties'; 'length of residence'; and 'level of exchange' within the neighbourhood.

People were asked their main reason for choosing the neighbourhood as a place to live in all neighbourhoods. This was relevant because if people chose to live near their relatives, this could be a sign of social support being

present; also, the closer the relation, the stronger the tie: Wellman and Wortley (1990, cited in: Giuffre, 2013) found that parent and child ties give the highest level of support. The higher the number of strong ties a network has, the higher the levels of cohesion (Giuffre, 2013). Residents were asked how long they had been living in the neighbourhood, a measure which is another dimension of social cohesion in social sciences research: Krebs and Holley (2006) stated that over time, community acquaintances can become strong ties, and stronger ties can result in denser community cohesion (Giuffre, 2013). In neighbourhoods with higher turnover, people have no time to bond and form roots. Lack of roots results in alienation, which is associated with weak and fragmented social networks that can cause loneliness and depression (Halpern, 2005). Residents were also asked the frequency of exchange of goods and support with their neighbours. Wellman and Wortley (1990) and Giuffre (2013) used similar scales to rate the level of support in communities, identified as another indicator of social cohesion. The final measure of social cohesion was calculated as an average of the three measures: the 'close ties' outcome measure was the percentage of participants with close ties (this was divided by ten to moderate the impact of this indicator over the average score); 'length of residence' in years; and for 'level of exchange' within the neighbourhood, the measure was the mean value of all responses scored as per Table 0.8, which took into account how often people supported each other and to what level.

Table 0.8: Measure of 'level of exchange', an indicator of social cohesion (see Introduction)

LEVEL OF EXCHANGE AMONGST NEIGHBOURS	NEVER	LESS THAN ONCE A MONTH	ONCE A MONTH OR MORE	ONCE A WEEK OR MORE	ONCE A DAY OR MORE
Casual chats	0	1	2	3	4
Objects (tools, etc.)	0	2	4	6	8
Emotional support	0	3	6	9	12
Caring (babysitting, etc.)	0	4	8	12	16
Money	0	5	10	15	20

Social Cohesion Index =

= [(Close ties x 10/total population) + Average length of residence + Level of exchange mean

value] / 3

Giuffre (2013) thinks that one of the current threats to social cohesion is the mass use of virtual networks, which might reduce the number of face to face interactions impacting on social norms and that there has been an increasing worry in the provision of fewer spaces where people can meet up casually and establish interpersonal contact. Another issue, she says, is that virtual networks might increase the number of strong ties because people will network according to similar interests and values creating closer virtual networks and decreasing the number of weak ties and diverse interactions, therefore weakening organic solidarity. Others value the fact that virtual networks allow people to connect independently of their schedules as they do not have to be connected simultaneously to form a tie which can also be independent from the geographical location (Jacobs, 1961; Oldenburgh, 1989; Rheingold, 1993; Putnam, 2000; Hampton and Wellman, 2003; all cited in: Giuffre, 2013). Technology offers new modes of networking. Informally sharing a communal neighbourhood email list is a strong tool for social bonding and bridging, and should become more popular. Research shows that neighbourhoods where this was implemented showed an increase in the number of social interaction and the sense of community (Halpern, 2005). The issue of virtual networks and its impact on participation and Placemaking was looked at in detail by a study (Alvarez, Borsi, Rodrigues, 2016) that contributed to this thesis. This is included in Appendix 4.

0.4.c.iii Perceptual dimension variables

The study focused on appraising four main variables: Mental mapping, Place attachment, Place care and Social value of place.

<u>Mental mapping</u>

Mental mapping analysis is a well-tested tool used by urban design practitioners for decades, since Lynch first published *The Image of the City* (1960). The breath of the data necessary to measure all variables within this thesis meant that some well tested urban design practises had to be done with very concise and effective methods. This was especially necessary due to the limited amount of time the researcher had with participants. For this reasons, although Lynch's approach served as a basis to the structuring of this task, particularly in terms of definitions and concepts considered, the method applied by Lynch was not adopted in full[7]. The wayfinding variable was captured by talking to people randomly on the streets, making questions about the urban structure of their neighbourhoods and asking for directions. The topic was also dealt with at community events through semi structured questions during focus groups[8], walkabouts and over conversations people had around maps and photos of their neighbourhoods. In order to have consistency in the amount of data, a minimum number of 10 interviews per neighbourhood was anticipated prior to the exercise, although in all cases more data was collected than expected because people engaged in

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[7] This was due to time constraints and since the aim of the study was to capture data as oppose to testing the already demonstrated validity of Lynch's method.

[8] Pretty (2003, p.2) used three variables to measure sense of place in adults and teenagers in Australia: place attachment (emotional bonding and behavioural commitment), sense of community (affiliation and belonging) and place dependence (available activities, quality and quality comparison with alternative communities). The author explains how focus groups provided rich data, packed with intention and personal perspectives, which enabled the researcher to capture information which would have been otherwise lost using purely questionnaires, as the body expression and the language used during activities showed how individuals build up a personal position and a relationship with place (Pretty, 2003, pp.31-32).

conversations regarding topics not covered by the questionnaires and interviews, which made the data richer in content and quantity. This was especially the case with regards to wayfinding, a topic of people's interest and concern.

Place attachment

For the purpose of this thesis, *place attachment* is understood as the emotional synergies connecting people and place together, and it entails the following measures:

Location Dependency: relating to how strongly services and basic needs provision might impact on people's need or desire to stay put in a geographical location.

Emotional Connection: relating to feelings of happiness and comfort in the public realm and the neighbourhood in general.

These place attachment dimensions were appraised at two different scales of analysis: i) noting the relations residents established with their neighbourhood as a whole; and ii) noting the relations residents established with the public realm in their neighbourhoods.

These variables were captured through the use of self-written questionnaires randomly distributed to 10 participants in each key location (indoors and outdoors) whilst they were using key public places, but also by speaking to participants during consultation events. The questions formulated to capture place attachment variables were:

LOCATION DEPENDENCY - My main reason for visiting is…/ this place offers what I need (0 = strongly disagree; 5 = strongly agree) / I visit this place (0 = never; 5 = always) (participants must tick one)

This questions aimed to find some of the reasons people had for using public places, it helped estimate the level of satisfaction with the services provided and with the place as a whole, and how often participants needed/wanted to visit public places. All of these measurables can give a good picture of the levels of Emotional Connection and Location Dependency participants might have in relation to the services provided in their neighbourhoods.

EMOTIONAL CONNECTION- In this place I feel: happy, comfortable, safe, and orientated (0 = strongly disagree; 5 = strongly agree) (participants must tick one)

This question aims to find out how different public places might make people feel. The purpose is to correlate the urban design qualities measured as part of the urban design appraisal with the participants' perception in public places, adding a user perspective to the appraisal.

Place care

Place care relates to attitudes and behaviours towards protecting and caring for geographical settings. The need to improve our places and make them our own, and the need to participate in social groups and become members of a community are associated with self-identity, which is partly achieved through our bonds with place; these feelings trigger positive attitudes and behaviours towards the environment (Brown, 2000; Carrus et al., 2014). Uzzell et al. (2002; cited in: Carrus et al., 2014) showed that cohesive communities with a strong sense of identity are more inclined to have pro-environmental behaviours than weaker communities.

For this study, this variable is captured through:

Participation rates: established through the use of a Participation Index[9]: I = R*5/H

Equation 0.5: Participation Index;

Where: R = number of participants on district specific research; 5 = scaling factor; H = number of households in the district.

Stewardship: observed during site visits; e.g. neighbours looking after public planters, mowing public grass patches; neighbours cleaning the streets and other public assets.

Attitudes to sustainability[10]: recycling, energy saving

The tools used to capture these variables were a *Community Life Questionnaire (CL.Q)* and observations during site surveys.

Social value of place

This section of the study aimed to understand the value participants assigned to public spaces in neighbourhoods, which might or might not coincide with other forms of place value[11]. The method for capturing the social value of place is an adaptation of Hester's environmental psychology method (2014) and it involves:

Mapping exercise: A mapping task was carried out during events and focus groups. The survey protocols are included in Appendix 3. Participants

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[9] Banfield (1958) and Putnam (1993; both cited in: Ferragina, 2012), found positive correlations between home ownership (an indicator of place dependency) and levels of participation. Hamdi's (2010) used participation as a way to enhance levels of place attachment variables in communities.
[10] It must be noted that ecological attitudes do not necessarily correlate with pro-environmental behaviours, as the latter are triggered by other motivations (Cicognani, 2010).
[11] Economic, aesthetic, environmental, historic, cultural, etc.

with an A1 or A0 map of the neighbourhood[12] were encouraged to talk about the map for a few minutes in order to help them orientate themselves and locate key landmarks. Specific questions were asked one at a time; mark places you love, places you dislike, places you want to protect and places that make you feel anxious or nervous. For each question, participants were handed over different colour stickers and were asked to locate them in the map[13]. Photographs were used as an aid to help participants relate to their neighbourhood places. During the task neighbours tended to engage in conversations packed with meaning and intention which resulted in useful qualitative data for the interpretation and analysis.

Conversations and walkabouts: participants are invited to have discussions about those places.

The outcome of this exercise is a series of maps, and quantitative and qualitative information about the meaning and value public places have for local people.

0.5. Research scope and limitations

The interdisciplinary place complexity at a neighbourhood level, with its multiple dimensions, made it difficult to cover all the phenomena in one single study. This was especially true due to time and resources constraints of this work. For these reasons, the scope of the research was limited to four of the key variables of each one of the tree dimesnsions: morphological, social and perceptual. Later sections of this thesis (Chapters 2, 4 and 6) go in depth

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[12] Maps, images and drawings can help participants relate to their environments better during interviews, especially when capturing cognitive responses is important to the study; maps can be used to ask participants where they feel at home, or where they feel scared (Zeisel, 2006, p.270).
[13] If participants cannot or will not answer a question they must locate the sticker outside the map (on the edges, for example).

to explain how each one of these variables was selected and why.

The study was also limited to looking at neighbourhood regeneration frameworks and development plans taking place in existing residential areas in Britain. The focus was on the role of urban design practice in the stage of 'appraisal' and it did not look at how these dimensions might have been considered during later stages of the design, build and post-occupancy processes.

This study focused only on publicly accessible spaces, both outdoors and indoors. It did not consider private property indoors or places of restricted acces such as schools or hospitals. This was due to the difficulties and slow process of granting access and ethical approval to conduct appraisal in such places. Due to the complexities involved, time constraints did not permit this type of practices.

As the subject of the study was broad and in-depth, and the objectives were vast, this work was specifically careful with regards to selection of the case studies and data collection that could help explain the argument of the study. Therefore, high volume quantitative research was not possible and populations had to be limmited to maneagable volumes. One of the major limitations of this study related to the lack of accessibility to broader public consultations, particularly due to budget constraints and over consulted populations. In addition, some social networks in the areas of study refused to participate due to having limited time and budgets, or due to political reasons. These, however, are constraints often also present in urban practice.

This study was dependent upon a high volume of empirical information obtained from a variety of sources, which required detailed

qualitative analysis.

The thesis explored three primary sources of data:

Primary source: critical literature with regards to each of the three dimensions studied.

Secondary source: documents produced by the government, design guides, reports and research conducted by organisations and institutions operating in the UK.

Terciary source: perception and public opinions regarding the variables of the research for each case study.

The study deliberately focused on the views of one specific portion of the stakeholders: the residents, users and other occupiers, to gather the relevant data. The study focused on finding ways to access the general public views because the engagement of public agencies and residents emerged as the main challenge in urban practice at the time of assertaining the research questions.

This study could not apply meta-population analyses due to time and resources constraints, and was limited to smaller population samples. Nevertheless, it focused on both qualitative and empirical data, and understanding processes of mutual transformation as opposed to the traditional approach of focusing only on quantifying final results.

Table 0.9: Research scope and limitations, summary

AREA	SCOPE/LIMITATIONS
Dimensions	Morphological, Social, Perceptual
Variables	Four key variables for each dimension
Neighbourhood	Existing UK residential areas

Space	Publically accessibly spaces (indoors and outdoors)
Stage of urban practice	Appraisal and evaluation / Feasibility
Population sample	Members of the community (individuals and groups; residents and regular users)
Geographical area	To match other policies and frameworks already in place

0.6. Thesis structure

The thesis was structured in three main parts following an inductive process:

Part 1: Theoretical framework and contextualisation of the study

INTRODUCTION: *Thesis overview*

The introduction discussed the conceptual framework and the theoretical background that contextualises the study. It introduced the aims and objectives of the thesis and it explained the overall research method, its scope and its limitations. It also described the structure of the thesis.

CHAPTER 1: *Social sustainability*

The chapter debates the framework of urban practice in the past couple of decades and how sustainability has been approached, highlighting some of the recent achievements and constraints in the delivery of sustainable development in the field of urban design. It expands on the relevance of multi-dimensional studies in neighbourhoods.

Part 2: Three dimensions of place in neighbourhoods: application on four case studies

CHAPTER 2: *The morphological dimension of place*

This chapter starts with a discussion about the morphological dimension of

place at a neighbourhood level, highlighting the key variables that concern the scale of analysis in urban practice. The core element of these chapters is the outcomes of the application of traditional urban design tools for the appraisal of four case studies.

CHAPTER 3: *The social dimension of place*

This chapter starts with a discussion about the social dimension of place at a neighbourhood level as approached by social sciences. Key variables that concern the scale of analysis are discussed. A methodology to appraise these variables, with tools imported from fields of sociology and anthropology is explained in depth. The core element of these chapter is the translation of social sciences techniques into urban design practice for the appraisal of the four case studies.

CHAPTER 4: *The social dimension of place findings*

This chapter presents the body of the data collected for the social dimension variables and their analysis. In order to simplify the reading of the findings, this chapter was structured in accordance to the variables, considering each one of the case studies.

CHAPTER 5: *The perceptual dimension of place*

This chapter starts with a discussion about the perceptual dimension of place at a neighbourhood level as approached by social sciences. Key variables that concern the scale of analysis are discussed. A methodology to appraise these variables, with tools imported from fields of psychology and anthropology is explained in depth. The core element of this chapter is the translation of social sciences techniques into urban design practice for the appraisal of the four case studies.

CHAPTER 6: *The perceptual dimension of place findings*

This chapter presents the body of the data collected for the perceptual dimension variables and their analysis. In order to simplify the reading of the

findings, this chapter was structured in accordance to the variables with illustrations of how these variables were measured.

Part 3: Tri-dimensional study and its practical applicability

CHAPTER 7: *Morphological, social and perceptual dimensions of place*

The chapter shows the results of all three dimensions of place and their correlations. It reflects on the overall cost-benefit of the proposed tri-dimensional urban study and the potential value of the findings that emerged for knowledge contribution to the field of urban design. It also debates how some of the constraints found could be minimised or managed in future studies, how this types of multidisciplinary methods could be broadly adopted in urban practice for neighbourhood appraisals and the benefits that might emerge from their application.

CHAPTER 8: *Thesis outcomes*

The chapter concludes the thesis with an overall review of the impact and outreach of the process and some potential future research avenues.
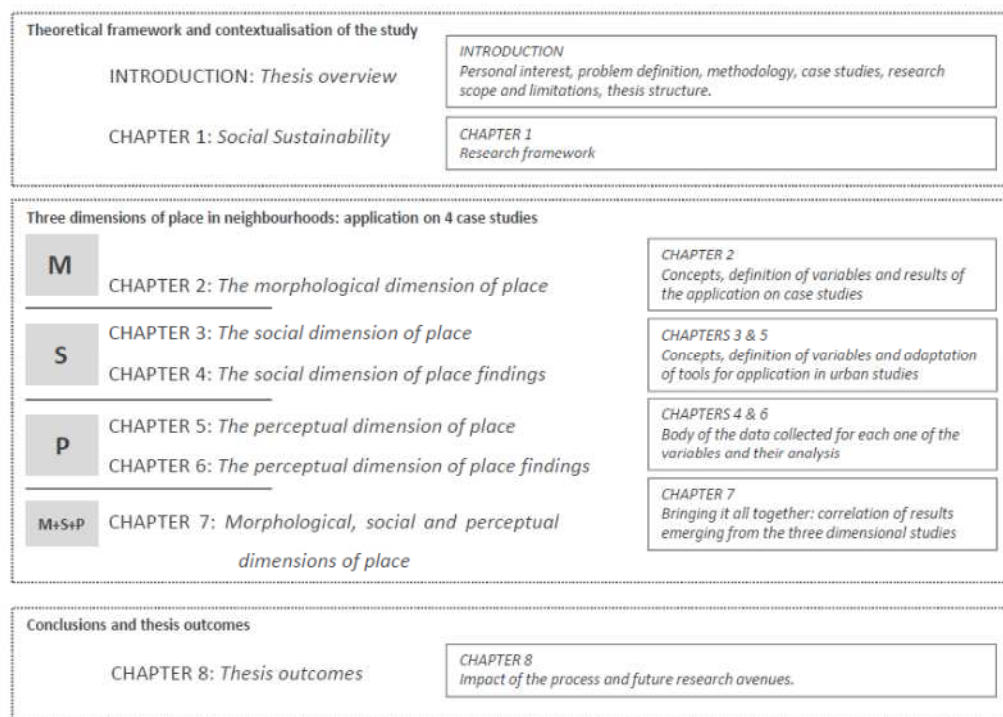
Figure 0.3: Thesis map diagram

0.7. Contribution to knowledge

The transition from sustainability to resilience and the introduction of ecological urban models turned the focus from end-product to complex processes of change more suited to systemic, multidisciplinary approaches. But at the time of the study, the economic and environmental aspects of urban sustainability had been further developed and understood than social sustainability. This thesis therefore set to explore the implications of transferring the recent conceptual changes of social sustainability into urban practice by adopting social sciences' tools and techniques to appraise two key dimensions of public places in British neighbourhoods: perceptual and social as well as the traditionally appraised morphological dimension. The main contribution to knowledge of this work was:

- The adaptation of social sciences methods and strategies to develop simple to use tools to appraise two dimensions of public places in neighbourhoods as well as morphology: social and perceptual.

- The corroboration of strong synergies between the three dimensions appraised.

The findings confirmed the urgent need to adopt multi-dimensional approaches for place appraisals, it supported existing views and introduced new critical knowledge to current urban design literature. This is discussed in depth in Chapter 8.

In order to respond to knowledge gaps in urban practice it was important to understand how theory and policy increased the awareness of social sustainability, and to explore what constraints were being found in urban practice to adopt more comprehensive, multidisciplinary approaches to place appraisal. This process of transformation of the legislative framework and urban practice is discussed in Chapter 1.

CHAPTER 1

1. Social sustainability

This chapter summarises an initial literature review that demonstrated the relevance of incorporating integrated, multidisciplinary approaches to urban practice to account for social aspects of sustainable development during place appraisal processes in neighbourhoods. The narrative is constructed chronologically to take the reader through the process of gradual incorporation of the social sustainability agenda in legislation and practice. Especially relevant to the discourse are the need to facilitate governance at community level and the need to account for crucial aspects of sustainability and social resilience in urban design practice. The chapter debates issues of social sustainability and how in recent years, resilience gained popularity as a strategy to tackle climate change adaptation and social re-balancing worldwide, and how urban ecology became the preferred theoretical model. European and British legislation embraced a fast process of reform with issues like partnership working, engagement, participation, collaborative design, and governance at a local level. The chapter looks at how urban practice began to search practical ways to respond. Social indicators and variables that measured change started to develop primarily because they had great political power: "*what gets measured gets done*" (Zautra, Hall and Murray, 2013, p.133). The chapter explores how despite best practice studies being recorded and soon becoming broadly available, due to the nature of a systemic process approach, it was still difficult to generate templates that would adapt to a multiplicity of scenarios. It also demonstrates the complexity of working with multiple inter-related dimensions of place addressed by different fields, which was also a constraint to practical applications in urban practice.

This chapter concludes by highlighting the key challenges that

prevented a more rapid response from urban practice to the fast theoretical changes:

- Difficulty to select appropriate variables due to the complexity of the systems involved.
- Difficulty to select indicators and tools to appraise the social dimensions of sustainable development.
- Difficulty to engage appropriately with the general public and to achieve successful participation and governance processes.

It also highlights how this literature review informed the research framework by:

- Focusing this work on the neighbourhood scale.

- Applying bottom-up participation strategies as a form of data collection that deliver socially sustainable outcomes (those that build up social resilience).

- Testing how the process could work in contemporary planning frameworks.

- Including a focus on how individuals felt, experienced and behaved towards the environment by adding the perceptual dimension of place as a key aspect of the social sustainability appraisal.

- Looking at social structures and individual psychologies simultaneously, correlating the results of the appraisal of both aspects of social sustainability.

- Adopting key concepts and definitions for this research (see Introduction).

The following section goes through the literature review that led to these key research foci examining the transitioning towards a sustainable future (1.1) and the core components of social sustainability (1.2).

1.1 Transitioning towards a sustainable future

"The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations." (Principle 3, Rio Declaration, 1992, p.1)

The Rio Declaration was the starting point of a shift to a more socially focused view of sustainable development (Colantonio and Dixon, 2011). Soon after, regeneration and social inclusion became broadly applied strategies aiming to relief decline through design (Colantonio and Dixon, 2011). However, sustainable development was still very difficult to achieve in practice (Ring et. al, 1999). There was no consensus on what was the best way to integrate all the dimensions of sustainability (Lee, 2000: 14; Glasson & Gosling, 2001; both cited in: Colantonio and Dixon, 2012, pp.40-41). Developing a 'whole system' approach to reveal feedback loops instead of negotiating trade-offs, was a challenge (Kumar, 2005). At this point scholars (Henriques et. al, 2004; Renn, 2005; Weber-Blaschke, Mosandl and Faulstich, 2005) began to question the validity of the sustainability concept and started looking for alternative ways to define the complex phenomena that associated the economic, environmental and social dimensions of sustainable development. Resilience emerged as a paradigm. Whilst sustainability referred to the ability to maintain certain status, resilience embraced the concept of adaptation and development of processes for coping with change.

1.1.a Social sustainability: how the journey began

The Conference on Environment and Development held in Rio de Janeiro in 1992 officially put humans at the centre of the global sustainability agenda for the first time, reinforcing the need to think in the long term

management of global resources. The environmental concerns raised by the summit showed a new focus on issues of a social nature such as poverty, health and equal rights for marginalised groups (Rio Declaration, 1992). It was a milestone document which prompted discussions about the environment and drove action with a holistic approach to planning issues (Beatley, 2000). In 1993, following the Rio Declaration, an extensive and intensive programme[1] was published by the European Communities showing a new turning point in the way environmental issues were tackled, establishing a set of actions and deadlines towards the development of a more sustainable future and specifying the need of using quantifiable data to assess progress. The document also highlighted the imperative need to implement financial support mechanisms such as the creation of cohesion and structural fund initiatives to support communities (European Commission, 1993; Colantonio and Dixon, 2009).

Four years later, the European Commission adopted the communication *Towards an Urban Agenda in the European Union* (European Commission, 1997) with a view to examine European urban policies in the context of the sustainability agenda. This work led to the release of the *Framework for Action* (European Commission, 1998), a document which built upon all mainstream European communications and policies released to date and highlighted four main principles to sustainability: strengthening employment and economic growth in cities; promoting equality, regeneration and social inclusion; protecting the urban environment; and contributing to good governance and local empowerment. The publication included a list of policy objectives with a series of actions designed around key principles

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[1] *European Community programme of policy and action in relation to the environment and sustainable development*, 1993.

including: subsidiarity, integration and partnership (European Commission, 1998; Beatley, 2000).

Regeneration and social inclusion were of particular interest as these became a turning point in the way development was approached. Regeneration, a set of activities that reverse economy, social and physical decline in areas where the market will not resolve this without government support (CLG, 2009) became a central objective in urban design practice (Colantonio and Dixon, 2011). Regeneration began to be favoured against standard forms of development, as it appeared to have the potential to offer a wider range of solutions to the social and environmental aspects of the process and it contemplated a vision for the future as well as present needs (Ritchie and Thomas, 2009). Colantonio and Dixon (2011) showed through a five UK case study analysis, how regeneration projects could generate social outputs such as identity and sense of place; social mixing and cohesion; and well-being, happiness and quality of life. Some characteristics were also found in their research study to be of critical importance for the success of regeneration: strong brand and identity; local community participation; partnership models; planning policies and governance models.

Quality of design became increasingly relevant as a strategy to deliver regeneration. In the UK, the Urban Task Force had the assignment of setting principles of design excellence, social inclusion and environmental responsibility for generating new towns and settlements, with a vision focused on principles 'to boost social cohesion'. Some of the points raised by the Urban Task Force related directly to the need to contemplate social sustainability as a fundamental part of the urban design profession's efforts to make the British public fall in love with the city again and abandon gradually the rural romanticism that increased the demand for suburban

areas. The report "Towards and Urban Renaissance" (Urban Task Force, 1999) was a key to deliver an action plan to achieve this. Empowering communities also came out as a priority, with a view to encourage local leadership, partnerships and neighbourhood strategies (Urban Task Force, 1999). A new strategy called 'A Better Quality of Life: A Strategy for Sustainable Development UK' was introduced, measuring 147 indicators related to sustainability targets (Vescovi, 2013). In England, the Town and Country Act of 1947 was replaced by 25 National Planning Policy Guidance (NPPG) and Regional Development Agencies were introduced to promote a more balanced territorial development (Vescovi, 2013).

Local Agenda 21 (LA21) was a set of non-binding, voluntarily programmes for the 21st century that emerged as a response to the Rio Declaration for cities, regions and nations worldwide to take action on sustainable issues. Beatley (2000) thought that the implementation of LA21 had been extremely popular, with 62% of all European cities adopting the scheme which demonstrated how serious the sustainability issue was for Europe. Hall and Ward (1998) disagreed, pointing out that a few years after the Rio Declaration and despite the action taken, it was still not clear how the issue of sustainability manifested in the everyday decisions made about our urban environments. In 1999 Ring et. al expressed that enormous efforts were being made and yet no individual discipline could still offer a satisfactory solution to sustainable development. They said that the integral aspect of a multidisciplinary approach made the concept of sustainability a very difficult issue to resolve and that therefore, simplicity in its interpretation was a key aspect of success. Bizer (1999) also supported this view, stating that perhaps sustainability should not be seen as a set of goals to be achieved but as an interdisciplinary way to interpret systems.

These debates led to a turning point at the end of the 20th century, when Ring et.al (1999) stated that sustainable development had to attempt to address two main issues: the equity between present and future generations and the relationship between people and their locality[2]. An integrated long-term approach to policy was needed to understand the interrelationship between ecological, economic and social systems, and the fact that they were all in constant change (Domenski et al., 1992; O'Hara, Shandas and Velazquez, 1999; Ring, Klauer and Wätzold, 1999; Vliet, 2000; Colfer C. et al., 2001; Fuad-Luke, 2009, p.23). Flap (1999; Lin, 2001; cited in: Van Der Gaag and Snijdersb, 2005) thought that, in order to deliver governance, a reliable study overviewing the distribution of social capital[3] and which indicators relate to broader socio-economic issues, was still missing. The European population and their behaviours were rapidly changing and there was no real understanding of the problems, whilst legislation was still focused primarily on economic issues.

1.1.b Social sustainability in the new millennium

In June 2001, the European Council met in Göteborg to agree on the first *European Strategy for Sustainable Development* (European Council, 2001). At this event, the Council added an environmental dimension to the Lisbon that included social cohesion. Two years later, the *ljubljana* Declaration on the Territorial Dimension of Sustainable Development (CEMAT, 2003) listed a series of action points calling for design to address a number of social issues such as integration, cooperation and participation, and stressed the need to address these from a spatial development policy

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[2] See Principle 1 and 3, Rio declaration, 1992 page 1; and Brundtland Report of the World Commission on Environment and Development, United Nations, 1987, footnote 6.
[3] See Chapter 4 for an in-depth discussion and definitions of social capital.

making perspective. By 2005 there were four assessment frameworks[4] already in place at European level. In the UK, a series of publications were launched to provide guidance on sustainability measurement and appraisal methodologies[5]. However, these methods were primarily based upon trade agreements and not embedded in wider policy frameworks, and they did not contemplate integration criteria (Colantonio and Dixon, 2011). Assessments of sustainability were being criticised for focusing on either of the three aspects of sustainability but without looking appropriately at the link between them and there was no consensus as to what the best way to integrate these dimensions was.

Richardson (2004; and Kumar, 2005) believed that a more systemic and integrated approach was necessary to achieve sustainability, and that a paradigm shift was paramount in order to succeed. However, the difficulty was that such a big change would require strong leadership, both within academia and politics (Weiler, 2005). Grunwald (2005) thought that an anthropocentric view could have been a good way to start simply because sustainability was about the human use of resources[6].

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[4] *Environmental Impact Assessment* since 1985 (Directives 85/337/EEC and 97/11/EC); *Strategic Environmental Assessment* since 1990 (SEA Directive 2001/42/EC); *Sustainability Impact Assessment* since 1999 (EC, 2005); and *The EU Impact Assessment System* introduced by the European Commission in 2003.

[5] *A better quality of life, A strategy for sustainable development in the UK* (HM Government, 1999); *Sustainable Communities* (ODPM, 2003); *Securing the future: The UK sustainable development strategy* (HM Government, 2005); *The Green Book* (HM Treasury, 2005); and *The Sustainability Appraisal of Regional Spatial Strategies and Local Development Document* (ODPM, 2005).

[6] Barry et. al (2004, p.2) found that there were two approaches to sustainable development from the perspective of the use of resources and the impact this could have on the environment and on societies: (1) strong and (2) weak. The 'strong' approach was based upon the idea that there are natural resources which are irreplaceable and crucial to human wellbeing called 'critical natural capital', and which should be protected even when this puts a stop to economic growth. The second or 'weak' approach was based upon the belief that humans have accumulated enough capital to replace lost assets and to enhance human wellbeing through the use of technology and innovation. Elkington (1997) adopted a strong approach, stating that people needed to be aware and assess which type of natural capital they are affecting through their actions. He classified natural capital into two categories: (a) the critical one,

In 2004, the shared Luxemburg-UK presidency of the European Union Council set a new milestone in the European search for sustainability with the release of two documents of great importance for the inclusion of the social sustainability dimension in European legislation: the *Urban Acquis* (European Union, 2004) and the *Bristol Accord* (European Union, 2005). The first one set up a framework for urban policy and the latter lined up the objectives and a compilation of good practice examples to build upon (European Union, 2004; European Union, 2005). The *Urban Acquis* prioritised economic competitiveness, social cohesion and environmental equality. The *Urban Acquis* called for participation, good communication and a balanced and democratic private-public partnership where the ownership of the urban environment is stimulated. It claimed that governance[7] had to be coherent, open, accountable and effective, inviting citizen involvement.

In the UK, in 2005, a document called 'Securing the Future: Delivering UK Sustainable Strategy' was published and the 147 sustainability indicators originally set in 1999, were reduced to a total of 68 divided into four categories including 'creating sustainable communities' (Vescovi, 2013). Halpern (2005) saw a scale problem in UK policy. He believed in Britain, local government was not of a neighbourhood level and that although some functions might have been more efficiently managed at a larger scale, others required a truly local level.

At the beginning of the new millennium the issue of scale became

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which cannot be replaced and is essential to the survival of the said ecosystem; and (b) the renewable one.

[7] Government can be understood as statutory relationship between politicians and the public within certain administrative areas whilst governance indicates a shift of power and control towards non-governmental organisations (Tallon, 2013). Jacobs (2011) attributed the results of city planning, whether they were good or bad, entirely to the capacity of neighbourhoods to govern themselves. She added that a vital capacity of a neighbourhood was the ability to ask for help to the appropriate channels when the difficulties were too large for them to resolve.

more relevant as social sustainability was widely understood. At the same time scholars (Henriques et al., 2004; Renn, 2005; Weber-Blaschke, Mosandl and Faulstich, 2005) were beginning to question the validity of sustainability as a concept and looking for new ways to define a complex phenomenon involving the three dimensions: economic, environmental and social.

1.1.c The resilience paradigm

Sustainability implied 'keeping' or 'retaining' things and this was somehow impossible as humans constantly had to intervene on ecological systems; a requisite for the survival of humanity (Renn, 2005). A shift to a larger commitment on human and ecological values was needed, where instead of attempting to maintain certain status, capacities were managed to change and adapt (Hauser-Kastenberg and Norris, 2005; Colantonio and Dixon, 2012). The realisation that sustaining our resources was an impossible task led to the paradigm shift from sustainability to resilience. Within the German Presidency of the European Union Council, the *Leipzig Charter* (European Commission, 2007) emerged, a framework for encouraging competitiveness whilst promoting 'social and territorial cohesion' on the delivery of successful sustainable cities. The document recommended coordinating the spatial and temporal scales of development processes. It called for cities to draw up programmes to suit their strengths and weaknesses, to develop objectives and visions, to balance disparities amongst neighbourhoods and, to coordinate different levels of participation emphasising the importance of high quality public spaces (European Commission, 2007). A report called *Promoting Sustainable Urban Development in Europe* (European Commission, 2009) was released. The report advised to move towards a more integrated strategy for regeneration, to decentralise shifting from governing to governance and to empower inhabitants.

As the complexities associated with sustainable ways of development became clearer in academia, there was an increasing recognition that sustainability could not be achieved by working in unidirectional ways. The traditional focus on physical and economic spheres turned towards more multidisciplinary approaches (Domenski et al., 1992; O'Hara, Shandas and Velazquez, 1999; Ring, Klauer and Wätzold, 1999; Vliet, 2000; Colfer et al., 2001; Fuad-Luke, 2009).

Initially one of the major challenges of social sustainability was that it involved the study of social and natural systems and therefore it dealt with two confronted scientific believe systems which made reconciliation difficult to achieve: social science dealt with change through system management and ecology dealt with the analysis of phenomena and their patterns of change. Technical and economic research, deemed as the hard approach to sustainability, clashed with the social aspects, which were more difficult to measure and therefore of a more qualitative nature (Bizer, 1999). But in less than a decade the soft approach to sustainability had become more popular creating a duality in the field which would endure for the foreseeable future (Colantonio and Dixon, 2011). The overlapping of empirical and qualitative data was complicated, as softer approaches to research were based on meaning and understanding, and implied informalities and personal analysis in favour of objectivities (Crilly and Mannis, 2000).

1.1.d Conclusion: how the research context framed this work

The key milestone in the process of introducing social sustainability into the global legislation agenda was the United Nations Declaration on Environment and Development of 1992, a document which put weight to social aspects of sustainability initiating a new path for research and practice

worldwide, and which was therefore the starting point for this chapter. The literature review explored how since, academia, urban practice and legislation moved forward with a view on social sustainability concluding that:

- As the complexities associated with sustainable ways of development became clearer, there was an increasing recognition that sustainability could not be achieved by working in unidirectional ways. The traditional focus on physical and economic aspects of sustainability turned towards more multidisciplinary approaches (Domenski et al., 1992; O'Hara, Shandas and Velazquez, 1999; Ring, Klauer and Wätzold, 1999; Vliet, 2000; Colfer C. et al., 2001; Fuad-Luke, 2009). This informed the decision of focusing this research working on a multi-disciplinary direction.

- The realisation that sustaining our resources was an impossible task led to the paradigm shift from hard sustainability to resilience. The idea of maintaining resources was abandoned in favour of a focus on environmental adaptation and resource management. This change in paradigm resulted in this work adopting a focus on processes and change, and a qualitative interpretation of phenomena rather than purely on outcomes.

- The incorporation of social sustainability to the agenda disturbed academia when qualitative research methods and practices borrowed from social sciences - initially deemed controversial and unscientific - became necessary to complement well established quantitative data analysis. The overlapping of empirical and qualitative data was complicated as softer approaches to research were based on meaning and understanding; where implied informalities and personal analysis were in favour of objectivities (Crilly and Mannis, 2000). This finding informed the research with regards to the imperative need to reconcile both approaches to data analysis:

quantitative and qualitative; with implications on how variables were measured and analysed in order to ensure correlations were possible.

- The translation of resilience concepts into practice and law was a slow process. Partly because of the lack of empirical data, as the ways in which social sustainability could be measured had been a topic of heated debate in academia and the selection of variables and methodology had not found consensus (Colantonio and Dixon, 2011). Furthermore, choosing the right indicators to address sustainability had been challenging due to the broad nature of the concept: values could vary between cultures, there were many different scales of analysis (Bennet & Lance, 2008) with legislation rooted in previous methods and models. This point informed the research work about the need to adopt appraisal methods that would reconcile with current legislation, making the application of the tools and findings in real case scenarios possible.

Finally, the literature review demonstrated that despite the difficulties encountered there had been a true and genuine commitment in Europe and in Britain to find more efficient ways to deliver sustainable development. This emphasis on achieving good public participation and community involvement demonstrated the level of commitment at all levels of government. This point gave this work a sense of real weight and potential impact giving great motivation to the author for pursuing positive change in urban practice.

1.2 The core components of social sustainability

"...a comprehensive study of urban regeneration from a social-sustainability perspective is still missing from the literature."

(Colantonio and Dixon, 2011, p.4)

This section looks at the relevance of participation and governance in social sustainability, and how these might work in contemporaneous planning frameworks. The sustainability agenda was increasingly recognising the need to account for social as well as economic and environmental aspects of development. With a combination of technological advances and globalisation, local distinctiveness was growing in relevance as there was a progressive loss of cultural diversity. Languages were being extinct and traditions were disappearing. The city landscapes were becoming more uniform and they were losing distinctiveness, which translated into cultural uniformity (Hester, 2006). Local identity, character and a sense of place belonging became more relevant than ever before but it was still unclear how these issues could be addressed through urban practice.

A number of new social design approaches gradually emerged since 2000 under the umbrella of what is known as co-design: *critical design*[8], *meta-design*[9] and *slow design*[10], all tempting to reframe theory and practice

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[8] Critical design: focuses in the design of products and services and in making them available to the whole population (Urban Design Associates, 2013). Often challenges its audience's preconceptions and expectations provoking new ways of thinking about the object, its use, and the environment. It is provocative, inspiring and questions fundamental assumptions about the object.

[9] Metadesign: defines and creates social, economic and technical frameworks for interdisciplinary, collaborative design with a series of practical design-related tools for achieving this.

[10] Slow Design: promotes well-being for individuals, society, and the natural environment. It seeks a holistic approach considering a wide range of material and social factors as well as the short and long term impacts of the design. It aims to establish development patterns that ensure the preservation of

by stimulating different degrees of participation, involvement and cooperation through the design process aiming to increase a sense of local distinctiveness to urban practice. Healey (1997; cited in: Townsend and Tull, 2004, p.12) thought that Collaborative Planning was the best way to give a voice to everyone involved in the process. Participation and governance were growing in popularity as legislation and funding acknowledge the need to involve people in place making as part of the sustainability agenda. But Entec (2003 cited in: Townsend and Tull, 2004, p.18) argued that ventures like Local Strategic Partnerships[11] were not representative of all sectors of the community. Bedford et al. (2002; cited in: Townsend and Tull, 2004, p.13) agreed. He found that at times, participants were badly informed, that consulted groups were non-representative of the community, and that participation was generally embraced by some sectors of society, primarily white, middle class and well–educated citizens. Tarrow (1998) instead, expressed concerns with his view that inviting people who were partially informed to contribute in designing cities implied a high risk, and it was therefore irresponsible from the profession.

In June 2010, following the global recession, the Informal Meeting of Urban Development Ministers held in Toledo was titled *Integrated Urban Regeneration.* An explanatory opinion from the European Economic and Social Committee on *'The need to apply an integrated approach to urban regeneration'* was released with a clear message:

> *"The EESC believes that in order to promote more responsible*
> *citizen participation in the implementation of integrated urban*

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landscapes, the reuse of land, the densification of centers, and the promotion of affordability, sustainability and health and safety (Urban Design Associates, 2013).

[11] Local Strategic Partnerships: a single coalition of public, private, voluntary and community sector organisations, with representation from all parties.

regeneration programmes, there is a need to have dialogue and consultation with communities within urban centres, including women and young people and those most at risk from exclusion."
(European Social and Economic Commission, 2010, 1.10)

The relevance of local powers and their validity as social assets able to build up social capital was also transferred to British legislation. In 2010, NESTA[12] published Mass Localism, a paper presenting the outcomes of their strategy to support local communities in solving social issues and striving to reduce their carbon emissions. The paper showed that local communities could pull on their existing social capital to take action and deliver projects with a global impact on broader sustainable issues (Bunt and Harris, 2010). This demonstrated the importance of social assets and the need to apprise them adequately to form a platform upon which to build up social capital at a community level. Urban design can play a part on this and therefore this point was a main consideration when deciding to focus this work on the neighbourhood scale.

The real influence of initiatives like Mass Localism at a national scale was that they could be used as case studies for innovative strategies and as examples of enterprises working alongside communities (Bunt and Harris, 2010). One of the key outcomes of the project was the understanding that governments should not implement best practice across the nation but it should seek to understand local capacities within communities in order to implement suitable strategies. The community scale was therefore considered the most appropriate scale of analysis for this research piece. Providing advice

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[12] *"NESTA is an innovation charity with a mission to help people and organisations bring great ideas to life. We are dedicated to supporting ideas that can help improve all our lives, with activities ranging from early stage investment to in-depth research and practical programmes."* http://www.nesta.org.uk

and identifying and removing participation barriers was seen as more important than giving financial support, especially at initial stages (Bunt and Harris, 2010). In 2011, the Localism Act was introduced, giving more power to local authorities and reversing the structure to a bottom-up approach (Vescovi, 2013). This work carefully considers this point by focusing on bottom-up participation strategies as a form of data collection.

Only months later Colantonio and Dixon (2011) noted that social sustainability had not yet been addressed by comprehensive urban studies but they recognised that the URBAN[13] programmes, rather successfully, had marked a substantial move from mono-policy towards city-wide visions for regeneration; a more integrated, local and decentralised approach to governance; an increased focus on neighbourhoods and communities; and that more attention had been paid since to the effectiveness of policy (Colantonio and Dixon, 2011). This point is important since it is indicative of a shift towards the scale of the neighbourhood as a key factor for urban governance and policy. This work draws upon this change and focuses on neighbourhoods.

Dolan (2012; and Roberts, 2013) stated that in order to have the

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[13] Between 1994 and 1999, the community initiative URBAN I benefited 118 European cities with more than 900 million euros invested in sustainable regeneration in deprived neighbourhoods. The scheme implicated an integrated approach to regeneration with programmes at local levels involving local communities. A key aspect of the initiative was the creation of URBACT, a platform for knowledge dissemination thought the exposure of good practice examples across Europe. The URBAN II Community Programme followed, with strong support from the European Parliament, for the period 2000 to 2006 for sustainable urban development in cities and neighbourhoods in crisis. This time, the initiative was drafted with administrative simplifications and the stronger emphasis on local partnership, in England for example, local councils accepted accountability for financial management and project appraisals. Overall more than two million people benefited from this program and the knowledge-based URBACT programme. The European Commission's initial assessment of the URBAN II Initiative (along with the results of the Urban Audit project, which had begun in 1998 aiming to measure the quality of life in 58 European cities through a range of socio-economic indicators) showed the main issues faced by European cities were: high unemployment, high crime rates, high proportion of ethnic minorities and lack of green space. Even more concerning was the fact that discrepancies were sometimes greater within various areas of a city than between different cities.

capability to act positively in times of crisis it was necessary to build-up a sense of belonging and strengthen social bonding, and this could only be achieved with participation. Maahsen-Milan (2013), on a study of urban regeneration schemes in the area of Munich, found that in Bavaria sustainability was increasingly related to some kind of proactive participation and intervention self-management as these approaches improved quality of life and social cohesion, responsibility for the environment and a sense of identity. Tallon (2013) believed that the main constraint in achieving partnership was the lack of trust in society and that in order to achieve good results, bridges had to be built between the parts involved and those sectors that could potentially feel excluded. The issue of trust and its impact on active participation was carefully considered during the process of this research. This is discussed in more detail later on.

Although the practice of community participation in urban regeneration was somehow established and growing in popularity, more 'moderate' approaches started to emerge as ways towards conciliation of contested opinions (Awan, Schneider and Till. 2011; Bishop and Williams, 2012). On one hand, empiric analysis started to show that participation was not something people naturally did even if they had the time or will; on the other hand it showed that it was indeed an integral part of designing and planning, and that it could bring a sense of ownership and responsibility which were detrimental to the health of the place and the community (Hamdi, 2010). Participation could lead to the transformation of the participants as they learnt from methodology and processes but more importantly, they discovered that everyone had something to offer, resulting in a change of mind-set and therefore in the transformation of relationships and communication patterns (Fuad-Luke, 2009). Community work and

collaboration could be tools to enable education and knowledge transfer and acquisition, for example, through community involvement schemes 'lead by architects and other professionals of the built environment' (Awan, Schneider and Till. 2011). It was by then clear that involving people in decision making processes and encouraging groups to come together around a common goal had many benefits, such as empowering communities, building up social cohesion and increasing individual skills and self-esteem (Bishop and Williams, 2012). Bishop and Williams (2012) stressed that greater community activism had the potential to become increasingly significant in the development of the cities of this century, as it could strengthen social structures and local economies. The reality was that a strange hybrid of traditional planning methods was running alongside emerging trends of governance creating unavoidable conflict and making compromises inevitable in practice (Allmendinger and Haughtonô, 2009). The issue of working within existing planning systems to understand how new methodologies could work in practice led to the decision to search for case studies that facilitated the application of this research onto legislation.

Summarising, it was through participation and governance that social sustainability could begin to be addressed. Bannon (2013) explained that the inclusion of the social dimension of sustainability to legislation had been slow. He said that back in 1946, the World Health Organisation described health as *'a combination of physical, mental and social wellbeing, and not solely the absence of disease'*, and it took them forty years to add that *'to achieve wellbeing we require an appropriate environment'* (Bannon, 2013). Issues such as social capital, social cohesion, leadership and engagement were proving to be the pillars of social sustainability and those could be best achieved at a local community scale. This work draws upon these issues by constructing the data collection in a format that delivers socially sustainable

practices.

1.2.a The relevance of resilience as a model

"The cultivation of choice when it comes to identity is one principal responsibility for all development practitioners, central theme in participatory work, because the ability to choose, to adapt according to one's values, believes and aspirations, builds resilience and reduces vulnerability."

(Hamdi, 2010, p.57)

This section discusses the implications of the resilience paradigm in urbanism and debates the practical difficulties of transferring the concept into practice.

The emerging concept of resilience which referred to the notion of survival of the main structures and the necessity of systems to adapt (Brand and Jax, 2007), was being interpreted in several contexts: in ecological sciences, in normative and operational terms, in economy and in social sciences. However Coaffee (2013) acknowledged that the concept of resilience itself was already developing and that not all scholars were supportive of the notion, as doubts were arising about the real benefits of the models and the political limitations for their applications. Davoudi S. et al. (2012) questioned whether 'resilience' was at risk of becoming another buzz word to replace the term 'sustainability' and doubted about the possibilities of fully translating resilience research into planning policy. However, there had been abundant evidence of this happening. A definition of sustainability which incorporates the notion of resilience appeared in Vancouver's SDP 14 in

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[14] The City of Vancouver's Social Development Plan: Towards Coordinated Planning and Decision-

2010: *"For a community to function and be sustainable, the basic needs of its residents must be met. A socially sustainable community must have the ability to maintain and build its own resources and have the resiliency to prevent and/or address problems in the future."* (also quoted in: Colantonio and Dixon, 2011, p.34).

Over the years, researchers identified attributes in connection with social resilience: vision; trust; leadership; development of social networks; information sharing; social learning, governance and participation; capacity to monitor and respond to environmental changes (Folke 2003; Lebel et al. 2006; Berkes and Turner 2006; Pahl-Wostl et al. 2007; all cited in: Maclean, Cuthill & Ross, 2013, p.1). Some schools were also shifting the focus, moving from a "silo" to a more "ecological" approach, combining sustenance of structure and function when under pressure with adaptation and capacity to change (Krimayer et al., 2009; Roberts, 2013, p.201), integrating risk management with resilience factors that emerged at three different levels: (1) individual, such as wellbeing; (2) close community, such as behaviour; (3) social and economic[15] (Krimayer et al., 2009). Haigh and Amaratunga (2011, pp.4-7) adopted an ecological resilience definition: *'the level of disturbance an ecosystem can resist without altering its primary structure'*. The authors understood resilience as the capability of the built environment to resist or change when faced with a hazard, in a way that enabled societies to continue functioning. Ratajczak (2011) explained that lower levels of resilience resulted in higher levels of vulnerability, which could be interpreted in different ways:

Making for Social Inclusion. Inclusive Cities Observatory. 2010.

[15] Colantonio and Dixon (2012) further divide the social and economic level into three scales: city; regional or national; and international and explain that the heart of social sustainability was finally at a local level because the focus had recently been placed on neighbourhoods (Colantonio and Dixon, 2011). Eagle, Macy and Claxton (2010) found that there was a strong link between the quality of social networks, well-being and the economic development of communities.

the incapacity of a system to resist an event even before the event happens; a direct consequence after exposure to a hazard; the probability of an outcome given a potential hazard, defined by the loses measured against benchmarks. More recently Mclean, Chuthill and Ross (2013) analysed different case studies in North Queensland and validated them against literature review of social reporting frameworks to identify six indicators of social resilience which were present consistently in all cases: community infrastructure[16]; community networks[34]; engaged governance[17]; people-place connections[18]; knowledge, skills and learning[19]; and diverse and innovative economy[20].

Some (Rowson, Broome & Jones, 2010; Awan, Schneider & Till, 2011) believed that an optimum outcome in social assets through policy could only be achieved with a better understanding of community connectivity, and that development could not be completely successful if it did not take note - and understood - its social structures, because the creation of spaces was relevant to the people who inhabit them. Haigh and Amaratunga (2011) affirmed that a more resilient society would result from driven action when the community assets were measured, valued and utilised to build capacity from them[21]. They supported asset-based community development, which looked at the state of the community in a point in time and it concentrated on an agenda to build up capacity and solve problems through creativity, innovation and control. Innovation became increasingly important as a resilience indicator,

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[16] Social capital
[17] Political capital
[18] Cultural, built and natural capital
[19] Human capital
[20] Financial capital
[21] Haigh and Amaratunga (2011) added that ignoring community assets during post disaster reconstruction, for example, could lead to lower social resilience and it could therefore create weaker and more vulnerable communities.

developing on the legacy from earlier schools of thought[22]. Fusco Girard et. al (2011) proposed a view of resilience which was intimately linked with creativity. They defined a creative city as one that develops mechanisms to tight economy, society and ecology. Their model included three types of resilience: social resilience: strongly dependant on formal and informal social networks[23] which were a result of a sense of place and community; economic resilience: which was the capacity to generate wealth, also deeply related to the nature of relationships; ecological resilience, which was reflected on the strength of the system; all of which they saw as dependant on the development of the density and nature of social relations and connections (Fusco Girard et. al; 2011). He later on added a fourth type: the 'culture resilience', which he saw as the capacity to retain cultural memory and collective consciousness, to retain and develop assets, and to positively react to external pressures, which could be achieved through the implementation of creative bottom-up processes particularly with a focus on culture. Carmona et.al. (2010) believed sustainable urban design could only be achieved if six dimensions were accounted for: morphological, perceptual, social, functional, temporal, and visual. This was an early comprehensive view that gave the same weight to these multiple dimensions.

Urban morphology refers to the *"patterns and processes of growth and change"* (Carmona et.al., 2010, p.77). It considers volumetric and mapping analysis of form, patterns and relations between the elements within a system. This is explained in more depth in Chapter 2.

The perceptual dimension of place refers to the process of

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[22] See Liebetruth (2005) and Renn (2005) previously discussed.
[23] Informal social networks referred to family and friends whilst formal social networks were defined by memberships (Ferragina; 2012).

interpreting spaces through our senses: vision, hearing, smell and touch. The process includes the actual sensorial input and the process of interpretation of that information, which happens primarily through our cognitive and emotional brain capacities. This is discussed at more length in Chapter 5.

The social dimension refers to the capacity of place to mediate, influence and constraint human activity and social life. Previous research showed some relationships between morphology and social activity patterns. This is explained in more detail in Chapters 2 and 3.

According to Carmona et.al. (2010) the visual dimension of place refers to the aesthetic appreciation of the disposition and composition of elements within a space. It could be argued that this dimension of place is intimately related – and perhaps a component of – the perceptual dimension since interpretation of form and patterns use similar cognitive brain capacities. However, this discussion escapes the scope of this research.

The functional dimension relates to the capacity of space to accommodate movement, areas of relaxation and repose and areas for discovery. It also deals with microclimatic issues such as light and air movement. This dimension was often considered in new developments through the application of tools like Space Syntax[24], pioneered by Prof Bill Hiller, and other modelling software.

The temporal dimension refers to time cycles and settlement rhythms;

[24] *"Space syntax is a science-based, human-focused approach that investigates relationships between spatial layout and a range of social, economic and environmental phenomena. These phenomena include patterns of movement, awareness and interaction; density, land use and land value; urban growth and societal differentiation; safety and crime distribution."* (Space Syntax Network, 2017).

often dealt with by conservation and heritage specialist fields. Table 1.1.1 below summarises how key literature informed this research.

Table 1.1: How the literature review informed this research.

Author	Concept	This research	Reason
Carmona et al. (2010)	Sustainable development achieved by considering six dimensions of place: morphological, perceptual, social, functional, temporal, and visual.	Adopted this concept of sustainable development and researched how three of the six dimensions could be better appraised in urban practice.	This is a comprehensive definition of sustainable development. Time limitations did not permit testing the appraisal of all dimensions. The core dimensions for a neighbourhood scale were appraised.
Rowson, Broome & Jones, 2010, p.15; Awan, Schneider & Till, 2011	Optimum outcome in social assets requires the understanding of community connectivity and social structures	The research includes the appraisal of social networks.	Appraisals of place in neighbourhoods were neglecting these core aspects of sustainable development.
Haigh and Amaratunga (2011)	Resilience results from action when the community assets are measured.	Focuses on the appraisal stage to measure community assets.	Appraisals of place in neighbourhoods were neglecting these core aspects of sustainable development.
Fusco Girard (2011)	Social resilience is strongly dependant on formal and informal social networks, cultural memory and collective consciousness.	The research includes the appraisal of social networks and emotional connection to place at an individual and collective level.	

1.2.b Sustainability assessments developed

This section discusses various ways to appraise sustainable development that were being used in architectural and urban practice and debates the practical difficulties and some appraisal gaps in terms of social sustainability.

Measuring degrees of sustainability in urban developments has proven

to be difficult. The Social Impact Assessment method introduced in the 1970s, which measured and managed the intended and unintended consequences of development in the social fabric, has been continuously revised to include biophysical and economic variables. However these appraisals were not designed to measure sustainability (Colantonio and Dixon, 2012). At a practical level, Social Impact Assessment were problematic due to several reasons: the difficulties in achieving an accurate measurement; the oversimplification of socio-political issues and regional differences; and the difficulty in agreeing benchmark indicators which will work for a variety of cases (Colantonio and Dixon, 2012). Technologically oriented assessment mechanisms such as LEED[25] and BREEAM[26] have done little to reflect the value of social interactions and the instability of the constituencies on which they are applied, such as its economic strength (Rawes, 2013). Colantonio and Dixon (2012) regard Igloo Regeneration Ltd[27] Footprint[28] assessment method

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[25] LEED (U.S. Green Building Council's Leadership in Energy and Environmental Design assessment) is a voluntary consensus-based and market-driven approach to sustainable building launched in 1998 and improved since with, several new versions launched to allow for retrofit, residential uses, commercial buildings, neighbourhood development, etc. The system evaluates building environmental performance at all stages of the process: design, construction and operation; accrediting a rating of Certified, Silver, Gold or Platinum in relation to the building overall score. The measurement areas are currently: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality and innovation in design. Some public bodies are encouraging the use of LEED in more than 40 countries to speed up the project review stages however, despite generating a raise in awareness and a sense of status amongst the industry, there is an argument amongst developers that the system still costs too much (Rajkovich, Kwok and Larsen, 2013).

[26] BREEAM assessment method was launched in 1990, it sets the standard for best practice in sustainable building design, construction and operation, awarding a rating of: 'Pass', 'Good', and 'Very Good', 'Excellent' or 'Outstanding'. The method uses recognised measures of performance set against established benchmarks and it evaluates buildings specification, design, construction and use in several categories and criteria including energy and water use, the internal environment (health and well-being), pollution, transport, materials, waste, ecology and management processes. The UK generally adopted the BREAM assessment method, along with more than 50 countries in the world (Rajkovich, Kwok and Larsen, 2013).

[27] *'The igloo Regeneration Fund is a partnership of pension, life and charity funds managed by Aviva Investors, which invests in sustainable urban regeneration across the UK, either directly or via joint venture vehicles, Blueprint (with the Homes and Communities Agency), Bigg Regeneration (with Scottish Canals) and Carillion Igloo.'* Available at: http://www.igloo.uk.net/ (last accessed on 02 April 2014).

[28] Footprint: innovative tool for measuring sustainability of developments in urban areas. This assessment method is based on a traffic light system and it is applied at different stages during the design process to evaluate the evolution of the design (Colantonio and Dixon, 2012).

as an innovative initiative because it combined health, happiness and wellbeing; regeneration; environmental sustainability; and urban design variables with a context/place focus and emphasis on stakeholders participation[29]. The tool, they said, enabled the design team to think more strategically identifying potential risks and encouraging innovative thinking and it was designed to be applied in conjunction with other assessment methods such as BREEAM and Code for Sustainable Homes[30] and with application at various stages of the process. The Footprint assessment, the authors added, was based on three main concepts: celebrating urban life; the understanding the impact of the development in the context of the wider neighbourhood; and promoting happiness on the basis of understanding human primary needs and the boundaries of living within an environmentally friendly lifestyle (Colantonio and Dixon, 2012). However, despite the efforts made, the relationship between different types of wellbeing and the environment, and the use of indicators to measure wellbeing and life satisfaction index to deal with issues such as fairness, social equity and cohesion, had not been fully researched (Colantonio and Dixon, 2012; Reid and Colin, 2013).

Choosing the right indicators to address sustainability was still proving challenging because the concept was very broad, values could vary between cultures, there were many different scales of analysis -from local to global- and even when a trend could be unveiled it would be difficult to spot a critical

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[29] Adams and Tiesdell (2013) also thought that appropriately engaging all stakeholders in creating a vision for any development was an essential part of the process and that the methods of engagement needed to be designed to suit each case and implemented in a fair way, enabling all parties to engage.
[30] Code for Sustainable Homes: UK national standard for the sustainable design and construction of new homes. The Code aims to reduce our carbon emissions and create homes that are more sustainable. Available   at: http://www.planningportal.gov.uk/buildingregulations/greenerbuildings/sustainablehomes (last accessed on 02 April 2014).

point (Bennet and Van der Lugt, 2004). Colantonio and Dixon (2012) identified ten social dimensions to sustainability emerging from international comparisons: demographic change; education and skills; employment; health and safety; housing and environmental health; identity, sense of place and culture; participation, empowerment and access; social capital; social mixing and cohesion; and wellbeing, happiness and quality of life. Ferrao and Fernández (2013) listed the sustainability indicators of Santa Monica in California: resource conservation; environmental and public health; transport; economic development; open space and land use; housing; community education and civic participation; human dignity. Colantonio and Dixon (2012) explain that initiatives to establish sustainability indicators only achieved solutions that apply to small scale studies with a focus on environmental issues. However, they said, there has been an increasing concern in incorporating variables of a social nature within the assessments. Initially these addressed the 'basic needs' issues but later on, variables had been combined to achieve more holistic approaches to sustainability assessments. However, the methods used to attribute relative relevance to each variable were often absent. Another issue, they added, was that whilst economic data was available at a regional level, the focus had been changing to a community level and wellbeing indicators were normally addressed at a local scale[31]. Methodology had also moved from a quantitative approach to a combination of both quantitative and qualitative analysis, introducing subjective values

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[31] For example, Zautra, Hall and Murray (2013) proposed an integrated model to measure levels of well-being in communities. Furthermore, individuals' perceptions of their well-being has proven to differ from the results obtained from social indicators in projects such as: Community Indicators Initiative of Spokane, Washington (www.communityindicators.ewu.edu); Jacksonville Community Council Inc., Florida (www.jcci.org); Sustainable Seattle (www.sustainableseattle.org); Truckee Meadows Tomorrow, Nevada (www.truckeemeadowstomorrow.org) (Campbell and Converse, 1972; Andrews and Withey, 1976; all cited in: Zautra, Hall and Murray, 2013, p.134).

that were related to culture and community morals. Furthermore, the authors added, despite the importance of community capital in development and regeneration had increased, only a handful of tools were available and they were normally either applied as a form of community survey at local level or used to deduce the level of social capital from national statistics and therefore, more empirical work needed to be done on social capital tools to be incorporated as a variable within sustainability assessments (Colantonio and Dixon, 2012). Table 1.2 below shows how different appraisal methods for sustainable development informed this research.

Table 1.2: Appraisals of sustainable development adopted by this research.

Author	Concept	This research	Reason
LEED BREEAM BREEAM Communities	Sustainability appraisal tools based on scoring technical aspects of a design.	Did not consider these methods covered the gaps found in urban practice.	Based on goals not processes. Designed to measure specific proposals than to understand existing assets & challenges.
Footprint	Sustainability appraisal tools based on scoring technical and implementation aspects of a design.	Did not consider these methods covered the gaps found in urban practice.	Based on scoring/informing specific proposals than to understand existing assets and challenges.
Colantonio and Dixon (2012)	Relationship between wellbeing/cohesion/other social sustainability measures had not yet been researched at a local level.	Gap found in urban practice addressed by this research.	Difficult to find right indicators due to the broad concepts.
Colantonio and Dixon (2012)	Social sustainability indicators: demographic change; education & skills; identity, sense of place, culture; participation, empowerment and access; social capital; social mixing & cohesion; wellbeing, happiness & quality of life.	These indicators considered for appraisal by this research, some through socio economic analysis.	All of these indicators were considered fundamental as they appeared as key aspects of social sustainability across literatures. Other indicators escape the scope of this work and had to be omitted due to time and budget constraints.
Ferrao and Fernandez (2013)	Social sustainability indicators: resource conservation; open space and land use; community education and civic participation; human dignity.	These indicators considered for appraisal by this research, some through socio economic analysis.	

1.2.c Happiness and wellbeing in social sustainability

This section discusses how individual psychologies such as happiness and wellbeing are intimately related to social sustainability and how urban practice can indirectly contribute to enhancing these through participation and engagement.

'Happiness', measured through variables of subjective wellbeing, became one of the goals of sustainable development (Gardner and Prugh, 2008; cited in: Corral, 2010, p.78). Happier individuals are more inclined towards pro-social behaviours and altruism (Kasser and Ryan, 1996; cited in: Corral, 2010, p.78). Participatory processes can become a trigger that brings emotions to the surface. Hamdi (2010) believed new multidisciplinary tools should enhance the sense of ownership and responsibility, as these prompt positive attitudes that are detrimental to the health of the place and the community. As discussed in previous sections, participation could lead to the transformation of the participants as they learnt from methodology and processes but more importantly, they discovered that everyone had something to offer, resulting in a change of mind-set and therefore in the transformation of relationships and communication patterns (Fuad-Luke, 2009; Hamdi, 2010). Community involvement in the early stages of decision processes could build-up social cohesion and increase individual skills, self-esteem (Bishop and Williams, 2012; Roberts, 2013) and knowledge transfer/acquisition (Awan, Schneider and Till, 2011), whilst increasing the community capacity to act positively in times of crisis, building-up a sense of belonging and strengthening social bonding (Dolan, 2012; Maahsen-Milan, 2013). In practice, however, active and inclusive participation had been difficult to achieve. Tallon (2013) believed that the main constraint at a personal level was the lack of trust in society and that in order to achieve

good results bridges had to be built between the parts involved and those sectors that could potentially feel excluded. The lack of resources meant that carrying out a transparent and inclusive consultation was proving difficult (Flyberg; cited in Townsend and Tull, 2004, p.13). Personal levels and individual psychologies are so linked to governance, leadership, self-realisation and social support that this study accommodated a focus on how individuals felt, experienced and behaved towards the environment by adding the perceptual dimension of place as a key aspect of the social sustainability appraisal and analysis.

1.2.d Placemaking and social sustainability

Overall consultation processes were becoming progressively more relevant but implementation was proving difficult and outcomes were still contested. At that point Placemaking started to emerge as a more suitable route to deliver public engagement, active participation and social capital enhancement, but affordable models for easy application in practice were still scarce. Placemaking is a concept Arefi (2014) saw as a process towards urban regeneration driven by three principles: needs; opportunities; and assets. Government-led Placemaking, the author added, was normally driven by people's needs, opportunities are normally generated by market and economic conditions and therefore they emerged outside the place, assets instead, existed within the locality and could be physical or social. In recent years there has been an increased interest in asset-building for both physical and social aspects of community living. However, Placemaking was not an end product but a process and different principles produced different results (Arefi, 2014). Placemaking needed to integrate expert and local knowledge in a collaborative process (Arefi, 2014) and public participation should have considered critical thinking, planning abilities and sills building during the

planning and design processes (Kennedy, 2003; cited in: Arefi, 2014, p.18). Musterd and Kovak (2013) believed Placemaking was a process involving a series of measures that were put in place by government and other stakeholders to add cultural characteristics to a geographical space. Lawton, Meczynski and Barber (2013) thought Placemaking policies needed to consider suburban and residential areas, and not only city centres, as neighbourhoods provided the foundations for communities, especially amongst working families and they should have therefore provided places where people could gather and interact socially.

The recent introduction of Neighbourhood Plans, a part of the decentralisation of power agenda of the British Conservative government, facilitated neighbourhood engagement and governance (NPPF, 2014).

"Neighbourhood planning gives communities direct power to develop a shared vision for their neighbourhood and shape the development and growth of their local area. They are able to choose where they want new homes, shops and offices to be built, have their say on what those new buildings should look like and what infrastructure should be provided, and grant planning permission for the new buildings they want to see go ahead. Neighbourhood planning provides a powerful set of tools for local people to ensure that they get the right types of development for their community where the ambition of the neighbourhood is aligned with the strategic needs and priorities of the wider local area." (Planning Practice guidance, 2014).

Although Neighbourhood Plans were not compulsory, they allowed communities to create visions for their places and to embed these within Local Plans for the area. Other planning mechanisms communities might have wanted to use to have an input on planning applications in the area were Local Development Orders and Supplementary Planning Documents. Although

the power was transferred to the community, local plans had to be developed alongside Local Authorities (NPPF, 2014).

With some of the powers transferred to people, governance started to take shape and people's perspectives began to gain weight in urban academic research. For instance, Marshall and Corcoran (2007) found that 85% of their survey population felt that the quality of the public realm had a direct impact on their lives. The quality of the public realm was understood as one of the core tenets of urban design theory and a range of methods for appraising it were developed, for example 'Character Appraisal', 'Qualityreviewer', 'Capacitycheck' and the widely used 'Placecheck'. As urban theory developed, UK legislation also became increasingly more concerned with the quality of design. In October 2015[32], Brandon Lewis MP, English Minister of State for Housing and Planning, stated that the quality of the built environment was not limited to the aesthetic value or the range of materials used, that design factors could also add quality and that was something that the UK industry had to acknowledge and embrace. Marshall (2014, p.4) however, argued that these approaches were no longer appropriate as they only focused on the physical aspects of place. The built environment had been poorly theorised in areas of social research (Woolsey, Biggart & Lutzenhiser, 2007), more multidisciplinary approaches were still needed (Domenski et al., 1992; O'Hara, Shandas & Velazquez, 1999; Ring, Klauer and Wätzold, 1999; Vliet, 2000; Colfer C. et al., 2000; Fuad-Luke, 2009), and although some emerging studies (Colantonio & Dixon, 2012; Mclean, Chuthill & Ross, 2013) accounted also for social structures, their application in practice had been complex (Allmendinger & Haughtonô, 2009). Manzo and Perkins (2006) thought there

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[32] The minister spoke at the Fourth Place Alliance Big Meet, attended by the author. Available at: https://www.bartlett.ucl.ac.uk/planning/events/big-meet-4. Last accessed 31 Jan 2016.

was a lack of interdisciplinary collaboration. That historically, studies of place psychology had been carried out by community and environmental psychologists, focusing on the psychological and individual emotions towards places without considering the socio-political framework, whilst literature on participation and governance, did not consider affections, and planners and designers focused on place but did not look at personal experiences. Furthermore, they added that practitioners had a tendency to see academic research as a luxury that was outside their budgets and they had not been considering the costs of not accounting for research finds. Manzo and Perkins (2006) proposed an ecological model to study place attachment and the politics of participation and governance. Other scholars also chose this model and some have applied it to community studies, but examples are still rare. As explained before, the link between personal happiness and wellbeing and social dynamics at a community level has been poorly researched. This study draws upon this issues and contributes to cover that knowledge gap by looking at social structures and individual psychologies simultaneously, correlating the results of the appraisal of both aspects of social sustainability.

1.2.e Conclusions: how the literature review framed the research

As discussed in this chapter, despite the difficulties encountered, there had been a true and genuine commitment in Europe and Britain to find more efficient ways to deliver sustainable development (Beatley, 2000). A range of sustainability assessment and methods were being created but were still largely based on traditional appraisal methods motivated by asset analysis and measuring impact of specific proposals, and focused primarily on technical issues rather than social outcomes and processes. Truly sustainable development was still difficult to achieve in practice partly due to the lack of simple cost-effective tools of wide application that facilitated delivery whilst

providing a multiplicity of gains. Also, choosing the right indicators to address sustainability had been challenging due to the broad nature of the concept, values could vary between cultures and there were many different scales of analysis (Bennet and van der Lugt, 2004). Legislation, particularly in the UK, was rooted in previous methods and models (Crawford, 2008; Bishop and Williams, 2012). This research aimed to address some of the key gaps revealed at the literature research stage, these were:

- Adopting concepts and definitions as detailed in the Introduction section.
- Working at a local neighbourhood/community scale.
- Applying on bottom-up participation strategies.
- Working with a multidisciplinary approach including both quantitative and qualitative research.
- Including a focus on individual psychologies (experiences and emotions).
- Including a focus on social structures (cohesion and social networks).
- Testing how the process could work in contemporary planning frameworks.

With a framework for the research defined by the initial literature review, an in depth literature review was done by looking at specialist fields that dealt with the gaps described in this section. Chapter 2 focuses on the morphological dimension of place, looking at concepts and contemporary standard forms of appraisal used by the field of urban design in more depth and testing their application in four case studies.

CHAPTER 2
2. The morphological dimension of place

"The current guidance, developed in 2012, is still largely based on the architectural tenets of good design laid down by the Roman architect Vitruvius in the 1st century BC. This is reflected in the diagram championed by CABE over the past decade – it is aesthetically based and we argue, an inappropriate approach given the current crisis in our towns and cities." (Marshall, 2014, p.4)

This chapter reviews the literature on morphology as a mode of urban analysis and adapts standard methodologies to appraise the four case studies. The first section reviews a body of research that argues to extend this formal and spatial analysis and demonstrates that while urban morphology can be analysed from a purely formal perspective, the literature review shows that strong synergies between social and perceptual aspects of place and urban morphology exist. As such, this chapter provides both the morphological analysis itself and the logic why this needs to be expanded.

This chapter begins by debating the issue of how urban morphology interlinks with the social and perceptual dimensions of neighbourhoods, and why separating these dimensions could lead to mistaken interpretations of place. It then identifies four key morphological variables of neighbourhoods found to have strong associations with other place dimensions, these are: road hierarchy; buildings defining spaces; plot patterns; and public space networks. These variables are discussed in more depth in sections below. The multi-directional approach to variable selection adopted facilitates the further integration and correlation of the three dimensions of place proposed by Carmona et.al (2010) that are the focus of this research: morphological, social and perceptual.

This chapter continues by debating the results of the morphological urban design appraisal of the four neighbourhoods studied: two urban areas in Nottingham and two semi-rural areas in North East Derbyshire. The outcomes of the analysis form the core element of this chapter, and these are correlated with the other dimensions in Chapter 7.

Urban design practitioners have developed a series of methods and techniques to analyse public places over hundreds of years. Largely a graphic practice, urban design relies hugely on maps, diagrams and sketches to demonstrate not only geographies but also spatial relations between built environment elements. Analytical thinking, often including both analogical and logical processes, is vastly supported in urban practice by graphic information, tables and comparative matrix. Not one place is the same as another given the multiplicity of variables involved in urban ecologies therefore establishing prescribed analysis methodologies is not feasible. The prevailing analysis method selection it is often dependent on the practitioner's professional judgement. For example, practitioners might consider an area to be of special historic value and tools like heritage assets or age of buildings mapping, façade material specification, fenestrations cataloguing, etc. might be considered appropriate. Movement and transport are often critical in busy areas or where access is obstructed or awkward. For these cases a modelling software like Space Syntax, which models movement based on road capacity, might be appropriate. Saying that, CABE, RIBA, UDN and other advisory councils have released a body of publications that guide professionals and offer proven to work and emerging analysis tools.

This study analyses existing neighbourhoods to demonstrate the importance of the different dimensions, so as to inform the design and regeneration process of new neighbourhoods as well as local and regional

planning legislation. The inclusion of social and perceptual dimensions of place analysis is important because in recent years, the pursuit for more sustainable ways to embrace urban development made regeneration the preferred option for the planning landscape in Britain. A development model that tackled - and often seemed to resolve - physical and social issues in residential areas. However, as the previous chapters' literature review demonstrated, urban designers did not always understand how processes could be delivered with higher concerns for all the dimensions of sustainability including the social and perceptual dimension, and they did not always consider the aftermaths of processes as well as the end results. Intervening in some aspects of urban morphology, particularly re-structuring existing neighbourhoods during renewal and regeneration, can incur in consequential, (often unintended) social re-structuring such as gentrification or displacement. In order to manage these (often radical) changes successfully with minimal negative impact on society it is necessary to pin-down the variables of morphology that are intimately related to social and individual psychology dimensions; and to understand how they might relate. This chapter explores how previous literature identified some of the synergies between morphology and other dimensions of place, and draws on the findings to narrow the focus of the morphological analysis that is the core of the chapter.

2.1 Understanding the morphological dimension

Morphology refers to the actual physical form of places. It is often the result of a combination of factors such as the geography, economic drivers, microclimate adaptation or simply aesthetics, to name some. Hester (2006) explains how cities influence our daily lives and how the urban form can increase society's resilience and enhance cultural values. As demonstrated by

Carmona et.al. (2010) there are numerous approaches to understanding urban morphology but studies should involve the change of the physical form over time. An understanding of urban morphology can reveal some political and socio cultural values of the settlement, giving clues for interpretation of past life styles and social dynamics. For example, morphological interpretations of settlement have helped archaeologists and place historians to understand how people lived in the past. Some approaches are favoured by purist morphology practitioners and those who maintain that getting the form right at the time of designing a masterplan will result in robust plans that can cope with movement and activity and that can adapt in the future, as explained by Carmona et al. (2010). On the other hand, others (Jacobs, 1961; Gehl, 2008) argued the city is far more than its form and the public realm has to be about mediating human life in all its forms. Some of these dimensions are studied by the field of environmental psychology and they focus on people's perceptions and emotional responses to place. Musterd and Kovak (2013) think that since basic place conditions such as accessibility and connectivity are being addressed more frequently in urban design, unique characteristics that add identity to places are becoming more relevant to distinguish places in an era of globalisation and standardisation.

As places change over time, neighbourhoods develop and when their morphology is altered, residents are often affected by change. Urban renewal and regeneration has been recently favoured as a sustainable form of development. However, in deprived areas can leave vulnerable people who saw their neighbourhood as a community place and not as a slum, in greater disadvantage (Porteus, 1977; cited in: Bell et al., 1996, p.349). In most cases, the effects relocation has on family relations is negative (Wilner et al., 1961; cited in: Bell et al., 1996, p.349). Regenerating neighbourhoods not only means demolishing or refurbishing the urban structure but also destroying

social systems which are essential to many people's survival (Gans, 1962; cited in: Bell et al., 1996, p.349) causing grief symptoms and damage to their psychological and physiological health (Haing, 1982; Myers, 1978; cited in: Bell et al., 1996, p.357). Bell et al. (1996) conducted a study in Boston's West End and showed 73% of a relocated group showed extreme grief symptoms including vomiting, intestinal disorders, nausea, crying spells and clinical depression. 20% were depressed for two years after moving. The study also showed that the stronger the social ties, the greater the grief people experienced. If morphology studies must involve place changes over time, changes in people's perceptions and responses to place are also fundamental to achieve sustainable development, particularly since wellbeing is one of the measures of social sustainability.

A social take on the morphology of place looks at how people interact in different environments. Toker (2005; cited in Zeisel, 2006, p.346) studied the relationship between layouts and people's contacts in the work environment. He found that accessibility and visibility were directly related to the number of contact amongst non-leaders within the social network. When people had more access to each other, they came into contact more often. In the urban environment similar results had been reached some time ago. The characteristics, function and weight of movement arteries, referred to as road hierarchy[1], can determine the overall form and the level of fragmentation in urban areas. Roads and streets give structure to urban neighbourhoods,

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[1] Hilberseimer (1967) first coined the term road hierarchy in relation to the speed of traffic around schools. Today, road hierarchy is a concept broadly adopted by urban designers and engineers alike and it refers to a number of measures to define roads: the width of the carriageways, the separation between buildings, the presence of greenery and many other parameters, all of which have been specified in detail in Manual for Streets (DfT, 2007).

forming plots of various types, shapes and sizes in between them, where buildings are placed. The combination of road form, hierarchy and inter-connecting arrangement gives way to different plot patterns. The form and hierarchy of road structures are intimately related with the way in which we perceive and respond to our environments, both socially and individually. Appleyard and Lintell (1972; cited in Carmona et. al., 2010, p.103) looked at how traffic in residential streets became a deterrent to neighbouring contact, increasing the social separation between neighbours living in front of each other. Back in 1962, Gans (cited in: Bell et al., 1996, p. 349) demonstrated that demolishing or refurbishing the morphology of neighbourhoods can, not only destroy social systems that are essential to many people's survival, but it can also cause grief symptoms and damage people's psychological and physiological health (Haing, 1982; Myers, 1978; cited in: Bell et al., 1996, p.357). Busy roads can become barriers as by instinct, people prefer to walk through safe, clear and open paths that offer least resistance to their movement. The shape, character and relative importance of roads is hugely significant as a component of our public place network. Within public places in the public place network, political structures and communities agencies find public places where they operate. Habermas (1962) called places with this additional dimension 'public spheres' to differentiate them from public places normally defined by its ownership, access and use (Carmona et.al, 2010). Although, the form and detail design of the public spaces can also influence the way individuals perceive ownership, which refers to both actual ownership and control over a space (Bell et al., 1990) and which in turn, enables social life at different levels (Carmona et.al, 2010).

The relevance of roads and streets becoming potential edges is also dealt with by the field of psychology. Henderson et al. (2007, p. 63 cited in: Hopkins, 2010, p.119) discussed territoriality as a key aspect of people's

psychology. Territorial attitudes happen when boundaries that are not visible in maps become present in the residents' mental map of their neighbourhood. Hopkins (2010) believes that neighbourhoods in disadvantage show stronger cases of territoriality that correlate strong social fragmentation. This fragmentation, they say, is often 'the norm' that allows individuals to find social identity (Hopkins, 2010). Kintrea et al. (2006: 6, cited in: Hopkins, 2010, p.122) found a link between social structures and some of the key factors that motivate territorial behaviours. They demonstrated that a sense of ownership over place was one of the motifs associated with territorial behaviours.

The discussions above clearly demonstrate the importance of *Road hierarchy* (2.4.a) as a parameter to define the morphology of settlements in relation to social and psychological dimensions, and for those reasons this study incorporated it as a variable of place morphology.

Newman (1996) noted that the more complex the physical environment, the more difficulty people find it to establish social codes and norms in the community. The author (Newman, 1996) explained that building size, and in particular height and density, have an indirect correlation with the use of public spaces, the levels of social interaction within neighbours and the sense of control over neighbourhood public spaces. This stresses the importance building massing and density might have in neighbourhoods, particularly to evaluate public spaces designed to function as social hubs, where people can interact and develop their networks. The concepts coined by Newman are discussed in more depth in forthcoming chapters as they relate to multiple dimensions of place.

The built from defines spaces in between which form the public space

networks. Numerous authors (Cullen, 1961; Alexander, Ishikawa and Silverstein, 1977; Jacobs and Appleyard, 1987; Hedman, 1984; cited in: Ewing and Clemente, 2012, p.7) have identified the importance of public spaces being defined by the buildings and other elements around them. A sense of enclosure helps humans identify their surroundings and establish their position in space, mentally mapping ways around it. Legibility has similar connotations in terms of the human response to space. When a place is easily understood, navigating it becomes a relaxed experience (Ewing and Clemente, 2012). Kevin Lynch (1960) described legibility as the ability to recognise the component parts which help us map spatial patterns and navigate the place; edges, landmarks, centres, focal points and paths, all help us do that but they must form part of a coherent system in order to allow the mental interpretation (Ewing and Clemente, 2012). Parts of that network often become public places.

The spatial relation of the built form determines the type of space that will emerge in between buildings for people to share, be in touch with each other and interact. This is a fundamental aspect of morphological analysis in neighbourhoods, particularly because public space networks might facilitate or hinder the process of engagement of groups and individuals with place. Scale is also extremely important, it is not the same to share an entrance between 200 people than to share it between ten (Halpern, 2005).

The literature reviewed helped define two of the key variables of place morphology alongside road hierarchy: *Buildings defining spaces* (2.4.b) and *Plot patterns* (2.4.c).

Hester (2006) refers to the notion of designing public space networks to facilitate the creation of new community rituals such as going to the

groceries, taking part in local sport events, attending school open days or making a weekly trip to the farmer's market. Some of these activities, he says, remain for centuries, others change, but allowing for them to happen could be a powerful tool in the hands of the designer. It is also important, he states, (Hester, 2006) that the community discovers its essence because the landscapes will transform reflecting this. Public space networks acquire status through the treatment the community gives to them, whether they are places of rituals or if they have special values or virtues. Hester (2006) believes there is a sense of spiritualism that connects humans with their landscapes, increasing the community awareness of the place and enhancing their sense of belonging.

How 'public' neighbourhood places are, is as important as how 'public' they are perceived to be. Research shows that land ownership and stewardship are deeply related to how much residents feel they belong to the place (Leopold et. al, 1989; Sardjono and Samsoedin, 2001; Hester, 2006; Banfield, 1958; Putnam, 1993; both cited in: Ferragina, 2012, p.142) which are rooted in psychologies of affect (Park, Davidson and Shields, 2011). These are essential to ensure happiness and well-being (see Chapter 1) when people cannot find the right level of bonding through ownership or land management, urban appropriation takes place (Jimenez-Dominguez, 2007; Fernando, 2007; Franck and Stevens, 2007; Rivlin, 2007; Crawford, 2008; Awan, Schneider and Till, 2011). Stewardship instead, refers to the group of actions people take to maintain, repair and improve their community and these actions are motivated by a sense of responsibility (Hester, 2006). These instinctive feelings, he says, sometimes translate into voluntary community actions or acts of a more global environmental activism. Design approaches must maximise these benefits and place-making should be carefully tailored to enable stewardship, which can in time, create new lifestyles. Places for

stewardship, he adds, could become an instrument for hands-on learning, for the community to bond by sharing physical labour whilst restoring their ecosystems. Mclean, Chuthill and Ross (2013), on their study of resilience in North Queensland explain how connection to place was noted as a fundamental element of environmental stewardship and land management and how it related to a huge sense of community's responsibility towards their place, which in turn naturally brings opportunities for sustainable development and therefore resilience. This connection, the authors add, conducts people towards building their adaptive capacity for change through the level of understanding and responsibility on how to use their resources and how to manage their land. Svendsen (2013) showed through her three case studies in New York, how stewardship can have a social as well as a physical dimension in restoring natural environments whilst strengthening networks and building bridges.

Hall and Ward (1998) commented on the advantages of allowing for a communal plot of land to suit the neighbours' demands, weather this is for allotments, communal agriculture or recreation as a vehicle to make new communities more engaged and attached to their places. But the issue of ownership and a sense of responsibility over place goes even further and does not limit to physical spaces with clear boundaries. Petrescu (2013) discussed the relevance of communal areas in communities in developing democracy and social solidarity with a view that a physical common space can become a catalyst for new ways of governance, reclamation, self-management and appropriation. 'Commons' are sometimes immaterial, part of the virtual infrastructure which comes from a relational progression such as the design process. Self-management of commons leads to the creation of new relationships, a sense of ownership and therefore of responsibility towards the shared asset and the co-owners, a new collective subjectivity that is local.

Halpern (2005) argued that transferring assets to public hands such as community centres, in the form of public trusts where local people have legal ownership of the communal assets could be a good way to increase capacity within communities by promoting bonding and bridging of social networks. These types of common self-management projects are 'relational' because one of their main outcomes is the creation of new social relationships, encouraging political and civic responsibility at local levels, making the design of social agencies more relevant than the physical design of common places (Petrescu, 2013). After analysing five cases of community energy ventures in Europe, Houghton (2000) concluded that community stakeholder in energy supply systems could be one of the resources designers have in order to bring together the elements of sustainable development deliverability: environmental, social and economic. Heiskanen et al. (2009) looked at new low-carbon communities as a context for environmental behavioural change[2] and found that place-based communities can be created on the basis of shared interests, practices and structures. In time, he says, they originate alternative ways of community operations, all coexisting and maintaining their goals and boundaries. However, although placed-based assets such as low-carbon infrastructure provide a way to create new social structures, they are not very flexible for future adaptation as they are slow, difficult and expensive to change (Heiskanen et al., 2009). Since *Public space networks* in the form of space and infrastructure can bring so many positive social and psychological changes, this was selected as another variable for this study.

Urban morphology can be analysed from a purely formal perspective and this

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[2] Reinders (2011) explored a focus on behaviour in relation to technology. He explained how transformations or transitions are necessary steps towards socio-technical improvement, how they can be long term processes and how they require innovation to succeed. Any socio-technical change, the author continued, is deeply related to the existence of social groups which support it and which are many times niche, micro-level groups.

has been the approach more often adopted in urban practice in recent years. Urban design guidance and recent best practice publications have largely focused on the morphological aspects of place. For example, CABE's publication *'Design and access statements: How to write, read and use them'* (2007), still being used in practice, names: *'use, amount, layout, scale, landscape and appearance'* as key aspects of urban design considerations for planning application. An analysis of the National Planning Policy Framework (NPPF, 2012) shows a clear emphasis on economy and environment, and a weaker emphasis on social aspects of urban policy. This is true for both in the number of sections and the number of pages, Figure 2.1 illustrates the word count and the number of sections and pages dedicated to each aspect of sustainability. The RIBA Design Companion for planning and placemaking (2017) recently launched to support NPPF, also makes a strong emphasis on morphological dimensions of place.
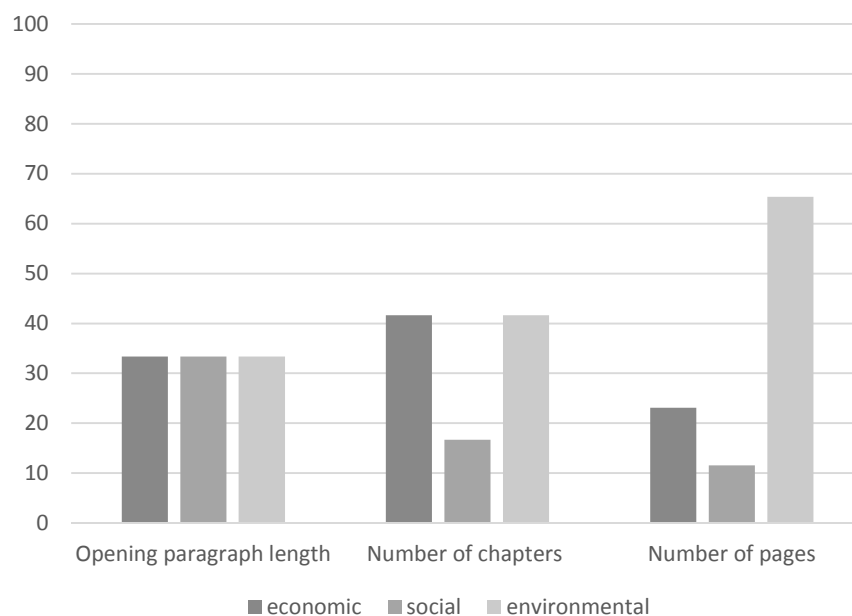
Figure 2.1: Weight given to each aspect of sustainability in NPPF (2012), in percentage.

   The literature reviewed and discussed above demonstrated the strong

synergies between social and perceptual aspects of place and urban morphology, relations that are solidly validated by research, particularly at a neighbourhood level where place emotions and daily rituals are in abundance. Traditional urban design practice mastered morphological analyses, even when it involved the study of patterns of change over time. This study adopts appropriate tools to appraise the key dimensions discussed above to conduct a morphological analysis. Table 2.1 on page 98 shows a summary of the methodologies applied, their source and the reasons for adopting them for this study.

2.2 Morphological analysis: case studies' findings

Due to the similarities found amongst urban and semirural cases, these were grouped for discussion in this section. Maps are included in Appendix 2.

2.2.a Urban neighbourhoods: The Meadows and Sneinton, Nottingham

This section presents a key summary of the morphological dimension of public places findings. The first two case studies: The Meadows and Sneinton, shared similar histories, are of similar size and developed in parallel maintaining a close relationship with the city (see Figure 2.2). Both neighbourhoods absorbed some of the city's growth during the 1800s (Chambers, 1945) and, along with housing, several high quality employment buildings and churches were erected at the time and until the early 1900s (Oldfield, 2003). In The Meadows, St Saviour's Church was built in 1864 (Oldfield, 2003, Nottingham Post, 2012); Piligrim Church was built in the 1870s (Henderson, cited in: OurNottinghamshire, 2014). Within a few years another three churches established in The Meadows (Mellors, 1998).

Table 2.1: Urban design methodologies applied to appraise the morphological dimension of place.

Method	Source	Reason for application	Adaptation for this research
UD.i Historic archive and mapping analysis, and historic literature review	Traditionally applied method for urban appraisals	Carmona et al. (2010) recommend to understand patterns of change	Additionally to conducting a traditional historic analysis, local historians and heritage groups were contacted as part of the network engagement task (see Chapters 4 and 5) to provide valuable information.
UD.ii TURaS Resilience Timeline	Author's research team (Rodrigues et al, 2014)	This research formed part of the TURaS programme and The Meadows was an application case for the Timeline	None
UD.iii Socioeconomic analysis	Traditionally applied method for urban appraisals	For a sound understanding of the socioeconomic context of the findings	None
UD.iv Character appraisal and mapping analysis	Author's own based on Oxford Character Assessment Toolkit and Placecheck	For a sound understanding of the architectural character context of the findings	Principles and themes adopted. Did not apply the spreadsheets and forms but instead mapped information and used notebooks to speed up the process
UD.v Quantitative urban design qualities appraisal	Ewing and Clemente (2012)	To capture interpretation of place quality from a professional perspective	Selection of key urban qualities relevant to the neighbourhood scale
UD.vi Walkabouts	Sue McGlynn (author of Responsive Environments, 1985)	To capture perceptual, cognitive and emotional interpretations of place from both professional and residents' perspectives	Method recommended by McGlynn, an OPUN team member during the Dronfield and Killamarsh projects
UD.vii We come to you	Author's method	To increase participation numbers in Dronfield and Killamarsh	Randomly approaching people in public places and asking them specific questions or handing over self-written surveys
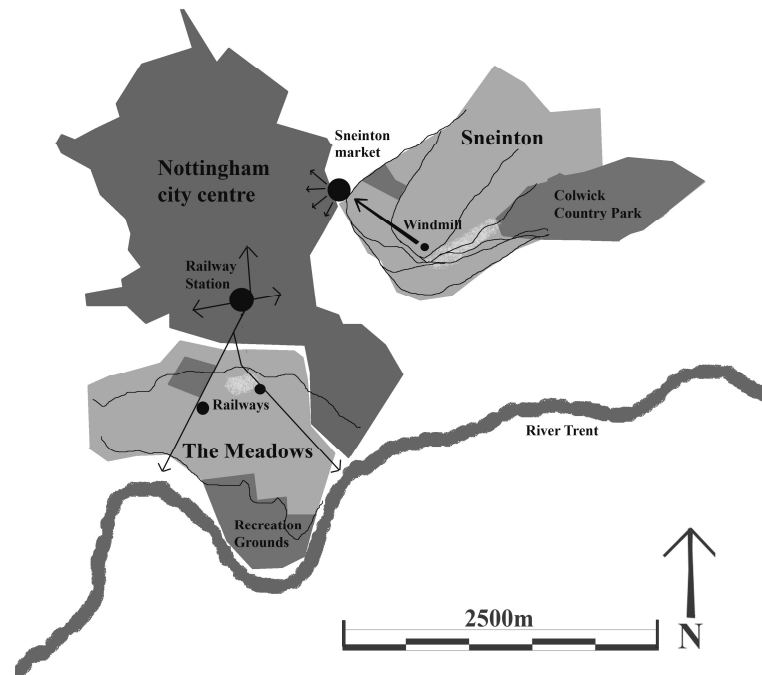
Figure 2.2: Location map and key relations between the neighbourhoods and Nottingham city centre.

St Stephen's Church Sneinton was built in 1887 (Wylie, 1887) St Christopher's Church Sneinton opened in 1910 (Pevsner,). This left both neighbourhoods with a selection of architectural assets scattered around amongst the dwellings. They also had green infrastructure of high quality at the time, protected by the Nottingham Enclosure Act of 1845, which followed a large sanitation programme (Nottingham Green Spaces, 2013): Queen's Park and the Recreation Ground in The Meadows, and King Edward Park and Colwick Country Park in Sneinton.

Nottingham hosted ammunition factories and was bombarded during World War II (Wright, 2012); this brought small sites forward for redevelopment in both neighbourhoods. Growth continued at a steady pace into the 1960s and by the 1980s, a combination of private and social housing had been built in both areas (Oldfield, 2013).

This gradual growth process resulted in two neighbourhoods with a combination of urban characters and a legacy of historic heritage landmarks scattered around, such as churches and public building. These landmark buildings, over the years hosted employment and public functions. The old Green Windmill in Sneinton was converted into a museum in the 1980s (OurNottinghamshire, 2017) and the former railway headquarters in Queen's Walk was converted into a Community Centre in the late 1970s in The Meadows (Oldfield, 2013):

"…the room at the top of the building were used as a youth club in those days [1970s] and stuff like that you know. And there was a lot of community workers who were operating in the room for the first time. The room that is at the end of the building. Now that is used as an advice centre. And community workers and other start up voluntary groups were started from there." (TM Participant - 2014)

"…we nearly loose the Windmill but the community got together and it was saved. It comes to show that it could be done they just could not be bothered." (S Participant - 2015)

Figure 2.3: left: Queen's Walk Community Centre, The Meadows (2015); right: Green's Windmill Museum, Seninton (2017).

How The Meadows Changed

In Victorian England, The Meadows was an area with a mixture of residential and industrial uses (Church, 1966). It was a transport hub that hosted depots, the railway and tram stations connecting Nottingham to the south of the country (Oldfield, 2013). Bombarded in World War II (Wright, 2012) and heavily flooded soon after (Oldfield, 2013), the area rapidly decayed and the infrastructure was severely damaged (DEFRA, 2012). With the increasing number of vacant and derelict sites came an opportunity for regeneration (Oldfield G., 2013) and in the 1970s, a strategic plan was put in place (Oldfield, 2013). Oldfiled (2013) explains that, following the Radburn housing model, planners aimed to achieve a neighbourhood where cars were separated from people. Most of the oldest Victorian houses were demolished along with pubs, factories and shops. Key access roads were almost completely eliminated. All the local schools were either demolished or vacated and new schools were built. New residential developments replaced the old stock including a mixture of tenure and density arranged in terraces with an intricate pattern of pedestrian accesses and drives. A new pedestrianised commercial centre was also provided, including a health centre, shops and a pub. The new urban morphology drawn for the area had curved roads and curvilinear plots that dominated the landscape of a lower density and more spread grain. Very little evidence was left from the Victorian and Edwardian vibrancy of the rather 'urban' environment that once existed in The Meadows. Soon after the urban restructuring, during the 1980s and 1990s, the neighbourhood gained a bad reputation for its crime and antisocial behaviour, which continued for decades (Nottingham Post, 2009):

"At the front of the building [Queen's Walk Community Centre] *was a substantial amount of graffiti. I call it graffiti-come-child art."* (TM Participant - 2014)

However, despite being infamous, the community spirit remained being noticeable, especially throughout the older parts of The Meadows:

"So in this community here [Old Meadows] *people have meaningful relationships developed and established because of things here, and also with the nature of the people who choose to live here and the sort of relationships they had."* (TM Participant - 2014)

At the time of this study, efforts to decrease crime rates through a series of strategies implemented by the local government and the police had paid off:

"I did not like it at all but because it was somewhere to live I accepted it [social housing] *but it was rough and it was horrible and certain gangs but now, now I can proudly say that Meadows has become like a village now. It's nice."* (TM Participant, 2014)

However, the regeneration strategy included a very comprehensive and ambitious programme to put the area at the centre of sustainable credentials programme. 'The Meadows Tomorrow', a Neighbourhood Plan report published in 2009 and commissioned by Nottingham City Council, involving the extension of the existing city tram network, the creation of low energy homes and the demolition of derelict council homes (NCC, 2009). Although this regeneration plan was more subtle and discrete than the 1970s' scheme, the idea of development had caused alert amongst a population previously damaged by radical structural changes to their physical environment.

By 2014, the area was still undergoing a radical physical transformation for the second time in its history. The community had begun to react in various ways, starting campaigns and organising meetings, and

several groups were formed to protect their heritage assets and to have a stronger input than previous generations on the regeneration of their neighbourhood:

"I lived in the Meadows for about 52 years, all the changes have all been too radical if it had gone on bit by bit over the years, you can kind of grow into that. Now this business with the tram, it is horrendous. All this [Queen's Walk] *was all trees once, and it was all squirrels, and it was all grass and birds. They have absolutely destroyed it. Why ruin people's community and what we had?"* (TM Participant, 2014).

"I don't think The Meadows had to be demolished as such. They ruined everything for everybody … You like a bit of progress but they have just uprooted everything to suit themselves." (TM Participant, 2014).

How Sneinton Changed

Sneinton was an ancient Saxon settlement (Whatnall; 1928). The former village, situated on a hill overlooking the River Trent, remained independent from Nottingham for hundreds of years. In the 17th century, the area grew primarily to provide food to the citizens of Nottingham; by then, some allotments began to operate as small agricultural land and farms (Mellors, 1914). Green Windmill was built around 1807 on the higher spot in Sneinton to produce flour (Plowman, 1993*)*. The food market, situated at the bottom of the hill in the boundary between Sneinton and Nottingham city centre, increasingly grew in popularity (NH, 2017). By the 1800s the neighbourhood experience its major growth (Chambers, 1945) and in 1877 Sneinton became a neighbourhood within Nottingham. During World War II, the area was bombarded losing some of the 1980s' terraced houses and other small buildings (Wright, 2012). After the wars, Sneinton absorbed some of the growth of modernism and between the 1950s and 1970s, a relatively large amount of social housing, some of it high rise, was built in the area.

Figure 2.4: Sneinton flats social housing (recently refurbished), 2017.

The close proximity to the city centre and its excellent links to main infrastructure networks made Sneinton a desirable and affordable neighbourhood where working classes settled for centuries (Smith, 1986). At the time of the study, the area was undergoing a programme of transformation led by community groups aiming to bridge cultures and preserve the historic heritage of the neighbourhood (Sneinton Alchemy, 2015). The programme also attempted to resolve some of the social issues the neighbourhood was facing, such as antisocial behaviours, drug abuse, loneliness and low levels of social support, especially amongst the elderly (SMILE, 2017). The community in Sneinton was leading an unprecedented bottom-up consultation scheme, centred in democratic and participatory engagement and governance processes (Sneinton Alchemy, 2015).

2.2.b Semi-rural towns: Dronfield and Killamarsh, North Derbyshire

The semi-rural towns of Dronfield and Killamarsh in North Derbyshire, have a close link with their rural surroundings, they share a typical valley geography and are also of similar size. The definition of the study boundary for these cases was pre-established, as the analysis was also aiming to inform

policy in a life case scenario. The geographical boundary adopted for these studies matches the Dronfield and Killamarsh Regeneration Frameworks boundary, which lines up with the Town Centre boundaries (NED, Local Plans 2005). However, the Office of National Statistics data is available for the political districts of Dronfield and Killamarsh.

Figure 2.5: Location map of Dronfield and Killamarsh (Source: Google Maps, 2015).

The discrepancy between the socioeconomic data boundary and the study boundary was explained to the County Council authorities, who agreed that the fact had to be accepted. The authorities felt that the data would result in a very close representation of the demographics of both areas due to the homogeneity of the population distribution in the area.

There was initially a disagreement between the county council and OPUN, the former insisted the study looked only at the assets and characteristics of the places within the boundaries whilst OPUN insisted that,

working with a system thinking approach, multiple levels of place had to be analysed since these various scales are all in deep interconnection and affect each other mutually. Following a meeting with the Planning Department at the council, OPUN's view was supported by the majority and therefore, although the Regeneration Framework applied only to the town centres, the study covered various scales simultaneously, including residential areas.

The historic archive and mapping analysis, and the historic literature review were provided to the researcher for these two case studies. This information was used as a contextual framework for analysis prior to surveying the areas.

How Dronfield Changed

Dronfield is a former village located in North Derbyshire, roughly between Chesterfield and Sheffield. Originally a farmland, the charming village grew in Georgian and Victorian periods, when the railway was introduced. Dronfield grew rapidly in the 1970's and 1980's and has now to a large extent stabilised in size. It is surrounded by farmland and therefore forms a tight community. It also serves as a focal point for neighbouring villages such as Holmesfield and Apperknowle. Due to the great heritage value, the centre of Dronfield is a conservation area as well as parts of Dronfield Woodhouse. The industrial heritage is also strong, and it particularly developed in the past 50 years but suffered with the recent global recession. The industrial site on Callywhite Lane, located in the south east, has suffered from closures over the years and there are large unoccupied areas.

Dronfield has a very intricate geography and it is built on a series of rather steep hills. Levels go down from all ends of the town towards the river Dron. Along the river runs the railway line, which cuts the town into two

parts. This division however, is more apparent on plan than it is for the pedestrian, as underpasses built by the railway are located in key streets with strong enough character, which knit both sides of the railway together. Dronfield Town Centre boundary (NED, Local Plan 2005) acknowledges this perceptual connection between both sides of the railway line.

Overall, Dronfield commercial area, which is near the Railway Station, has a Village-like feel to it. Most of the buildings in this area are old and quaint but in good condition; the vast majority belong to the Victorian period. There are many picturesque views and intricate pedestrian paths that join the wilderness of forestation and water streams to the village. No signs of antisocial behaviours or vandalism[3] were found during the visits.

The town offers a relaxing and charming atmosphere to the visitor through the diverse nature of its green infrastructure assets. However, a clear heart of the town is not apparent and instead several landmark places fight to appear as protagonists in a pattern where scattered public places are linked by multiple pedestrian paths. The overall result is a confused settlement structure with no clear place hierarchy.

The lack of clear 'destination', the complex access to most public places and the town's proximity to Chesterfield and Sheffield, make Dronfield a place 'for the locals', for those who live and work nearby. This is also evident from the lack of clear signage and intuitive connections, which are not

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[3] Vandalism: *"wilful or malicious destruction, injury, disfigurement or disfacement of any public or private property"* (Uniform Crime Reporting Handbook, 1978, p.90). Fisher and Baron (1984; cited in: Bell et al., 1996, p.505) suggested vandalism occurs as a buffer mechanism to restore social equity by people who perceive themselves as not being treated equally.

necessary confusing for those with local knowledge but which puzzle the visitor. Parking is free and vastly available everywhere in the town and car parks are heavily used which suggests reliance on car as a method of transport.

How Killamarsh Changed

Killamarsh is located in North Derbyshire, roughly between Chesterfield and Sheffield. The town was originally farm land and it grew in the Victorian period due to the extraction of coal and manufacturing of bricks in the locality. The railway was introduced (now redundant) and a canal was built to transport the industrial produce.

In the 1970s and 1980s a large amount of social housing was developed in the area with a curvilinear pattern separating cars from pedestrians. This new urban form changed completely the image of the place, which started to be perceived as a town rather than a village.

"It used to be lovely here, there were no cars, no people, it really felt like a rural village. Now they have taken that away with all the states they build in the 80s." (K Participant, 2015)

Also, the former canal was tubbed and houses were built on top, and the railway station was removed in favour of car usage. This cause a group of resident to form a heritage society, a group that has been firmly fighting to preserve the town's heritage since. In the 1990s, with the expansion of commercial and retail activity, the former heart of the town (a public green) was developed to accommodate supermarkets and car parks.

"We used to have the Christmas tree put up here in the green, look at it now, it is awful. The car park is always empty and one cannot even cut across it." (K

Participant, 2015)

The town is flanked by the M1 motorway and railway on the west and the Rother Valley Country Park in the north, at the bottom of the valley. This provides beautiful views to the green areas and the lake. The rest of the surroundings are green fields and farmlands.

These changes are explained in more depth in the following sections in the context of historic urban trends.

2.3 Morphological correlations across case studies

2.3.a Road hierarchy

The Meadows is located on level land, on the banks of the River Trent. The road hierarchy was initially designed to deliver the optimum railway lines connecting Nottingham to the south. Later on, roads were focused on suiting car dominance. Sneinton, Dronfield and Killamarsh instead, are situated on hills with some small cliffs. The road hierarchy in these neighbourhoods follows the geology and has barely changed over the years. In all cases, road hierarchy plays an important part in fracturing the plot patterns into various enclaves, as seen in **Error! Reference source not found.**.

Walking around the neighbourhoods during surveys it was observed that, in all four neighbourhoods, dense vehicular traffic separated both sides of main roads and pedestrians needed to stop for a few minutes before crossing. However, in The Meadows and parts of Killamarsh, the presence of high rear garden fences alongside the road on both flanks gave a stronger sense of edge, and roads became more powerful in defining enclaves. The Meadows new tram line, located along the Victorian Queen's Walk Boulevard, also appeared as a strong edge separating areas within the neighbourhood.

Figure 2.6: The Meadows Recreation Grounds (top left); Sneinton Green Windmill hill (top right); Dronfield (bottom left); Killamarsh (bottom right; source: www.J31.co.uk).

Figure 2.7: The Meadows (top right: Robin Hood Way, central road; top left: Meadows Way during tram works); Sneinton (bottom right: Sneinton Dale; bottom left: Carlton Road).

In Sneinton and Dronfield, this strong edge condition occurred when a cliff divided enclaves, but most main roads had some activity on both sides, and the tissue was also continuous on both flanks. The traffic was slower and the perception of edge was less intense. The neighbourhoods' boundaries were an exception to this rule, as roads were wider and traffic heavier in all neighbourhoods, creating strong edges. Road hierarchy maps of all four neighbourhoods can be found in Appendix 1.b.

2.3.b Buildings defining spaces

The volume and scale of the built form were consistent with a height of two to three storeys and medium densities through different stages of development in all neighbourhoods, with the exception of a handful tower blocks of social housing built in Sneinton and Dronfield in the 1960s. These developments were the only superblock enclaves across all case studies. Generally, the building geometry defined public space networks by forming streets and spaces between buildings with specific forms, sizes and characteristics. In the 1800s patterns terraced houses and the 1970s shopping precincts formed clear frontages giving streets 'flanks' that defined streets in the middle. In modern and 1970s developments building volumes were more scattered, spread and orientated in various forms, leaving less defined space in between them.

In the 1970s block patterns mainly associated with commercial or mixed uses, spatial definition were clearer, front and back of buildings were identifiable, and enclosure was achieved through adequate mass proportion and proximity. Wayfinding became intuitive and a sense of spatial awareness, safety and surveillance was achieved, encouraging people to remain in the place and interact confidently.

All four neighbourhoods had some commercial activity located in the older and newer parts of the neighbourhoods. They also had a main conglomeration of medium and small sized commercial premises and small independent convenience stores scattered around some key locations.

Figure 2.8: 1970s commercial precincts (left: Bridgeway, The Meadows; right: Sneinton Road, Sneinton)

Figure 2.9: 1800s commercial streets (left: Dronfield; right: Killamarsh)

2.3.c Plot patterns

The morphology of these neighbourhoods is characterised by a mixture of developments from different historic eras. In the 1800s, development was financially led, making the most of profits and looking for efficiency in the use of land, this was often the case when land was not broadly available.

The plot patterns analysis showed that growth before the World Wars adopted cadastral patterns subdivided into equal plots in urban neighbourhoods, back to back wherever possible. In semi-rural towns the patters were cadastral around roads and main streets and looser, organic forms in other locations. Modern developments (1900-1950) appeared with strong geometries, particularly geometric in urban neighbourhoods and to a lesser degree in semi-rural towns. During this period, houses were larger with bigger rear gardens as well as garages, driveways and large front gardens. During the following two decades (1970s-1980s), the grid system was further eroded in both urban neighbourhoods and semi-rural towns, but with a slightly stronger curvilinear form in urban settings comparing like-for-like plot sizes. Nevertheless, inwards-looking housing in curvilinear roads appeared in all four neighbourhoods. In The Meadows and Killamarsh hill top, a stronger vision was delivered in the 1970s, as the available land was larger and level, allowing for optimum segregation of cars from pedestrians. The master plan concepts resulted in a stronger road dominance and a curvilinear morphology, with small cells of dwellings facing car park courtyards.

In modern post wars times more curved streets appeared, not always responding to the geography. The concept of separating the car from people became more popular and curvilinear patterns emerged in an urban pattern known as the Radburn model, originated in New Jersey, USA in 1929. In all cases, 1800s terraced houses, late modernist terrace housing and 1970s curvilinear forms were found. Each typology has different plot pattern and road networks: the street base (or street defining edge) of the 1800s Victorian houses with their gardens or small courts behind deliver a clear hierarchy of public/private spaces, a defined street space and accordingly a defined public space network. By contrast, the modernist housing was planned with setbacks from the street to allow for car drives; front gardens are larger and roads

become more dominant. This is a less efficient use of land where houses are more far apart from each other. In curvilinear street networks houses come closer to each other again, this is in part to increase urban density making the land more efficient. Cars are often grouped in communal car parking court yards. This urban form leaves much of the public space undefined with awkward shaped leftover spaces in between houses and with an increased number of intricate pathways and alleyways.

The 1800s patterns differed in the city (The Meadows and Sneinton) from semi-rural towns. The latter were not greatly populated in those times, they were small commercial centres for industries like coal or steel and farming. The appearance of the railway often acted as a catalyst for village growth. Here it can be seen how land demand in city environments as opposed to geology in more rural locations, were the main drivers to dictate urban form. In modern times, curvilinear roads were popular as the suburban dream with high car usage increased in popularity. In all cases houses were more apart from each other allowing for driveways and private gardens. Semi-rural location development generally followed the shape of the land levels. In the Plato of larger city valleys, forms were more geometrical. In the 1970s there was more standardisation and patterns start to look more alike across case studies. This happened in part due to technology becoming broadly available as industrialised pre-fabricated materials were applied across the country, but also because planning systems adopted certain models that emerged as preferable to resolve some of the technical movement issues that came with mass car usage. Maps and aerial photographs showing the various plot patters found in all four neighbourhoods are included in Appendix 1.b.

In the curvilinear patterns, very little definition of public and private spaces made the areas confusing and difficult to navigate. Fronts and backs are often ambiguous and difficult to recognise, which also resulted in neighbourhoods heavily reliant on barriers such as gates and fences to demarcate ownership and rights of access.

1800s	**Modernist**	**1970s**	**1970s Block**

Figure 2.10: Plot pattern prototype examples (top: The Meadows; bottom: Sneinton)

Alleyways and corners provided dark spaces where criminals and offenders operated. Interviews substantiated the above finding:

"There is no logic to the layout. After twenty years I can't find some streets still." (TM Participant, 2014)

"Yeah me too. People say to me do you know where so and so is. I have lived here that long and I think I have heard of it but I am not sure if it is up there or down there." (TM Participant, 2014)

"…even online or on paper that it is impossible to find a map of the Meadows that finds all the streets cause they are so small some of the little closes that there is not enough space even on the really big maps to show the names of the streets so you can't even say to people to follow the map because there just isn't one." (TM

Participant, 2014)

"There are that many alleyways and back entrances you know where you walk through and the bridges over and that causes a lot of youngsters I am not saying them all. They stay up there though the alleyways selling the drugs." (TM Participant, 2014)

"Yeah I have drug dealers on my street. They use the alleyway." (TM Participant, 2014)

"The alleyways is where the youth hides and where all the crime happens, it is dark and dirty." (K Participant, 2014)

Figure 2.11: Privacy demarcation in The Meadows, 2015.

Figure 2.12: Privacy demarcation in Sneinton, 2017.

Figure 2.13: Places where crime was reported, The Meadows, 2014.

Figure 2.14: Places where crime was reported, Sneinton, 2017.

2.3.d Public space networks

Public space networks also differed across plot patterns, not only in form but also in relative size. The cadastral pattern allowed a clearer distinction between various levels of privacy, making land ownership easy to interpret. It was also more economically efficient in terms of land usage as its geometry allowed a maximum amount of private space, reducing the surface of public places almost exclusively to circulation. Conversely, the curvilinear pattern required a larger amount of public area to accommodate circulation and the irregular shapes made the delineation of private, semi-private and public spaces more illegible than tissues with pure geometry. This was evident

across all cases and participants noticed this particularly in The Meadows and Killamarsh, where the amount of 1970s prototypes were larger.

Most historic buildings, relatively large in size due to their original function, were surrounded by large public places around them, which varied in size and quality. Some of these were originally designed to allow the whole buildings to be appreciated from the distance in one glance, or for functionality, allowing for people to congregate before functions or to allow carriages and other vehicles to park.

Figure 2.15: Places around public buildings in The Meadows, 2014 (left: St Saviour's Church, New Meadows; right: Library, Old Meadows).

Figure 2.16: Places around public buildings in Sneinton, 2015 (right: Hermitage Centre; left: Green Windmill).

Public space networks often allow informal contact and social interaction but they can also restrain it. If public places are not easy to access, if they are in a state of disrepair, or if crime and antisocial behaviour are present, people can be refrained from using them. Some spaces in three neighbourhoods (excepting in Dronfield) had been reported to host anti-social behaviours (UKCrimeStats, 2015). Others spaces found in all neighbourhoods' public space networks appeared to have the potential to become places due to their location and size. Instead these were fenced off or simply left unused, and neighbours expressed that they felt these were not performing to their full potential:

"This area used to be mainly inhabited by elderly people who did not want noise or youth gathering in the green area, and one of them raised complaints to the council. The solution was to gate the green to stop people from accessing…it is outrageous that this lovely green area is not being used for children to play in, or even for parking" (Casual conversation with a neighbour on the street by Findern Green, Sneinton, 2015).

In The Meadows and Killamarsh, the majority of these underused spaces were relatively small and scattered around the curvilinear patterns, with unclear demarcation of ownership and visible from a limited number of dwellings. In Sneinton and Dronfield, green areas of good size were found in modern enclaves with strong geometrical tissues, which had clearer boundaries and were more accessible and visible to larger groups of dwellings, with higher levels of surveillance and appropriate demarcation. A large amount of underused space was also visible around the Sneinton and Dronfield high-rise residential blocks.

Figure 2.17: Underused public places in The Meadows, 2014.

Figure 2.18: Underused public places in Sneinton, 2105.

2.3.e Conclusions

The literature review helped define the key variables of place morphology that were subjected to analysis: (2.4.a) road hierarchy; (2.4.b) building defining spaces; (2.4.c) plot patters; and (2.4.d) public space networks.

All four case studies had similarities regarding the public place provision. Urban neighbourhoods however, had more public places than semi-rural areas, including parks boulevards and large areas in front of public buildings; this point is demonstrated with quantitative data in Chapter 4. These had been introduced in the 1800s as part of large national sanitation

programmes following the industrial revolution and the proliferation of slums. Despite the different geographies and the contrasting surroundings between the cases in Nottingham and North Derbyshire, the morphological analysis highlighted clear patterns across the four neighbourhoods which show some correlation between all four variables:

Road hierarchy resulted in two different situations depending on the treatment of frontages. Main roads flanked by fences, with no active frontages were found in curvilinear enclaves in all four cases. These gave a perception of strong edge, dividing the urban tissues into enclaves. Main roads with active frontages were found in cadastral plot patterns, for example in Sneinton Boulevard. Despite the volume of traffic, these gave a perception of soft edge and did not divide the urban tissue into enclaves, instead, frontages with activity acted as a connectors 'stitching' enclaves together.

Without exception, the plot pattern typologies were representative of specific periods in time. For equivalent period of construction, the four neighbourhoods shared strong morphological characteristics. Private, semi-private and public space definition was stronger in cadastral patterns than in curvilinear plots where buildings were arranged in irregular patterns. Buildings defining spaces were key to giving shape public space networks, particularly in the 1970 commercial precincts and superblock residential towers, where building forms were regular.

In all four case studies, historic buildings in 1880s and 1980s plot patterns were placed in good locations and had prime access. These were surrounded by public places of good size in all neighbourhoods. These spaces around public buildings added spatial meaning to the public place network. These were well used and became well known landmarks. Conversely,

irregular curvilinear and regular modern patterns had a series of underused and neglected spaces within the public space network. Key findings across case studies are shown in Table 2.2.

Table 2.2: Summary of morphological findings across all four case studies.

	ROAD HIERARCHY	BUILDINGS DEFINING SPACES	PLOT PATTERNS	PUBLIC SPACE NETWORKS
Cadastral (1800s)	easy to navigate, connected short routes	compact, homogeneous height, consistent built form: excellent definition	clear geometry and closed street definition	Different levels of privacy clearly defined No underused spaces
Modern (1900-1950)	easy to navigate, connected routes	homogeneous height, consistent built form: good definition	clear geometry and open street definition	Different levels of privacy clearly defined Underused spaces
Curvilinear (1960-1980)	difficult to navigate, disconnected long routes	heterogeneous height, inconsistent built form: poor definition	clear geometry of blocks but unclear, open street definition	Different levels of privacy not clearly defined Underused spaces
Block (1970s)	easy to navigate, disconnected long routes	heterogeneous height, consistent built form	clear geometry of blocks, clear, open or closed street definition	Different levels of privacy clearly defined No underused spaces

This chapter looked at how morphological analysis of place can help urban designers understand some of the characteristics of neighbourhoods. However, as demonstrated above, other dimensions of place are intimately linked with morphological attributes. The next chapter discusses the social dimension of place, going into depth with regards to concepts and analysis methodologies applied by the fields of sociology and human geography.

CHAPTER 3
3. The social dimension of place

"One of the sites for action of spatial agents is engagement with social structures [a] ... and let us remember that before we begin to construct a civic society, we must first build a community [b]"
([a]Awan, Schneider and Till, 2011, p.56; [b] HRH Prince El Hassan bin Talal, 2005, p.2)

This chapter reviews the literature across different disciplines from within the social sciences about the social dimension of place. Its aim lies in the exploration of theoretical concepts and tools that can be transposed into urban design practice in the appraisal and evaluation of neighbourhoods. It achieves this by researching the social sciences interpretation of concepts and theoretical models that led to the most recent social sciences tools used to measure core social variables in the public realm in four neighbourhoods. A literature review focuses on social sciences concepts to both the informal and formal aspects of public life. It then goes into some depth to review research methods that explore the social dimensions of place. It concludes that four key areas of the social dimension linked to public space can usefully be appraised in the urban analysis of neighbourhoods: informal contact; organised activities; social networks; and social cohesion (involving close ties; length of residence; and levels of exchange). This forms the research framework for the case study analysis of the social dimension of place.

Carmona et.al. (2010) believe understanding the relationship between societies and places is essential to urban design because the environment has an influence on people's behaviours. Peoples' social behaviour in neighbourhoods relates closely to the opportunities public places offer for engaging in casual contact, generating and developing social networks,

organising social activities and cultivating and maintaining certain levels of social cohesion. Carmona et al. (2010) explained that the public realm has a physical dimension which is the space it occupies, and a social dimension – called public life - which relates to the activities that occur in that publically accessible space. However, although public life includes the social dimension of the public realm, it also includes activities that occur in private spaces, or spaces with controlled access such as pubs, cafes and community buildings, to name some. Public life can be segregated into various parts for the purpose of analysis, Carmona et al. (2010) classify a 'formal' public life in relation to institutions and organisations and an 'informal' public life, which includes casual encounters and spontaneous activities. But although urban theory often deals with these types of concepts, urban designers rarely appraise these dimensions of place in practice. This literature review provides the academic and methodological underpinning of Carmona et al.'s argument about the correlation between the spatial and social dimension. Carmona et al, as other authors from the field of urban design, take an interdependency between the spatial and the social as a given, but it lies outside their capacity to undertake such an analysis. This is what this research seeks to make a contribution to. It begins by looking at how core concepts that relate public life and public places are understood and analysed in other fields.

The synergies between people and place have been traditionally approached with a strong focus on psychological factors (Gardner and Prugh, 2008; cited in: Corral, 2010, p.78). However, Mihaylov and Perkins (2014) believe that a more positive approach would include social dynamics at a community level and in the context of social capital, participation and empowerment which in turn, results in social resilience. Musterd and Kovak (2013) stressed the growing importance of considering how social networks develop and to account for them in urban policy. According to Zautra, Hall

and Murray (2013), resilience in neighbourhoods is achieved when: people trust each other; they interact regularly; they remain in the neighbourhoods for some time; they have a sense of community and cohesion; they work together towards a common goal; and they have formal and informal public places to meet. These aspects of social life are important in urban practice particularly because, as Chapter 1 discussed, participatory design and governance have recently increased in popularity as optimum ways to deliver social sustainability in urban environments. With the forthcoming literature review, the author aims to investigate if empirical appraisals of some of the social dimensions of place could potentially offer a more comprehensive understanding of urban morphology and simultaneously they could become a vehicle to strengthen more appropriate ways to deliver social sustainability through the participation process.

3.1 Understanding the social dimension

Although social and cultural capital are not measured as variables of place in this study, it is important to understand these as a framework for participation and engagement. This literature review explores key concepts about social dimensions of place in neighbourhoods as dealt with by the fields of social sciences, particularly sociology and anthropology, with a particular interest in the key variables of public places. The section however, starts by debating concepts that are central to social sustainability and social resilience: Social Capital and Cultural Capital, and the concept of Community.

3.1.a Social capital and cultural capital

Primordial concepts in today's social sciences, directly linked with social resilience, and that need due attention are Social Capital and Cultural Capital.

Social Capital:

Social capital is key to community cohesion and it is structured by a series of relations between people, which are based on trust. It enables communities to achieve social interaction, shared goals, co-operativism, participation and access to information and resources; empowering people to perform to its full capacity in order to develop their skills and to manage their assets (Grunter and Kroll-Smith, 2007; Tallon, 2013). Hall, Hardy and Ward's (2003) definition of social capital has an emphasis on social connexions: *"...the development of a huge complex of voluntary organizations for a great variety of work, both for mutual benefit and for charitable purposes."* The groups and organisations that work independently from the government form the civil society; these type of institutions are a form of social capital, as members share goals, develop habits and establish norms (Halpern, 2005). Burt (1992) further adds that social capital is the combination of both: contacts and networks, accounting for 'who' you reach and 'how' you reach them. Van Der Gaag and Snijders (2005, pp.1-29) see social capital as *'the collection of all potentially available network members' resources'* such as '*advice, love, practical assistance, attention, influence, physical strength, knowledge, expertise, status, money, food, health care, etc.',*[1].

Social capital is one of the components of the 'seven capital model'[2] (Tallon, 2013) and all forms of capital are deeply interrelated. Elkington (2002) explained that whilst human capital[3] manifests in the form of public health,

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[1] Van Der Gaag and Snijders (2005) work under the assumption that resources are equally available to all and ignoring the fact that people might not want to facilitate or allow access in all circumstances. Lin (2001a, b; cited in: Van Der Gaag and Snijdersb, 2005) make a distinction between having access to social capital and being able to mobilise it.

[2] The seven capital model includes the following variables: financial, built, social, human, natural, cultural, political.

[3] Human capital: group of *'skills, knowledge, and experience possessed by an individual or population,*

wealth creation potential, skills and education; social capital lays in the ability of people to organise and work together[4], a capability which is fundamental to the idea of social sustainability (Fukuyama, n.d. cited in: Elkington, 2002, p.85). Halpern (2005) and Ferragina (2012) explain that virtually every piece of research shows the direct relationship between education, especially at university level, and social capital. The more educated people are, they state, the more number of associations they join, the more they trust other people and the more interest they have in engaging in politics and public participation. Also, a study on local labour market variations (Gray et. al, 1994) shows that as a general rule, the higher the unemployment levels the lower the level of participation rate, with the most influential variables being of a personal nature, such as level of education and social background. This demonstrates that in general, the more advantaged the participant, the higher level of participation. Income Inequalities[5] however, comes across as the strongest variable to predict social capital; the reduction of income inequalities increases the efficiency of the networks (Ferragina, 2012). Paxton (1999, cited in: Ferragina, 2012, p.22) found that social capital in UK had decreased from 1975 to 1994 but only in poor and socially excluded groups, maintaining its levels amongst the rest of the population. Stone (2001) explains that social capital indicators can be proximal or distal. Proximal indicators are related to the core aspects of social capital such as trust levels, norms and reciprocity. Most studies, he says, use one dimension to measure

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viewed in terms of their value or cost to an organization or country' (Oxford Dictionary).

[4] Research shows the impact of some human capital variables on social capital rates, for example, the European Values Study programme, a large scale cross national longitudinal study of human values which has been going for several decades, with revised versions, and which brought to light to the way human, cultural and social capital variables relate.

[5] The most used method to measure income inequalities is the Gini coefficient however, Atkinson A. (1970) opposed to the use of the method based on the fact that there is no solid ground to relate welfare functions to social values.

social capital: Trust; which is essential but not the only important indicator, reciprocity is equally important, for example how often people have done things for neighbours such as carrying the shopping, decorating, mowing the lawn, etc. Distal indicators like crime rate, teenage pregnancy, etc., he continues, are rarely empirically linked to the concepts of social capital and the use and mix of diverse indicators has led to confusion as to what social capital means. Stone (2001) thinks that social capital is simply measured by querying three components: trust, norms and reciprocity, and then analysing how social capital relates to other predictors and outcomes. Rowson, Broome and Jones (2010) disagree, they explain how previous studies show that indicators of social capital had incongruent results in some deprived neighbourhoods, and they attributed this fault to the fact that social networks had been omitted from the analysis and that communities have been studied purely within geographical boundaries.

Despite the many definitions of social capital (MacGillivray, 2004), scholars from a variety of disciplines[6] agree with a concept of social capital highly related to both human and cultural capital[7], and which is defined by: (i) Social norms[8] and trust; (ii) Social relationships and networks. These two core concepts give shape to our societies and the ways in which we relate to each other. Place, hosts the dynamics resulting from the social capital dimensions.

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[6] (Putman, 1995; Elkington, 2002; MacGillivray, 2004; Halpern, 2005; Hester, 2006; Colantonio and Dixon, 2011; Ferragina, 2012; Tallon, 2013).

[7] The relationship is established in research by setting social network analysis in the context of socio-cultural profiles and conducting crossed data analysis between variables associated with all three forms of capital (Stone, 2001).

[8] Private and public spaces are very well defined in Western societies and people have great respect for boundaries whether they are physical or virtual, this attitudes and behaviours are now a social norm Kopec (2012).

Public place provision for example, can enable the development of social networks that grow through organised activities taking place or simply through repeated social interaction between people. On the other hand, people might form networks to care for places around them, to improve them and to make them suited to their lifestyles. The provision of suitable places that enable these types of practices in neighbourhoods could be one of the urban design mechanisms to contribute to the formation and development of social networks at a local level.

The major constraints to evaluating social capital are: the necessity to measure something rather immeasurable, and the lack of communication amongst academia (Ferragina, 2012). Because of this, only some dimensions of social capital have been measured in depth as it has been normally the case that research was carried out from data that was already available. On the other hand, the information available is fragmented because most studies focused on a specific aspect of social capital[9] (Van der Gaag and Snijders, 2005). However, a number of surveys on social capital have been carried out in different countries creating a platform of data and methodology which could be followed up in the future in order to detect change (Halpern, 2005, p. 38).

Social capital definitions and its indicators have been largely debated and they vary across fields causing some difficulties in the interpretation of empirical research (Stone, 2001; MacGillivray, 2004). When Paxton (1999,

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[9] The UK Department of Trade Industry set seven indicators of social capital: relationships, knowledge, leadership and communication, culture and values, skills and competencies, reputation and trust, processes and systems (MacGillivray, 2004). The Office for National Statistics (2014) selected four indicators of social capital: (1) civic participation, in relation to involvement in local and national governance; (2) social participation, in relation to the individual volunteering for organised groups; (3) social networks, in relation to the contacts and support people have from family and friends; (4) reciprocity and trust, in relation to the level of trust on people and institutions.

cited in: Ferragina, 2012, p.22) measured social capital by looking at two variables: (1) associations and (2) trust. The association variable had three indicators: (i) evenings with neighbours, (ii) evenings with friends and (iii) membership to voluntary organisations; the higher these indicators, the higher the participants' social involvement. The trust variable had two indicators: (a) trust in people and (b) trust in institutions[10]. But Halpern (2005) argued that numerical measures of voluntary organisation density per area can lead to biasing important qualitative differences. Association-based measures, he said, can have poor predictive validity when crossing with other variables due to the lack of qualitative information about those affiliations. Van der Gaag and Snijders (2005, pp.1-27) said: *"When the relationship between different social capital measurement models is known, we will be able to link results of several different studies, and develop a better understanding of social capital."* However, the most accurate approach to measuring social capital takes into account (Putman, 1995; Elkington, 2002; MacGillivray, 2004; Halpern, 2005; Hester, 2006; Colantonio and Dixon, 2011; Ferragina, 2012; Tallon, 2013):

> 1- Social norms and trust
>
> 2- Social relationships and networks

Social norms and trust are highly depending on culture, they cannot be assumed and they vary within neighbourhoods, therefore indicators to account for them have to be tailored to each study (Rowson, Broome and

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[10] Halpern (2005) argued the impact of adversity in social capital is evident through the results of the pre and post 9/11 attack surveys in USA, as the levels of trust in government, police, neighbours and people of other races increased whilst the levels of trust in Arabs declined.

Jones, 2010).

Cultural Capital:

Halpern (2005) felt the need to make a distinction between social capital and cultural capital[11] due to the recurrent confusion the proximity of the terms caused[12] (Stone, 2001). The first one, Halpern (2005) says, are the norms that define the social interaction between people, the latter are personal preferences that might give character to a society. Culture, Miles (2011) says, is the expression of common values held, whatever those values might be. Tomassello (1999) explains that cultural development is evolutionary and based on the idea of saving time and risk by using previous knowledge and skills acquired through collaboration, instructive learning and imitation. These mechanisms of learning are developed in humans through the cognitive system, which gives us the capacity to relate to others like ourselves, and it is this what differentiate us from other animals (Tomassello, 1999). There are two elements of cognitive development, Tomassello (1999) says: the individual line, when we learn by our own observation; and the cultural line, when we learn by empathising with others and trying to see their perspective. Cultural differences emerge with the process of cultural evolution, traditions can suffer a series of modifications triggered by acts of innovation which are collectively adopted over time through imitation (Tomassello, 1999). How

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[11] Cultural capital: *'relating to the ideas, customs, and social behaviour of a society'* (Oxford Dictionary). *'A term introduced by Pierre Bourdieu to refer to the symbols, ideas, tastes, and preferences that can be strategically used'* by a society (Oxford Dictionary of Sociology, 2012). Bourdieu (2008) classified four forms of capital: economic (money and assets), social (networks and affiliations), cultural (taste, language, preferences, etc.) and symbolic (credentials, ways to exchange other forms of capital, having a title like Dr., for example). The author believed these types of capital are inter-exchangeable and that to be truly valuable they have to have *accomplishment* and *transferability*; which translates into being objectified, embodied and internalised. Recognition happens when value is placed within social norms which have been internalised by the actors of a social body or network.

[12] For example, Baum et al. (2000, cited in: Stone, 2001, p. 10) measured activities carried out in public places of leisure such as cinemas, clubs, restaurants, etc., but this study reflects more on the life style of the community rather than in the ways they link.

diversity influences social capital is contested, Hester (2006, pp.171) thinks that cultural diversity is deemed as a primordial community asset and therefore a key variable which is directly proportional to social capital: *"... the resilient city is neither a botanical garden (which has plenty of variety but no regional delineation) nor single-crop agriculture (which has replaced regional unity with uniformity)"*. Cultural diversity is a key asset of social resilience and it can only be maintained by preventing the island effect from which a population become isolated and lose their capacity to change (Hester, 2006). Halpern and Nazroo (2000; Franzini and Spears, n.d.; cited in: Halpern, 2005, p.260) disagree. They state that there is significant research-based evidence to support that social capital is higher in homogeneous groups as the process of bonding[13] is smoother. They say higher levels of health have been found in homogeneous groups in relation to the reduction of problems such as discrimination, segregation and conflict[14]. Table 3.1 on page 133 shows the social capital concepts adopted for this research.

3.1.b Communities

For this study the most appropriate scale of analysis is the community scale, which is the social structure most closely related to the neighbourhood scale. The concept of community has been difficult to convey and it has been debated at length in various fields. Creasy, Gavellin and Potter (2008) believe a community is a social infrastructure that turns neighbourhoods into social systems. Shared services form the physical context, along with social networks, give form to social organisations called communities.

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[13] Bonding social capital refers to creating positive relationships amongst members of the same community (Morrissey, Healy and McDonnell, 2008).
[14] (Halpern and Nazroo, 2000; Franzini and Spears, n.d.; cited in: Halpern, 2005, p.260).

Table 3.1: Social capital concepts and methods adopted for this research

	Reviewed			Proposed	
Prece dent	**Author/s**	**Strengths**	**Weakness**	**Adopted**	**Improved or Adapted**
Socio-ecologic model	Mittelbach, 2012; H. Erixon , S. Borgström & E. Andersson, 2013; Pickett, Cadenasso and McGrath, 2013	Relates people and their environments		Adopted as a model	
Social capital	Putman, 1995; Elkington, 2002; MacGillivray, 2004; Halpern, 2005; Hester, 2006; Colantonio and Dixon, 2011; Ferragina, 2012; Tallon, 2013	Definition takes into account: 1- Social norms and trust 2- Social relationships and networks		Definition	
	Paxton, 1999; Stone, 2001	Reciprocity/ associationism as an indicator		Reciprocity included as an indicator	
	Putman, 1995; Paxton, 1999; Halpern, 2005; Ferragina, 2012	Take into account social norms and trust	Data collection method suitable for large scale networks / little qualitative information on relational data	Social capital indicators	Data collection method adapted to neighbourhood scale study
	Ferragina, 2012	Includes qualitative historic analysis to reduce bias		Qualitative historic research and analysis	
	Ferragina, 2012	Labour market participation found as largest determinant		Labour market participation included in socio-economic profile	
	Ferragina, 2012	Level of participation as indicator of trust: formal and informal networks		Level of participation as indicator of trust: formal and informal networks	Added casual/virtual networks, length of residence, participation (consolidation of existing networks)
Social networks	Newman, 2011	Snowballing random-walking-sampling		Snowballing random-walking-sampling	

	Lin and Dumin, 1986; Lin et al., 2001; Pahl and Spencer, 2004; Valdis Krebs and June Holley, 2006	Name and position generator interview methods		Name generator interview method	
	Rowson, Broome and Jones, 2010; Stanczak, 2007	Account for the individual psychology of the members through narratives		Individual psychology of the members through narratives covered in interviews informal section	Photo elicitation included as interview tool
	Wellman and Wortley, 1990; Giuffre, 2013	Level of support as indicator of network strength and length of ties	Data collection method suitable for large scale networks	Level of support as indicator of network strength and length of ties	Data collection method adapted to neighbourhood scale study
Place bonding	Ferragina, 2012	Considers people's perception of their place, a vision and predisposition towards the locality	Makes deductions from historic analysis but does not measure these through surveys/interviews	Adopted indicators and historic analysis	Added vision, perception, affect as indicators to be surveyed
	Park, Davidson and Shields, 2011	Psychologies of affect: nostalgia, desire, hope		Adopted psychologies of affect as indicators	
	Banfield, 1958; Schumacher, 1973; Putnam, 1993; Hall and Ward, 1998; Halpern, 2005; Faud-Luke, 2009; Hamdi, 2010; Park, Davidson and Shields, 2011; Ferragina, 2012; Doina Petrescu, 2013; Svendsen, 2013	Land ownership and stewardship as fundamental to sense of belonging		Land ownership and stewardship adopted as indicators of belonging	

Giuffre (2013) thinks a community is a social system with laws and norms of a moral nature, based on family life and grounded in land ownership. Others also believe the social interaction and psychological bonding between

members in the context of their place of residence, is what makes a community (Christensen and Robertson, 1980, cited in: Kirmayer et al., 2009; Grunter and Kroll-Smith, 2007, p.167). Colantonio and Dixon (2012) share this view; institutions, they say, regulate relationships between people and between them and their place, and all of these elements together constitute the local culture. All of these definitions make reference to a geographical area but Krimayer et al. (2009) instead found that a physical place is not a necessity for the existence of a community. They showed that some aboriginal groups in Australia, which moved from a rural to an urban location, maintained their sense of community, which was focused on history, values, and shared concerns. Rowson, Broome and Jones (2010) agree, they state that defining communities on the basis of a geographical area does not offer a comprehensive view and that current research should study and map social networks and base analysis on relational aspects of social structures in favour of holistic or individualistic approaches. This point was taken into consideration by adding social media analysis as a research strategy (see Appendix 4). Despite the diverse interpretations of the term, the most frequently adopted definition of community in social resilience studies refers to *'a group of people linked together by their need to survive'*, which unites them, as they share a natural and built environment subject to some vulnerabilities and exposed to certain hazards. People living collectively face similar disasters and are together in the face of adversity (Jewkes and Murcott, 1996; Hamdi, 2010; Ginige and Amaratunga, 2013; Ophiyandri, 2013). The concept of community adopted for this research was described in the Introduction, section 2.d.

3.1.c Informal contact

Built environment experts such as Jan Gehl (2010) have considered the ways in which place can mediate informal contact. These approaches are dealt with by the literature review in Chapter 2. This section explores the social sciences take on these concepts.

As briefly mentioned before, the term 'informal contact' refers to casual, non-pre-arranged interactions that people might have in the public realm. These involve a greeting, a conversation, the exchange of information, play, etc. The combination of public spaces and all other publically accessible places that host public life (cafes, pubs, etc.) form the space network that hosts public activity, both at an informal level and through organised activities. Over the last 200 years, and in the past half century especially, there has been a decrease in the provision of publically accessible places; this went hand in hand with a decrease in the need to work cooperatively with our neighbours (Halpern, 2005).

But the different aspects of public life are so interlinked that it is often difficult to draw a line between concepts. For example, the consistent repetition of informal meetings can lead to the gradual development of closer relationships, turning acquaintances into friendships and even closer relationships. Informal contact can therefore lead to the formation of various types of social ties. Public life is so important because it is the group of networks and norms that give character to a community and facilitate action, especially when communities need to overcome adversity (Halpern, 2005). And social resilience is strengthened when communities can build up social capital (Halpern, 2005) and manage the aspects of social life that enable people to act more efficiently as a group in order to meet their objectives,

connect socially and develop norms and trust (Putnam, 1995; cited in Halpern, 2005, p.1; Ferragina, 2012, p.19). People create social institutions and conventions to give structure to our world, to help us make sense of opportunities and threats, and these cultural structures are maintained through interactions and connections or ties (Tomassello, 1999). More significantly, these social ties are one of the goals of sustainable development and a key aspect of happiness and well-being (Gardner and Prugh, 2008; cited in: Corral, 2010, p.78). Research showed clear link between the levels of support social ties can offer at a personal level, and health (Berkman and Kawachi, 2000; Putnam, 2000; cited in: Halpern, 2005, p.87). Those who are part of strong social networks have better physical and psychological health, less fear and more coping mechanisms in case stressful events happen in their neighbourhoods (Antonvosky, 1979; Holahan and Moos, 1981: all cited in: Bell et al., 1990, pp.347-348). For instance, a study conducted by Bell et al (1996) showed that the stronger the place-base social ties, the greater the grief people experienced when they were forced to relocating to other neighbourhood.

The significance of these types of social dynamics for this thesis is particularly the close relation between the operation of networks and the space provision necessary to mediate social action. Social ties are mediated by space (Dear and Wolch, 1989; cited in Carmona et.at, 2010, p.133) because the public realm can facilitate or inhibit the development of public life. This includes meeting a neighbourhood for a drink, attending events with friends or spending a day out with the family. All of these activities and the many other alternatives to socialisation, require the provision of place that mediates them. Socialising at five or ten minutes-walk from home is crucial to people's well-being, how relaxed they feel, how they connect with others sharing common territory and how they feel a sense of belonging. Similarities

and relations amongst people sharing spaces create a unique sense of community identity (Hopkins, 2010). Bourdieu (2008) relates identity to 'habitus', which is structured by both the conditions of our past and present life, but also by the environment where we are acting.

There are parameters such as culture, norms, values, infrastructures and institutions that form a complex dynamic system associated with human actions (Moloney, Horne and Fien, 2010). Aoki (2007, cited in: Vellema and Springerliknk, 2011, p.22) says that patterns of social interactions are institutionalised within society[15] and McInroy (2014) sees place as key aspect of network activity. He interprets cities as 'hosts' to networks but also as a 'formed' by a combination of social networks in a physical sense, both of which together, form the DNA of cities.

The notion of how public place are - and are perceived to be – has been of interest to environmental psychologists and sociologists in recent decades. Frank and Stevens (2007) believe spaces have the property of 'looseness', which allows degrees of public appropriation. They explain how some spaces can be looser than others: when the prisoners take over a prison, they say, the space becomes loose. According to the authors, it is not the physical form of the space that makes it more or less loose but the action of people. Frank and Stevens (2007) further state that many of the activities that produce loose spaces are purely recreational, a way of reflection or social interaction, and that these activities can be spontaneous or planned in advance but that they are all temporary, whether they last minutes, months

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[15] Vellema, (2011) makes reference to the social behavioural pattern of stopping at a traffic light; if no law were applied to this rule people would still adhere, the author adds. Another example of this behavioural institutionalisation might be the British obsession with queuing, or standing on the right at the tube escalators. Even people who are visiting the UK for the first time follow this socially institutionalised rule.

or a year. Activities can occur and disappear without leaving any trace[16] (Bishop and Williams, 2012). Frank and Stevens (2007) believe that in cities, people are more anonymous and to some degree less worried about other people's activities in public spaces, that this gives them a sense of freedom which allows for loose space activities to take place. They explain how people may have clear objectives and how they might look for a place that supports that activity, such as playing hide and seek, or that instead, the place might trigger, a specific activity by its shape and context such as streets that encourage strangers to talk to each other. Another issue raised by the authors is the fact that some people have rebellious attitudes towards space and appropriate through colonisation, such as skateboarders might do, for example, which is still a way to loosen space. In all cases, loose use of urban space shows people's conscious reaction to rules, expectations and constraints. Nisha A. Fernando (2007) raises the issue of how space can be appropriated through multi-sensorial aspects of urban life, how music or other sounds and smells can transform the atmosphere of a place and how communities can add a sense of identity to places through the senses. He refers to the case of New York and the different neighbourhoods (Little Italy, Chinatown, etc.), where street appropriation is very evident and where both, the way in which the process takes place and the final physical appearance, transpire a set of cultural values and identities.

As Carmona et al. (2010) explained, the relevance of public place as a generator of public life through the mediation of informal contact is one of

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[16] La Varra (n.d., cited in: Bishop and Williams, 2012, pp.87-88) used the term *Post-It City* to describe a range of temporary activities that come and go just like post-it notes in books, following a research project documented temporary and informal uses in 80 cities in the world.

the core social dimensions of place; as well as place's capacity to constrain or obstruct human activity. Therefore, *Informal contact* is adopted for this research as one of the key variables of the social dimensions of place.

3.1.d Organised activities

The term 'organised activities' refers to the events, meetings, workshops, games and other gatherings arranged by the community or by institutions and organisations that are opened for the general public to participate. For example yoga classes, youth clubs, pensioner's day trips, and so on.

In recent years there has been a clear tendency of formal institution affiliation being in decline, traditional ways of membership such as association to religious institutions and club memberships have decreased worldwide. However, more self-interest based memberships such as environmental organisations based in low-commitment and regular payment, have increased (Halpern, 2005). Also, informal ways of networking have been increasing by the use of virtual networks and technology; people do not need to belong to a club, they can call their friends and meet up (Halpern, 2005).

The relevance of organised activities in neighbourhoods is that these are deeply associated with the concept of social capital and the possibility of communities to grow and become more resilient. It is through engagement with activities at a local level that people get to know each other and come up with ideas to improve their lifestyles and their environments. This level of organic development of organisations locally often leads to community governance. Ferragina (2012) thinks there is only one way to increase social capital in Europe, and it requires participation and involvement both in the micro and macro levels; the reinforcement of collective values in favour of

individualism; and the redistribution of wealth and opportunities. The author based his studies on Putnam's work. To build up social capital, MacGillivray (2004) says, two systems can be used: 'bonding' and 'bridging'; the first one refers to bring like-minded groups together and the second to shorten distances through negotiation between confronting groups. Morrissey, Healy and McDonnell (2008) instead, used the 'linking' social capital technique, which refers to developing positive relationships with institutions responsible for supporting and delivering services to communities. These community developing techniques require the provision of public spaces that can host a number of organised and informal activities. Due to the relevance of place as a host of *Organised activities*, this variable is included in this research.

3.1.e Social networks

Society is not made by individual atoms, people connect to each other through social structures, norms and values called social networks (Halpern, 2005). Social network analysis was initiated in the 1950s in Manchester when anthropologist John Barnes came up with the term, then empirical studies turned this into more methodological analysis in the 1960s and 1970s. The study of the connections between people and groups is called methodological relationism (Rowson, Broome and Jones, 2010). Rowson, Broome and Jones (2010; and Valdis Krebs and June Holley, 2006) see social networks as a key component of social capital[17], important on its own right and worthy of focused analysis; they provide a fundamental structure for developing community capacity and ability to change (Maclean, Cuthill & Ross, 2013). Depending on the point of interest, social networks might have different sizes, shapes and definitions (Newman, 2011). Social networks are formed by

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[17] The authors see the general framework of social capital studies which also includes the psychologies of the players, global markets, policy, etc. (Rowson, Broome and Jones, 2010).

groups of people linked by some sort of relationship such as friendship, business venture, work, etc.; and these are not about the individual nor the groups but about their links (Newman, 2011). Using social network analysis gives us a richer understanding of how communities operate (Giuffre, 2013), focusing on the dynamics and the processes that make societies work, rather than looking purely at static measures of independent variables. But social network analysis in social sciences is often focused on quantifying all actors within their networks and their contacts, instead of focusing on the whole structure of the network and how it operates. This involves having access to data about all the component participants of a network and how they relate to everyone else, which is time consuming and expensive. For this reason, network structural analysis, focusing on the form of the network; and relational data, focusing on how people connect; can bring more light to the understanding communities than isolated human capital determinants such as age, gender or religion (Knoke and Yang, 2008; cited in: Giuffre, 2013, p.3). Individuals are defined, and behave, on the basis of their individual and social identities, and according to social norms, which are determined by relations.

Social institutions and conventions are created to give structure to our world, to help us make sense of opportunities and threats, and these cultural structures are maintained through interactions and connections (Tomassello, 1999). McInroy (2014) interprets cities as 'hosts' to networks but also as 'formed' by a combination of networks in a physical sense, both of which together, he says, form the DNA of cities. Burt (1992; 2001) has a similar interpretation but on a theoretical rather than physical basis. He describes two lines of thought in the role of networks on social capital: the first one assumes networks as the 'conduit' to people with certain capital, the second assumes networks as a 'component' part of social capital. Understanding community network structures is vital to understanding life since they shape

us and we shape them, they can make us feel included or alienated (Giuffre, 2013). Loneliness increasingly affects people of all ages and backgrounds and it has recently been identified as twice more harmful to health than obesity and almost as bad as smoking primarily because it is not only a cause of sadness but it is also an anthropological warning sign: in isolation we are more vulnerable to predators. Some of the effects recorded in adults show "*increased anxiety, hostility and social withdrawal; fragmented sleep and daytime fatigue; increased vascular resistance and altered gene expression and immunity; decreased impulse control; increased negativity and depressive symptoms; and increased age-related cognitive decline and risk of dementia*" (Cacioppo and Cacioppo, 2015, p.1). In neighbourhoods with higher turnover, people have no time to bond and form roots; alienation is associated with weak and fragmented social networks which cause loneliness and depression (Halpern, 2005). Participation can be a good way to create ties and bonding in communities and neighbourhoods, but understanding how this can be achieved entails an in depth knowledge of how people and groups interact (Creasy, Gavellin and Potter, 2008).

But social networks would not operate efficiently without trust. Trust is the expectations one has on someone, the mechanism that increases the 'tolerance uncertainty' within societies. Within familiar people or situations, whether the result were to be positive or negative, a high level of trust prepares us for the outcome, we know what to expect and therefore tensions and anxieties are reduced (Luhmann, 1973). We would not be able to operate a normal life without trust, the anxieties of living within an unpredictable set of norms and conduct would paralyse society (Luhmann, 1973); only simplistic ways of social interaction and cooperation are possible, because social systems are highly reliant on organised and implemented law. Trust is the result of a combination of personal conduct and social norms, and it cannot

be understood in dissociation of either of both (Luhmann, 1973). A personal relationship normally starts with exchange of small favours like kindness, help and small gifts, if these attitudes are reciprocated the relationship becomes more established and the levels of trust can be developed (Luhmann, 1973). People are more willing to trust if they have inner security and the self-confidence to help them overcome the disappointment of the betrayal, so the problem of trust is placed within the roots of personal cognitive development and the internal acknowledgement of possessing certain inner capacity to solve the problems that might emerge from the betrayal situation (Luhmann, 1973). In UK, middle classes have recently had an increase in their levels of social trust whilst in working classes they have been falling dramatically (Halpern, 2005). Surveys show that individuals who are affiliated to voluntary organisations are much more trusting of others than those who don't; and the more associations people adhere to, especially if they differ in character, the higher the levels of trust the individual has (Halpern, 2005). Putnam (1993; cited in: Halpern, 2005, p.8) further argued that the outstanding economic performance[18] of countries like USA and Japan was due to the high level of trust amongst strangers; this was confirmed by the European Values Study, which revealed that in societies with higher levels of institutional trust people are more likely to make longer term investments; opportunistic behaviours are lower in societies with more participation and civic trust (Ferragina, 2012). For this research, the issue of trust was considered as a key component of social networks and social ties.

Newman and Franck (1982; cited in: Bell et al., 1990, pp.348-349) thought that social networks can be increased or reduced through design and

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[18] Economic performance is measured through levels of Financial Capital in relation to Social Capital (1993; cited in: Halpern, 2005).

Orford (1992; cited in Cassidy, 1997, p.64) argued that social support[19], which occurs in communities and neighbourhoods, is place-dependent and the form of the physical environment will enhance or diminish access to these type of networks. Cassidy (1997) claimed that neighbourhoods that are designed to provide both a physical place for social interaction and good levels of privacy are the ones that result in better levels of mental health as they enable multiple levels of interaction and sufficient levels of social support within close knit groups. Social interaction is also a determinant of creativity and innovation, and it can impact on job creation and entrepreneurial attitudes resulting in stronger local economies emerging as a result (Musterd and Kovak, 2013).

Social networks structure our societies and are those structures that not only require places where they can operate but also become agencies for place change and environment governance. For these reasons, urban design as a practice that provides places for people and networks to share, must embrace a deeper understanding of how social relations are mediated by space but also how place might enable democratic processes in neighbourhoods. Concepts and techniques were adopted from social sciences for this research, as shown in Table 3.2.

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[19] Orford believes that social support involves five degrees of aid: material, emotional, esteem, informational and companionship.

Table 3.2: Concepts and tools adopted from social sciences to appraise social networks in urban practice

Author	Strength	Weakness	Improved	Adopted or adapted
Newman, 2011	Snowballing random-walking-sampling		Snowballing random-walking-sampling	Initially adopted but reviewed and adapted
Lin and Dumin, 1986; Lin et al., 2001; Pahl and Spencer, 2004; Valdis Krebs and June Holley, 2006	Name and position generator interview methods		Name generator interview method	Initially adopted but reviewed and adapted
Rowson, Broome and Jones, 2010; Stanczak, 2007	Account for the individual psychology of the members through narratives		Individual psychology of the members through narratives covered in interviews informal section	Photo elicitation included as interview tool
Wellman and Wortley, 1990; Giuffre, 2013	Level of support as indicator of network strength and length of ties	Data collection method suitable for large scale networks	Level of support as indicator of network strength and length of ties	Data collection method adapted to neighbourhood scale study

3.1.f Social cohesion

The section above looked at social networks. These are formed by a number of individual relations that can be stronger or weaker and that have various modus operandi. These 'connecting dynamics' are referred to by the term 'social cohesion', the main subject of this section.

The components of social networks were defined and researched for decades within the field of sociology. Giuffre (2013) described networks as composed by 'actors', who are people in the network, linked by 'ties'. These ties can be 'weak' or 'strong' according to the level of bonding between

actors, the higher the number of strong ties a network has[20], the higher the levels of 'cohesion' or *'glue'* that keeps the network together. 'Bridges' occur when positive relationships happen amongst different communities linking them together through a common actor (Burt, 1992; Grunter and Kroll-Smith, 2007; Morrissey, Healy and McDonnell, 2008). Bridges can remain as weak ties between groups (e.g. acquaintances), or over time they might become strong ties (e.g. friends) creating a larger group from the junction of both networks (Krebs and Holley, 2006). Tightening loose ties requires the removal of possible political tensions and questions over power and ownership, and ensuring that no clusters have formed which ignore the needs of the larger community and instead focus on the survival of their group (Krebs and Holley, 2006). Well-funded sociological research shows that socio-economic variables are related to the type of ties the actors in a network might have. Middle classes have larger and more diverse networks than working classes, which gives them an advantage, as the larger the proportion of weak ties and bridges, the bigger the advantages to move in society to find jobs, to do professional development, and other types of personal growth[21]. Giuffre (2013) showed that communities that have stronger ties are more compacted and closed, and therefore, more likely to maintain their identity but less likely to withstand adversity and challenges. The sense of social identity is one of the key triggers of community cohesion and higher social identity results in more collaborative action, as proved by Parker et al. (1983; cited in Cassidy, 2006, p.217). However, consolidated communities might be resentful and

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[20] Pryke (2012) explained the relevance of the position of the actor within a network: 'Point centrality' gives an indication of the importance and connections of an actor in the network, the more centrality, the more relevant this actor is; 'betweenness' centrality relates to the position one actor adopts when it is connecting another two actors, depending on the level of access to the information or goods travelling through the actor via the network, he/she is in a position of more or less control or power; 'closeness centrality' refers to the distance between the actor and either end of the network nodes.
[21] (Goldthorpe, Llewellyn and Payne, 1987; Hall, 1997, 1999; all cited in: Halpern, 2005, p.23).

hostile towards a new organisation within their locality, or towards any type of transformation, and the reason for this, is that there is a communal feel of threat to their own identity and security (Alisky, 1969). Gray (cited in: Grunter and Kroll-Smith, 2007) states that conflict is almost always triggered by threats to social and personal identity, which in some people can be perceived and felt as a threat to their meaningful social connections, to their trust or to their mere right to exist. When emotional threat happens it can be a very lengthy process for people to restore their emotional wellbeing and they remain in alert (Grunter and Kroll-Smith, 2007). Structural betrayal occurs when people perceive unfairness and direct action against them from organisations and government agencies, whether this is actual damage with intent or not. Very often local people are predisposed to bias and confusion due to past experiences or previous conflicts and trust is very difficult to restore when local communities feel or think they have been lied to in the past, in which case people become defensive and territorial making uninformed predictions and estimations. Even when official agencies may believe they are making a positive change by looking at a larger, long-term picture, they might not be considering the day to day aspect of people's lives and how these might be affected, which can lead to an overviewing of the real reasons for opposition and lack of collaboration (Grunter and Kroll-Smith, 2007). Sometimes the solutions to some problems are the beginning of other problems, at a local scale. When this process leads to a feedback-loop of anger, fear and mistrust, it is very difficult to have a positive impact on socio-spatial problems (Grunter and Kroll-Smith, 2007). Strong ties usually can give negative outcomes, dense cohesion within a network reduces the chances to have new ideas and innovations, this happens in rural communities which resist change (Krebs and Holley, 2006). Similarities between networks develop trust, diversity instead, introduces innovation (Krebs and Holley, 2006).

Encouraging interaction between different groups is positive, as it activates creative thinking triggered by information exchange. A good way to achieve this is to provide spaces where people can interact, hang-out and communicate (Burt, 1992; Giuffre, 2013). Public places can also help to strengthen community networks through tightening loose ties. To do so, it is necessary to remove possible political tensions and questions over power and ownership first, and to ensure no clusters have formed which ignore the needs of the larger community and focus on the survival of their group (Krebs and Holley, 2006). Nevertheless, weak ties give structure to the broader society (Ronald Burt, 1992) but memberships and networks often have 'blockages', which appear in the form of barriers such as: resources; class and community; gender; and ethnicity (Cabe, Lowndes and Skelcher, 1997).

An important indicator of social cohesion is the social support people receive from their networks (Wellman and Wortley, 1990; Giuffre, 2013), which Carmona et.al (2010) identified as 'community self-help'. For some time there has been a tendency to study the composition and persistence of community network structures to identify loses and gains, with less focus on how these structures could act as conduits towards support systems (Wellman and Wortley, 1990). But more recently, research showed a clear link between the levels of support personal networks can offer at an individual level[22] and health[23]. The World Health Organisation stated that support through social networks is an essential tool for health and well-being (Wilkinson and Marmott, 1998; cited in: Barton, 2000). Furthermore, the UK Green Paper on Our Healthier Nation (DHSS, 1998) states how social networks

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[22] Through the study of the meaning and nature of ties, Wellman and Wortley (1990, cited in: Giuffre, 2013) found that parent and child ties give the highest level of support and that women provided a much higher level of emotional support than men did.
[23] (Berkman and Kawachi, 2000, chapter 1; Putnam, 2000; cited in: Halpern, 2005, p.87)

can help reduce mental illnesses (Barton, 2000). Various authors (Wellman and Wortley, 1990; Orford, 1992; cited in Cassidy, 1997, p.64) agree that social support involves several degrees of aid: material, emotional, esteem, informational and companionship. The type of support people receive in networks can also be classified for the purpose of analysis as: emotional such as lending 'a shoulder to cry on'; small services such as lending a tool; large services such as childcare; financial such as lending money; and companionship such as having a chat over a cup of tea[24] (Wellman and Wortley, 1990; Orford, 1992; cited in Cassidy, 1997, p.64; Giuffre, 2013). All of these account for some level of social interaction that are place-dependent, and the form of the physical environment will enhance or diminish access to these networks.

Giuffre (2013) carried out two contrasting case studies to show that communities that have stronger ties are more compacted and closed, and therefore these are more likely to maintain their identity, but less likely to withstand adversity and challenges than communities with weak ties. Strong ties usually can give negative outcomes, in the case of Polish immigrants in the UK who use close networks to find jobs very quickly but within a limited range which eventually leads to social stratification, lack of integration and stronger language and market barriers (Sumption, 2009; Rowson, Broome and Jones, 2010). Also, Coleman (1998) found that the drop-out levels in Catholic schools was much lower than in estate schools and attributed it to the strength of the ties the population created through the sharing of core values (Halpern, 2005).

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[24] Social support occurs in communities and neighbourhoods and it involves five degrees of aid: material, emotional, esteem, informational and companionship; all of which account for some level of social interaction (Orford, 1992; cited in Cassidy, 1997, p.64), these interactions or networks are place-dependent and the form of the physical environment will enhance or diminish access to these networks

The 'strength' of networks can also be assessed by defining three key operational aspects of its governance: the degree of consensus in the decision-making process; the objective judgement and the behaviour of the members; the relationship between the leaders and their constituency (Cabe, Lowndes and Skelcher, 1997). When a network structure has gaps in places where relations could occur but do not, the vacant space is called 'structural hole'. These holes are normally placed in the periphery of the network where ties are not so compact (Giuffre, 2013). When a bridge is over a structural hole, opportunities for innovation and information exchange occur (Burt, 1992; Valdis Krebs and June Holley, 2006). According to Burt (1992), people standing next to structural holes have a bigger chance to come up with good ideas[25] because behaviours in people within a group tend to be more similar than those across groups (Burt 1992, 2000, 2002, 2004) due to the adjustment to the group social norms[26] (Moloney, Horne and Fien, 2010). Similarities between networks develop trust, diversity instead, introduces innovation; *"Connect on your similarity, and profit from your diversity."* (Valdis Krebs and June Holley, 2006, p.11). New ideas, some of which are good, emerge from the exchange between groups. This bridging across structural holes put actors close to them in an advantageous situation as they have to translate information across groups, which can increase social capital (Burt 1992, 2000, 2002, 2004). Transferring best practice between groups gives actors a high level of brokerage, people with involvement in two groups are more able than people confined within one group as they transfer behaviours, values, beliefs and norms, and are more capable to think outside the box by

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[25] '*"Good" will take on specific meaning with empirical data, but for the moment, a good idea broadly will be understood to be one that people praise and value.*' (Burt, 2004, pp.349-350)

[26] Social norms allow societies to develop conduct, obligations and expectations (Colantonio and Dixon, 2011) they are the assets of peoples' daily lives: good will, fellowship, sympathy, and family union (Hanifan, 1920; cited in: Halpern, 2005, p.4).

attempting to transfer practices across groups. People who have been confined in a group for too long tend to ignore differences and they do not feel comfortable with the challenge of change (Burt, 2004). On his study of social structures within organisations, Ronald Burt (1992) explains how structural holes create inequality but also offer entrepreneurial opportunities and how, in some cases, holes can be an advantage triggering the reorganisation of the network. He further said that holes can offer some players freedom instead of power, negotiation and diplomacy instead of control; almost as when one is driving in a traffic jam and suddenly finds a gap to drive through. When people live in close networks with strong relations (strong ties), or 'clusters'[27], the information travels rapidly within their network and everyone shares the same knowledge. New information and opportunities for innovation occur through weak ties which connect people in different clusters. Structural holes appear between players when: cohesion is low between members of a cluster; members of a cluster are too equal and strongly related; when distant clusters are linked through a strong tie. In the first case the lack of strength in relationships within a cluster makes the whole cluster weak and prompt to collapse[28]. In the second case, if members of a cluster have equal relationships they become obsolete as their networks are redundant, and they can be replaced by new members with non-redundant ties. In the third case, the strong link between different clusters generates opportunities for information exchange and innovation (Ronald Burt, 1992). Weak ties give structure to the broader society and the relevance is not only

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[27] Cluster: subgroup within a larger group. Pryke (2012) calls it 'clique'

[28] Initially some scholars argued that societal collapse occurs when the complete political system and their civilisation framework disappear however, more recent theories sustain that societal collapse does not exists as the total end of a social order and its people is rarely an occurrence, civilisations never totally disappear but they transform and adapt (McAnany and Yoffee, 2010). Another view is that collapse happens when societies become rigid, adhering to old structures and rituals and refusing to adapt, which in the long term makes the community fragile (Scheffer and Westley, 2007).

in the tie itself but in the location of the contact (Ronald Burt, 1992), and even when they appear to be open to the wider public, memberships and networks often have 'blockages', which appear in the form of barriers, these can be based on: resources; class and community; gender; race (Cabe, Lowndes and Skelcher, 1997).

Giuffre (2013), with a different take, believes that social cohesion lies in the faculty of maintaining diversity 'and' individuality through personal levels of connectivity. In a society that accomplishes that, the author says, individuality is achieved through the individual's unique combination of network systems. If actors are connected with the same people within a network, those actors become redundant by structural equivalence, but if they have other personal contacts outside the network, these are non-redundant. A network therefore, becomes more efficient when the number of non-redundant contacts is maximised, this is when each member has many different personal contacts outside the network (Burt, 1992). When people belong to several networks simultaneously and share several group memberships, they are also more likely to develop stronger ties which lead to cohesion (Giuffre, 2013).

Within a community, neighbourhoods with equal distribution of class, ethnicity and culture, are the most successful as they enable multiple levels of interaction and sufficient levels of social support within close knit groups whilst allowing for group bridging (Cassidy, 1997). Rowson, Broome and Jones (2010), in their deprived neighbourhoods study, found that there are differences in how closed clusters bridge: highly cohesive immigrant groups with a marked identity have higher propensity to form bridges with other communities than excluded groups, which had lower levels of bridging capacity. Despite the relevance of these phenomena and the availability of

research on the field, social support is often overviewed when analysing the cost-benefit of developments. Young and Willmott (1957; cited in: Cassidy, 1997, pp.63-64) showed how social development and the reduction of family units impacted on the number and strength of kinship networks. The sense of loneliness and isolation in communities is often only seen when communities are under threat, when people feel vulnerable they spontaneously look for each other (Cassidy, 1997). In communities where people have the same life experiences, they are more likely to relate to one another, stand up for each other and share the same values, which gives them a 'collective conscience' called *mechanic solidarity*, making them more prompt to act as a unit. However, this unit also acts negatively because it prevents individuality and people seem more forced to develop collective behaviours for fear of punishment or exclusion. The division of labour produces a more balanced type of society with *organic solidarity*, where different members or groups have different roles and experiences and where they need each other for survival. Mechanic solidarity will not allow a great deal of individuality whilst organic solidarity might fall short in offering sense of belonging and identity (Giuffre, 2013). Bourdieu (2008) relates identity to 'habitus', which is structured by the conditions of our past and present life, which give form to our perceptions and preferences. These dispositions are structures that stay with us for life; these can be a result of certain culture or social class upbringing. These structures, the author says, are also conditioned by the 'field', the environment where we are acting, and both processes trigger our behaviours; the processes involve both individual and social agency structures and help us create that link between our individualities and our social structures.

Social cohesion is a technically complicated concept to grasp, it involves a number of components and definitions and it is linked to other

social phenomena and individual and group psychologies. Due to its relevance this research looked at how social cohesion, as a core trigger of social networks and social support systems, might be mediated by urban design practices. Concepts and techniques were adopted from social sciences as shown in Table 3.3 on page 155.

3.1.g Conclusions

Despite the complexities of the phenomena that involves the social dimensions of place, some key concepts and specific place-related variables can be established:

Social capital differs from cultural capital but both are relevant for the understanding of place. Social capital is defined by: Social norms and trust; Social relationships and networks. Cultural capital relates to the symbols, ideas, tastes, and preferences of a society.

Table 3.3: Concepts and tool adopted from social sciences to appraise social cohesion in urban practice

Author	Strength	Weakness	Adopted or adapted
Burt (1992); Grunter and Kroll-Smith(2007); Morrissey, Healy and McDonnell (2008); Giuffre (2013)	Close ties as an indicator of social cohesion	Difficult to apply to large samples as requires high levels of participation	Measured alongside other variables
Wellman & Wortley (1990); Giuffre (2013)	Social support as an indicator of social cohesion	Difficult to apply to large samples as requires high levels of participation	Measured alongside other variables
Banfield, 1958; Schumacher, 1973; Putnam, 1993; Hall and Ward, 1998; Halpern, 2005; Faud-Luke, 2009; Hamdi, 2010; Park, Davidson and Shields, 2011; Ferragina, 2012; Doina Petrescu, 2013; Svendsen, 2013	Length of residence and land ownership fundamentally related to formation of social ties	Difficult to apply to large samples as requires high levels of participation	Home ownership adopted as indicators of social cohesion (related to social support)

Communities are complex multi-layered systems in constant change and their boundaries are difficult to define. However a good interpretation of community involves: the people; the place; the connections between people, and with their place (Christensen and Robertson, 1980, cited in: Kirmayer et al., 2009; Jewkes and Murcott, 1996; Hamdi, 2010; Ginige and Amaratunga, 2013; Creasy, Gavellin and Potter, 2008; Rowson, Broome and Jones, 2010; Colantonio and Dixon, 2012; Giuffre, 2013; Ophiyandri, 2013).

This section looked at the core concepts of sociology in relation to social activity in public places. It transpires that the ways in which we make informal contact and how we carry out organised group activities is of significant relevance. Also, as place could enable the creation and development of social structures that govern places at a local level, the shape and operative systems of these structures and the 'glue' that keeps them together seem to be vital as social dimensions of place. The next section looks at how these concepts can translate into variables that could be appraised in urban practice.

3.2 Translation into urban studies

The previous section looked at the core social dimension of place emerging from a literature review in social sciences. Four key aspects that relate the social dimension of neighbourhoods with the public realm could be established as follows:

- The level and quality of informal contact mediated by the public realm.
- The capacity of the public realm to offer opportunities for organised activities to occur.
- The capacity of the public realm to offer opportunities for social networks to emerge and develop.

- The capacity of the public realm to offer opportunities for social cohesion to strengthen, particularly in relation to the development of close ties, the opportunity to remain in the neighbourhood for a long time and the capacity of place to mediate various levels of exchange.

Based on the above, the social dimension analysis for this study involved two areas of public life: informal and formal lives; focusing on four core variables: (4.2.a) informal contact; (4.2.b) organised activities; (4.2.c) social networks; and (4.2.d) social cohesion; involving close ties; length of residence; and levels of exchange.

The Methodology section in the Introduction looks at techniques that were seen as more appropriate for urban practice and explains the tools adopted.

Table 3.4: Summary of methods adopted from social sciences for the social dimension of place.

VARIABLE	MEASURE	METHOD	ADAPTED FROM
Informal contact	Number and type of contact observed / experienced	Ethnographic	Chen, Orum and Paulsen (2013)
		Go-Along	Kusenbach (2003)
Organised activities	Number, frequency and attendance of organised event, meetings, etc.	Ethnographic	Chen, Orum and Paulsen (2013)
		Go-Along	Kusenbach (2003)
Social networks	Number, type and activity of groups, organisations, etc.	Snowball ego-metric random-walking sampling	Newman (2011)
		Focus group consultation	Pretty (2003)
		Resource Generator	Snijders (1999)
		Photo elicitation	Stedman et al.'s (2014)
Social cohesion	Close ties (length and strength)	Self-written questionnaires	Wellman and Wortley (1990)
	Length of residence (in years)	Self-written questionnaires	Krebs and Holley (2006)
	Levels of exchange (in terms of trust)	Self-written questionnaires	Wellman and Wortley (1990) and Giuffre (2013)

The data was collected through researchers' observations and also by consulting with the residents through a variety of methods: questionnaires and surveys; and qualitative data gathered at interviews, focus groups and during observations. Table 3.4 shows a summary of the method adopted from social sciences for this work. Section *3.c.i Social dimension variables* in the *Introduction*, explains how the variables were appraised for the case studies of this research.

3.2.e Conclusions

The in-depth literature review, focused specifically on social sciences approaches, helped understand the theoretical background and definitions of the key components of the social dimension of place. The main advantage of looking directly to social sciences, as opposed to the field of urban design, was the opportunity to focus on the social dimensions that have shown associations with place and to import techniques applied by other fields. Key variables and appraisal tools were identified to assess neighbourhood places. A summary is shown in Table 3.5. These were selected because previous studies shown their synergies with other dimensions of place.

Table 3.5: Variables adopted for the social dimension of place

Informal contact	In the public realm including streets
Organised activities	In public places including buildings
Social networks	Main community networks
Social cohesion	Bond that ties people together

The findings of the appraisal of four neighbourhoods using these variables are discussed in Chapter 5.

CHAPTER 4
4. The social dimension of place findings

The previous chapter looked at how the social dimension of place could be captured in urban practice. This chapter illustrates the data obtained thought the application of social sciences methods (fully described in the Introduction). It also shows how data was collected - including methodological adaptations – and the key results of the findings for each variable across case studies.

The chapter begins with a description of the process of selecting neighbourhood public places that were subjected to analysis. This process and a brief description of the locations are shown in this chapter. Then, the chapter discusses the application of different forms of appraisal (as shown on Table 0.4 of the Introduction) for the social dimension of public places to assess the four key variables in the four neighbourhoods, and it shows the core results. Although there was a clear distinction in urban morphologies and geographies between both types of settlement scenarios (urban and semi-rural) and different data collection processes were involved - as discussed in more depth in Chapter 8 - the data is presented by variable due to the consistencies that could be drawn across cases.

In The Meadows, methods directly imported from social sciences were applied because for this case study, the community was willing to participate unconditionally following the research methodology suggested by the professional researcher. In the other neighbourhoods, other agencies had a voice in adapting the methodologies to suit their cases. In Sneinton, the community groups tailored the process to their Neighbourhood Plan process. In Dronfield and Killamarsh the authorities led the process to inform the Regeneration Frameworks. The Meadows provided an opportunity to test

how feasible social sciences tools could be when applied as directly as possible in urban practice, especially considering the regular budget and time constraints faced by professionals in the urban design field. Some of the Sneinton data was collected and handed over by Sneinton Alchemy community organisers. As explained in the Introduction, this was due to consultation fatigue; also a recurrent problem in urbanism. For Dronfield and Killamarsh, the data collection methods had to be adjusted due to budget constraints and local politics, and to suit contractual obligations between the County Authority and OPUN Design Council. Despite these discrepancies in data collection techniques and having more quantitative data in some cases than others, the analysis was carried out by the author with similar processing software models for all case studies and correlations were achieved. Discussions included at the end of the chapter illustrate how the findings could inform urban practice and how they contributed to reinforce current literature in the field.

4.1 Methodology for selecting the key public places subjected to detailed analysis

The first stage of the study was to decide where interviews and questionnaire would be conducted. This section explains how the key places where the structured observations, interviews and questionnaires would take place were selected. The methods applied in those key places are shown in Table 0.5 of the Introduction.

The objective was to select key places that appeared, upon observation, to be potential mediators of social contact or interaction. The selection would enable the researcher to conduct interviews and surveys in specific locations, this was to facilitate the correlation of data with other variables data, for example the morphological data, which was place-related.

The exercise involved a general survey of the whole area with a focus on public spaces and an emphasis on those that appeared to be mediators of social contact. The site survey commenced on the southern point of each area, continuing by circulating around the perimeter in a clockwise circuit, and then following the main roads across the site, observing all secondary roads on both left and right flanks in order to spot potentially hidden public places. A map and a spreadsheet to make notes about the place name, size and location, were used as aid during the survey to ensure all areas were observed. Photographs were taken in key points. There was no interaction with the public at this stage.

All public places found – including streets - were listed, numbered and mapped. The section *Initial place listing: The Meadows example* below shows the process of listing all public places. Once the places that would form part of the study were selected in accordance to the study scope (detailed in the Introduction) these were looked at in more detail and, on the basis of this fine-tuning qualitative information, it was decided which places would be subjected to full analysis. For example, places where access was restricted and some buildings that had closed down at the time of the research were eliminated from the survey. An example of how this part of the process took place is shown in the section *Final place selection: Sneinton, Dronfield and Killamarsh* below.

4.1.a Initial place listing

The Meadows example

The Meadows full list is shown here as an example of how all places in all neighbourhoods were listed; to avoid repetition and to keep the data chapter condensed, further sections only focuses on the places fully surveyed in the other neighbourhoods. During the survey, a total of 22 public places were

initially identified as being points that mediated social contact and interaction. Some of these public places were found to be outside the scope of this study, as shown in Table 4.1. Figure 4.1 shows their location.
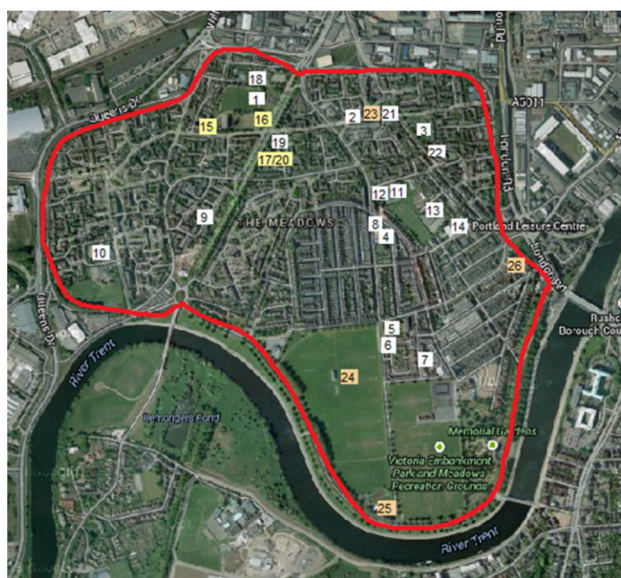
Figure 4.1: The Meadows key public places location map (map source: Google Maps, 2014; not to scale)

Table 4.1: Initial place listing in The Meadows

	MAIN USE	**OUTDOOR PUBLIC PLACES** (OPEN TO THE PUBLIC)	
1	Recreation	Queens Walk Park, Queen's Walk, NG2 2DF	Within scope
2	Commercial	Bridgeway Centre, Nottingham NG2 2JD	Within scope
3	Recreation	Arkwright Walk children's play area	Within scope
4	Recreation	Mundella Rd Play Area, Mundella Rd, NG2	Within scope
	STREETS		Within scope
	MAIN USE	**INDOOR PUBLIC PLACES** (CONTROLLED ACCESS)	
5	Religious	St Faith's Church, Bathley Street	Not within scope
6	Religious	Muslim Centre, Collygate Road	Not within scope
7	Community	Meadows Youth Centre, Wilford Crescent E, NG2 2EF	Within scope but not included sue to complex ethical procedures affecting timescales
8	Services	The Meadows Library, Wilford Grove, NG2 2DR	Within scope

9	Religious	British Pukhtoon Association UK, 12 Meredith Close, NG2 1PH	Not within scope
10	Education	Riverside Primary School, Ainsworth Dr, Nottingham NG2 1FX	Not within scope
11	Community	Arkwright Meadows Community Garden, Kirkby Gdns, NG2 2HZ	Within scope but unwilling to participate due to time and budget constraints
12	Education	Sure Start and Greenfields Nursery, NG2 2HZ	Not within scope
13	Education	Greenfields Community School, Orange Gardens, NG2 2JE	Not within scope
14	Leisure	Portland Leisure Centre, Muskham Street, NG2 2HB	Not within scope
15	Religious	St George in The Meadows, Vicarage, Strome Close, NG2 1HD	Not within scope but so willing to participate that it was included in the study
16	Community	Queens Walk Park Pavilion, Queen's Walk, NG2 2DF	Within scope
17	Community	Meadows Advice Group, Queen's Walk, NG2 2DF	Within scope
18	Education	Welbeck Primary School, Kinglake Pl, NG2 1NT	Not within scope
19	Religious	Pilgrim's Church, Queen's Walk, NG2 2DF	Not within scope
20	Community	Queen's Walk Community Centre, Queen's Walk, NG2 2DF	Within scope
21	Religious	Bridgeway Hall Methodist Mission, Bridgeway Centre, NG2 2JD	Within scope
22	Religious	St Saviours Church, St Saviour's Gardens, NG2 2JU	Within scope

4.1.b Final place selection

Following the initial survey and listing some public places identified as mediators of social contact and interaction were analysed in detail. Some of the places found were dismissed and removed from the study as it was found they escaped the scope of this work.

<u>Sneinton</u>

A total of 14 key public places identified. Some of the places found were dismissed and removed from the study as it was found they escaped the scope of this work. Figure 4.2 below shows the place locations and a detail

assessment is listed below.
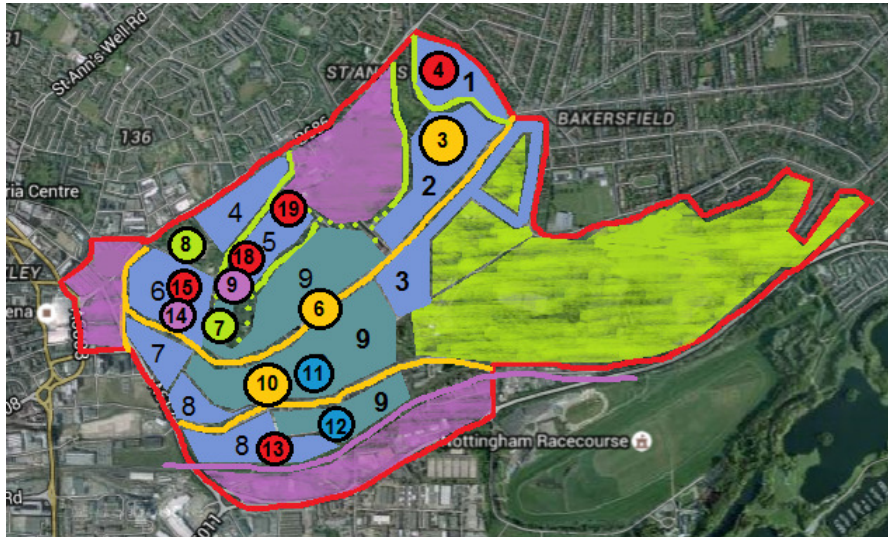
Figure 4.2: Location of public places studied in Sneinton (source of photo: Google Maps, 2015). Orange: Streets; Green: Parks and recreation areas; Yellow: Underused green areas; Blue: Public services; Purple: Heritage.

Place 1 (not within scope): City College Nottingham

Initially included to ascertain whether community activities occurred in the facilities.

Place 2: City College Nottingham Sports Green

This small outdoor green field was completely empty all day long but signage suggested it is used for sports by City College Nottingham students. The place was well maintained and with the exception of people passing by (including one white British young man wearing a hoodie and smoking marihuana and local residents going to the shops on the main road) there was no activity. This place had potential to mediate positive social interaction as it had benches and it was well maintained and accessible but at the time if the study it was always empty and it was not a place where people might casually meet

or where groups might bridge.

Place 3: Skipton Area (modern urban pattern)

This group of residential streets (enclave), was classified as a public place due to the highly unusual level of spontaneous casual interaction between neighbours at a street level. Upon observations, it was noticed that 90% of the times when people where seen to come across neighbours, they stopped to say hello and maintained short conversations.

Place 4: Findern Green

This was a grassed circular area in the centre of a neighbourhood enclave; fully fenced with 3m high gates and inaccessible to the public or neighbours. A "no ball games" sign was observed on the fence. During the site visit, a neighbour (male adult 30-40 years old, Chinese origin, educated and well spoken) was cleaning his front garden, he mentioned the area was owned by Nottingham City Council and that in the past, neighbours reported that the area used to be mainly inhabited by elderly people who did not want noise or youths gathering and who raised complaints to the council. The solution offered by the council was to gate the little green area they had to stop people from accessing. The neighbour added:

"It *is outrageous that this lovely green area is not being used for children to play in, or even for parking. Something useful and practical*".

This was an area with huge potential as mediator of social contact, for example offering opportunities to enhance social cohesion in the neighbourhood through planned community-led design and management of the space.

Place 5 (not within scope): Sure Start health service provider

This is the location of Sure Start and therefore it might encourage people with young children to casually interact here however the place was very quiet due to the holiday season.

Place 6: Sneinton Dale (commercial street)

This was a very busy and vibrant commercial street. During the visits, and operating incognito, neighbours complained to the researcher that most shops sold fast/take away food, and that they needed a café, somewhere to sit down and eat. Also, they commented on how Sneinton used to feel more dangerous about 5 years ago but now it feels safer, as Community Police Officers (CPOs) have made a huge improvement in the neighbourhood.

Place 7: Green Mills Park

The park was relatively quiet but there were some parents and children using the facilities and a few dog walkers were seen there. Along the main road, bad driving behaviour was observed several times. People were yelling and cars were speeding recklessly. School age children were observed riding bikes on the same road.

Place 8: King Edward Park

The playground in the park was relatively busy with parents and children using the facilities. One dog walker was using the fields in the park to exercise her dog. Two couples spent a few minutes in the open gym area but did not use the machines, they sat down and talked. The park had many facilities that looked in bad state of neglect and it seemed like a strong asset was being underused, only offering a play area for an age band (5 to 12 years old). One participant commented that "*games for younger children are needed in the park*", explaining that whilst school children could play, babies and toddlers

were bored, and that prevented more people from visiting the spot.

Place 9: Green's Windmill

The Windmill was visited in various occasions, during quiet week days and during community events. During the week, several visitors used the facility. Many asked where the café was (there wasn't one). During the weekend the place was thriving. In one occasion neighbourhood groups had organised a pizza baking session with produce from the windmill's allotment, a barbecue, a local artisan and food/produce market (both indoors and outdoors), raffles, free entrance to the working windmill, etc. People seemed to enjoy their stay and they remained in the facilities for long periods of time (2 to 4 hrs). This was evident not only from observing people's body languages and seeing them laugh or smile but also because most people commented about how they were enjoying the event and how charming the place was. There were local and regional visitors joining the event. During the community event, people were randomly approached to carry out place surveys and everyone without exception participated enthusiastically.

The windmill was an outstanding spot with a huge amount of underexploit potential. The place looked well looked after however it was evident that there was lack of funding and insufficient maintenance provision.

Place 10: Hermitage Square

Most people were in transit to work or to the shops. School-age children were observed riding bikes on the adjacent main road and on the pedestrian areas. People mentioned having to "go to a few shops" because there was not a single shop offering the daily necessities. During the interviews and conversations held in the commercial area, a few people mentioned that there were not enough shops, referring to the vast majority of them serving a

specific sector of the population (eastern European or Islam). Many people (including foreigners) complained that the character of the area was rapidly changing into a much more multicultural and diverse neighbourhood. Various people said they were not happy with the fact that they did not feel "in England" and that pubs were being converted into mosques or closing down. A participant mentioned feeling uncomfortable with neighbours from different cultural backgrounds having public space appropriation attitudes such as putting sofas in the public realm. Also, other people mentioned that litter was thrown everywhere and that there isn't a feeling of pride and belonging in the area.

Place 11: Seninton Library

The library was busy and various activities were taking place in the building. The place appears to be a valuable asset for the community. Participants were overseeing children on school-holiday, whose parents were at work, a testament to the level of community support occurring in the place.

Place 12: Greenway Community Centre

The community centre is a very active place even during school holidays. The centre is open long hours and it is always full, especially with children of all ages taking part in arts and crafts and sports activities.

Place 13: Lindum Grove green

This was a green area completely underused, almost neglected. It appeared to be a good asset in need of development. The space had huge potential offering opportunities to encourage social cohesion within the nearby settlement, for example through planned community-led design and management of the space.

Place 14: William Booth Square

The Salvation Army is the main facility in this place, including a day centre and a residential home for the elderly, both of which were recently closed due to lack of funding. Other activities and services provided also stopped recently for the same reason. Although the facilities were excellent and ample in size, the place was almost inactive at the time of the survey due to lack of funding.

William Booth museum, adjacent to the day centre, was a great heritage asset with free entrance to all. However, according to the management team, it was not heavily advertised and although it was an important historic destination it did not have many visitors.

Place 15: Henry St (green) – see place 13

Place 16 (not within scope): Colwick Park Play Area

This playground was used by local residents who do not live within the Sneinton Neighbourhood Plan boundary. Although the consultation carried out to define the Neighbourhood Plan boundary showed that Sneinton residents feel a sense of ownership towards Colwick Park, this facility was of a larger scale and it was used at a regional level, therefore it was not included in the place study.

Place 17 (excluded from study): Sneinton Market

The market was in pristine condition, works were still in progress in some of the buildings. On the 2nd Saturday of every month there were local food events. However, there were very few stalls and these had very limited products for sale, there was not a vibrant atmosphere. Nothing prompted people to stay for longer than 5 minutes with the exception of one particular event when a stage with live music was added. Similarly to Colwick Park, Sneinton Market was perceived to belong to residents in Sneinton, but in fact

it was more an asset for the city centre and it operated at a city scale. Boundaries and edges such as busy roads, separate the market square from the residential areas in Sneinton and therefore, linkage is more evident to Nottingham city centre than to Sneinton. For these reasons, the City Council removed the place from the Neighbourhood Plan boundary and the market was not included in the place study.

Place 18: Elford Rise corner (green) – see place 13

Place 19: Anstley Rise corner (green) – see place 13

Dronfield

During the place surveys and ethnographic observations and also during conversations with neighbours in the walkabouts (Chapter 6) it became apparent that there were few public places where people could meet up or casually interact, Figure 4.3 shows the location.
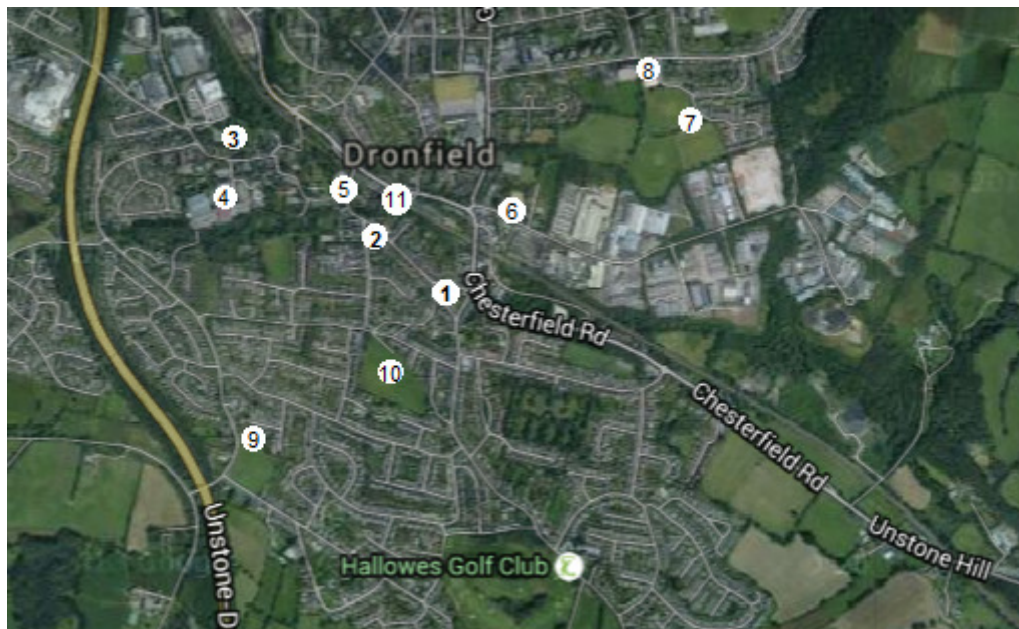
Figure 4.3: Location of key public places in Dronfield (source: Google maps, 2015).

Place 1: Quoit Green

This was a green area completely underused. It appeared to be a good asset in need of development. The space had huge potential offering opportunities to encourage social cohesion within the nearby settlement, for example through planned community-led design and management of the space.

Place 2: School Lane Green – See Place 1

Place 3: Library Park

This is a very well structured landscaped area in front of the public library. It is an ideal place to meet people, to rest and enjoy the picturesque views. At the time of the survey there were many children and some adults enjoying this space, they had just come out of the library. A few people (including a dog walker) cut across this area to walk towards the shops in the civic centre.

Place 4: Shopping District – Civic Hall – Leisure Centre

This is an inwards looking square block (resembling a court yard) with two sides comprising small retail units and a supermarket, with residential units above. Another side hosts the Civic Hall and the fourth side the Leisure Centre. In the middle of this space there is a free car park. The place was active at the time of the visit. The car park was nearly full, people were also arriving by bus to the stop in front of the Leisure Centre. People were carrying out daily shops or visiting the facilities in the precinct. Based on the informal contact data collected through observations, there was minimal casual interaction or socialising between people, most users were focused on their tasks and did not interact with other people.

Place 5: The Forge shopping centre

Relatively recently refurbished, this shopping centre has a glass-roof

courtyard with cafes and tea houses, sitting area, a variety of local shops and public toilets. The mall offers a unique atmosphere, it is comfortable, charming, and it overlooks the water stream and its forestation. The place was visited several times and it was always very busy. People were casually interacting and exchanging conversations. Due to the enclosed and comfortable nature of the complex, it appears as one of the very few places in Dronfield where local people might arrange to meet up.

Place 6: Cliffe Park Playground, Café and Community Centre

This is a large playground, a bowling green with a pavilion, a café, a community centre, a council office, and sports fields. The place was very busy at the time of the visit. Children of all ages were using the playground and playing sports, both formally in the courts and freely in the open green. Adults were talking to each other whilst children played. The overall atmosphere was happy, active and relaxed at the same time.

Place 7: Cricket field

This is an enclosed cricket ground (adjacent to a private football ground). The facility was being maintained (paint, grass repairs, etc.). It is not clear whether this is a private facility that charges an entry fee to the public. If that is the case the place will be removed from the study as it would not be a public place but a profit-making venue.

Place 8: Stonelow Rd Playrground

This is a playground nearby a school. The facility is completely gated and there is almost no green infrastructure. Children of various age groups were playing at the time of the visit although a little girl aged circa five years old had to leave her bike outside the gates in the pavement due to the "no

cycling" sign in the facility. The place felt soulless, dry and harsh. A gated, tarmacked, uninviting but well maintained playground.

Place 9: Hilltop Rd Green – See Place 1

Also comprising sport fields and a playground.

Place 10: Wilson St Green – See Place 1

Place 11: Railway Station

This place was included despite its transport service nature, due to the extraordinarily high level of stewardship observed.

Killamarsh

Overall, this was the area with fewer public places where people could gather and socialise. Neighbours complained consistently about the lack of public places and the absence of a 'heart' of the town. The location of public places found during the place assessment visit are shown in Figure 4.4, and these are listed below.
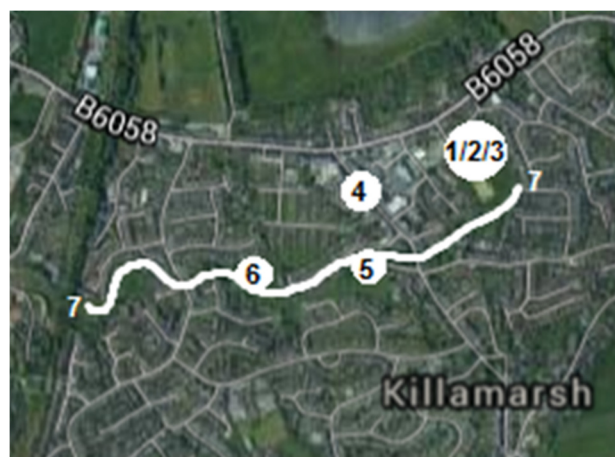
Figure 4.4: Location of key public places in Killamarsh (source: Google maps, 2015).

Place 1: Sports Centre / Community centre and Parish Hall

This facility seemed to provide a good range of activities and information about what was happening in Killamarsh. On both visits this was the most populated public place in town. The sports facilities were comprehensive, there are public toilets and the community centre and hall were well maintained and provide flexible space for a variety of uses.

Place 2: Library

The library had one or two visitors at all times during the site observations. Externally, the building appeared a bit neglected but inside was a well maintained space offering good service.

Place 3: Civic car park

The car park serving the library, the sports and community centre, and the adult learning centre was very uninviting and it lacked a clear access for both pedestrians and cars, although it was free of charge. The building surrounding the space are sparse, lacked massing and therefore did not give a good sense of enclosure.

Place 4: Bridge Street

The high street was typical of a small English town, small shops were dispersed along the main roads on a T junction. More recently, a supermarket (Aldi) was built with access from two commercial roads. The development allowed for a car park at the front and a supermarket at the rear, dissolving the street front of the main road (See Figure 4.5).

Figure 4.5: Killamarsh Town Centre; Red: commercial; Orange: Aldi supermarket; Blue: sports and community centre and library; Yellow: rear access to Aldi; Purple: lack of street frontage, (source: Google maps, 2015).

Place 5: Peacock Close playground

This small "leftover" space, located on the side of a house and leading to a road, hosts a slide, a bench and a rubbish bin. At the time of the visits there were no people using the facility, although the place looked well maintained. One issue with this slide was that it was not overlooked and it was adjacent to a road, therefore children needed to use this small facility under adult supervision. On the side of the bench there was a blackberry bush and it looked as if berries had been picked recently.

Place 6: Killamarsh Greenway playground

This was a large playground with excellent landscape however, and despite being school holidays, there was none using the facilities. A few children were seen scatting pass the green and heading towards the civic car park.

Place 7: Killamarsh Greenway

The greenway was identified as an asset with extremely huge potential, especially because it offered a strong physical structure and coherent pattern, and because it could link the residential areas to the Country Park and natural reservoir (see Figure 4.6). These links were underused and almost neglected.

Figure 4.6: Killamarsh Greenway and Country Park; Light Green: Killamarsh Greenway; Dark Green: opportunity for linear park; Red: commercial; Orange: playground; Yellow: existing Country Park access points (and potential links in dashed line); Purple: ongoing residential development.

4.1.c Public place distribution indicator

In summary, urban neighbourhoods had more public places where people could meet, interact and conduct organised activities. Table 4.2 shows a summary of the data and Figure 4.7 shows a graphic format, an indicator of public place provision calculated by dividing the number of key public places found by the number of residents in the neighbourhood (ONS, 2011). In order to establish a comparison between case studies and to relate this with other variables, a Public Place Provision Indicator was created and the index was calculated per neighbourhood:

Public place provision indicator: <u>Number of key public places found</u> *100

Number of residents (ONS, 2011)

Equation 4.1: Public place provision indicator (by the author)

Table 4.2: Public place provision across case studies

Case study	Type	Number of places	Ward population (ONS, 2011)	Public place provision indicator
The Meadows	Urban	22	15,313	0.144
Sneinton	Urban	14	10,097	0.139
Dronfield	Semi-rural	10	21,177	0.047
Killamarsh	Semi-rural	6	9,415	0.064
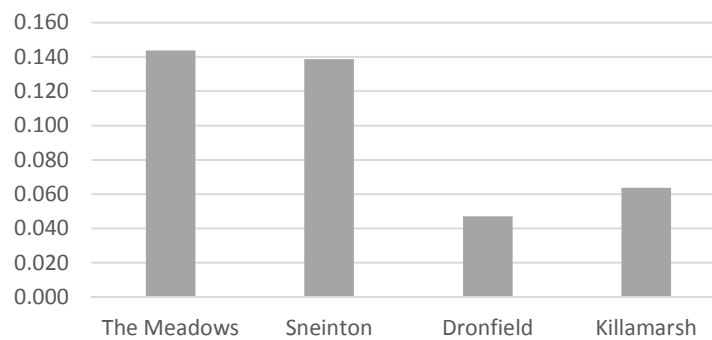
Figure 4.7: Indicator of public place provision (number of key places/number of residents)

4.2. Key findings

The four variables of the social dimension (informal contact; organised activities; social networks and social cohesion) were intimately related and at times was difficult to draw a line between them, especially when systemic processes were evaluated. However, the results are shown in this chapter in terms of each variable for the purpose of organising the discourse.

The nature of the data collected for Dronfield and Killamarsh for the social dimension of place variables was primarily qualitative, with only few quantitative data sets regarding the informal contact variable appraised through observations. This was because both the county authorities and

OPUN Design Council preferred to work on the basis of understanding phenomena rather than numerical facts; and due to budget constraints. The county authority was also concerned about over consulting the public as local politics were complicated in line with previous conflicts that had occurred prior to this study. The instruction given to the researcher was to manage the study with data obtained through observation as much as possible. Also, because of the low number of public places found, the weight of this numerical data in concluding phenomena and relations became difficult to justify from a statistical perspective. The key results are shown and some conclusions are drawn in this chapter.

It was not possible to include the actual transcripts of all the qualitative data in the core of this work due to data protection and ethical approval. This Chapter shows the results of the data analysis and, where appropriate, it includes anonymous quotes which were part of the discussions.

To frame the social dimension of place findings, the chapter begins with a brief discussion of socioeconomic salient measures for each neighbourhood in comparison with the national average.

4.2.i Socioeconomic analysis key findings

In order to understand patterns of attitudes and behaviours, social issues and local politics in residential areas, it is essential to look at the social profile and key social capital variables. This section briefly looks at these parameters in all four case study neighbourhoods.

<u>Urban neighbourhoods: The Meadows and Sneinton</u>

According to the Office of National Statistics prognosis (NI, 2014), at the time of the study (2014) Nottingham's population was 314,300 inhabitants, with 15,536 (4.9%) people living in the Bridge Ward, which

includes The Meadows residential areas subject to this study, some industrial and commercial uses, and a small mixed use development in the north. 16,745 (5.3%) people were living in Sneinton and St Ann's (10,097 in Sneinton according to the neighbourhood plan steering group). Both areas share similar histories and consistently hosted comparable demographics, appealing to the working classes for their affordability, excellent access and transport to local employment sites (Mellors, 1998). According to Right Move (2016), the average selling price of a terrace house in either The Meadows orneinton was 40% lower than the average Nottingham city terrace house.

The latest ONS census projection 2014 showed that the socio-economic profiles of both neighbourhoods were close to the national average in some areas but showed some signs of poverty and deprivation on other measures. The Meadows was very close to the national average with the exception that it had 12% more people at working age but 11% more disability allowance and 83% of the residents had lower incomes than the UK average. Twice more non-UK natives lived in The Meadows. There was also five times more crime. Compared to the national average, Sneinton had almost 1.5 more non-UK natives; 3 times more residents from minority backgrounds (of whom 87% were from an Asian background); 3 times more long-term unemployment; and 4.6 times more crime.

At the time of this study, these two neighbourhoods with similar socio economic variables had been trying to recover from decades of crime and antisocial behaviours (UK Crime Stats, 2016). Community groups organically came together and organised themselves to seek positive change. By 2014, both neighbourhoods had made significant progress and programmes were in place to protect some of their heritage and to act upon the social challenges both areas were facing.
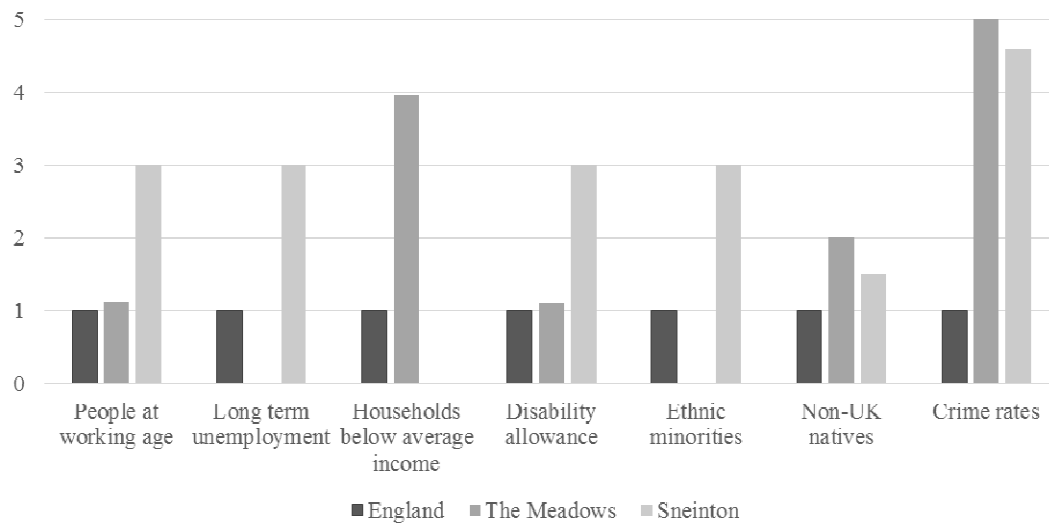
Figure 4.8: Salient socio-economic variables for The Meadows and Sneinton; neighbourhood means divided over the national average (Source of data: DWP, 2014; NI, 2014; ONS, 2011).

Today, these areas appeal to new home owners and the rental market, including students and non-British who had recently arrived in the UK (ONS, 2014).

"*I used to like it in here* [Sneinton] *but in the last few years all the immigrants came. I don't feel I'm in England anymore.*" (S Participant - 2015)

Semi-rural areas: Dronfield and Killamarsh

Although Dronfield and Killamarsh towns have a very small proportion of ethnic minorities in comparison with the national average, the demography of both towns is dramatically different. Dronfield is a desirable therefore expensive area with 21,177 inhabitants. Its character and proximity to Chesterfield, Sheffield and the Peak District make it ideal for young professionals with children. Killamarsh is a town with 9,415 inhabitants; it is dominated by former social housing and in close proximity to Sheffield's industrial areas. It therefore attracts factory workers and residents with families and lower incomes. Dronfield also has quite a large ageing

population. The majority of the population falls within the 45-64 age group and around 48% of the population are over 65 years old. Killamarsh is dominated by people between 25 and 44 years old and young children. Dronfield has proportionally more residents who are in employment, who own their properties and who have higher levels of education. Killamarsh has more residents affiliated to Christian religions and relying on benefits as a form of income.

The socioeconomic profile of both areas, in combination with the experience from working in The Meadows, informed the consultation process strategies. For example, for areas with high percentages of working parents, more events were planned for weekends and evenings.

Dronfield

Although the town had a very small proportion of ethnic minorities in comparison with the national average, the demography of both towns was dramatically different. According to the statements made by participants, Dronfield was a desirable therefore expensive area with 21,177 inhabitants. Its character and proximity to Chesterfield, Sheffield and the Peak District made it ideal for young professionals with children. Dronfield also had quite a large ageing population. The majority of the population fell within the 45-64 age group and around 48% of the population were over 65 years old. Dronfield had proportionally more residents who were in employment, who owned their properties and who had higher levels of education.

Killamarsh

Killamarsh was a town with 9,415 inhabitants; it was dominated by former social housing and in close proximity to Sheffield's industrial areas. It therefore attracted factory workers and residents with families and lower

incomes. Killamarsh was dominated by people between 25 and 44 years old and young children. Killamarsh had more residents affiliated to Christian religions and relying on benefits as a form of income. Table 4.3 shows the organised activities findings in the context of the socioeconomic salient variables for each case study compared to the national average (NA).

Table 4.3: Socioeconomic analysis salient measures across case studies

Case study	Crime and antisocial behaviours	Economy	Background	Dominant population age	Education level
The Meadows	5 times more than the national average	83% people with income below the national average	Twice as many immigrants than the national average		
Sneinton		3 time more long term unemployed than NA the national average	3 time more people in minority groups than the national average		
Dronfield		Employed home owners	White British	48% over 65 years old	Higher than the national average
Killamarsh		Benefits as main source of income	White British	25 and 44 years old and young children	

4.2.a Informal contact

Once key places were defined, visits were done consistently across cases on different days of the week and at different times of the day. Two 10 minute visits to each place took place during the week: mid-morning, to capture dynamics during working hours; and late afternoon, to capture after school hours. Two visits to each place also took place during weekends to capture family and recreation time. That gives a total of four visits to each key public place; all streets were also observed four times. During the visits,

observations were made with regards to the nature of social contact occurring; for example, whether it was engagement in conversation or simply a look or a smile between passers-by. The number of contacts were noted for key public place locations including streets (see the Appendix for relevant forms).

The number of people was considered another dimension and was accounted in a qualitative form in relation to the type of contact: one-to-one or group contact. The latter was absent except in front of public buildings prior to an activity taking place and in relation to that activity; this is explained in more length later on and in Chapter 7. The information was mapped using an average Informal contact per place, the larger the number the thicker the line. These maps can be found in Appendix 1.b.

Table 4.4: Measurement criteria for informal contact in neighbourhoods

Place 1: *Hermitage square*	Minimal contact between strangers (smile, hello, hand waving)	Minimal contact (smile, hello, hand waving)	Up to five minute conversation	More than five minutes engagement (walking dog playing, shopping)
Time	10:50	11:54		11:54
Nº of people	2	2		2
Time	11:32			
Nº of people	2			

Table 4.5: scoring method for informal contact in public places

Place 1: *Hermitage square*	Minimal contact between strangers (smile, hello, hand waving)	Minimal contact between acquaintances (smile, hello, hand waving)	Up to five minute conversation	More than five minutes engagement (walking dog together, playing, shopping, etc.)
Time	1	2		4
Nº of people				
Time	1			
Nº of people				
Value assigned	1	2	3	4

Based on the observations, ethnographic and walk-along research data, and looking at the graphic representation of the data, most informal contact happened with the same patterns in all four neighbourhoods: in public places (near or surrounding public buildings), in commercial areas and occasionally on some streets. The patterns related to either: networking in association with specific activities occurring (for example maintaining a small conversation before a yoga class), or whilst passing by (saying hello or sharing a smile). When people knew each other this was evident, people called each other by name or they referred to other people they knew by name. Also, it was possible to establish which contact instances occurred between strangers by observing body language and physical proximity during the contact event. This behaviour was not quantified but it added a qualitative depth to the data. Table 4.6 shows a summary of the patterns of informal contact observed in each case study.

Table 4.6: Informal contact observed across case studies

Case study	Dominant degree	Average frequency*	Dominant type	Exceptions
The Meadows	Quick chat/smile	Medium	1-2-1	Shopping precinct: people talking for longer periods
Sneinton	Quick chat/smile	Height	1-2-1	Skipton circus: people seem to know each other
Dronfield	Eye contact/smile	Low	Small groups	Shopping precinct: high levels of 1-2-1 contact
Killamarsh	Eye contact	Low	1-2-1	Teenagers skating in the car park

Average frequency*per 15 minutes: more than 5 (high); 3-4 (medium); 1-2 (low)   Frequencies were place dependent, this is discussed in more length in Chapter 7*

As can be seen in the Informal Contact maps in Appendix 1.b, more informal contact (yellow) occurred in all neighbourhoods around public buildings (in darker grey), around commercial streets and in more geometrical

residential streets. Areas with more complex geometry were deserted and where there were people, they did not tend to interact. This point is discussed further in Chapter 7. The informal contact variable was mapped in all four case studies. These maps can be found in Appendix 1.b.

Killamarsh and Dronfield were significantly quieter than the other cases. On the days of the visits, (and despite being school holidays in some instances and children being off school) the towns were very quiet. Cars were parked on the residential driveways and adult conversations and children playing could be heard in some of the private gardens, although there were very few people visible on the streets and clearly people were not in the town centre. In the commercial area, very few people were doing their daily shopping, mainly around supermarkets. Some of the smaller shops were closed. In Killamarsh, a few children were observed skating in the car park outside the library but none was observed in any of the playgrounds. A handful of people walked in and out of the library and the sports centre during the spaces of four-hour constant observation. It is possible that this lack of activity was due to the fact that public places seemed dangerous and were unappealing, lacking in charm and character. The environment was car-dominated and there were alleyways and corners where people could hide. This type of desolation and lack of surveillance was found in part of the other cases as well. This is looked at in combination with morphological variables in Chapter 7. Informal contact patterns at a street level were found to be intimately related to street form in all four cases, which supports Carmona et al.'s (2010) claim that residents interaction can be influenced by design and depends on instances of visual contact or the time to maintain meaningful interaction. It is also possible that this case verifies Carmona et al.'s (2010) idea that a lack of public places had resulted in a diminution of public life.

Due to the strong association of this variable with urban morphology and to avoid unnecessary repetition, this data and the relevance of the findings as contribution to urban literature are discussed in Chapter 7, where correlations between morphological and social dimensions are debated.

4.2.b Organised activities

The appraisal of organised activity schedules and timetables was straightforward and no specific training was necessary to perform the assessment. Although, it required a great deal of investment, repeated visits to the neighbourhood and a several hours spent walking the area, picking up leaflets, looking at display boards and talking to neighbours to learn about any course or class available. The assessment was also done using ethnographic research (see Introduction) and observations at different times of the day, both during the week and on weekends. This was to note who was attending the activities and what were their attitudes and behaviours in relation to events and other attendants.

For The Meadows, a detailed and accurate list of organised activities was created (see Table 4.7) and the results were quantified (see Table 4.8). The level of activity was numerically recorded in terms of number of classes and hours of activity offered per household, and this information was correlated with the notes taken during observations. This correlation demonstrated that a strict quantification of number of hours/classes was not truly representative of human activity in public places; information which in actual fact was a dynamic process and required an understanding and recording of qualitative data such as the body language and attitudes of people involved in activities. This was confirmed also because the number of activities did not reflect how many people attended and how engaged they

were in the activities. The enthusiasm of participants was visible upon observation before, during and after the activities. Also, asking people how long they have been attending the activities or how often they attended gave more interesting and valuable information than knowing the number of classes taking place. This qualitative analysis provided a richer insight into the neighbourhoods' life and therefore, balancing cost-benefits, the process of quantification of hours and classes offered was not completed for the other case studies; instead more attention was paid to the type and dynamics of organised activities and their attendants. This finding confirms Halpern's (2005) posture. He argued that numerical measures of voluntary organisation density per area can lead to biasing important qualitative differences and that association-based measures can have poor predictive validity due to the lack of qualitative information about those affiliations.

Table 4.7: Organised activities in The Meadows (fraction of the full list as example)

ACTIVITIES 2014-2015	GROUPS	AWARDS
THE MEADOWS LIBRARY		
Homework Help session, every Monday and Friday 3:30pm to 5:30pm	Friends of The Meadows Library	
Conversation Class every Tuesday 11:00am to 12:45pm	The Meadows History Project	
Totstime every Monday 2:00pm to 3:00pm with Rainbow Stripes	OMTRA	Nottingham in Bloom x3 / EMA in Bloom
Craft Club Saturdays 1:00pm to 3:00pm		
Councillor Surgeries 1st & 3rd Fri of each month 4:00pm to 5:45pm + 2nd & 4th Sat of each month, 10:30am to 12:00pm		
Reading Group First Wednesday of each month 6:00pm to 7:00pm		
Urdu Reading Group Second Wednesday of each month 10:30am to 12:30pm		
Caring Therapies for Positive Birth - Mondays 10 to 11am		
Seasonal: Summer reading (4 No 2hr sessions in 2014)		

Table 4.8: Number of hours of Organised activities in The Meadows

	Hours of activities per week	Number of groups hosted
The Meadows Library	14.75	3
Queen's Walk Community Centre	13	4
Queen's Walk Park Pavilion	16	1
Arkwright Meadows Community Gardens	32	0
Meadows Youth Centre	8	1
Meadows One Stop Shop	0	2
Total	83.75	11

The Meadows

The data sets for organised activities occurring in The Meadows were mapped, locating the buildings where the activities took place. This was done early in the process because it soon became apparent that social activities operated differently, with some association to social spheres, across two main areas: New Meadows (1970s development) and Old Meadows (1800s Victorian development). Due to this particularity in this neighbourhood, the author made a decision to separate the data for those two areas in two sets – New and Old Meadows - and then correlate the data sets to explore if any patterns were visible. As it can be seen in

Figure 4.9, The Meadows had more activities and more hours of activity per household occurring in the New (1970s) area than in the Old Meadows (1800s). However, it is difficult to ascertain the reasons for this pattern. It is possible that this is simply due to having more or larger public buildings and facilities able to host activities and that there is no relation to any other factor. Perhaps the provision of public buildings for community use is higher given the proportionate number of social housing in the area, a point that is consistent with the findings in Sneinton. This point is looked at in more depth in the conclusions of this chapter, where all the social dimension variables were correlated.
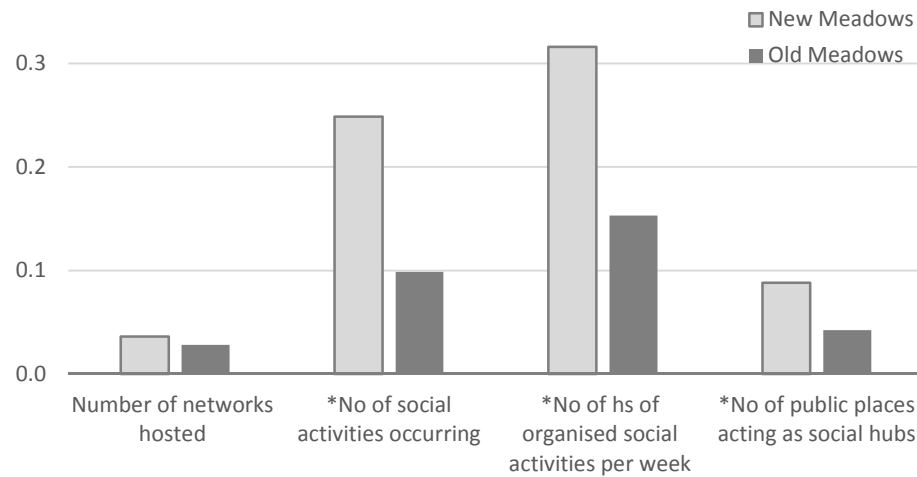
*Figure 4.9: Activity in public buildings in Old and New Meadows in relation to the number of households in each area (No-*mean/No of households)*

Sneinton

The table of organised activities in Sneinton was provided to the researcher by community organisers[1]. In Sneinton, most buildings providing space for organised activities were in the older parts of the neighbourhood because the newer developments did not have public places available and when they did, social spheres related to religion, culture and age groups, and not on place of residence or territorial definitions like in the case of The Meadows. For these reasons the data for Sneinton was not separated by zone or per enclave. In this case, the most interesting finding was not the quantification of the number of hours of activity per building or area, but the nature of those activities in relation to cultural belonging. For example, The Muslim Community Organisation, a charity interested in bridging religious and cultural groups and working actively to engage non-Muslim neighbours in the

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[1] The reliability of this data can be questioned due to possible delays in the updating of activity tables, which might omit cancellations and inclusion of new events. However, the author considered a level of error of this magnitude accepted and inevitable when working with dynamic social systems.

activities they offered, commented:

"We really struggle to attract people from other backgrounds, even when the activities are nothing to do with religious beliefs. People appear to have some sort of prejudice, some do not want to come to our building because there is a sign with the word 'Muslim' outside." (Community organiser)

The Greenway Centre was dedicated to working with children and young adults. At the time of the survey they emphasised on promoting young talent through art and sports as forms of expression and integration amongst younger people. They expressed finding it difficult enough to manage the range of activities with the limited resources they had and said that, although they would have liked to engage with elderly groups for cross-generational work, they did not have time to achieve this. More recently (towards 2017) but after enormous efforts, both the CIC Sneinton Alchemy and the Muslim Community Organisation had both managed to do a series of cross-generational events involving adults and children. In sections below this chapter discusses how the socioeconomic salient measures for each neighbourhood (in comparison with the national average) might relate to this and other variables.

Dronfield

Despite the vast amount and the large size of landscaped areas found in the outskirts of Dronfield during the place assessment, these offered very few opportunities for people to gather or carry out organised activities with exception of formal sports facilities. The main purpose of the vast majority of public places and open green infrastructure in Dronfield town appeared to be 'amenity' rather than 'use'. However, despite the low level of casual

interaction in public places, on close inspection it became apparent that there was a strong sense of community and an impressive amount of organised activity serving a variety of groups. After careful observation during site surveys, leaflets were found on community boards that showed that many local churches, the library and Cliffe Park Café and its Community Centre, offer*ed* a range of activities from knitting activities to children playgroups, from cake baking to local history and country walks. There was also evidence of the community working together. For example, leaflets were posted to show what various groups had done to reopen the railway station. Later on, during engagement with social networks, it was confirmed that in order to maintain the Railway Station, the Civic Society along with local businesses and industries have gathered to supply goods (plants, for example) and resources, making the station an exemplar transport hub.

Killamarsh

On close inspection it became apparent that there was a decent amount of activity serving a variety of groups, most of which were hosted by the sports and community centre, but also some were advertised at the adult learning centre. These groups were invited to participate in the research but only the Open Church and the Canal Trust groups accepted the invitation to events.

Conclusions across all case studies

Overall, although the quantitative analysis for *Organised activities* was a lengthy and time consuming task involving visiting all neighbourhood public places and recording all the activities offered, the correlation of the *Organised activities* data produced for The Meadows (number of hours of activity and number of activities) was interesting because of the clear division, both geographical and social, between the Old and New Meadows areas. The

decision of separating the *Organised activities* data for both parts of The Meadows did not offer a clear answer to any hypothesis but it opened new avenues for further research, as discussed in the Conclusions section below.

In all neighbourhoods, understanding the qualitative elements of the type of activities occurring, the type of places more often used by the community and the nature of those engaging, helped creating a clearer picture of public life in the neighbourhoods. The motivations of residents and the role of public places in facilitating networks to develop and individuals to grow and thrive. In urban practice, this information is valuable for directing and channelling funding to optimise the provision of place as a mediator of social activity. The understanding of how communities use and govern their public places is particularly important for designers as it can inform the delivery of accessible, equitable and inclusive public places, which Tiesdell & Oc (1998) considered to be necessary qualities. Public spheres are formed by a series of overlapping and interacting public entities (Carmona et. al, 2010, P140) that inevitably require public place provision to exist, as public life is place-dependant. Figure 4.10 shows examples (Dronfield & Killamarsh) of how the *Organised activities* trends were found for each neighbourhood based on number of affiliations.

Table 4.9 shows a summary of the key *Organised activities* data documented for each case study and an illustration of the impact of this place-based social variable on social life. Organised activities change so much and so quickly, and they depend on so many other factors that the number did not appear as relevant to this study as its dynamics and how relevant these were for people.
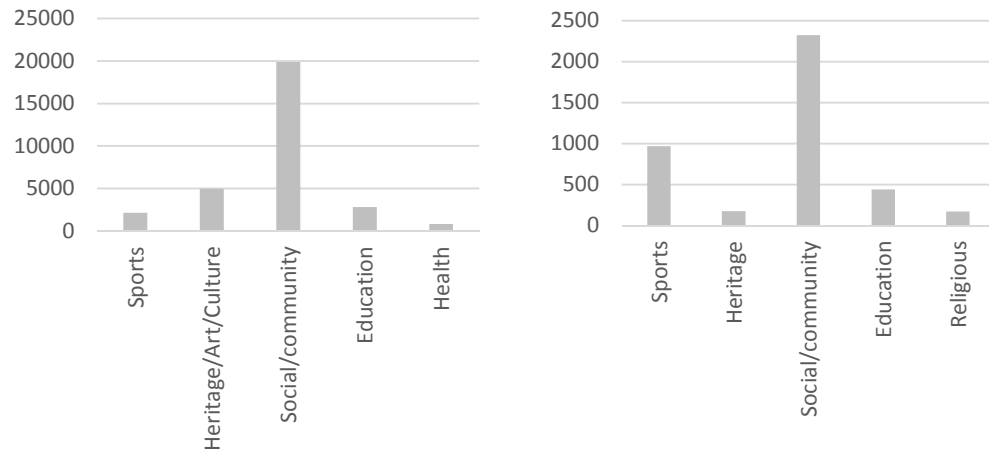
Figure 4.10: Example illustration. Number of virtual group affiliation by interest (left: Dronfield; right: Killamarsh)

Table 4.9: Organised activities patterns and salient socioeconomic variables in all case studies

Case study	Dominant type of organised activities	Organised activities with strong relation to place/placemaking	Key social impact of organised activities	Salient socio-economic variables
The Meadows	Social/community arts/culture health/wellbeing	Community placemaking groups: gardening/allotment; public art; energy	Providing social support to vulnerable individuals	83% people with income below the national average
Sneinton	Social/community arts & culture; religion	Community placemaking groups: gardening/allotment; cultures/ages integration; heritage places/buildings	Bridging communities and cultural backgrounds	3 time more people in minority groups than the national average
Dronfield	Social/community arts & culture; sports	Transport; heritage and history; arts	Placemaking and governance	Highly educated home owners
Killamarsh	Social/community sports; education	Heritage	Improving lifestyles	25-44 y/o children

Table 4.9 also shows the dominant socioeconomic variable for each case.

The trends of how organised activities relate to certain socioeconomic groups is not an objective of this research and in order to arrive to more determinant conclusions it would be necessary to conduct more research with larger data samples, a task perhaps more in line with the field of sociology. However, illustrating this information can inform urban designers and guide them with regards to participation and engagement maximisation techniques. Also, it can lead professionals towards specific research that can add value and evidence based support to decisions regarding place interventions. Further analysis regarding organised activities engagement was discussed by the author and her team in a publication called *The role of social network analysis on participation and placemaking* (Alvarez, Borsi, Rodrigues; 2016), enclosed in Appendix 4.

4.2.c Social networks

The social network analysis involved the identification of key actors and their contacts and the recording of qualitative data with regards to type, size, origin and development patterns of social networks in the neighbourhoods. Also, the role of social networks at a personal level was explored to look at how social identities and self-identification/motivation/actualisation were facilitated by social networks mediated by place. As explained in the Introduction, this data was collected through interviews, surveys and self-written questionnaires (available in Appendix 2).

This task was done in two main parts: identifying current social networks and identifying how long these had been operating, where they were based and their membership numbers. The information was provided by key actors during interviews and by participants through Community Life questionnaires (see the Appendix). The task involved producing a list of key

social networks with contact details and mapping these, which was rather straightforward. A fraction of a list is shown as an example in Table 4.10 (Dronfield); full lists are included in the Appendix.

Table 4.10: Social Networks list for Dronfield

Dronfield Community Groups

Dronfield Carers Support Group
Dronfield Health Centre
High Street, Dronfield
S18 1PY
Lou Jolley (Co-ordinator)
01246 419181

Dronfield Sure Start Children's Centre
Gladys Buxton Community Education Centre
Oakhill Road
Dronfield
S18 2EJ, 01246 296010
Anne Beard (Centre Co-ordinator)
Anne.beard@derbyshire.gov.uk

Finding out the historic data about these groups - such as a foundation day and growth in membership - was laborious, time consuming and did not add a great deal of valuable information to the study. Some of the groups operated in a very informal way and had no formal records of how networks grew or progressed. During various activities and in casual conversations, participants talked about how long these community groups have been operating, their roles and involvement and the group's relevance for the community and for themselves. This casual engagement proved to be a less formal way to capture valuable information without consuming a great deal of time and resources but also capturing the value of those processes at an individual level. Figure 4.11 on page 196 shows a fraction of a full social networks' place timetable which covers a period from 1845 to 2016.

The mechanics of group interaction and bridging was an interesting finding that organically came about during the process of engagement. Once

the groups were identified and contacted, the conversations and rapport-building with the group leaders started.
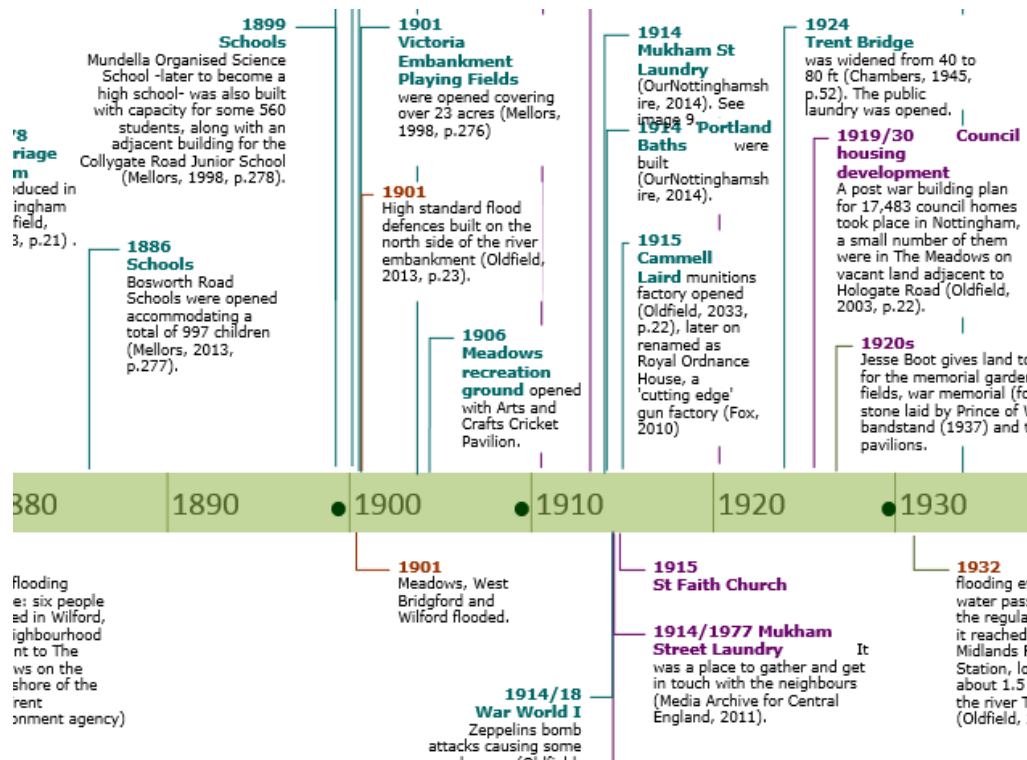
Figure 4.11: Social networks timetable for The Meadows (illustrative example of a fraction of the full table)

It soon became apparent that most of the key actors were acting in multiple networks, bridging the communities. Once they agreed to participate, some group leaders were keen in engaging fully and inviting their contacts and other resident groups.

Keen to test the bottom-up capability of the study, a change in approach was accepted and the Focus Groups process was left to be completely driven by the community leaders. Attendance to events was good with an average of ten people in each focus group, a good number of people because it made participants feel comfortable, allowing everyone to

formulate an opinion and to engage in rich conversations with a diversity of views. Also, following careful site and network observation it became apparent that most people would feel intimidated by a one-to-one interview and that arranging all those was going to prove difficult due to participants' time constraints. Therefore, the structure snowball random-walking-sampling method originally proposed for interviewing was dismissed in favour of a more flexible approach, and semi-structured discussions with the same questions were performed during the focus groups. This approach was very successful and vast, rich information was collected.

The qualitative data was analysed counting the number of times a statement made by participants related to specific places or topics. Based on the number of repetitions and the content and intent of the statements, a brief was produced and items were logged according to their popularity utilising summary tables such as Table 4.11 on page 203. This method is similar to a Word Cloud software but instead of focusing only on the number of repetitions it also looks at the literacy and assignation of meaning through the tense. For example: *"I love it here, people are so kind are friendly."* The statement suggests that friendly people is the key point made but the sentence also implies a feeling of affection towards the place-based on people relations. The key findings for each case study, which were interpreted through these type of tables and are briefly described below.

The Meadows

The social networks analysis identified a total of 14 networks operating in The Meadows, all of which were invited to participate in the research. Nine groups did not reply to the invitation. One group refused to participate due to financial and time constraints, and four of them agreed to participate. Once

initial contact was established, group leaders were keen to engage and invite the community to join the process. Casual and semi-structured interviews (see Appendix) with key actors revealed some strong variants of social capital levels within the neighbourhood and between networks, issues of trust, socio-economic class belonging and diversity of education levels. This was possible to establish because interviews and questionnaires included a section on personal data at the end. People of similar socio-economic backgrounds tended to gather together. Low levels of trust were found between groups with contrasting socio-economic backgrounds, marked identity belonging and different education levels.

"[Leader a – Old Meadows] *and his friends, including* [Leader b – New Meadows] *were in the 'closed' group. But 'we' were not invited." (TM Participant - East Meadows, 2014).*

In The Meadows in general, key actors were well linked and took ownership of the data collection engagement process. They did this by choice and based on their experience working within the community; this led to wide, representative participation. The issue of participation during the process of engagement for this work was discussed in a publication by the author: *The role of social network analysis on participation and placemaking* (Alvarez, Rodrigues, Borsi, 2016). Leaders and key actors led the engagement process. They set up convenient dates, times and venues for the events. Due to social identities and group behaviours such as territorial attitudes and segregation, the key actors decided it would be appropriate to conduct two focus groups together - with two networks that already shared a venue in Old Meadows - and the other networks in different venues in New Meadows. This was to allow all participants to express their thoughts and emotions freely and

without feeling any social pressures.

Sneinton

Although this part of the study was not included in Sneinton due to consultation fatigue and in Killamarsh due to local politics upon conversations with the community leaders in charge of bridging groups and dealing with the social networking in those communities, it was agreed that producing a list with details of networks was a good idea and a useful resource to aid bridging and to enhance community capacity. The author provided the community leaders with an example and a blank form to add their details and upon completion, the list was distributed amongst the networks operating in the area and other stakeholders.

The analysis of the data provided to the researcher by the community organisers showed that Sneinton had a relatively large number of social networks and memberships in comparison with The Meadows, particularly with an interest in community action but also robust in heritage (Alvarez, Borsi, Rodrigues; 2016). Strong groups were looking to transform the area, steering projects such as the renovation of Sneinton Market and the protection and reactivation of Green's Windmill. Other aspects of community action such as urban agriculture and community food, reduction of crime, cycling, artistic and cultural events were also evident in Sneinton. New groups were also emerging, particularly with an interest in health and wellbeing.

Dronfield

Although this part of the study was considered not necessary for the purpose of the Dronfield Regeneration Framework, upon conversations with the community leader of the group Dronfield 2gether, who was in charge of bridging groups and dealing with the social networking in the community, it

was agreed that more could be done to share assets and events between various groups making ongoing engagement more efficient. Also, engagement with social networks during the course of the consultation process was seen as an extremely necessary step, both politically to ensure no conflict emerged later on in the project by engaging every stakeholder, also and in terms of data collection. The researcher therefore established contact with key networks on Facebook and requested permission to join a meeting previously organised by the group Dronfield 2gether where key members of active community groups[2] met to discuss placemaking issues already in process. It was discussed that back in 2012 there had been a large consultation programme carried out to support funding for The Barn project, which was successful. Three thousand people were consulted at the time on various aspects of life in Dronfield. Clear outcomes (listed below) were drawn from this previous consultation process (Dronfield 2gether, 2012) and these were also included in the Regeneration Framework.

Outcomes of previous consultation done by local social network groups:

- *The high level of social capital in the village.*
- *The concern and love for green spaces and historic heritage.*
- *The lack of connectivity and poor bus service to Eckington in particular.*
- *The lack of awareness about the different groups and stakeholders present in the village.*
- *Dronfield was found to be a "silver" community, with an aging population.*
- *Sixteen buildings were identified as "community places"[3].*
- *Need for future-proof access considering 60% of the population will be elderly in the future.*

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[2] Groups represented included: Dronfield 2gether; Dronfield Reminiscence Society; Dronfield and district CAMRA; Dronfield Rugby Club; Dronfield trough time; Dronfield Henry Fanshawe School Group; Dronfield Players; Pictures of Holmesfield, Dronfield and Barlow; Dronfield civic society; arts@s18; The Friends of Dronfield Hall Barn; The Old Dronfield Society; Dronfield and District Wildlife and Natural History Society; Dronfield Round Walks Society; The Botanical Illustration Group; The Creative Gardening Group.

[3] The Barn to provide OPUN with a map of the location of these venues.

Although the consultation programme was very positive and The Barn group was then in a delivery and implementation stage, there was concern about the potential of running out of income for the following stage. But because of this social network engagement process, an action plan for the next stages of The Barn project and key points for strategic support were included in the Regeneration Framework, which was very welcomed by the groups.

Regeneration Framework Action Plan for local social network groups:

- *A central platform for groups and networks to book rooms and physical space.*
- *Bridging between groups to allow more integrated approaches utilising resources more efficiently.*
- *Better walking routes from The Barn (such Dronfield round walk).4*
- *Greater public awareness of existing groups and networks in Dronfield.*
- *Progress with the archive project involving historic and present data and images of Dronfield[5].*
- *A team of volunteers to take over the notice boards round.*

The only social network engagement meeting in Dronfield was extremely positive as valuable data would not have been accessed by the authorities without the engagement with social networks. The Regeneration Framework acknowledged the invaluable work already done by the community and reinforced the need for their programme to continue, which strengthen the efforts of the community.

Killamarsh

The researcher engaged with community groups through Facebook and good links were achieved. These steps were indeed correct decisions and in

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[4] The Barn to provide OPUN with a walking routes map.
[5] The Barn was put in touch with the University College Dublin, who are developing a geo-timeline software to map and date local information as a mean to enhance resilience in neighbourhoods (part of the TURAS project http://www.turas-cities.org/)

retrospect, engagement with existing networks should have happened before the consultation process commenced. The information obtained and the networking process were invaluable for the progress towards a suited Regeneration Framework. For example, projects initiated by the community regarding heritage assets and a heart for the town lacked in evidence and substance. The Regeneration Framework adopted these as key aspects of development for the town increasing the opportunities to access sources of funding to conduct evidence-based studies that support local social network place shaping programmes. The outcomes of the social networks engagement process reinforces the value of including the social networks variable in urban practice for the delivery of democratic political stages, concepts largely discussed Hester (2006) and also previously by Arendt (1958) and Alinski (1971). Chapter 1 discussed in some length core literature that supports the need to engage local communities in governance processes for place shaping. This research demonstrated the relevance of this social dimension variable in urban practice.

4.2.d Social cohesion

The social cohesion variable was measured through a Social Cohesion Index developed by the author (also see Chapter 3). The purpose of this index is to encompass the three key aspects of social cohesion (closeness of ties, length of residence and levels of exchange) into one single measurement in order to graphically visualise how all neighbourhoods compare regarding the overall average measure as well as the individual measures. This equation enabled the identification of potential trends regarding the impact of each measure on the overall value:

Social Cohesion Index = [(Close ties x 10/total population) + Average length of residence + Level of exchange mean value] / 3

Equation 4.2. Social Cohesion Index (by the author)

Table 4.11: Summary of qualitative social network analysis across case studies

SOCIAL NETWORKS

	Key Actors	Origin of Networks	Strenght of networks	Role of networks	Nature of participation	Bridging	Trust
Positive	Most key actors joined the networks after actively looking for volunteering opportunities, or because they were invited by close friends.	Most place-based networks seem to have been generated from the bottom-up and following a strong will to resolve problems or conflicts.	Most place-based networks in The Meadows seemed to be closely knit and they seem to rely on social bonds and trust between members.	Although most place-based networks were established with a specific aim, they eventually became providers of social support for the community in the long term, engaging sectors of the population which need more support than they currently receive.	Most people who participate in place-based networks seem to have strong personal reasons for doing so, ranging from health issues to boredom and needing to find support and friends.	Few key actors reported to simultlneously act in several networks. This is very positive for social bridging between groups in the neighbourhood.	Despite the strong lack of trust amongst the residents and the University connections with specific neighbourhood groups, spending time with people, listening closely to them and encouraging them to express their feelings for the place made it possible to re-establish their trust in this research project, which enable the collection of sensitive data.
Negative	A few volunteers seem to be keeping the whole community active and they reported that it is hard to find more people who would take on their busy roles.	Neighbours reported that without funding and support from authorities, secular place-based networks could have not been established.	Most place-based networks in The Meadows seemed to tightly engage the same people and they reported difficulties in expanding the network due to lack of trust and cultural differences. Lack og funding seems to be strong enough to dissolve top-down networks.	Key actors unanimously agreed that the fundamental role that place-based networks have is providing social support and acting as the community glue, but that this is being ignored by the authorities.	Neigbours reported more volunteering and active participation is needed to keep the networks active. They expressed they had knowledge of people who would benefit from the support of the network but that socio-cultural barriers and stigma stopped them to join.	Key actors reported that they fiound difficult to engage various cultural backgrounds and more specifically the youth, expressing that they did not have the skills or resources to engage or interact with other groups.	A luck of trust was evident throughout groups nad individulas in the neighbourhood. A history of radical physical transformations led with top-down/authoritatian approaches left the community with a sense of disempowerment and a feeling of victimisation. This attitude has now extended between socio-cultural backgrounds and groups withing the neighbourhood.
Conclusions	Place-based networks rely heavily on volunteers. The skills and contacts these people developed need to be handed over to new generations, which is proving challenging, especially because yousters are not engaging in community activities.	Both bottom-up and top-down approaches were found to be the genesis of neighbourhood networks however they all have two elements in common: 1) resolving an existing problem; 2) receiving funding to start functioning	Place-based networks which emerged organically from the bottom-up seem to have whistood longer than top-down ventures as people take ownership of the network, the place where it is based and the catchment area as a whole. In the face of budget cuts, these networks have managed to source funding to remain and have generally demonstrated to be more resilient.	The apparent role of place-based networks is normally place-making or activism. However, the true and fundamental role is providing a source of social support and identity, covering anthropological, psychological and social human needs.	People seem to participate in networks only if they find the motivation to do so, independently of the time they have to spare and what they could gain from participating. If neighbours do not share values and priorities with those of the network they simply would not participate independently of how much they might benefit from what the network has to offer.	Network bridging does happen to some degree within the neighbourhood groups through common key actors. However, bridging between culturally differnet groups and with other neighbourhoods could be an advantage.	Past experiences and a repetition of radical place renewal patterns left residents with a strong sense of misstrust and feeling vulnerable and powerless. However, working alongside networks it is possible to regain that trust and re-establish communication paths.

In the case of The Meadows, quantitative data was collected through postal self-written surveys (see the Appendices 2.c and 2.d), circulated manually and returned by participants in pre-paid envelopes. These were distributed through area probability sampling covering 10% of the households in each enclave within the neighbourhood; adding to a total of 346 distributions. This practice was costly and it exhausted a great deal of time resources that are often not available to urban design practitioners. It was however decided to carry out the exercise in full for one of the case studies in order to compare the results of this social sciences method with other data collection solutions more viable for application urban practice. Despite this lack of statistical analysis in Sneinton, Dronfield and Killamarsh, it was possible to discuss the variable indicators at length with people, formally during events and casually by talking on the streets and shops, collecting a sample number of surveys of circa 0.5% of the population in all neighbourhoods. This more flexible approach, largely based on qualitative data and smaller numerical data, was valid and useful information that allowed the appraisal of the social cohesion variable. The results of these various methods for all neighbourhoods are discussed below. The data was processed used an Excel sheet where scores were given for each option selected as explained in Chapter 3, section 4.2.d.

An example of the processing format of this data is on Table 4.13. The table shows the location and participant codes on the left. The middle 'I come across' column quantifies the frequency participants claimed to have come across people they knew in public places in their neighbourhoods, their degree of relations and the levels of exchange. This is captured through a survey (see Appendix 2) with the question shown in Table 4.12. This gives a mean value to use in the Social cohesion Index equation (Close ties x 10/total population).

Table 4.12: 'I come across' question

SECTION B: In this place, I come across…					
Tick only one per row	Never	Less than once a month	Once a month or more	Once a week or more	Once a day or more
Neighbours					
Relatives					
Other people I know					
Value (0: no response)	*1*	*2*	*3*	*4*	*5*

This provides an indication of how frequently people who know each other meet (0: never to 4: once a day or more). The more people meet the more possibilities they will have to establish closer ties and stronger relationships, which also depend on the pre-existing relation people have managed to establish already (acquaintances, neighbours, friends, etc.). The column about 'exchange' in Table 4.13, page 205, allows the quantification of the levels of exchange people establish with those in their area. The higher the value, the more often they exchange. The average is then worked out per place and per neighbourhood. This way of capturing frequency of encounters allows to establish a place dimension and social support, what Carmona et al. (2010) called 'community self-help', to the phenomenon as well as capturing a social cohesion indicator.

Table 4.13: A fraction of the Level of exchange/Social cohesion data (Place 7, Sneinton example)

No		I come across			I exchange				
Location	Participant Code	I frequently come across neighbours	I frequently come across relatives	I frequently come across other people I know	With my neighbours I exchange casual chats	With my neighbours I exchange objects	With my neighbours I exchange emotional support	With my neighbours I exchange caring/babysitting	With my neighbours I exchange money
	1	1	1	1	1	1	1	1	1
7	2	1	1	1	2	2	2	1	1
	3	2	2	2	4	2	1	1	1
	4	3	4	3	3	3	2	3	1

Value as per table 4.13

The 'Length of residence' is also caught through the Public Place Questionnaire, and values are allocated according to the box ticked as shown in Table 4.14.

Table 4.14: 'Length of residence' question

Tick one box	Less than 1	1 to 5	5 to 10	10 to 20	More than 20
I have lived in this neighbourhood for (YEARS)					
Value (0: no response)	1	2	3	4	5

The results are calculated through an Excel spreadsheet along with other place attachment measures as shown in Table 4.15. In this example, the table is for public places in East Meadows (part of New Meadows). The mean values are then compared with the mean values for other areas or between neighbourhoods as necessary.

Table 4.15: Data analysis spread sheet showing an illustration of the length of residence calculation for East Meadows public places

Place	Home ownership	Length of residence	Love location	Have friends/family in the area
1	4	5	0	1
2	4	5	1	0
3	4	0	0	1
4	1	5	1	1
5	4	5	1	0
6	4	4	1	0
7	4	4	1	0
8	4	2	0	0
Total	**29**	**30**	**5**	**3**
Mean	**4**	**4.28**	**0.62**	**0.37**

A table comparing the results across case studies is discussed at the end of this section.

The Meadows

The findings achieved through formal discussions, informal conversations and surveys showed that participants chose The Meadows as a place of residence primarily due to its location and to a lesser degree due to having family and relatives in the area. Participants claimed to have found a 'family-like' community in the area, with high levels of exchange including emotional support and care, after having lived there for many years and having grown up alongside neighbours. Quantitative data confirms these findings, as shown in Figure 4.12, which shows the example of the data analysis for The Meadows per area.
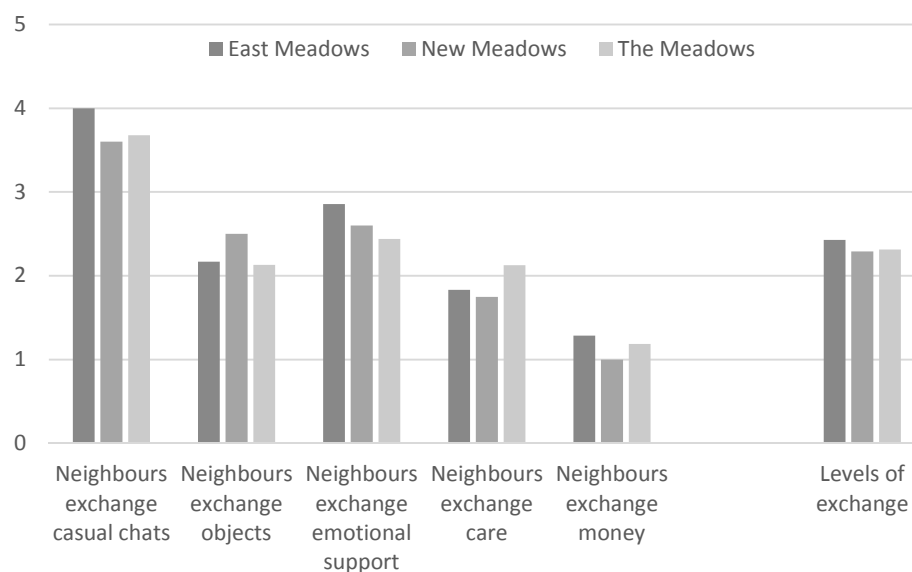
Figure 4.12: levels of exchange in different areas of The Meadows

Sneinton

Most participants said Sneinton was not their choice but that proximity to family had to come first. Others felt they had no choice because they had been allocated social housing, or that budget had to be prioritised. Despite easy access to the city centre from Sneinton, this did not come strongly as a

reason for choosing the location. Most participants claimed to have both: very close ties and strangers in the community, even after having lived there for many years, explaining that short tenancies are a problem to develop bonding and a good sense of community. For Sneinton, this data was shown to the public at a community event ("I love Sneinton") alongside other data emerging from this research (see Appendix). In Sneinton, family life was the priority at the time of choosing a place of residence, as most people wanted to live near their loved ones. More than 80% of the responses that gave this answer also claimed to live within two minutes-walk of a close knit relation; this often meant living within the same enclave.

"I live on D. Rd with my mother-in-law and my sister-in-law. I have three children, she has two. My brother-in-law lives two minute-walk from us, on W. Rd, they have four children. We are always together and we help each other with the kids." (S Participant - 2015).

Social cohesion in Sneinton was constructed around close-knit ties such as family and close friendship bonds amongst certain sectors of the population. However, there were also many neighbours that felt isolated, disconnected, unsupported and lonely. This issue was noticeable and already being addressed by community groups organising bridging activities. For example, the Muslim Community Organisation run a programme called 'Sneinton Memories' based on mixing older generations with school children to share memories and experiences of the
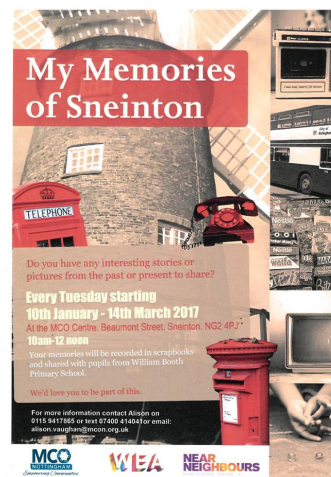
Figure 4.13: MCO flyer, Sneinton Memories.

neighbourhood.

Dronfield

In Dronfield, most people claimed either to have lived in the area for many years or to have gone to university and come back when they had formed a family. People loved the location close to Chesterfield, Sheffield and the Peak District National Park. Most participants were professionals who believed the high property prices were worth paying for given the architectural amenity and natural beauty of the area.

Killamarsh

In Killamarsh, most people chose the place due to its convenient location, being accessible to industrial Sheffield. Low budget was also a motif, claiming that Killamarsh was one of the most affordable, functional locations in the region. Few people had relatives in the area, most having close family in surrounding towns and cities.

Conclusions across all case studies

Social cohesion is a variable difficult to quantify precisely in urban practice using similar approaches to social sciences. This is true because the measure requires vast amount of complex data being collected and analysed for robustness and validation, and large population samples to make the statistical analysis reliable and to reduce the error margins. Saying that, qualitative information in relation to the nature of close ties, reasons for choosing the area and length of residence can be useful data for urban practitioners. Qualitative data is easy to gather through engagement events and it provides another dimension to urban studies, an understanding of people, their values, priorities and motivations as members of a community ultimately mediated by place. Table 4.16 shows a summary of the Social

Cohesion data by case.

The clearer pattern observed here is that 'Length of residence' seems to be the stronger determinant of Social Cohesion. However this hypothesis is more suited to social sciences research and need further research with larger population samples. These variables can help urban designers establish a clearer understanding of the social dynamics in neighbourhoods. In Chapter 7 these results are correlated with morphological and perceptual variables of place.

Table 4.16: Social cohesion summary of core results across case studies

Case study	Close ties	Level of exchange	Length of residence *	Social cohesion *
The Meadows	Established with neighbours through long time in the area	Medium 2.5 (in scale 1-5)	4 .00	4 .00
Sneinton	Family and extended family members living in the same area, often in the same block.	Similar to The Meadows but compared through qualitative data analysis	2.54	2.56
Dronfield	No close ties nearby. Only a few had family in the area or established relationships with neighbours through long time in the area	Similar to The Meadows but compared through qualitative data analysis	2.87	2.80
Killamarsh	No close ties nearby. Only a few had family in the area.	Similar to The Meadows but compared through qualitative data analysis	1.94	1.80
* mean value in scale 1-5				

4.3 Conclusions: Social dimension of place in neighbourhoods

The key findings drawn from the social dimension variables analysis are:

- The *Public place distribution index* showed that more public places that could mediate social contact were provided in the urban neighbourhoods and

fewer in the semi-rural towns.

- *Social cohesion* correlated positively with *Length of residence*.

- The *Organised activities* variable was particularly relevant in relation to public places allocation and social activity trends in neighbourhoods (possibly in relation to socioeconomic variables).

- The *Social networks* variable was particularly relevant as a facilitating mechanism for engagement and participation in place shaping processes.

- The *Informal contact* variable needs to be associated with morphological variables for a deeper understanding of its meaning in urban practice because the form of streets and location of buildings showed to be related to the ways in which people interact casually.

One of the most interesting correlations of the social dimension variables was in relation to formal and informal social contact. These variables helped capturing the qualities of public places as mediators of social interaction and they opened questions for further research in the field. Correlating the social dimension variables for each case study individually, it was found that The Meadows had more activities and more hours of activity occurring in the New (1970s) area, where casual contact at street level was significantly lower, than in the Old Meadows (Victorian). *Informal activity* and *Organised activities* were indeed variables in inverse correlation. Correspondingly, the levels of *Social cohesion* in The New and Old Meadows were almost identical. However, it is of course possible that *Social cohesion* was non-dependent on the levels or types of activity and that it was instead the result of stronger determinants that were not directly appraised by this study, such as social or cultural capital, operating at a larger scale. It is also

possible that both types of activity - formal and informal – work together as enablers of social cohesion development in neighbourhoods. However interesting, this hypothesis could not be confirmed by this work due to the limited amount of data, and it requires further research.

Although static views of social cohesion can help to visualise the network at a point in time, active definitions can reflect how cohesion is built over time (Creasy, Gavellin and Potter, 2008). Knowing how the process of building cohesion in communities might occur, can offer a deeper understanding of the role of place as mediator of social relations. This study could not cover long term data collection due to the tight schedules of the thesis, and unfortunately longitudinal analysis is not present in the findings.

During the research process, it was noted that conducting the organised activity quantitative analysis might not be always practical in urban practice as it can be too time-consuming and not cost effective. However, understanding activity related factors could be beneficial in some cases, for example, if the neighbourhood had socially heterogeneous sub-areas in need of re-balancing or if the provision of public places needed to be quantified (e.g in m2 per household) to respond to legislative frameworks or design codes.

Working with social networks added another dimension to the understanding of public place as trigger and enabler of social networking creation and growth. The impact of engaging with social networks was not only manifested through the advantages of the engagement and participation processes but also in terms of actual outcomes. For instance, a recommendation was made to Sneinton Alchemy that the Neighbourhood Plan policies and projects were structured in themes emerging from the data

analysis resulting from this research, and that the results were included as evidence in the form of quotes, graphs and maps. In Dronfield and Killamarsh, the process of developing legislation at a regional level was hugely improved and optimised through the incorporation of crucial information and data provided through local networks engagement. For the Dronfield and Killamarsh cases, OPUN, the County Council leaders and the community considered the whole process to be of great value.

There were no major constraints in appraising qualitative aspects of social dimensions of place other than those already discussed. The appraisal process opened communication channels with participants and facilitated engagement between agencies. Community leaders and participants enjoyed discussing how the physical and geographical aspects of place might have an impact on the level of activity and on people's behaviours. The community considered this information extremely valuable and worth it of incorporation on their Neighbourhood Plans and Regeneration Frameworks. Overall, the value of accounting for social dimensions of place goes beyond the gains in terms of data for urban analysis, the contribution is indeed inherent in the process of collectively (professionals, communities and authorities) understanding and engaging with place as part of a human ecosystem.

Having demonstrated the value of considering social dimensions of place, and having proved that this can be achieved adequately and efficiently in urban practice, the next two chapters explore the value of integrating Perceptual dimension variables in place analysis.

CHAPTER 5
5. The perceptual dimension of place

"People need not only to obtain things, they need above all the freedom to make things among which they can live, to give shape to them according to their own tastes[a]"… "when a space is made significant by humans it becomes a place[b]".

([a]Ivan Illich , 1973; cited in: Faud-Luke, 2009;

[b]Chen, Orum and Paulsen, 2013, p.20).

This research aims to search for innovation by exploring how tools used by other fields could be imported into urban practice to understand how we perceive, feel and behave in neighbourhoods. It achieves this by researching how the fields of environmental psychology and anthropology interpret concepts and theoretical models that led to the most recent measures of core perceptual variables. This section discusses the vast range of interlinked dimensions of place psychology and demonstrates how an adaptation of tools and techniques used in social sciences is adopted to appraise perception of place. For these dimensions to be appraised in urban studies, it is necessary to simplify methods to capture data in a way that would allow the analysis of key variables in correlation with other dimension variables. The literature review discussed in this section led to put the focus on four variables: mental mapping; place attachment; place care; and social value of place.

Carmona et.al (2010) believe our perception of places, and the ways in which we experience them, are essential to the field of urban design; our not only our wellbeing but also our behaviours are a product of our perception. Also, understanding the link between people and their neighbourhoods is

essential to enhance resilience (Haigh and Amaratunga, 2011), because nothing exist in isolation, only in relation, and therefore people have to be studied in the context of their environment (Ellin, 2013), which is ultimately the key to sustainability (Wu and Wu, 2013, p.216; Kearns et al., 2014). The psychological status of an individual in relation to their physical, social and economic environment is called subjective wellbeing, and it is a measure of happiness, one of the goals of sustainable development (Gardner and Prugh, 2008; cited in: Corral, 2010, p.78). Wellbeing has recently become more relevant and central to the discussions in environmental psychology and how some characteristics of place can enhance or reduce wellbeing.

We are emotional beings and therefore we react to environmental stimuli. Our environment directly affects our biorhythms and the way we feel, both physically and psychologically. For this reason, the psychology of the members of a society (cognitive; affective; behavioural) should be set as a framework for any place study (Rowson, Broome and Jones, 2010). Veitch and Arkkelin (1995) consider our response towards the environment as formed by a *cognitive* component; an *affective* component and a *behavioural* component, reflecting the way we feel, think and behave towards the environment[1].

Cognition involves memories, beliefs, meaning and knowledge that people develop about their places and which allow individuals to connect with them. The information obtained through cognitive processes is organised in the brain in the form of 'schemas' (Barlett, 1932; cited in: Scannell and Gifford, 2010, p.3) which keep input data which connects features of the environment with the personal self so that self-definition is partly a result of

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[1] Ittelston (1978; cited in: Bell et.al) classified four key areas of place perception in a similar way: cognitive; affective; interpretative; and evaluative.

environmental cognitive data (Proshansky et al., 1983). Specific features of places such as landmark, architectural prototypes, vegetation, etc., can be relate to individuals' self-concept and construct 'place-related distinctiveness' (Twigger-Ross and Uzzell, 1996; cited in: Scannell and Gifford, 2010, p.3). The process of forming place identity can be compared to the formation of social identity, when individuals define their personalities in order to belong to certain groups (Brewer, 1991; cited in: Scannell and Gifford, 2010, p.3). Cognitive maps are important because they are a means to human survival, but they also help us in the process of environmental adaptation (Veitch and Arkkelin, 1995). There is a natural development of environmental cognition in children which correlates with Piaget's stages of development[2] and this manifests in a gradual increase in the capacity to interpret the topography and represent it through abstract icons and symbolism (Veitch and Arkkelin, 1995). Hart and Moore (1973, cited in: Veitch and Arkkelin, 1995, p.95) added that when we learn an environment, we first understand it as a sequence of 'paths' linking 'points'. As we become familiar with it, we form a more complex image of the area which includes orientation cues and relations between points, zones and objects.

Affective reactions involve emotions towards a geographical place. Sometimes called 'topophilia' or 'love of place' (Tuan, 1974; Relph, 1976; all cited in: Scannell and Gifford, 2010, p.3), these emotions can have an impact

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[2] Piaget's stages of development: sensorimotor, preoperational, concrete-operational and formal-operational (Flavell, 1977: cited in: Veitch and Arkkelin, 1995, p.94). Children development of spatial recognition happens in four stages: recognition of landmarks, then recognition of paths between landmarks, then these recognised landmarks and paths are organised into clusters and finally the clusters are arranged in a comprehensive spatial map (Siegel and White, 1975; cited in Bell et al. et al., 1990, p.74).

on people's sense of well-being and self-assertiveness (Brown et.al, 2003), which is demonstrated by population grief, sadness, longing which caused depression and anxiety symptoms following place destruction or displacement (Fried, 1996; cited in: Scannell and Gifford, 2010, p.3). We associate places with emotions. The concept of 'home' derives from a group of environmental conditions associated with feelings of safety, security and protection, which over time lead to a sense of emotional attachment (Rapoport, 1995; cited in: Kopec, 2012, p.175), it is the centre of one-self's universe and this is the case across cultures and social classes (Tuan, 1997). Research shows that children who associate happy memories with the notion of 'Grandma's house' will instantly feel happy when the place is mentioned to them, and a similar effect happens when people hear about places associated with negative feelings. Other studies show that people can develop place attachment by assigning meaning to spaces simply to overcome specific emotional needs (Korpela et. al 1996; cited in: Kopec, 2012, p.176). People can associate distinctive spatial arrangements and subconsciously relate them to memories and notions of places which cause emotional reaction on them[3].

Park, Davidson and Shields (2011) explained that the study of affect emerged in the past couple of decades as an academic subject. They looked at how the definition of affect adopted in the field of ecology reflects a highlight of sentiment or attachment towards a material object. They further explain that 'affective passage' is the increase or decrease of someone's power or will to act, and that it could be reflected in several ways such as fear or hope, all related to our natural ecologies rather than our rationales. The authors identified three main affective modalities in relation to three main temporal

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[3] But this second stage of bonding is not always present (Brown and Perkins, 1992; cited in: Kopec, 2012, p.178; Kopec, 2012).

allocations: nostalgia[4] (past), desire (present) and hope (future). They concluded by remarking that affects related to both physical and virtual elements are equally relevant in the development of our relationship with place, as they both define patterns of behaviour towards the three affective modalities (Park, Davidson and Shields, 2011).

Behaviour involves expressions and actions that denote place attachment such as proximity-maintain, reconstruction and territoriality (ownership, stewardship and appropriation). Proximity-maintain is a manifestation of an affective bond which is not associated with the need to have territorial control but it is purely based on the need to remain close to place (Hidalgo and Hernandez, 2001). Reconstruction can manifest in either the physical re-build of a place following destruction or, in the case of migration or displacement, the need to look for or erect a place that looks like 'home' (Michelson, 1976; Francaviglia, 1978; all cited in: Scannell and Gifford, 2010, p.4). Territoriality manifests with more aggressive behaviours which involve defending a place[5], and marking or appropriating territory (Altman, 1975; cited in: Scannell and Gifford, 2010, p.4).

As demonstrated by the literature discussion above, the mechanisms that connect us psychologically with place are complex and interlinked, and involve a mixture of emotional and cognitive responses. For these reasons, establishing criteria for empirical research has been difficult in urban practice. Below, the chapter goes into more depth exploring the essence of the three

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[4] Sanchez and Brown (1994; cited in: Fullilove, 2014, p.149) defined nostalgia as a life-threatening pain that arises when one is far from home.
[5] Grunter and Kroll-Smith (2007) identified three reasons for environmental conflict: conservancy, when people try to retain natural habitats; siting, when people try to remain settled in a specific place; and exposure, when people fight against pollutants or harmful substances. When people try to defend vistas and landscapes, there might be more rooted motives than the apparent ones. People might have a shared history of traditions and socio-cognitive memory which triggers sentiments of affect and which might be related to identity (Grunter and Kroll-Smith, 2007).

spheres of place psychology.

5.1 Understanding the perceptual dimension

This section debates a literature review that explored concepts dealt with by the fields of environmental psychology and anthropology with a particular interest in how these might impact on people's personal relation with place. The most relevant variables found in relation to public places were: mental mapping, place attachment, place care and social value of place. These are discussed below.

5.1.a Mental mapping

A primary function of animals' brain (including humans) is the ability to navigate to their home or place of safety (Chadwick et al., 2014). Finding the way round is a key ability for human survival. The discovery of how the brain works was so crucial that it lead to the 2014 Nobel Prize in Medicine being awarded to O'Keefe and Edvard and May-Britt Moser, who identified the brain cells responsible for way-finding. Place cells were originally found in the 1970s when laboratory experiments with rats showed a relation between animal sense of distance and direction and grid cells[6], the mapped information is then transferred and stored into place cells[7], all located in the

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[6] *"A grid cell is a place-modulated neuron whose multiple firing locations define a periodic triangular array covering the entire available surface of an open two-dimensional environment. Grid cells are thought to form an essential part of the brain's coordinate system for metric navigation."* (Moser and Moser, 2007)

[7] Wood and Dudchenko (n.d) explain that place direction cells are neurons that fire when the animal is placed in a specific point within the environment. A cognitive map is formed in animals brains thought the use of a combination of different place cells. *"Head direction cells (HD cells) are neurons found in several brain areas that discharge in relation to the animal's directional heading with respect to the environment in the horizontal (yaw) plane…head direction cells are similar to a compass in that their discharge is always tuned to a particular direction and can fire at any location provided the animal's head is facing the appropriate direction. However, unlike a compass, head direction cells are not dependent on the Earth's geomagnetic field, but rather on landmarks and self-motion cues, such as vestibular and proprioceptive cues."* (Taube, 2009, p.1). Chadwick et al. (2014) found that humans

hippocampus (Brut de Perera and Guilford, 2015).

The ways in which we understand our environments also concerned the field of urban design for decades. Back in 1960 Lynch studied how the morphology of cities was understood by it residents and he believed a well organised space could become a place if it allowed for clustering, self-organisation and a sense of community to emerge. Lynch (1960) identified five main components of a city image based on how residents interpreted it: paths, or channels that allow movement; edges, or boundaries between two phases; districts, or areas with specific characteristics; nodes, or junctions and crossings or points of shift in structure; landmarks, or elements that differ from the norm and which are used as signals. This theory of how people understand their places is also known as 'mental mapping' and it proved to be highly applicable in urban design practice and studies. These are special concepts that people understand and can articulate, and therefore they are relatively easy to capture in the form of verbal or graphic data. For example, participants might comment: *"I never cross here, there is too much traffic and cars go too fast. I prefer using the other grocery, the one by the school, so I don't have to cross."* This statement suggests that the road is a barrier for this person, a cognitive 'edge'. When we give directions we might say: *"when you get to the corner you'll see a purple shop, turn left by the shop..."* we are using a particular salient from an urban pattern as a landmark to find our way round. This way, narratives can be used to construct a mental map of a neighbourhood.

Kaplan and Kaplan (1975/82/87, cited in: Bell et al. et al., 1990, pp.48-50) found four key factors which describe environmental preference amongst

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have neurons which represent aimed directions and these correlate with the act of 'facing' the direction, which demonstrates that the sense of orientation is located in the human head.

humans: Coherence, in relation to the spatial organisation of a place; Legibility, in relation to recognisable spatial arrangements; Complexity, implying the number and variety of elements in a space; and Mystery, in relation to a suggestion of hidden information waiting to be found. Bell et al. (1990) explained that other aspects of cognition can also have an impact on way-finding. For example the ability to make a distinction between elements or parts of an environment, called differentiation (Appleyard, 1969; Evans et al., 1982); the degree of visual access to objects, and the level of complexity (Weiman, 1981). McNamara (n.d; cited in: Bell et al., 1990, p.75) found that we make relations and hierarchical associations in order to establish a place network in our memory and Collins and Quillian (1969; cited in: Bell et al., 1990, p.75) found that we use semantic memory to create such hierarchical spatial networks. In other words: we read the space.

Particularly interesting is also the view of Tuan (1997). He explained that when we move through space we use a series of kinaesthetic patterns, we construct a series of movements; we 'learn' how to move through a space and this, in time, becomes familiar to us. Being able to find our way through space has emotional connotations. Finding familiar landmarks within a space, he said, makes us emotional because it means we are on the right track. Warner Brown's experimental research on wayfinding, he adds, showed that we confidently move in space following a combination of 'known moves' and 'familiar landmarks' (Tuan, 1997). Landmarks, Tuan (1997) continues, help people develop a sense of bonding to place, they are associated with sensorial experiences, rituals and memories. These sometimes are reinforced by social institutions, therefore adding a social belonging element to their value. For example, belonging to a club and attending a specific class with a specific group every week can become a ritual in a person's life. Rituals trigger kinetic memories, for instance automatically taking the same route to work

without giving it any thought. They also provide landmarks in our biorhythms, helping us keep a natural track of time. And they can help develop our personal identities through group engagement.

Understanding how people 'read' their environments is so important because it not only can give urban practitioners an idea of how people move, navigate and use public places, but it can also give them an insight into people's ways of life, sense of safety, routines and memories of place. Due to its significance, 'mental mapping' was adopted by this study as a key variable of the perceptual dimension of place. Further sections explain how this variable was measured.

5.1.b Place attachment

This section looks exclusively at the place attachment sphere of place bonding, associated with individual place psychologies. This chapter explains the various terminologies and concepts involved below. The social aspect of place bonding, which relates to the emotional connections people establish with their support networks, was dealt with by the social dimension of place within this study.

The terms 'place bonding' and 'place attachment' have been largely discussed and their meaning contested. Understanding how humans relate emotionally to their geographical settings was indeed largely theorised (Tuan, 1974; Altman, 1974; Kasarda and Janowitz, 1974; Park, Davidson and Shields, 2011; Scannell and Gifford, 2014). Hidalgo and Hernandez (2001; cited in: Scannell and Gifford, 2010, p.4) believe place bonding involves both 'social attachment' and 'place attachment' and therefore both aspects must be considered in studies. Kopec (2012) also thinks there is a social dimension to place bonding and says that not only it defines who we are as individuals but

it also helps us portrait how we want to be perceived, and it gives us a sense of belonging. Social attachment relates to the bonds and ties people develop with their neighbours and their community belongingness. Williams and Vaske (2003; cited in: Hernandez et al., 2014, p.129) studied place attachment with an ecological approach looking at multiple levels of the psychological dimension and they also found that social attachment has two dimensions: place and people bonds; and place attachment is deeply related to both but it entails different cognitive dimensions.

The physical and social environment postulate sensorial inputs which evoke emotions to individuals, triggering certain behaviours that are goal-directed and that are dependent on the personal characteristics of the individual and on the type of socio-physical environment. If the individual requires a disproportionate amount of energy to respond to the environment or if the response does not cause a positive effect, the environment is pathological (Bell et al., 1990; Veitch and Arkkelin, 1995). When people feel they are losing control over the environment[8], a phenomenon called psychological reactance occurs (Brehm, 1966; Brehm and Brehm, 1981; Wortman and Brehm, 1975; all cited in: Bell et al., 1990, p.105), to help us recuperate the sense of freedom[9]. These explains why individuals with higher levels of place attachment have a greater sense of safety, they have an

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[8] Averill (1973; cited in: Bell et al., 1990, p.107) defined three types of control we develop over our environments: behavioural control (raising complaints about loud noises), cognitive control (learning to live with noise), and decisional control (moving to a different neighbourhood). Thompson (1981; cited in: Bell et al., 1990, p.107) added retrospective control (control present behaviours which are the result of a past event); and differentiated between primary control (taking action) and secondary control (adapting to new circumstances).

[9] For example developing agoraphobia after a traumatic event; or, learnt helplessness (Seligman, 1975; Garber and Seligman, 1981; all cited in: Bell et al., 1990, p.105), which results in creating a new conception of the environment with the subsequent process of adaptation. This is usual in societies where corruption is the norm (Bell et al., 1990). However stress is not always negative, when a cognitive process recognises a threat, aversive stress occurs triggering four stages: alarm or reaction, resistance, equilibrium and exhaustion (Selye, 1956; cited in: Bell et al., 1990, p.116).

exacerbated perception of place-protectiveness and lower perception of risk (Scannell and Gifford, 2010).

Despite this separation of concept, necessary for the purpose of analysis, the social and physical dimensions are interlinked. Previous studies found a direct relation between the place attachment and the development of social ties (Kasarda and Janowitz, 1974; cited in: Scannell and Gifford, 2010, p.4), also places can be a symbol of a group's identity, something that makes them different to the rest (Twigger-Ross and Uzzell, 1996; cited in: Scannell and Gifford, 2010, p.4). People might want to remain in a place because of its meaning, because being a resident there represents something in their society such as status, social or religious class association (Stedman, 2003; cited in: Scannell and Gifford, 2010, p.4). Some authors (Fullilove, 2004; Seamon, 1979; cited in: Seamon, 2014, p.13) believe that emotional attachment to place occurs after collective actions become routines, triggering social bonding. Studies show that worldwide, people develop emotional links with their places of residence and the neighbourhood scale[10] ranked first on the measure of attachment (Lewicka, 2014). In communities, emotional bonds to place have a relation with the time people spend outdoors, socialised and connected with their neighbours (Mihaylov and Perkins, 2014). These bonds can trigger both 'stay and fight' or 'flight' attitudes (Manzo and Perkins, 2014; cited in: Mihaylov and Perkins, 2014, p.61). This view supports Hester's findings in the 1980s. Cities, Hester (2006) said, must touch our hearts, they must bring joy instead of insecurity and force. Back in 1962, Gans (cited in: Bell et al., 1996, p. 349) demonstrated that

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[10] Studies showed that place attachment vary greatly in scale, people can feel attached to a home, a neighbourhood or a country, and equally people might feel attached to features such as the sea, or memories that a place evokes such as smells or climate (Knez, 2005; cited in: Scannell and Gifford, 2014, p.25) and due to the great diversity of scenarios, more research on place attachment is needed, especially in adults, to understand the mechanisms of place attachment (Scannell and Gifford, 2014).

demolishing or refurbishing the urban structure of neighbourhoods can, not only destroy social systems that are essential to many people's survival, but also it can cause grief symptoms and damage to people's psychological and physiological health[11]. Good cities, Hester (2006) said, make us aware of ourselves in a way that connects us with nature, reinforcing our sense of identity. Identity in young people does not translate in a label, it is generated through a complex process that involves practices of engagement with public spaces such as territorialism[12], which often manifests in community spaces. For example, Hopkins (2010) showed that the way public spaces are makes a difference to the way in which youngsters define their social identities and other forms of identification. Young people respond to exclusion and social challenges, often exhibiting a series of behaviours in their localities. This relates to the scales of engagement[13] with public space, which are a key aspect of social development (Hopkins, 2010).

Love for place is intrinsic to human life and it relates to the need to ensure survival. The place-person bond was largely studied from the 1970s and themes ranged from topophilia[14] (Tuan, 1974) and territoriality (Altman, 1975) to place identity (Kasarda and Janowitz, 1974). More recently, more comprehensive approaches to place attachment appeared (Scannell and

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[11] A study in Boston's West End showed 73% of a relocated group showed extreme grief symptoms including vomiting, intestinal disorders, nausea, crying spells and clinical depression. 20% were depressed for two years after moving. The study also showed that the stronger the social ties, the greater the grief people experienced (Bell et al., 1996, p.349). Similar results emerged from studies done by Haing, 1982 (Myers, 1978; cited in: Bell et al., 1996, p.357).

[12] Territoriality is the way in which animals govern the spaces they occupy within the environment, the way in which organisms claim spaces and defend them against intruders (Veitch and Arkkelin, 1995).

[13] Scales of engagement in youth: 1) Home area: Identity and belonging; 2) Locality: social status and position; 3) District or Region: connections and opportunities (Hopkins, 2010,).

[14] Topophilia refers to the feelings of 'love' towards a geographical place (Musterd and Kovak, 2013).

Gifford, 2014).

There are many reasons why humans develop a sense of attachment to place, Scannell and Gifford (2010) highlighted three main causes: a) survival and security; b) self-regulation; c) continuity:

a) SURVIVAL AND SECURITY

Some authors argue that a behavioural bond is shown by the need to remain close to resources and services that make daily life possible such as food, shelter, water, etc., and a cognitive bond is manifested by the knowledge and familiarity of how one can make these become available for use and consumption (Schumaker and Taylor, 1983; Turnbull, 1983; cited in: Scannell and Gifford, 2010, p.5). Other scholars believe that the attachment is due to the psychological sense of security and comfort in relation to the services and resources offered. This can also help individuals develop self-confidence and freedom of exploration (Harlow, 1961; Bowlby, 1969; Fullilove, 1996, Fried, 2000; Giuliani, 2003; Chatterjee, 2005; all cited in: Scannell and Gifford, 2010, p.5). Vulnerable people, Fried (2000) stated, are more likely to develop stronger place attachment and proximity-maintaining behaviours, as these result in an increased sense of safety and security (Scannell and Gifford, 2010).

b) SELF-REGULATION

Places can offer the services, activities and support to enable people achieving their goals. This can result in patterns of place dependence because if individuals can plan their goals and assess their progress with confidence, the place becomes a safe haven for them (Korpela, 1989; Izard and Kobak, 1991; cited in: Scannell and Gifford, 2010, p.5). This aspect of place psychology is intimately related to participation, governance and local

democracy, and it is included in this research as a component of other sections dealing with personal growth and leadership in neighbourhood.

c) CONTINUITY

Cognitively, people try to link past and future behaviours together to make sense of their own self as a coherent continuous existence. When a place reminds someone of their past, it helps them identify with elements of their identity as a person, causing feelings of place attachment (Robinson and Freeman, 1954; Hallowell, 1955; Twigger-Ross and Uzzell, 1996; cited in: Scannell and Gifford, 2010, p.5).

Scannell and Gifford (2010) recommend that research involving place attachment includes the three key aspects: cognitive, affective and behavioural, but that studies are tackled with a tailored approach where indicators address issues according to the objectives of the study. This research adopts this view and the construction of a method that looks at the three key aspects by measuring key variables of place psychology is explained in detail in later sections of this chapter.

Since concepts and definitions are so complex and interlinked, one of the most important factors in the study of place attachment is establishing the definition of the concepts involved and correlating these with mixed research methods. But the study of place attachment has been rather slow recently and this is partly due to the multiplicity of terms, definitions and frameworks which make comparisons inconsistent (Young, 1990; Soja, 2010; cited in: Hernandez, Hidalgo and Ruiz, 2014, p.125).

Riger and Lavrakas (1981; Mesh & Manor, 1998; Uzzell et al., 2002; Mazumdar and Mazumdar, 2004; cited in: Scannell and Gifford, 2010, p.4)

believe place attachment is reflected by people's length of residence, ownership and plans to remain in the place but the phenomena of attachment is complex. Williams and Vaske (2003; cited in: Hernandez et al., 2014, p.129) disagree, they believe place identity was identified as a cognitive concept and place dependence is related but these are separate and individual variables not dimensions of place attachment (Hernandez et al., 2007; Ruiz, Hernandez and Hidalgo, 2011; cited in: Hernandez et al., 2014, p.128). Lewica (2011; cited in: Seamon, 2014, p.11) thinks variables of place attachment are independent from predictors such as age, social status, time spent in a place, etc., simply because they are part of a broader synergy between the environment and the physical body. Seamon (2014) disagrees, he thinks that place attachment relates to other variables like culture, rootedness of place, level of activity and involvement in the place, group identity, etc. But independently of how the correlations might vary, place attachment is a universal psychology of mankind (Scannell and Gifford, 2014).

Seamon (2014) found six ways in which the place attachment processes occur: Place Interaction, referring to the everyday activity relating the human body and the space[15], including the social relations which are a product of the physical locality; Place Identity, referring to the aspects that make the place unique and identifiable; Place Release, referring to accidental social encounters a place might trigger, for example, the place where we met a partner can have a high release value for us; Place Realization, referring to the environmental and human assets of a place, its physical parts; Place Creation, referring to the act of intervening in a place through design or

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[15] Lewicka (2014) explains that there are two types of human memory: (1) the 'I know that', which is declarative (episodic and semantic); and (2) the 'I know how' which is procedural and internalised through motion and cognition and more dependent on residence duration as it develops through repetition. Connerton (1989, cited in Lewicka, 2014, p.52) defined 'habit memory' as a type of memory embedded in places.

policies, or by arbitrary decisions which deny the natural evolution of a place; and Place Intensification, referring to well thought policies and interventions that can enhance the natural characteristics of a place. According to Seamon (2014) all six processes are related to the intensity of emotional place attachment, feelings that can range from disinterest to deep love, even leading people to sacrifice their own lives for a place (Relph, 1976, 2006; Shamai, 1991; cited in: Seamon, 2014, p.19). This is an interesting take that links the social and perceptual dimensions of place and it will be reviewed later on when the results of both place dimensions are correlated.

Place attachment has been recently associated with well-being and mobility with social disintegration, this does not mean that one is good and another one is bad. Even when all people are mobile, some are more mobile than others and the option and ability to 'move' are related to social stratification (Bauman, 1998; Cass et al., 2005, cited in: Gustafson, 2014, p.37)

Mobility in a diverse society increases cosmopolitanism and tolerance. The assumption in the field has been that place attachment is in invert proportion to mobility but that is not necessarily the case, people who move or emigrate can develop multiple attachments (Gustafson, 2014; Lewicka, 2014), even sedentary people can attach differently to their homes and to their work places but to both simultaneously. This is why it is important to consider the attachment of those who have less mobility and who have remained in a place for longer, but also the attachment of those who are in a place temporarily or for a short time as both cases might exhibit qualitative differences. There are therefore two types of attachment: the 'rooted' and the 'on route', and both are equally relevant and the relation of these two types of attachment with the scale of attachment (neighbourhood, city or

nation) has shown mixed results[16] (Gustafson, 2014). Rishbeth (2014) carried out research in a community of first generation of immigrants from several countries and cultures, in Sheffield, England. Using locational storytelling, she found that people connect places of the past with places of the present through the use of memory and establish that people attach to multiple places and develop what they called 'Transitional Attachment' which can in turn lead to rootedness. Lewicka (2014) supports this view, she argues that research has used length of residency as a measure of place attachment and that this could be misleading because even when it is one of the most consistent predictors, it is not necessarily the only indicator, other factors need to be considered to discover the different types of attachment within a place. Length of residence is however linked to social engagement and it therefore was dealt with in this study by the social dimension of place.

A comprehensive framework to study place attachment with an ecological view was proposed by Mihaylov and Perkins (2014). It involved a series of variables in communities which were facing environmental disruption. They looked at: (A) Place Definition, with regards to how the community perceived their neighbourhood in terms of identity and boundaries. This dimension can explain attitudes of acceptance, adaptation and opposition within neighbourhood renewal schemes; (B) Place Dependence, this happens when people are attached to the services and support provided by a place rather than to the identity of the place. This

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[16] Barcus and Brunn (2009, cited in: Gustafson, 2014, p.39) describe three categories of attachment: 'rooted', for people who remained in a location for a long time by their own choice. Forced mobility can lead to 'root shock' (Lewicka, 2014); 'tied to place', for those who wouldn't choose to stay lack the resources to move; and 'mobile but attached', for people who left due to work, education or life circumstances but who remain attached to a place.

variable is linked to cognitive extension of one self, sense of ownership and investment in place; (C) Place Identity, relating to the dependence on the symbolic meaning of place, which is associated to the individual's own identity, most frequently linked positively with opposition to change; (D) Place Bonding, which refers to the affective or emotional bond towards a place, also most frequently linked positively with opposition to change; (E) Social Capital, which influences peoples capacity and modes of engaging in collective action; (F) Collective Efficacy, which refers to people empowerment and the confidence they have to organise themselves for mobilization; (G) Sense of Community, which relates physical rootedness and social bonding; (H) Neighbouring, comprising emotional attachment and levels of support; (I) Citizen Participation, referring to people's involvement in grassroots action groups; (J) Place-based Social Interactions, referring to bridging[17] and bonding[18] of networks; (K) Bridging Social Capital, with regards to the ability to use knowledge and skills to enhance power; and (L) Community Response, relating to the capacity to collectively mobilise, adapt or accept change. Points A, C, E, F, G, H, I, J, K and L are dealt with by the social dimension of place in this research (see Chapter 3). B and D are adopted for the measure of Place attachment.

Kopec (2012) thinks place attachment is a personal affiliation between a person and a place which leads to a feeling of security, control and belonging; and that it can be influenced by three variables: 1) Personal characteristics and behaviours; 2) Facilities, opportunities and resources available; 3) A sense of belonging. Place attachment can be enhanced and sometimes developed through the opportunity to personalise place and

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[17] Bridging: shorten distances through negotiation between confronting groups (MacGillivray, 2004).
[18] Bonding: bringing like-minded groups together (MacGillivray, 2004).

restricting the degree of personalisation can have great impact on the level of place attachment. Kopec (2012) measured place attachment using four variables: 1) Psychological needs, referring to the necessity to escape stress, find comfort and safety in a place; 2) Monetary value, as this might be a factor that prompts people to stay in a neighbourhood or move if they want to go up the property ladder; 3) Amenities and attributes, in relation to the level of services which make people feel comfortable in the neighbourhood; and 4) Functionality, referring to how useful the place or space is for people. Kopek's idea of place attachment correspond with Mihaylov and Perkins's ideas and are adopted by this research.

Looking at how authors are contemplating place attachment processes and variables involved, it is clear that most approaches consider: a type of place dependency associated with facilities and 'needing what the place offers for life/survival'; and a personal realization and behaviours associated with personal growth and identity. Definitions vary amongst different approaches however it is clear that both processes are relevant to understand the complex phenomena.

In summary, the concepts and interpretation of place attachment phenomena are complicated and still there is no consensus. There are also great associations between the perceptual and social dimensions of place. The adopted interpretation of place attachment for the purpose of this study is shown in Table 5.1. Section 5.2 of this chapter goes into more length to explaining how the variables will be captured for this research.

Table 5.1: Summary of Place attachment concepts adopted

AUTHORS	CAUSES/INFLUENCES/DIMENSIONS	ADOPTED/ADAPTED
Scannell and Guilford (2010, pp.1-10)	Cognitive; affective; behavioural	Included all three in the Perceptual dimension of place analysis
Carrus et al. (2014, pp.154-156)		Environmental behaviours
Mihaylov and Perkins (2014, pp.65-71)	Place definition; Place dependence; Place bonding	Location dependency Emotional connection
Kopec (2012, p.178)	Facilities and resources; monetary value; amenities and attributes	Location dependency
	Personal behaviours; Sense of belonging	Emotional connection

5.1.c Place care

Environmental behaviour research has identified the key issues which explain how people relate to their environment, some of which are: (A) place personalisation, (B) territoriality, (C) way finding, and (D) degree of privacy; core aspects of the brain development in animals, including Homo Sapiens (Zeisel, 2006). (C) is discussed in the Mental mapping section and (D) is discussed in the Morphological dimension chapter.

Personalisation (A) is important because through the use of objects that trigger our memories we are able to define our own self, which is essential to understanding our role and place in society (Zeisel, 2006), it gives us autonomy and empowerment (Cassidy, 1997). Despite having introduced different forms of public consultation, most developments are designed by architects and planners are homogeneous and do not allow people personalising their own homes, this causes distress and have numerous psychological and physiological effects on the population (Cassidy, 1997) as this prevents people from developing a sense of belonging, and from finding their own identity and social status (Bell et al., 1990). This aspect of place care is dealt with in the participation and place shaping discussions within this

research.

Territorial demarcation (B) serves as a mean to demarcate and defend space, but it can also be a way to organise groups and develop identity, leading to sentiments of attachment (Bell et al., 1990). Territoriality can be defined as '*a set of behaviours and cognitions an organism or group exhibits, based on perceived ownership[19] of physical space*'. In a controlled environment, we reduce the emotional stimuli load therefore reducing stressors; in our home we feel secure. In neighbourhoods and communities, territorialism promotes a sense of belonging, trust and social safety, and it can prevents certain zones from vandalism (Bell et al., 1990). Henderson et al. (2007, p. 63 cited in: Hopkins, 2010, p.119) discussed territoriality as a key aspect of people's psychology. Territorial attitudes, they said, are common in neighbourhoods and often stronger amongst youngsters. This happens when boundaries that are not visible in maps that are present in the residents' mental map of their neighbourhood, and are often also noticed by visitors. Hopkins (2010) believes that neighbourhoods in disadvantage, and offering fewer opportunities, show stronger cases of territoriality that correlates with enhanced levels of identity amongst certain groups, frequently causing even stronger social divisions in the long term due to selective affiliation. This fragmentation, they say, is often 'the norm' that allows individuals to find social identity (Hopkins, 2010). Kintrea et al. (2006: 6, cited in: Hopkins, 2010, p.122) found a link between social structures and some of the key factors that motivate territorial behaviours. They demonstrated that a sense of ownership over place was one of the motifs associated with territorial behaviours. Newman (1996) coined the term 'defensible space' in neighbourhoods for

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[19] Perceived ownership, according to the author, refers to both actual ownership and control over a space.

places that allow people to control the spaces around their homes; therefore relying on peoples' governance instead of the help from the authorities. He (Newman, 1996) found that anonymous places shared by numerous households did not trigger sentiments of affect or identity whilst private spaces or those shared by two families were well maintained and controlled because the larger the number of people sharing a space, the smaller the individual claim to that place becomes and therefore the perceived right to conduct activities in the place also diminishes. Streets where people felt a sense of ownership, and where despite being open to the general public it could be perceived that one was entering a private zone, were calm and clean (Newman, 1996). The degree to which spaces are private or public is of huge importance, especially because some public spaces become private through public acts of appropriation (Chen, Orum and Paulsen, 2013). Space appropriation is the process of taking ownership of unused property through legal or illegal action in urbanism, it is the harnessing of underused space, is as a tool to question public or private areas to create new activities (Awan, Schneider and Till, 2011). Jimenez-Dominguez (2007) defined the concept of appropriation as a common human action to use the right to the city and public spaces of encounter. He further states that the process differs from other concepts such as ownership, as it implies a collective activity taking place, and it always suggests a reciprocated feeling: "*I own the city and the city owns me.*" The concept of appropriation, the author states, has an affective dimension which translates into identification and attachment, it is the human need to relate to a place that, in a technological era, is out of their control.

Carrus et al. (2014) found that place attachment is directly linked to pro and anti-environmental attitudes and behaviours. This emerged from the notion of relating the mother-child bond to the adult-place bond, positive

feelings emerging from the relationship translate into positive attitudes and behaviours[20]. The need to improve our places and make them our own, and the need to participate in social groups and become members of a community are associated with self-identity, which is partly achieved through our bonds with place; these feelings trigger positive attitudes and behaviours towards the environment (Brown, 2000; Carrus et al., 2014, pp.154-156). The level or scale of environmental protection (a result of territoriality) is also very relevant. For example, groups who oppose to wind turbines in coastal landscaped areas could be considered to have anti-environmental attitudes emerging from place attachment. However, they might be showing pro-environmental behaviours by protecting a natural environment (or a view) at a local scale. Group identification and the protection of the personal or community identity also plays a huge role in the psychologies of place attachment, the level and scale of pro-environmental attitudes and place care attitudes (Scannell and Gifford, 2010, cited in: Carrus et al., 2014, pp.159-

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[20] Scannell and Gifford (2014) found similarities in the ways in which people bond with people and with places and they see place attachment as a processes of psychological development and in relation to proximity-seeking: the transition between the "mother-child" of dependency towards a "place-adult" bond of self-sufficiency. The authors continue explaining that the transition from one stage of development to another happens gradually in toddlers, when the place bond cannot counteract for the mother loss, stressors are released to warn the child of imminent danger, and this mechanism is also present in adulthood if the place bond does not occur[20]. This theory explains why individuals and communities with higher levels of place attachment also have a lower perception of risk and might see areas with high crime index as safe havens. Once safety is perceived, exploration takes place and a sense of self confidence is achieved which allow the individual to grow socially and psychologically (Fried, 2000; cited in: Scannell and Gifford, 2014, p.25). Children show distress when they are being detached from their mother/carer and in a similar way, people show great anxiety and stress when being suddenly detached from a place they bonded with[20] (Devine-Wright, 2009; Fullilove, 1996; cited in: Scannell and Gifford, 2014, p.27). Childhood places are an important part of a person's identity because they evoke the transition processes of mother-child/place-adult dependence. In that sense, nostalgia is not a romantic notion but the bond between childhood and adulthood and the definition of self-identity[20] (Cooper, 1992; cited in Lewicka, 2014, p.53). Lewicka (2104) believes that people have several mechanisms to bond with place: procedural, autobiographic, genealogical, and place memory. The author used 'Interest in family history' as an indicator of place bonding and demonstrated a positive correlation.

160).

Attitudes and behaviours to 'care' for place are natural in humans and denote emotional responses associated with the need to survive. The perception of ownership and control over a territory. Table 5.2 shows a summary of the concepts adopted to measure the *Place care* variable.

Table 5.2: Summary of Place care concepts

AUTHORS	CAUSES/INFLUENCES/DIMENSIONS	ADOPTED/ADAPTED
Zeisel (2006, pp.356-358) Cassidy (1997, p.197)	Autonomy and empowerment through space definition	Participation
Newman (1996, p.11, p.17)	The degree of sharing places relates to the sense of ownership and triggers stewardship at different levels	Stewardship
Carrus et al. (2014, pp.154-156)	Environmental behaviours	Environmental behaviours

5.1.d Social value of Place

This variable is called 'social' value of place because it captures collective emotional and cognitive dimensions of public places in neighbourhoods from groups and people working as part of a group, rather than measuring value from individuals operating alone. The word 'social' was used to reflect a group/community assignation of meaning and symbolism as opposed to 'individual' values given to places. It refers to the value groups assign to public places collectively.

Place attachment in individuals involves personal connections such as memory, experience, and self-realisation. Place attachment in groups is what this thesis refers to as 'social value of place'. It occurs when places are assigned collective symbolic meanings and when memories, experiences, values and norms in connection with the place are shared amongst the group.

Social dimensions of place are central to people's feelings of

attachment. Places do not only reflect our identity but the identity of our community: a social group where we feel we belong, where we feel a sense of trust (Chen, Orum and Paulsen, 2013). These places could be a little play ground or a cul-de-sac, places which sociologist Oldenburgh (1997; cited in: Chen, Orum and Paulsen, 2013, pp.15-16) called 'third spaces' and which follow in importance to people's homes and workplace. In some neighbourhoods, there might not be sufficient provision of 'third spaces' that allow people's interactions and development of community tights.

But emotions in relation to the social value of place are intimately related to our personal emotions towards place, the same way that our personal and social identities relate. Sentiments of attachment refer to the emotions that places might trigger in people, whether they are related to aesthetic or historical values, or familiarity (Chen, Orum and Paulsen, 2013). Cultural perception is the consequence of a series of subconscious mechanisms of decoding the data received and their interpretation through learnt reasoning patterns (Bourdieu, n.a.; cited in: Webster, 2011, p.99). Through the mechanisms of perception and interpretation we assign meaning to places around us, and to their components[21], to help us understand our position within that space, this is called self-reference system, and it helps us move and survive within our environment. Meaningless as a phenomenon of perception of place does not refer to lack of meaning, as this is impossible to occur, instead it refers to a sense of confusion where signs are not interpreted or processed within the spectator self-reference systems (Luhmann, 1995). A place that invites routinely bodily activities to occur bringing people together in some sort of interaction triggers place attachment (Fullilove, 2004; Oldenburgh, 1999; Seamon, 1979, 2012a; cited in: Seamon,

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[21] Components of place: edges, boundaries, centres, axis, etc.

2014, p.13). Attachment to place occurs after collective actions become routines which trigger social bonding (Fullilove, 2004; Seamon, 1979; cited in: Seamon, 2014, p.13). However, this routines are not an impediment to natural and organic patterns of change that might occur spontaneously in places through collective intervention; these are reflections of the social dynamics on place (Seamon, 2014).

Back in 1980, Hester (2014) conducted a remarkable study in Monteo, USA. He mapped the value local residents gave to places and use the data as a guide to inform a neighbourhood renewal scheme. He defined sacred places[22] and sacred areas, which he marked in a map. During the course of the research programme he found that: 1- The most valued places were consistently emerging from people's childhood memories. 2- The majority of those places involved some sort of natural element. Hester also found that: 3- The sacred structure of places involves a centre, boundaries and character areas; 4- Vocabulary and design methods to allow the value of place to be considered in design were still not familiar to community work and participation; 5- It was possible to design considering the social value of places. Hester (2014) concluded that it makes more sense to consider place attachment for some situations, such as established communities in rapid change, and not for others such as entirely new communities built in virgin land.

The principle of *fairness* refers to having equal access to information, participation, adequate transport and good communication for all. It is also important, he states, (Hester, 2006) that the community discovers its inherent

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[22] Others believe that when the meaning is religious, the place might become sacred (Low, 1992; Vierden and Walker, 1999; Mazumdar and Mazumdar, 2004; all cited in: Scannell and Gifford, 2010, p.2).

strengths and weaknesses and that it works within those. As the community discovers its essence, the landscapes transform reflecting this. He explains that landscapes acquire status through the treatment the community gives to them, whether they are places of rituals or if they have special values or virtues. He says that there is a sense of spiritualism that connects humans with their landscapes, increasing the community awareness of the place and enhancing their sense of belonging.

Chen, Orum and Paulsen (2013) explained that emotional connections with place are formed over time through the repetition of rituals which assign places with meaning. These attachments could be personal or shared by groups or populations and they can vary amongst them so the same place might simultaneously mean different things to different people or groups (Chen, Orum and Paulsen, 2013).

This research adopts a variation of Hester's method to explore the value local residents gave to their public places through the Social value of place variable. The method adopted is explained in the next section of this chapter.

5.2 Translation into urban studies

Four key aspects that relate the perceptual dimension of neighbourhoods with the public realm could be established as follows:

- The ways in which people interpret and navigate their places.
- The emotional bonding with their places.
- The capacity to look after and care for their places.
- The value people add to places based on their life experiences.

Based on the above, social sciences tools were adapted to be practically applied in urban studies to capture the perception of place, as shown in Table 5.3. Three key areas of place perception were adopted: cognitive; affective; and behavioural. Focusing on four variables: Mental mapping, Place attachment, Place care and Social value of place.

Table 5.3: Methodology variables, indicators, area and population adopted for the perceptual dimension study.

VARIABLE	MEASURE	METHOD	ADAPTED FROM
Mental mapping	Edges Paths Districts Nodes Landmarks	Interviews and focus groups.	Lynch (1960)
Place attachment	Location dependency Emotional connection	Self-written questionnaires (see Introduction and appendix 2)	Mihaylov and Perkins (2014, pp.65-71) Kopec (2012, p.178)
Place care	Participation	Virtual networks analysis	Alvarez, Borsi, Rodrigues (2016)
	Stewardship	Self-written questionnaires (see Introduction and appendix 2)	Author's method
	Environmental behaviours	Self-written questionnaires (see Introduction and appendix 2)	Carrus et al. (2014, pp.154-156)
Social value of place	Love	Mapping and conversations	Hester Jr. (2014, pp.192-198)
	Protection	Walkabouts	Sue McGlynn (2016) Working in the OPUN team
	Fear and anxiety	Photo elicitation	Stedman et al.'s (2014, p.114)

Section *4.c.iii Perceptual dimension variables* in the *Introduction*, explains how the variables were appraised for the case studies of this research.

5.2.e Conclusions

The in depth literature review, focused specifically on social sciences approaches to perception of place, showed that psychological variables are

difficult to ascertain. This is particularly the case because social and psychological concepts are interlinked and phenomena are complex, making classification and differentiation difficult to achieve in practice.

The main advantage of looking directly to the fields of psychology and anthropology, as opposed to looking at the field of urban design alone, was the opportunity to focus directly on the perceptual dimensions that have shown associations with other dimensions of place (e.g. social), and to import techniques applied by other fields. Key variables were identified (see Table 5.4) and tested methodologies were adopted.

Table 5.4: Variables adopted for the social dimension of place

Mental mapping	Residents interpretation of neighbourhoods
Place attachment	Local dependency - Emotional bonding
Place care	Participation – Stewardship - Environmental behaviours
Social value of place	Collective value based on symbolism; rituals; memory

The findings of the appraisal of these variables in four neighbourhoods are discussed in Chapter 6.

CHAPTER 6
6. The perceptual dimension of place findings

This chapter begins with a description of the scope of the phenomenological spheres of perception that were subjected to analysis: the neighbourhood scale and the public place scale. It looks at some methodological adaptations necessary during the course of the work in field and the process of data collection in practice, which was associated with individual and collective psychologies. Then, it discusses the application of different techniques applied to appraise the four key variables of the perceptual dimension of public places in the four neighbourhoods, and it gives an illustration of the core results for each variable showing examples of the data captured. Although there was a clear distinction in urban morphologies, geographies and demographics between all four neighbourhoods and different data collection processes had to be applied for various reasons the data is presented by variable due to the consistencies that could be drawn across cases.

In The Meadows, methods directly imported from social sciences focusing primarily on individual responses were applied because for this case study, there was a larger budget and longer timeframes, and larger sampling was possible. The Meadows provided an opportunity to test how feasible standard environmental psychology tools were when applied directly in urban practice. As previously explained in the Social dimension chapter, some of the Sneinton data was collected by Sneinton Alchemy community organisers and handed over to the author. As explained in the Introduction, this was due to consultation fatigue; which is a recurrent problem in urbanism. For Dronfield and Killamarsh, the data collection methods had to be adjusted due to budget constraints and local politics, and to suit contractual obligations between the County Authority and OPUN Design Council, as these cases were real life

scenarios for the production of Regeneration Frameworks. Despite these discrepancies in data collection techniques and having more quantitative data in some cases than others, the analysis was carried out by the author with similar processing software models for all case studies and correlations were achieved. Discussions included at the end of the chapter illustrate how the findings had the potential to inform urban practice and how they contributed to reinforce current literature in the field.

6.1 Scope of the perceptual dimension of place

The perceptual dimension of place appraisal focused on two levels: the neighbourhood scale and the public place scale. For the neighbourhood scale, people were asked how they felt about their neighbourhoods as a whole. For the place scale they were asked how they felt about each one of the individual places they visited. The places selected were those detailed in the social dimension analysis (see Chapter 4), this was in order to correlate variables across dimensions.

Perception of place is primarily a subjective and individual measure, given that environmental responses to space are processed by individual physiologies and psychologies. However some shared interpretations of place are also present in communities, especially in relation to communal rituals and symbolic meaning. For this reason it was considered important to test and evaluate the application of methods that collected personal appreciations of place with and without emotional investment in place, as well as investigating group interpretations of place in the context of social dynamics. This is explained in detail in the paragraphs below.

6.1.a Methodological adaptations

The methodology as discussed in Chapter 5 was applied in most instances but some corrections had to be made during the process to ensure that sufficient meaningful data was collected and that the correlation of variables and across cases would be possible. For example, due to the poor levels of participation to events in Dronfield and Killamarsh, flexibility was necessary, and adopting additional techniques to capture sufficient information became necessary during the process. Sections below describe the application of additional techniques incorporated to the research: 6.1.a i- We come to you, and 6.1.a ii- Walkabouts.

Quality of place has gained importance recently and it became a key aspect of urban regeneration, as discussed in previous chapters. An interesting part of the Perceptual dimension appraisal related to the hypothesis that through investigation, it would perhaps be possible to determine if the mechanisms that triggered positive place care attitudes and behaviours in residents were the result of purely cognitive place evaluative processes or whether place-related emotions played a part in behavioural outcomes. In order to understand whether cognitive interpretations of place differed between those living in an environment (with emotional investment in place) and others, the assessment involved a standard survey of urban qualities done by professionals following Erwin and Clemente's (2013) method: 1.1.c Urban qualities. The results of the urban qualities appraisals with this method was based purely in a cognitive evaluation of place. This was then correlated with the social value of place results, which encapsulated residents' place emotions. The findings are discussed below.

i- We come to you

Due to the low level of attendance to events, a task called *"We come to you"* was introduced for Dronfield and Killamarsh. It involved looking for participants and approaching them randomly in populated public places and ask questions that would fill in research gaps found after the character and place appraisals. Circa 50% of the people approached in Dronfield agreed to participate. A total of 18 adult residents of various age groups and 16 teenagers participated. This was effective as an alternative to approach groups that would not necessarily be inclined to participate, as young adults and people in nursing or care homes. At least 80% of the people approached in Killamarsh refused to participate. In many occasions people were rude and aggressive towards researchers, stating they did not trust anyone and had no interest in participating. A total of 22 adult residents of various age groups participated. Participants approached casually on the streets and parks were invited to join the social value of place task at a community event, some of whom attended. The issue of trust as an indicator of social capital, and its relevance in engagement and participation is discussed in more detail later on.

ii- Walkabouts

For Dronfield and Killamarsh, additionally to the initial place assessment, a collective appraisal was carried out with professionals from OPUN and a group of participants working separately in sub-teams. This method was introduced as a way to correlate professional and public appreciations of place. Groups discussed their views on points 1-9 and 11-2 in Dronfield in Figure 6.1 and all points in Figure 6.2 in Killamarsh. The whole walk was not possible in Dronfield due to lack of time (it was getting dark) and bad weather. The sub-teams logged their discussions in purpose-made forms, capturing various Perceptual

dimension variables simultaneously. The results of these appraisals are shown below.

Figure 6.1: Dronfield walkabout route (source: Google maps, 2015).

Dronfield:

1.   Professionals: Two centres were identified: 1) Library, monument and Civic Hall; 2) Station and The Forge but they feel disconnected from the other. The commercial centre of Dronfield feels hidden from other parts of town.

Participants: It is a Town of two halves divided by the railway. We feel the boundaries of the town centre go from the High Street/Gosforth Lane junction down to The Forge. We do not believe the shops by the railway station are part of the town centre. Most parts of the town we want to get to are accessible. The green routes are very well connected (Gosforth Valley and Leebrook Valley) and continue through the town. There is very active use of the footpath. It is easier to walk through the green paths that it is walking by the roads.

2.   Professionals: Arriving from the Station it is not clear which direction the centre is. Turning to the right, one needs to walk some way before realising

it is not leading to places of interest. Turning to the left there are two alternative routes, one along the road and over the bridge, which is long and heavy to walk; and another over the pedestrian bridge, which is not intuitive but is a more direct route to the centre. The church serves as an orientation point. The easiest routes for orientation are High St and Church St, they are clear, linear and have landmark buildings.

Participants: *It is difficult to give directions to people, even for how to reach the town centre. The Callywhite and Gosforth Industrial Estates are difficult to find for visitors.*

3.   Professionals: Most of the route felt safe even at night, although, alone at night, one would not walk the path along the river. The main concerns for pedestrians are: a) the speed of traffic; b) the lack of crossing along desire lines; and c) the narrow pavements.

Participants: *Farwater Lane is overgrown and difficult to move through with a pushchair. It feels like a safe town but cars dominate the streets. There is not a right balance between car space and pedestrian space. It is difficult to cross the road, there are few crossings in appropriate places. This is particularly the case if you want to go from Sainsbury's to the Civic Centre. There is a smooth but continuous flow of cars so it is difficult to cross. This would be even more important when the new barn opens as more people will need to cross towards the civic centre. Delivery vehicles block the road at any time. The two car civic centre car parks are split with no vehicular connection between the two, this means that cars have to do a very long loop around to look for spaces on the other car park adding unnecessary car movement.*

4.   Professionals: Everywhere we walked seems safe. Boundaries to private

land or buildings are either clearly marked or buildings are well placed and there are very few ambiguous places.

Participants: It is a safe town but there are some places that feel a bit vulnerable. There had been some house burglaries.

5.   Professionals: The liveliest area is in the car park by the Civic Hall and by the Library. Shops, buses and Leisure Centre and Health Centre all help attract people to the centre. The Forge is also a place to go for social meetings. The riverside path is a quiet and peaceful route and although some casual encounter might happen this is not a place for social activity.

Participants: It is a contained town and it feels quiet "village-y". The market has gone down-hill and it is not what it was. It is very disjointed as it is in various locations in and out doors and it is not a destination anymore as it used to be. A good innovation or change like a farmers market would be nice.

A group of eight teenagers walking by that said: we would like somewhere "cool" to meet, somewhere where we could buy affordable food in a town centre location so that we can all walk to meet up there.

6.   Professionals: The best place is in front of the library, it is green, it has benches, it is surrounded by heritage buildings, and it has a clear centre and well defined boundaries. Also there is a good green space is along Station Road, which has a monument that acts as a space for children to play, it has benches and you can hear the stream running. A minus would be the entrance to Sainsbury's which is designed for cars and disconnected from residential areas. The quality of streets does not match the quality of buildings and green spaces, and there is scope for improvements.

Participants: There are lots of cafes to meet up such as the forge but otherwise they'd go out to the garden centre, Coal Aston and to pubs in the peak district. The place outside the Library is the best place in the town. It hosts Christmas tree, Good Friday services, etc. The parks are excellent, both neighbourhood ones which are an incidental part of the journey, and large parks.

7.   Professionals: The place where most contact with nature occurs is along the Valley path along the stream, between the church and Gosforth Valley. Most places within the Town centre have green edges, trees or views.

Participants: There is green space everywhere, even in the town centre. You feel in touch with nature even though you are in a town. We like the swamp and we feel surrounded by green areas.

8.   Professionals: The most memorable place is the Library building and green space outside, continuing to the Peel monument. The shopping and car park by the Civic Centre.

Participants: The most memorable thing we'd put in a postcard would be the Library and the pubs. The town has its own atmosphere. We like it and it is a good place to bring up children. It has a strong community feel and we have very active voluntary groups. I particularly like the A61 flyover, it is beautiful architecture.

9.   Professionals: The walk from the Library to The Forge would be the place we are most likely to visit. The least likely places we would visit are the shops by the Station on Sheffield Rd.

Participants: The parks are the most desirable places, we can spend time with

our children there for free. Sildenfingen Park is a destination on its own. We like the walk from the civic centre to our homes.

Killamarsh:
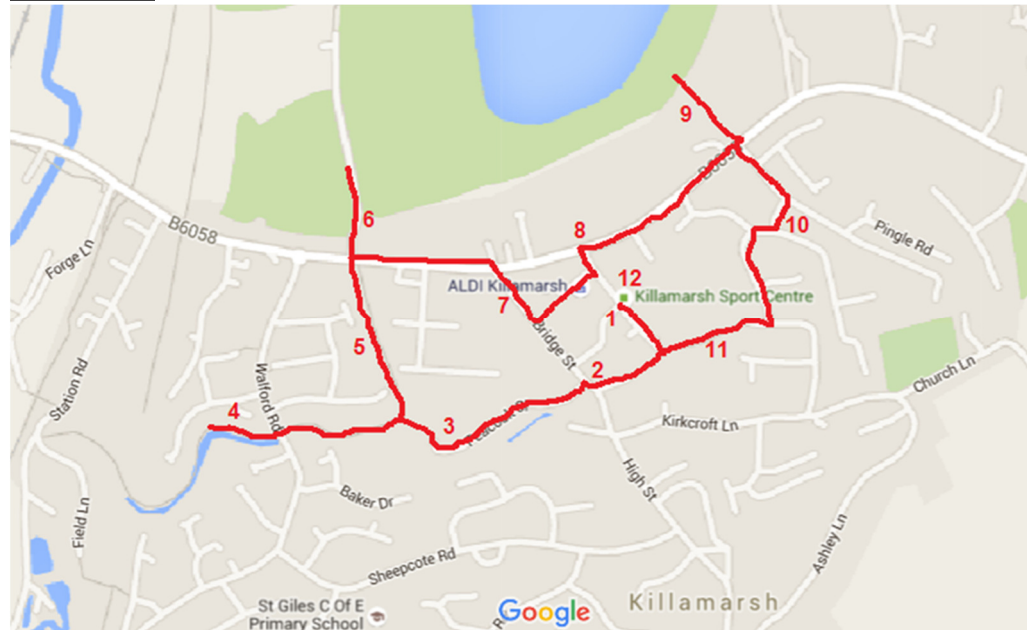
Figure 6.2: Killamarsh Walkabout route (source: Google maps, 2015).

1.   Professionals: The areas adjacent to Bridge Street and Sheffield Road seem well connected. All other curvilinear areas are disconnected to the town centre, or connections are not clear.

Participants: The footpaths are not well maintained and there is litter all over.

2.   Professionals: Arriving to the centre is easy, the shops are easily found. However, the facilities (library, sports centre etc.) are not easy to reach, the lack of signposts, visibility and legibility makes it very difficult to find facilities. Behind the facilities and elsewhere in the town there are lots of footpaths but it not clear what these are connecting or where they go.

Participants: The footpaths are confusing. We would like to close some footpaths but we think this might be an issue. We cannot decide what the best solution for this problem is.

3.   Professionals: Bridge Street feels quiet safe and it has less traffic than Sheffield Road. Walking the paths and blind alleys do not feel safe, particularly after dark.

Participants: Although there are a lot of footpaths a lot of them are not pleasant to use and do not feel positive as an experience or safe.

4.   Professionals: In general, the town feels unsafe. Car parks are not overlooked and many places feel like "a vandalism paradise".
There is a problem with antisocial behaviour in houses that have their backs to the recreation areas. There is vandalism of fences and properties.

5.   Professionals: Bridge Street and outside the Aldi supermarket are the liveliest areas.

Participants: The area where the shops are, are normally busy. We feel that Killamarsh used to be a village with a friendly community and now the town has expanded and people don't know each other. The pubs still offer a meeting place for the locals.

6.   Professionals: The old part of the town in High Street is the nicest part of Killamarsh. There are no public open spaces where people can meet or interact, or a space they could call the heart of the community.

Participants: We have lost the place where we had our Christmas tree and the market when Aldi came.

7.   Professionals: The Greenway is a good asset as it brings people close to nature within the town. The Rother Valley Park is excellent although the links could be improved.

Participants: We love the parks and green spaces by the canal and the track by the railway. Some of the recreation areas have vandalism issues.

8.   Professionals: Rother Valley Park and the historic routes (Sheffield Rd and Bridge St/High St) are the most memorable places.

Participants: We love the green places, especially Rother Valley Park. The old village used to be very nice.

9.   Professionals: The Rother Valley Park is the place we'd like to visit the most.

Participants: We liked the green places around the town and schools are good.

Participants doing the Walkabout largely agreed that there was a lack of public places in Dronfield and Killamarsh, in the latter the quality of the built environment came up as a concern. However, in Dronfield people said the village character made up for the lack of public realm. Participants also enjoyed discussing how the physical and geographical aspects of place, particularly the railway and the hills, might have impacted on the ways in which the town was perceived and where people felt they belonged. The community considered

this information extremely valuable and worth it of incorporation on their Regeneration Frameworks.

iii- Urban qualities

Ewing and Clemente (2012) developed an assessment method based on scoring urban design qualities in a scale of 0 to 5 (none to excellent) in public places. They found that these can be consistently appraised by people with or without training, giving valid and reliable results. The quality of public places goes beyond the excellence of the actual materials and landscape, many spatial attributes make places special and change people's attitudes and behaviours in that space (Ewing and Clemente, 2012). Ewing and Clemente's method was adjusted to the scale and nature of the case study. On that basis, twelve variables to measure urban design quality were selected. These measures are relevant due to the possible impact they might have on social behaviours and social networking attitudes at a neighbourhood level. The variables are:

1. Adaptability: the ability of the place to host different activities, whether they might be planned or spontaneous. Places which are more flexible have the capacity to host a variety of functions and activities. From a functional perspective, groups might be attracted to places with greater flexibility. From a psychological perspective, adaptable spaces might lack restrictions dictated by design and might therefore be more inviting to appropriation, encouraging a larger variety of uses.

2. Legibility: how easy it is to understand the purpose and function of the space and how easy it is to move around it. A more legible place is easier to understand and to circulate, which makes people feel more comfortable and safe in the space. With a higher level of self-awareness and confidence, people might be more prompt to engage in social interaction.

3. Centrality: how easy it is to establish a central point, not in the geographical sense but in the sense of 'the heart' of the place. Human relations are directly translated to the position we occupy in our territory. Places which make the process of translating subconscious social hierarchy into spatial location might facilitate the process of social structuring amongst groups and therefore they might encourage network structure formation and longer term engagements.

4. Linkage: how well connected this place is to similar or significant places in the area and to the buildings and spaces that surround it. Places which are more accessible and easier to find might naturally become gathering points due to the practicality of meeting somewhere identifiable and easy to find.

5. Enclosure: how protected, surrounded and overlooked the place is. How much the place is defined and demarcated by vertical elements surrounding it (walls, trees, buildings, etc.). Large open spaces relate to freedom and a valid argument might be that in those spaces people find it easier to network with strangers and brake social boundaries which night lead to innovation. Another valid argument might be that in enclosed and overlooked places, people find a sense of safety that subconsciously increases the levels of trust by reinforcing people self-confidence. With the element of fear and possible threat eliminated, people might be more prompt to social interaction.

6. Meaning: how easy it is to understand the social and cultural meaning of the place, for example, the space around a church or a school will determine patterns of social use which are established norms within society and are clearly understood. Places with no meaning might be perceived as 'blank canvas' and therefore regularly used by social groups possibly resulting in civic rituals which in turn might assign specific symbolism to places, meanings that belong to that particular social group. Places with embedded social norms,

where rituals and symbolism is largely understood by the wide society, might be more prompt to institutionalised networking and social interaction occurring within establish norms.

7. Territoriality: if temporary or permanent appropriation of the public place can take place. Some places are perceived as being suitable for territorial appropriation, this is due to a number of spatial attributes combined in particular ways, for example, an overlooked space might detract people and groups from trying to settle in a space. Places which are suitable for appropriation might encourage strong tight links and therefore high levels of cohesion in segregated groups. On the other hand, certain levels of communal appropriation of public spaces can trigger social bridging, joining diverse groups with common objectives.

8. Comfort: if the place has the necessary infrastructure and services to allow people use the space without struggles (for example seating, lighting, etc). From a functional point of view, uncomfortable places detract people from spending time there. If people do not spend time in the public realm they do not have a chance to interact and form social networks.

9. Naturalness: if the place has natural features (trees, vegetation, water, soil, sand, rocks, etc.). The impact of nature on health and psychology has been largely debated in the literature review. Content, relaxed and calm people are more likely to interact, to form social links and to help each other.

10. Refuge: how well protected from the elements the place is (for example having an undercover area, wind screen, etc). This variable is deeply linked to variables 5 (Enclosure) and 8 (Comfort). People spending more time in the public realm and feeling safer and more confident in the outdoors might result in higher levels of social interaction taking place.

11. Visibility: how easy it is to find the place for an outsider. This variable might have implication on the ways people socialise initially but also in the ways in which existing social networks grow and develop. Perceiving special clarity and transparency, and being physically visible is essential to increase the size of networks but it also has an impact on the levels of trust.

12. Upkeep: how well maintained and cleaned the place is. Apart from the obvious link between cleanliness and health, which makes us feel safe in a place, this variable is deeply related to a sense of stewardship. If a place is well looked after, it is perceived as belonging to someone who cares, and caring for a place denotes a sense of emotional attachment: "If 'others' love this place, then it might be a place worthy of affection." We feel naturally attracted to places we love and if we spend more time in those places, we socialise more.

The key findings in relation to each one of the perceptual variables is exemplified in subsequent paragraphs with fragments of the findings for each case study.

6.2. Key findings

6.2.a Mental mapping

The mental mapping exercise was not conducted in its entirety following Lynch's (1960) method but data regarding its component criteria (edges, paths, nodes, districts and landmarks) were captured during conversations in events, walkabouts and as part of interview and survey comments.

During the various events it was established that *way-finding* was perceived by people as a strong indicator of place bonding in all four neighbourhoods. Some people engaged in long heated conversations where

they clearly stated that in the 1970s parts of the neighbourhoods, they did not feel they belong to the area because after years of living there they still could not find their way around. Participants claimed to feel "*like an outsider*" in their own place. Therefore, a *Way-finding* question was added to the place bonding survey questionnaires. Table 6.1 shows a summary of the key findings regarding this variable across case studies.

Due to the strong association of this variable with urban morphology and social dimensions, and to avoid unnecessary repetition, this data and the relevance of the findings as contribution to urban literature are discussed further in Chapter 7, where correlations between morphological and social dimensions are debated.

Table 6.1: Mental mapping summary of findings across case studies

Case study	Key findings	Evidence example
The Meadows	Getting lost in a familiar place can increase stress and reduce the sense of belonging.	P1: "*I was lost. I was on the link bus the other day. When I got to my stop the bus didn't stop there it went to the next stop and when I got off the bus I though oh I will cross over here by the Police Station it was all cordoned off and I didn't know where I was.*" P2: "*We all get lost in Meadows*" – Laughter P3: "*I can relate to that*"… "*I feel like a stranger in my own neighbourhood*"
Sneinton	Landmarks play a significant role in creating a sense of place and identity	P1: "*The estate* (1970s social housing) *is a maze. I never know where I am and I end up looking up to find the windmill in the horizon so I can orientate myself.*"
Dronfield	People become familiar with their neighbourhoods and can navigate provided there are clear landmarks, paths, nodes and districts	P1: "*I kind-of appreciate that you cannot find the way round here, there are lots of little paths; but we* (local people) *know how to get to places. Once you've walked it twice you'll get to know where paths take you.*"
Killamarsh	Homogeneous developments without landmarks and distinctive character can cause disorientation	P1: "*It all looks the same up the hill. They took the character of the village away with that massive development where none ever knows where they are. The post man takes ages up there!.*"

6.2.b Place attachment

The Place attachment variable refers to the need people have to remain in a particular location, whether this might be a functional need, measured through the Location Dependency Indicator; or an emotional need, measured through the Emotional connection data. The first was captured with an evaluation looking at how people might be experiencing their places in terms of functionality - access and services, for example - and if they found in their localities what they needed to carry on with their lifestyles. The second referred to the feelings of happiness and comfort people experienced, for example observing comments such as: *"I love it here, it is peaceful and beautiful, a delightful and safe place for children to grow up".*

In The Meadows and Sneinton, quantitative data was collected in relation to this variable indicators (location dependency and emotional connection). For Dronfield and Killamarsh these were captured through qualitative data analysis emerging from interviews, focus groups and other events. The questionnaires in appendix 2 show the questions asked through questionnaires in both neighbourhoods, alongside questions relating to other variables.

The Location dependency data was analysed by scoring values to the answers given by participants for the following questions: group affiliation, home ownership, location (e.g. close to work/school), having friends or family in the area, and budget reasons. An option was made available for people who did not have a choice about their place of residence. The higher the level of agreement the higher the score (1 to 4 and 0: no entry). Table 6.2 shows a fraction of the table used to analyse the results from the Sneinton survey, for illustration.

Table 6.2: Location dependency analysis (Seninton example)

Place code	Participant code	No of community memberships	Home ownership	Location	Friends or family	Budget	Not my choice
	1	0	3	0	0	0	1
	2	1	3	0	0	0	1
	3	1	3	0	0	1	0
	4	0	3	0	0	0	1
10	5	1	4	0	1	0	0
	6	0	1	0	1	0	0
	7	1	1	0	0	0	1
	8	0	3	0	0	1	0
	9	0	3	0	0	1	0
	10	0	2	1	0	0	0
TOTAL		**4**	**26**	**1**	**2**	**3**	**4**
MEAN		**0.11**	**0.7**				
%				3	6	9	11

Similarly, Emotional connection was analysed by adding the scores for A, **Error! Reference source not found.**. The findings showed that residents chose The Meadows as a place of residence primarily due to its location (and at a lesser degree due to having family and relatives in the area). Budget did not come up as a strong reason for living in the area despite its affordability. The average sentiment was that the neighbourhood was very good at offering services, security and comfort, with average scores hitting the "strongly agree" mark. In Killamarsh, most people chose the place due to its convenient location, accessible to industrial Sheffield, and due to budget, because Killamarsh was one of the most affordable functional locations in the region. Participants in The Meadows and Dronfield had been living longer in the locality than in Sneinton and Killamarsh. Responses also showed that people tended to choose Sneinton and Dronfield primarily due to its location but also because they had friends and family in the area.

In Sneinton, people claimed to love their area, less than 1% of the participants declared that they did not like the area. Place attachment levels were high, with an average score of 76/100). This was surprising because the

answers given suggest that residents have serious points of concern:

i- Location dependency

In Dronfield, although people claimed to love the village and to be very fortunate to be able to afford living there, the results with regards to *Location dependency* questions showed that people were not completely satisfied with the provision of services and the functional aspects of their town. The results of the data obtained were analysed and these informed the Dronfield Regeneration Framework in the form of a series of long, medium and short term recommendations and action plans (OPUN, 2015). The questions asked are listed below.

Killamarsh:

In Killamarsh, although most people claimed to dislike the area and many said they would live elsewhere if they could choose, participants were more positive when it came to giving specific answers about the service provision. The results of the data obtained were analysed and these informed the Killamarsh Regeneration Framework in the form of a series of long, medium and short term recommendations and action plans (OPUN, 2015). The questions asked are listed below.

- *Does Dronfield/ Killamarsh town centre provide what you need? If not, why?*
- *Describe your experience accessing/arriving and circulating through Dronfield/Killamarsh centre*
- *What would you change in Dronfield/Killamarsh village centre if there was an opportunity for investment?*

ii- Emotional connection

The emotional connection data was then analysed by scale (neighbourhood as a whole and particular public places), in The Meadows the data was separated for New and Old Meadows, as shown in the summary

results in Table 6.3.

Table 6.3: Emotional connection data analysis (The Meadows example)

EMOTIONAL CONNECTION (mean values)						
	Specific Public Places (mean value)			Neighbourhood Public Places		
District	Feel happy	Feel comfortable	Feel safe	Feel happy	Feel comfortable	Feel safe	Ove rall
East Meadows	4.00	4.00	4.00	4.43	4.50	4.17	**4.12**
New Meadows	3.29	4.00	3.60	3.70	4.20	3.89	**3.69**
The Meadows	**3.88**	**3.93**	**3.96**	**4.06**	**4.22**	**3.97**	3.96
EMOTIONAL CONNECTION (index value I*)						
East Meadows	0.13	0.07	0.04	0.37	0.28	0.20	**0.16**
New Meadows	-0.59	0.07	-0.36	-0.36	-0.02	-0.08	**-0.27**
Variance*	0.71	0.00	0.40	0.73	0.30	0.28	**0.42**
* I = enclave mean/neighbourhood mean *Variance = difference in mean value between both districts						

Figure 6.3 shows an example of the graphic representation of this data analysis (Sneinton results).
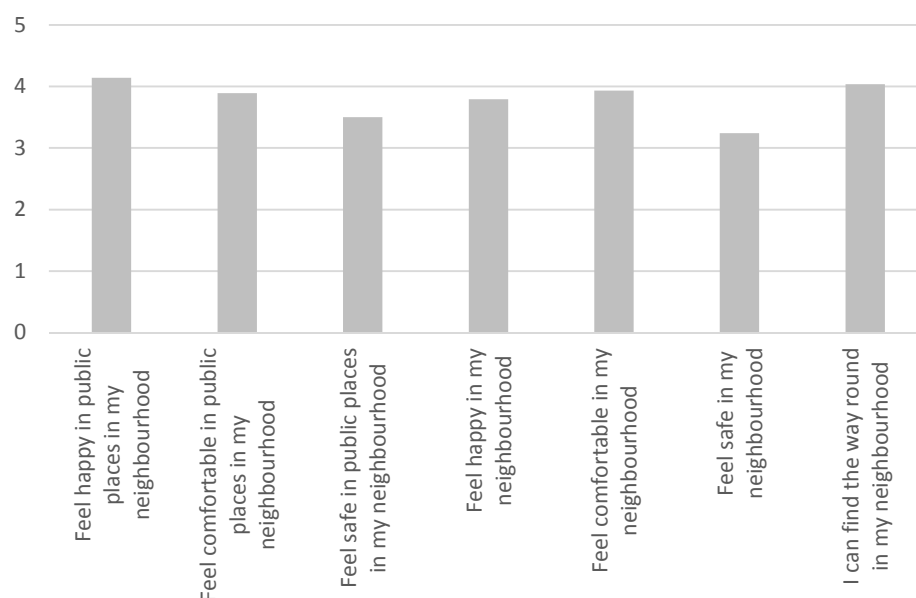
Figure 6.3: Emotional connection data analysis (Sneinton example)

What the people of Sneinton loved

Most people in Sneinton loved the location and how close the area was to town. The range of shops and facilities available and the diverse and multicultural community are also key assets.

According to the community, Sneinton was a friendly place where people were nice and polite to each other. The quality of schools and public transport provision were also recurrent themes, followed by the recent improvement in safety and security.

What the people of Sneinton are concerned about

The main concerns emerging were the difficulties in integrating cultures/communities (especially newcomers) and the number of young people misbehaving and abusing drugs and alcohol. Residents are also concerned about the amount of littler, dog foul and household rubbish people dump on the streets and parks. Residents also complained that there are not enough facilities for children and young teenagers and that students can by noisy in the night. The issue of bad behaviours with regards to noise and litter were generally associated with the fact that people do not feel they belong and therefore they do not care enough for the area. Residents complained that parking is difficult and despite all the speed bumps cars still race dangerously along the roads. Bad smells, prostitution, domestic violence/arguments were also mentioned.

This discrepancy with regards to the overall feeling about their neighbourhoods and the actual answers to the questions (Dronfield and Sneinton felt positive but disliked many/important things; Killamarsh felt negative but disliked fewer things) could be related to: a) expectations in the

population, possibly related to the levels of social capital and mobility; b) emotions towards place being triggered by determinants other than the 'place dependency' variable. This is an issue that requires further investigation, larger population samples and more in-depth consistent surveys. Although the results from this analysis alone are not considered sufficient to understand the place attachment phenomenon, they give an insight into the ways in which each one of these neighbourhoods might relate emotionally with their places and how much they might depend on them.

In Dronfield and Killamarsh, the data was collected in a qualitative format. The results from the data collection for Dronfield and Killamarsh are shown below as illustration.

In summary, the Place attachment variable results across all case studies is shown in Table 6.4.

Table 6.4: Place attachment summary of key findings across case studies

Case study	Location dependency	Emotional connection
The Meadows	Length of residency with home ownership	Happiness with place 3.96 (in scale 1 to 5)
	Not their choice (social housing)	Fond memories of the past Attachment to natural features
Sneinton		Happiness with place 3.80 (in scale 1 to 5)
	Family in the area Location (close to work)	
	Budget	Family in the area Attachment to heritage and character
Dronfield	Good schools	Attachment to green spaces Fond memories of the past
	Close to work (Chesterfield and Sheffield)	Attachment to heritage and character
	Close to Peak District	
Killamarsh	Budget Close to work	Low levels of attachment Fond memories of the past Nostalgia

6.2.c Place care

To measure the Pace care variable this study looked at: a) participation/public engagement; b) stewardship (positive attitudes and behaviours towards place), as a vehicle for inquiring place care phenomena; and c) environmental behaviours.

i- Participation

"One of the sites for action of spatial agents is engagement with social structures[1]. If people don't think they have the power to solve their problems, they won't even think about how to solve them.[2]"

(^{1} Awan, Schneider and Till, 2011, p.56;

^{2}Saul D. Alinsky)

This section looks at leadership and engagement during the application of the methodology on all four case studies. It also looks at how these might have enabled or constrained the process of data collection in practice. It also expands onto how methods had to be adjusted under specific circumstances and how these adaptations worked. Although this variable is strongly linked to the social dimension of place, it was previously found that the motivations to participate are also linked to place emotions and the need to protect and defend one's territory.

The real problem in community engagement, participation and placemaking is to make sure that all voices are heard and all parties have equal representation; those who take part in networking normally represent a set of shared interests or stakes (Cabe, Lowndes and Skelcher identified, 1997). Hamdi (2010) worked on participatory strategies driven by localism; knowledge

of place; building up ownership and reducing dependency by strengthening communities to develop and evolve mechanisms for governance. The author concluded that flexibility and adaptability of rules[1] were an essential route to success because communities are self-driven by a dynamic force in constant metamorphosis.

Since Putnam's measure of the decline of America's social capital in 1995 the use of formal and informal networks analysis became well established (Stone, 2001). However, despite the progress in the development of methods, sometimes it is very difficult to draw the line between formal and informal types of network action (Halpern, 2005). It is often informal relationships that determine the residents' perception of a place and its people (Creasy, Gavellin and Potter, 2008). A key starting point in participation and engagement is to understand existing informal networks and to ensure those who are alienated can also participate. This can be achieved by learning about formal and informal networks, formal and informal activities and community catalysts or people who are key in bringing the community together (Creasy, Gavellin and Potter, 2008).

A good understanding of community networking patterns can be fundamental for researchers. Knowing how communities might operate can give a hint of which methodologies could be more effective and efficient to collect information. Understanding place attachment can also help us create as

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[1] He believes that in the context of community involvement 'patterns' can be a restriction for growth, independence and creativity, and that they would be a contriving force against change, an essential element in community development. Hamdi (2010) makes a reference to The Oregon Experiment[a] (Alexander c., 1975; cited in: Hamdi, 2010, p.161) and the notion of shared principles in the form of 'patterns', which form a legible language to establish a platform for making design-based decisions eliminating the 'chaos' factor.

[a] *The Oregon Experiment*: book by Christopher Alexander, 1975. The book states that: 'feeling' should be the primary criteria used for designing, prioritising places that needed the most help; 'patterns' are good solutions to generic problems which should be available in a community encyclopedia; places should be shaped for people, to make them feel more whole, and to nourish them; people should be involved in the construction of their community.

an opportunity to build up empowerment and increase participation (Manzo and Perkins, 2006). Creasy, Gavellin and Potter (2008) believe participation processes can be good to generate new ties and bonding in communities and neighbourhoods, but that understanding how this can be achieved requires an in depth knowledge of how people and groups interact.

Leadership was identified as extremely important for the operation of social networks[2]. Without strong and lively leaders who become responsible for increasing the network, the growth and strengthening of groups become very slow. People's organisation can be done only by people themselves, this creates political structures that not only shape communities but also sustain them (Alisky, 1969). Leaders can naturally emerge from a group because they have specific knowledge in the area of common interest or because they have good contacts[3], but there can also be competition for the leading role (Cabe, Lowndes and Skelcher, 1997). Alisky (1969) believed the only way for people to be able to express as a community is through their leaders; the importance of the leader being chosen by people is often underestimated in community work. He thinks people are the soil, and the leaders the roots of a tree, the soil nourishes the routes as they are deeply immerse in the contents of the soil and they are very well established within it. In Alisky's (1969) model, the community anchors their leader, not the other way round, he thinks a solid base is needed to support the creation and survival of a community. Confronted personalities,

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[2] The UK Department of Trade and Industry identified Leadership as one of the seven indicators of social capital. (Alisky, 1969; Cabe, Lowndes and Skelcher, 1997; Alex MacGillivray, 2004; Ginige and Amaratunga, 2013).

[3] These key actors are normally 'network weavers'; they often have connections outside the network and therefore can create bridges with other groups; they can also encourage others to behave in similar ways (Valdis Krebs and June Holley, 2006).

views or approaches can be divisive and have a negative impact on the group and its goals (Cabe, Lowndes and Skelcher, 1997).

A key to the success of community engagement is understanding the life of the community, their values, habits, points of view and even their rituals. There is a huge risks of having an outsider representing a community, someone who may physically be within the locality but who does not really understand the group, its concerns, its goals and its traditions (Alisky's, 1969) or what makes community cohesive (Giuffre, 2013).

In all four case studies there was a degree of community leadership but not always achieving their goals. The individualities of each case are discussed in the next few sections of this chapter.

The Meadows

In voluntary networks, some actors are influenced by other members who encourage them to make contact with new actors in order to engage them in participation; this shows that group behaviours such as altruism or motivation can expand through social network action (Fowler and Christakis, 2008). In society, individuals and groups feel the pressure to look and behave like others in order to belong, adjusting to the group social norms, it is an adaptive characteristic intrinsic to the social nature of human beings and it can be underpinned by social networks (Rowson, Broome and Jones, 2010).

In The Meadows, key actors and community leaders were well linked, bridged groups and encouraged volunteer participation. Community leaders in The Meadows were able to take ownership of the engagement process based on their experience working with their community. They decided it would be appropriate to conduct separate focus groups to allow all participants to

express their thoughts and emotions freely, without confrontations and without feeling any social pressures. This led to wide, representative participation with an opportunity for everyone to express their views. Participants expressed that previous consultation experiences had not been so successful and that they felt frustrated:

"I was frustrated [2009 Neighbourhood Plan consultation] *because I could not get the answers or the information from anyone despite how loud I shouted. I went to church on Sunday and cried a lot…I feel I'm finally being heard."* (The Meadows Participant - 2014).

In The Meadows, certain groups engaged more in consultation and activities than others. On average, circa 2% of the population participated in tasks involving a series of engagement and participation methods ranging from self-written questionnaires and surveys to interviews, activities and focus groups. The analysis of how representative the sample population was, revealed that certain socio-economic variables correlated with participation rates in The Meadows as described in Appendix 4.

Sneinton

During the four years of community engagement run by Sneinton Alchemy, more than 40% of the participants said they did not feel they had a voice in Sneinton: 7% explained they did not know where to go how to make themselves heard; and more than 12% said they did not trust the authorities, that consultations and other ways of communications were box-ticking exercises and that what they had to say was of no interest to councillors and leaders. Less than 29% of the participants affirmed they felt they had a voice in Sneinton and 31% did not answer. Just under 40% of the participants said they would like to have a voice in their neighbourhood.

Cabe, Lowndes and Skelcher (1997) identified four main types of attitudes: (1) enthusiasts, who value networking as a tool to overcome constraints, to participate and be innovative; (2) activists, who see networking as a more organisational approach to meeting goals; (3) pragmatists, who use networking as a means of materialising funding; and (4) opponents, who see networking being contrived by government time tables and agendas. Sneinton had a good mix of enthusiasts, activists, and pragmatists but had very few opponents. In Sneinton, participation levels had been regularly exceptionally high in the neighbourhood due to the high level of activity organised by community coordinators, who were brought along and commissioned by Sneinton Alchemy to focus on community engagement to create a vision for their Neighbourhood Plan.

Due to the work already carried out by community groups and other agencies working in the area, it was not necessary to understand how to engage the public as the group leading the research - Sneinton Alchemy - was also in charge of broad engagement strategies. The group regularly published events by leafleting every single house in the neighbourhood, posting flyers regularly on social media, communicating with other groups and agencies operating in the area, and setting pop-up consultation stands regularly in various locations across the neighbourhood. The only possibility to assess how keen people were to participate in this study was during the place and community questionnaires. The task which was done by random sampling approaching participants in the streets and public places; 62% of the people approached accepted to participate.

The results of this research were presented at a community event which included presentations from Public Health England, Local GP Surgeries and

Global Health[4], Nottingham Trent University, Our Sneinton community group and SEND[5]. The attendance was extraordinary, more than 100 neighbours participated. At the event there was food, drinks and live music. There is no doubt the work of community groups in Sneinton is exceptional and people living in the area are fortunate to have such open channels of communication, clear democratic leadership and opportunity for action and governance to a level that is rarely reported in the UK.

<u>Dronfield and Killamarsh</u>

According to the ONS survey 2011 (2015, ONS) for Dronfield and Killamarsh, the vast majority of the population in both areas was of white British background, Christian or non-religious, the groups that participated more actively in The Meadows. Therefore, a very good level of engagement was assumed as the method proposed was expected to appeal this type of demographics. Both towns differed significantly in social capital variables. For example, Dronfield and Killamarsh had comparatively higher level of home ownerships, higher levels of education and higher incomes than Killamarsh. In response to these differences, tailored strategies were thought to be essential to ensure inclusive participation.

The majority of the population in Dronfield was in employment with higher levels of education and income. Therefore virtual network engagement and weekend activities were the types of strategies believed to be the most suited for these demographics. Leadership was strong in these areas. Both communities were active with regards to local heritage and history. A local historian living in Dronfield had been leading a heritage group that, along with

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[4] Global Heatlh: a project comparing Kenya's and Sneinton's health issues on minorities.
[5] SEND's Supporting Sneinton volunteering project

the Civic Society, successfully recovered and reactivated the Railway Station. The group was also in the process of renovating an old barn and converting it into a local museum and events venue. A similar group was very active in Killamarsh and had been attempting to recover the canal and regenerate the areas around it be so far had been unsuccessful in securing funds. Both areas had enormous amount of detailed historical research available and groups were keen in documenting this data. The Killamarsh group had been working with local schools in local heritage projects for a while. As the communities were so active in creating a historic record and they already had high quality data available, the historic mapping analysis was dismissed from the study and the information provided by the community was used to give shape to the regeneration framework.

The population in Killamarsh had comparatively lower levels of education, more households with dependent children and more people of young age. Working with nurseries, schools and youth groups was considered key to ensure inclusive participation in this area. However, time constraints did not allow for the engagement processes to be completed with education establishments and other key institutions. Nevertheless, events were planned during the day and on weekends, following the public activity patterns surveyed in the area. Despite the efforts designing tailored strategies, participation was low in comparison with the Nottingham cases: 108 people in Dronfield (0.5% of the population) and 113 in Killamarsh (1.2% of the population). Table 6.5 below shows the values for all four case studies. This issue was investigated further, both during events and talking to people casually on the streets, in both areas. It was concluded that the reason for lack of participation was the low levels of trust from the population to the authorities leading the process.

Table 6.5: Overall participation across case studies.

CASE STUDY		CASE TYPE	PROCESS LED BY	PARTICIPATION (% of the population 4 week period)
The Meadows	Nottingham	Urban	Researcher	3.0 %
Sneinton			Community	4.8 %
Dronfield	North East Derbyshire	Semi-rural	Authority	0.5 %
Killamarsh				1.2 %

This coincides with the findings of other authors. Grunter and Kroll-Smith (2007) found that local people might feel official organisations are acting with 'bad intent' if public participation schemes have been organised in a way that impedes their involvement due to the venue, time or type of event but when the root of the issues between agencies and local communities lies in distorted and inadequate communication methods, there is a chance to arrive to a positive resolution. This is especially the case, they said, when norms and reciprocity are shared amongst opposing groups and agencies. A vehicle to succeed can be finding commonalities upon which to bridge and bond, and these can be either positive assets or the triggers of conflict themselves. More than twenty years ago, Putnam (1993; cited in: Halpern, 2005, p.8), in his study of Italian regions, found that high levels of participation went hand in hand with the levels of trust, a measure of social capital. Lowndes et al. (2001; cited in: Townsend and Tull, 2004, p.14) also carried out a survey that supports this view. They found out that the main reasons for people to participate related to finding their interests compromised and that people did not participate when they did not trust their local governments, or when they were unaware of their opportunities to participate.

Across cases it was found that the relative effectiveness of each one of the engagement methods applied depended greatly on the character, culture and behaviours of the communities subject to analysis. The group dynamics,

social capital and social network analysis provided a good platform to design successful engagement processes.

A virtual network analysis (see Appendix 4) took place and the participation trends in all four cases were analysed in the context of local politics and social dynamics (Alvarez, Borsi, Rodrigues, 2016).

ii- Stewardship

The stewardship indicator was strong across cases at a group level more than at an individual level in The Meadows. In Dronfield, groups had gathered to reinstate and maintain the Railway Station (discussed in Chapter 4). In Sneinton, community groups had renovated the Green Windmill (discussed in Chapter 4) and another group called Growing Spaces had taken over the allotments to produce food to cater community events free of charge. In Killamarsh, a group of volunteer neighbours organised themselves to clean the canal walkways. Conversely, at an individual basis there was some evidence of disregard attitudes and damaging behaviours. For example, during a 30 minutes visit to the car park on the western access to the reservoir, two neighbours drove to the location to dispose of household waste, totally ignoring the surveyors' presence and acting as if this was acceptable behaviour.

Table 6.6: Transcript of a focus groups even in The Meadows. Talk about the Arkwright Community Gardens.

Participant A: The community gardens, just in case you are left with the impression that it is just a plot of land with a few cabbages on it, it is more than that. It is way more than that.
Participant B: It is a lot more than that.
Participant A: Regionally and even nationally it is quite acknowledged isn't it?
Participant B: Very nationally. We also do employment. We have trainees on the garden. We have volunteers that come year after year…

At the time of the visits, a few people were seen walking across the Greenway, walking dogs and even sitting on benches having a chat. Killamarsh Greenway also offered numerous opportunities for local people to forage. However there was no evidence that fruit or leaves had been picked. Similar behaviours were observed in Sneinton and The Meadows but not in Dronfield. The stewardship indicator had strong correlation with urban morphology and to avoid unnecessary repetition, this data and the relevance of the findings as contribution to urban literature are discussed in Chapter 7, where correlations between morphological, social and perceptual dimensions are debated.

iii- Environmental behaviours

The results showed that the environmental behaviours measured followed very similar patterns across cases and attitudes at an individual level were more dependent on social capital indicators, particularly 'levels of education'. Figure 6.4 shows the mean value for environmental behaviours, which were roughly consistent across case studies. Table 6.7 below shows an example (Dronfield) of the level of concern for environmental issues of some participants in particular had about their environments.

Summarising, place care attitudes and behaviours entail a number of complicated and interlinked dynamics and instead of including this variable as an indicator of the Perceptual dimension of place in urban practice, it would be more appropriate to research further what design principles could potentially contribute to more positives attitudes and behaviours towards the neighbouring environment. The correlations found with other dimensions (discussed in Chapter 7) could be a starting point to highlight the relevance of developing design principles as an avenue to facilitate positive processes of place engagement, governance and management in neighbourhoods.
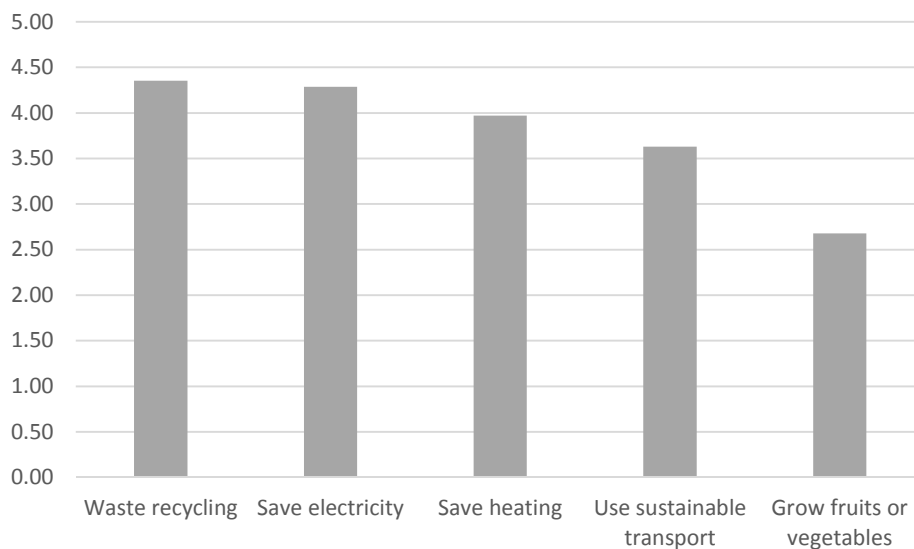
Figure 6.4: Environmental behaviours; mean value across case studies (0: no answer; 1: never; 2: often; 3: very often; 4: almost always; 5: always).

Table 6.7: Participant's response regarding environmental issues (Dronfield example)

Response to Dronfield Community Consultation

Many thanks for the opportunity to add my thoughts for the setting out of items to structure the Local Plan.

My immediate thoughts lie more in the environmental aspect, viz
  - *The Civic Centre should not have any additional charity shops, but more customer specific businesses be given opportunities. e.g. model/toy shops; shoe shops;*
  - *Provision of an outdoor metal adult gym facility. The current provision in Cliffe Park is welcome, but now the evenings are dark after 5:00pm, this is of no practical use. A site adjacent to main street lighting such as the perimeter of Sindelfingen Park would likely see a greater evening usage.*
  - *The current campaigner group to improve movement around the local area on bicycles to be given more positive assistance to expedite their work and transform aspiration into reality.*
  - *FODS have worked with considerable effort to improve evening train facilities for Theatre goers in Sheffield/Chesterfield as well as other user groups in these metropolises. Once the new franchises have been awarded, pressure to be brought to satisfy these researched requests.*
  - *The perpetual and vexatious question of additional car parking at the Dronfield Rail Station be resolved in the best interests of the travelling public.*
 I await the results with interest they are published in the Local Plan. Many thanks, Rob Barron.

6.2.d Social value of place

The social value of place variable was appraised with the mapping exercise technique adapted from Hester's method in three neighbourhoods: The Meadows, Dronfield and Killamarsh. This part of the study was certainly the task that neighbours enjoyed the most. Conversations were flowing; laughter and joy were contagious. Participants started by thinking carefully where to place their only sticker and started to talk to one another, sharing experiences and perceptions of their places and telling stories of their past. The information gained during the 20 minutes of this task was vast and rich. As Hester Jr. stated (discussed in previous Chapters), it is indeed possible to map neighbours sentiments, values and visions for their neighbourhood places. This is undoubtedly the part of the appraisal that produced more highly valuable gains in relation to the time and effort investment, whilst also being incredibly gratifying for all.

The mapping task was not completed for Sneinton, where enough data was provided by community organisers who had already conducted surveys with very similar questions to those formulated in the other neighbourhoods for this study (the blank forms are included in the Appendix 2.j). Although participants did not map their most valued places, descriptions of place made it possible to associate comments with specifics points in the map. The community coordinators had been working in the area for more than four years and they had gathered an immense amount of data from residents. A random sample of all this data was made available to the researcher for analysis for this and other studies. Their exercise involved years of careful collection of complex and extensive qualitative data, but it did not produce mapped information or quantitative data. As Sneinton did not provide data in numerical form and the responses to question were open rather than by multiple choice, the data had to be interpreted and transferred to a matrix for the purpose of quantification.

This process was laborious and time consuming, and margins of error were potentially introduced through the data interpretation process. However, the responses were more meaningful and gave a clearer picture of reasons people might have for certain feelings or behaviours. In order to achieve a combination of both approaches (numerical and phenomenological), the studies in Dronfield and Killamarsh, which happened after The Meadows and Sneinton, included the walkabouts and discussion groups afterwards, where this and other variables were discussed further, enriching numerical results with limited efforts.

The Meadows

Neighbours across focus groups identified the places they valued the most. Unanimously, neighbours said they loved places where they spent time taking part in social activities, such as the community centre, the art pavilion and the shopping precinct. They also added significant emotional value to places of historic interest such as Victorian landmark buildings and derelict sports pavilions. Natural features such as the river waterfront, the recreation grounds and Victorian green infrastructure also scored high values, although the primary feeling these places triggered was stewardship. People also cared about their streets, particularly if they were in disrepair or if they impeded circulation. Neighbours in New Meadows did not seem to regard streets as places where they could meet and socialise. Neighbours in Old Meadows displayed more stewardship and spontaneous appropriation attitudes; they added flower pots and benches to the street scene. Figure 6.5 shows the Social Value of Place mapping results and a summary of the type of places neighbours value the most overall. When asked which public places neighbours would prioritise for investment (care, time and money) they chose the places they

valued the most (although the *Urban qualities* in those places scored low values).

FOCUS GROUP 1

FOCUS GROUP 2

Green: places you regularly visit, where you feel you are welcomed, you enjoy being there and you feel those places belong to you as a member of your community.
Pink: places you do not visit, where you might feel you are not welcomed, maybe you feel in danger or under threat, maybe you feel those places do not belong to you as a member of your community but they belong to other groups.
Purple: places you feel need more attention and love from the community and/or from the authorities, places you feel are being neglected but have the potential to be better.
Orange: places you feel are under imminent threat, or where conflict is imminent or actually happening, either between different community groups or between residents and the authorities.

Figure 6.5: Social Value of Place mapping (map source: Google Maps, 2014). Places neighbours value the most in The Meadows (size of dot relates to total number of stickers).

Sneinton

The data analysis revealed that less than 1% of the participants declared that they did not like the area. Most people in Sneinton loved the location and how close the area is to the city centre. The range of shops and facilities available and the diverse and multicultural community were also key assets. According to the community, Sneinton was a friendly place where people were nice and polite to each other. The quality of schools and public transport provision were also recurrent themes, followed by the recent improvement in safety and security.

Residents valued the presence of the Windmill and other historic landmarks, the natural environments (parks and trees), and the relative lack of

traffic and noise. The quality of the architecture, the charm of the streets and the high level of voluntary community work were also mentioned as positive points.

More than 2% of the participants declared that they had no concerns about the area. The main concerns emerging are the difficulties in integrating cultures/communities (especially newcomers) and the number of young people misbehaving and abusing drugs and alcohol. Residents were also concerned about the amount of littler, dog foul and household rubbish people dump on the streets and parks. Residents also complained that there are not enough facilities for children and young teenagers and that students can by noisy in the night. The issue of bad behaviours with regards to noise and litter were generally associated with the fact that people do not feel they belong and therefore they do not care enough for the area. Residents complained that parking was difficult and despite all the speed bumps cars still race dangerously along the roads. Bad smells, prostitution, domestic violence/arguments were also mentioned.

More than 12% of the participants declared that they did not have dreams for the area. The most recurrent dream was the introduction of frequent creative-industry events (music, art, history, etc.) to integrate communities and engage youngsters and students. The need for cleanliness also came up high in the vision for Sneinton. People mentioned a desire to organise seasonal or regular clean-ups led by the community and engaging different ages and cultures. Slightly below in rating was the dream of restoring the historic heritage and giving more emphasis to parks and natural features. A standard supermarket was rather high in the priority list alongside a strategy to force landlords/leaseholders to look after their properties. The need to tackle public health issues and loneliness were also mentioned. Many residents could think of one dream to solve all the issues: for people to care more.

More than 17% of the participants declared that they did not have any ideas. Less than 4% said it was the responsibility of the authorities to improve the area. The most recurrent ideas were the creation of regular events and festivals to blend communities and age groups, and to increase the provision of sports facilities, especially for children and youngsters. Many people mention the importance of working with schools and in several languages to increase the levels of education about public health and behaviours. The idea of organising cleaning events involving children from schools was also popular. Alongside were the engagement of the elderly, "*who can be very isolated*", and increasing the awareness of nature through creative gardening, community allotments, etc. People also recognised the need to act as a community and several strategies to form neighbourhood groups, such as Neighbourhood Watch and street representatives, were mentioned. Table 6.8 on page 284 summarises the key findings.

Dronfield and Killamarsh

Similarly to the other case studies, Dronfield and Killamarsh benefitted from the social value of place appraisal greatly. The analysis and correlation of all the information in relation to this variable, collected conducting all the different tasks and with a variety of methods, resulted in a classification of areas of concern that was identical for both towns:

1- Access and movement
2- Green routes and spaces
3- The town centre
4- Heritage and character
5- Community and social networks

Table 6.8: Summary of Sneinton Alchemy's interviews data analysis.

Frequency of appearance	Love	Concern	Dreams	Ideas
High	Multicultural diversity	Integration of cultures and communities	Creative events	Inclusive and blending community events and festivals
	Range of shops & facilities	youngsters misbehaving / drugs & alcohol	Integrate cultures and communities	More sports facilities, especially for young people
	Location	Litter, rubbish and dog fouling	More for children and youngsters	Increasing education Working with schools
	Friendly people		People to care more	Public health awareness
	Schools	Not enough facilities for children & youngsters	Cleanliness	Cleaning events
Medium	Public transport	Lack of care for the neighbourhood	Historic heritage enhancement	Engaging the elderly
	Safety *"I don't feel fear when I'm*		Natural environments enhancement	Contact with nature Gardening & growing
	Windmill & historic landmarks	Parking is difficult	Standard supermarket (e.g.ASDA)	
Low	Natural environments	Cars racing on the roads	Forcing landlords/leaseholders to look after properties	Getting together
	Quiet/not much traffic		Tackling public health	
	Architecture & character			
	Voluntary community work			
Most representative quote	*"If I won the lottery I wouldn't move."*	*"I once knew the name of everyone on the street."*	*"People often have stopped dreaming."*	*"To empower other people to make lives simpler+better; to help them know their rights and get them involved in self control"*

These areas of concern became chapters in the Regeneration Frameworks (OPUN, 2016). Although the classification was the same for both towns, which is probably due to the semi-rural locations and economic and geographical characteristics common to both places, the contents were significantly different. This point demonstrates the varied types of data that can be captured with the proposed methodologies, which in these cases, it adjusted well to two very different demographics.

6.2.e Urban qualities Vs Social value of place

Combining the place appraisals achieved by consulting the residents with those achieved through the Urban qualities method, it was found that there was indeed a discrepancy between cognitive evaluation of place done by professionals and the value people gave to public places though the Social value of place variable. In The Meadows, when neighbours across focus groups identified the places they valued the most, unanimously they said they loved places where they spent time taking part in social activities (community centre, art pavilion and shopping precinct). They also added significant emotional value to places of historic interest such as Victorian landmark buildings and derelict sports pavilions. Natural features such as the river waterfront, the recreation grounds and Victorian green infrastructure also scored high values, although the primary feeling these places triggered was stewardship. People also cared about their streets, particularly if they were in disrepair or if they impeded circulation.

Figure 6.6 shows the type of places neighbours value the most overall. When asked which public places neighbours would prioritise for investment (care, time and money) they chose the places they valued, although the urban qualities in for those places were low. The most salient urban quality in places people loved was Amenity. Natural Features scored higher in places that

triggered stewardship sentiments, such as Queen Walk's park and boulevard. Neighbours said they felt anxious over places subject to eminent redevelopment, which are also those with low urban design qualities such as the new tram line and the old pavilion in the recreation grounds. Places where neighbours felt fear coincide with the location of reported crime in the area. These places showed the highest overall value of urban qualities with the exception of Landscape, Materials, Street furniture, Lighting, Upkeep, which scored low values. Table 6.9 shows the mean value and the salient variables for the urban design qualities appraised in the places neighbours valued the most.

The results were consistent across case studies, people valued places of social gathering, with historic meaning and with natural features, and the latter always triggered place care attitudes and behaviours. When analysing the qualitative data it was evident that people valued experiences and moments in that meant something to them, such as memories and time for recreation and contemplation. The texts in Table 6.10, shared by a neighbour of Killamarsh and a former neighbour of Dronfield, demonstrate this point.
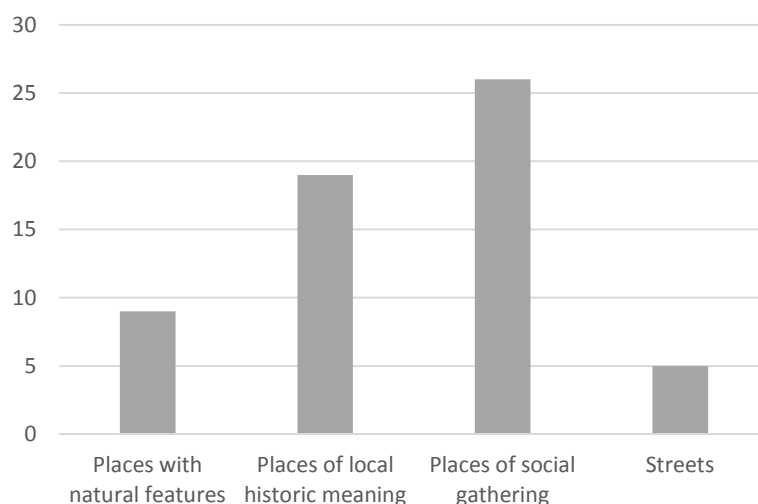
Figure 6.6: Type of places neighbours value the most in The Meadows (No of stickers)

Table 6.9: Mean value and salient urban design qualities on places neighbours value the most in The Meadows

Questions of task 3) Social Value of Place		Urban Design Qualities appraised (task 1- Place assessment*) on places selected by neighbours	
The order below corresponds with order of formulation during the task	Mean	Variables with highest score	
Area (mean value)	**2.73**	* Mean values (scale 0-5)	
1	Places people Love	**2.97**	Amenity
2	Places where people feel fear *(also where most crime is reported)*	**3.36**	Enclosure - Refuge Centrality - Interaction
3	Places people want to care for	**2.61**	Natural features
4	Places people feel anxious about *(also to be redeveloped soon)*	**1.53**	Lowest scores for all variables

Table 6.10: Memories shared by neighbours of Dronfield and Killamarsh (examples)

A Memory of Killamarsh

I was born on this road in 1957 at number 21 and well remember it looking like this for years as my friends and I grew up here. There were no hedges, or very few then, and I still remember the concrete posts with two strands of galvanised wire strung between them to mark boundaries of gardens and paths. The scene depicted here has changed so much that there is not enough space to tell of all of them, most of the houses eventually did have hedges planted but these have made way for wavy lap fencing and concrete posts. Driveways have also taken most of the front gardens that during the sixties were full of flowerbeds and lawns, lovingly tended by men of the mining industry who lived and worked here.

Sat here, looking at this photo, stirs memories of happier times and old friends - Kevin Lacy, Christopher Wheelhouse, David Lewis, Terrence Hurst, Paul Barker to name but a few that I grew up and knocked about with.

Those days, when school was finished, we were gone, playing in the fields that surrounded the white city in every direction, there was so much untouched countryside then and we could be gone for hours, only returning home for food or if our respective parents sent out a message for us to come home. That has always amazed me, how anyone of the parents would send out a message that it was time to come home and it would find us, no matter how far away we were. We did it all football, cricket, fishing, tennis, yes even tennis as down on Sheffield Road there were courts (long gone now) just before the Nethergreen pub and playing fields everywhere.

I still live on Rectory Road at number 25, but it saddens me to say that it is not the estate I fondly remember and that is a real shame."

A Memory of Dronfield

I was born at 4 Chapel Yard, Dronfield on 13th September 1941. We lived with my grandma, Mrs Watson, as my dad Jack Keeble was away in Burma fighting the Japanese. It was only a small house as it was originally a Methodist or Quaker Meeting House which had been converted into two cottages. Our neighbours were Mr and Mrs King and their two sons Maurice and Brian. It was quite a lonely childhood as I had no one to play with until I started school at 5 years old. I went to The County Primary School until I was 11 years when I passed my 11 plus and went to Dronfield Grammar School.

When I was 5 my parents got one of the prefabs on Stubley Lane. It was wonderful to have a bathroom with a heated towel rail and a fridge and electric cooker. We felt really posh. Three of my brothers were

born there, Stuart, Allen and Philip. When my dad was demobbed in 1948 he worked for Derbyshire County Council for a short time on the roadworks then he got a job at the new Gunstones Bakery as nearly everyone in Dronfield did. I worked there myself for a time when I first left school. We had some good times there although we also worked hard.
I still go back to Dronfield but it has changed such a lot now. Nowhere stays the same, that is progress, but I can reminisce about my childhood and remember the days when we all seemed so more innocent than the children today. Happy days. "
A memory shared by Ann Lee

6.3 Conclusions

6.3.a Conclusions on participation and engagement

This section was included to review the relevance of participation and engagement processes as a vehicle to delivering social sustainability due to the importance of this topic. Previous chapters discussed how engaging local people and being able to provide an opportunity for local governance is one of the key contributors to sustainable development, therefore the author considered the topic worthy of in depth analysis and discussion.

For all case studies the methodology was designed to deliver processes focused on democratic participation and engagement, additionally to serving as data collecting methods. This was possible due to the flexibility of the methods, as it is structured in tasks that allows various techniques to be applied for each data set aimed for. Communities adapted to working with the methodologies proposed relatively well, with the exception of over consultation cases. The county council were keen to conduct an innovative bottom-up consultation scheme to set up precedent with a truly democratic and participatory engagement and governance processes in North East Derbyshire. This political decision enabled the success of the process.

Understanding how representative participation is in neighbourhoods can open opportunities for meaningful engagement and can help urban

practitioners design more inclusive Placemaking/Place-shaping programmes. Looking at how people participated in The Meadows was a good strategy for creating a programme to maximise engagement in Dronfield and Killamarsh. A positive learning in the cases of Dronfield and Killamarsh was the preparation of an engagement strategy based on the socio-economic background and possible lifestyles of potential participants. This not only allowed the researchers to programme events at key times and locations, but it also allowed using a form of advertising with high outreach. For example, the analysis reflected that most people in Dronfield are in full time employment and have dependent children and therefore events were made in the evenings and were child-friendly. Whilst in Killamarsh daytime and Saturday mornings were ideal to work with people using the leisure centre and other facilities in town. Community leaders commented on how impressed they were with the quality and value of the information gathered and presented to them in such a short period of time, "*you hit the nail in the head*", a local leader said. *"Needless to say"*, they added, *"we are grateful to you* (the author) *and the University of Nottingham for choosing our neighbourhood as a case study."*

The application of the proposed method had the side effect of empowering the communities involved by providing more effective and efficient techniques than the ones being used by the authorities on previous consultations. This is particularly the case for the Walkabout and the Social Value of Place data collection tasks, which the county authorities have considered adopting for future schemes and for inclusion in their own engagement procedures.

In summary, all the data was collected for all four case studies. However, in order for this to be possible, it was necessary to allow some flexibility in the methodology and to have an understanding of the communities' characteristics

in order to tailor the methods to each case. The main learnings with regards to data collection through engagement were the need to:

- Understand leadership and engagement trends in communities.

- Understand levels of trust and local politics within communities.

- Allow for flexibility of data collection methods.

The participation and engagement variable was discussed in a publication by the author: *The role of social network analysis on participation and placemaking* (Alvarez, Borsi, Rodrigues 2016). The publication concluded that *"Amongst the four case studies analysed, there seemed to be a direct correlation between the levels of unemployment and the levels of traditional face to face participation.";* and that the patterns of engagement are more dependent on lifestyles and socio-economic backgrounds than on place attachment variables.

6.3.b Conclusions on the Perceptual dimension of place

The four variables of the perceptual dimension of place were so intimately related that their separation for analysis was complicated. The results of this research not only showed they overlapped but also that they are combined with other dimensions.

The *Mental mapping* variable analysis was especially interesting as it provided information about how perceptual factors could influence attitudes and behaviours in neighbourhoods, especially in relation to variables of other place dimensions such as morphology. This is discussed further in Chapter 7.

Place attachment appeared to be very complex as a phenomenon, it implied response to environmental stimuli as well as personal psychologies and

social identity patterns and dynamics. Despite all this, attempting to capture this perceptual variable in urban practice not only could inform designers with regards to the issues that people put at the top of their priorities but it could also facilitate engagement processes, building up social capital and capacity.

Place care variables are not as relevant as an element for analysis themselves but they are valuable as a parameter upon which to establish best design practice that could encourage and drive more positive environmental attitudes. This is also discussed further in Chapter 7 when dimensions of place are correlated.

The *Social value of place* task showed that neighbours' values are based on the significance places have on their daily lives and not necessarily on the urban qualities as they might be evaluated by urban design professionals. Neighbours valued places for social gathering, with local meaning, with natural features and streets, in that order. The most salient urban qualities appraised in valued places were: Amenity in places people love; and Natural Features in places people that trigger stewardship sentiments. Neighbours feel anxious over places subject to eminent redevelopment, and naturally they feel fear in areas of reported crime. These findings were consistent across case studies.

Based on the combined results of the Perceptual dimension appraisal a recommendation was made to Sneinton Alchemy that three key areas of further research and analysis should inform Sneinton Neighbourhood Plan: Green Infrastructure, Historic Heritage and Public Realm. The reason for this is that all three areas: a) have assets to build upon; b) are of high concern to the local population; and c) due to their location, networks built upon their assets could physically knit the perceptual quilt of the fragmented urban structure by applying well tested urban design strategies, starting to construct a more

integrated and equitable Sneinton.

Table 6.11: Perceptual dimension variables summary of core findings across case studies

Case study	Mental mapping	Place attachment	Place Care	Social value of place
The Meadows	Related to plot patterns	Length of residence	Stewardship Territorial	Places for social gathering Green spaces Historic features
Sneinton	Related to plot patterns	Family and close relations	Heritage Social	Places for social gathering Historic features Green spaces
Dronfield	Landmark led	Character Greenery	Heritage Stewardship	Green spaces Historic features Places for social gathering
Killamarsh	Related to plot patterns	Low levels Nostalgia	Low levels Heritage	Green spaces Historic features Leisure centre (clubs)

To facilitate the process, the data was summarised and presented in an iconographic format (see the Appendix) to the community at a multi-purpose event organised by Sneinton Alchemy: I Love Sneinton. The event was highly attended. During the course of the event, residents addressed the author asking questions about the panel and commenting that the information made sense, and that there did not seem to be any contradiction with their perception of the neighbourhood. Participants were provided with a blank sheet of paper and pens and they added comments to the information on the boards. No contradicting information was reported at any stage.

Significantly important is the different perception of professional appraisals of place simply based on cognitive evaluation of urban qualities and the value neighbours gave to their public places, which were bested on a combination of cognitive evaluation and emotional response to place.

The next Chapter shows the main findings from the correlation of all three dimensions of place and discusses how these contribute to urban practice and literature.

CHAPTER 7

7. Morphological, social and perceptual dimensions of place

This chapter reviews the interaction and correlation of the key variables of the three core dimensions of place in the four case study neighbourhoods and it situates these in the context of associated literature. The main statements made are supported by the evidence presented in the data analysis Chapters (3, 4 and 6). The core findings include:

- *Social cohesion* correlated to *Length of residence* more than with other place variables.

- *Organised activities* and *Informal contact* were in inverse correlation in The Meadows, and in relation to *Plot patterns*.

- *Road hierarchy* corresponded with social spheres and enclave belonging behaviours.

- Cadastral patterns with well-formed streets mediated more casual, informal contact at a street level and more *Place care* attitudes (especially stewardship) than other patterns.

- Public buildings and associated public open spaces around them facilitated the creation and development of social networks.

- The ways neighbours valued public places had correlation with certain urban characteristics of place but not with professional evaluations of urban quality.

This section finishes with an overview of synergies found between the three dimensions of place analysed, shown diagrammatically in Table 7.1, and speculates some possible implications of these findings for academia and urban practice.

Table 7.1: Key synergies of place dimension variables.

	MORPHOLOGICAL	SOCIAL	PERCEPTUAL
CORRELATION 1.a	Road hierarchy	Social networks	Mental mapping
CORRELATION 1.b	Plot patterns	Informal contact	Place care
CORRELATION 1.c	Public place networks	Organised activities	Social value of place

7.1 Key findings: morphological, social and perceptual dimensions of place

The Social cohesion variable resulted to be similar in all neighbourhoods although the quantitative data obtained for The Meadows and Sneinton was in different formats and the Dronfield and Killamarsh data was of a qualitative nature, it was possible to draw comparisons when other measures were also considered, such as the number and type of social networks and these operated and connected. However, no evidence was found to assume that the social cohesion variable was associated directly to the other place variables analysed.

In Sneinton, as the socio-cultural values of close-knit ties were shared, social clusters often lined up with the morphological fragmentations of enclaves, and in many cases people felt they belonged to 'little islands' within the neighbourhood:

"There is a lack of communication between cultures; no animosity, but no gelling either; demographics are varied, but there is no communication between various cultural groups. It can be like 'little islands' of tiny groups." (S Participant -

2015).

Quantitative data obtained during the public place surveys in The Meadows and Sneinton[1] showed no correlation between the levels of exchange and specific locations. The type and frequency of exchange were evenly distributed across all public places in both neighbourhoods and levels were similar across both cases. The results for 'I come across/meet neighbours/other people I know' measure correlated with exchange of casual chats, this is normally representative of looser ties. The 'I come across/meet relatives' value correlated with higher levels of exchange, this is typical of close-knit relations such as emotional support and exchange of objects and money. Length of residence came up stronger as a determinant of social cohesion than close-knit networks, as per Table 7.2.

Table 7.2: Social cohesion mean values in The Meadows and Sneinton.

SOCIAL COHESION	THE MEADOWS	SNEINTON
Participants with friends and/or family in the neighbourhood.	35%	38%
Participants' average number of years of residence in the area.	3.2	2.8
Level of exchange	5.6	4.9
OVERALL SOCIAL COHESION	4.1	3.8

7.1.a Road hierarchy, Social networks and Mental mapping

<u>The Meadows</u>

In The Meadows, there were strong social identities and group behaviours amongst community networks, such as enclave-belonging attitudes and self-segregation. Participants tended to define themselves as coming from 'The

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[1] No quantitative data was collected for Killamarsh and Dronfield due to time constraints and local politics.

New', 'The East' or 'The Old Meadows', and referred to each other are being "from the other side".

> *"The New Meadows Residents Association started a programme helping the East Meadows…we are all volunteer residents but have helped a lot of people for the other side."* (TM Participant - 2014).

Grunter and Kroll-Smith (2007) explained this phenomenon. Once there is an opportunity to bring up the word 'fairness' in a community in conflict, one or more parts to the conflict perceive themselves as victims of other parties' actions, which translates in the belief of having to be the party that sacrifices. These are strong sentiments linked to absence of security and anthropologically related to fear of predators and need to fight or fly attitudes. Perceptions of unfairness trigger communal sentiments of anger and fear which can linger for years, and even decades. If volatile emotions are present in the community history, they will be part of the social memory and people will mobilize in defence if necessary. Conflict has existed in The Meadows in the past, particularly because the authorities' power to evict certain parts of the neighbourhood and not others, subjected some targeted groups to force displacement. Forced displacement occurs when people are obliged to leave their neighbourhoods. This causes trauma, distress, anxiety and disturbance to people emotional ecosystem (Fullilove, 2014). Fullilove (2014) thinks people who face forced displacement go through a series of psychological stages: antecedent, when they acknowledge the threat; uprooting, when they break social ties and abandon groups and communities where they were associated; transition, when they physically move from one place to another; and resettlement, when they start to make new connections and build up a sense of identity. Devine-Wright (2014) has a different classification, he thinks the emotional stages of forced displacement

are: linked to the process of grief[2]. Nevertheless, the emotional processes linked with forced displacement leave lingering social identity emotions attached, especially when the process involves some groups and not others. Qualitative analysis of interview and focus groups responses indicate that in The Meadows, this caused the formation of long-lasting social spheres.

Till (2012, cited in: Fullilove, 2014, p.149) thinks cities become 'wounded' when their individuals or societies suffer trauma due to some physical structures being disrupted or displaced. Participants commented on how radical structural change and gentrification in some enclaves had caused population replacement:

"So when they shift half of that away [The Meadows housing] *it has a tremendous impact on the community because as it happens, some people are not able to come back 'cause they are gone astray; and the whole dynamics of this, shifts things in the community…"* (TM Participant - 2014).

Research shows that underprivileged groups inhabiting social housing have complex social relations and attachment systems that help them cope by supporting each other and that the strength of the identity achieved amongst these communities seems to relate to the social stigma created around the concept of social housing and the idea of 'social exclusion', which bring people closer together in a collective identity. In this context, forced displacement is particularly delicate and intricate, and it involves insecurities, low self-confidence, doubts in the self-ability of coping with change and lack of trust (Manzo, 2008, 2014). One neighbour in The Meadows commented:

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[2] Grief process: move announcement, when people first hear the news; shock, when they internalise the facts; denial; anger; bargaining; depression, all associated with the grief process; testing, when people have to start the new bonding process; acceptance, when they work towards a new place attachment.

"They want to gentrify the area because this land is valuable and they want higher revenue from it, but this land is ours, for our community." (TM Participant, 2014)

The impact on people's health and wellbeing was evidenced in The Meadows at a community meeting with the researcher attending incognito, where there were several cases reported:

I. A teenage girl whose school had reported on her gradually poorer performance due to the stress caused at home regarding moving home. A single mum with two daughters, one aged 14 and one aged five was being allocated to a two bedroom house so the girls would have to share the room and they did not want to do that.

II. A woman who had suffer a stroke as a result of a problem with a home she bought (see Informal Interview 6, Pat mentioned the case but she said it was a man who suffered the stroke)

III. A single mum with an 11 year old boy who was awarded 'community boy of the year' by the local scouts group. The woman had her disabled/ill father living across the road and she cared for him on a daily basis, taking food to him, bathing him in the night, caring for his home, etc. The mother and the boy were being relocated to another neighbourhood which meant she would have to either stop caring for her father or stop working, and the boy would lose all the community ties he created.

IV.   A single father with a daughter who had to be relocated to a one bedroom flat in another community. The father's name was not in the child's birth certificate. Her mother had left them after suffering mental health problems and he was asked to demonstrate by a privately taken DNA test that he was the biological father of the girl in order to qualify for a two bedroom property.

V.   A resident who was not present was mentioned. Apparently she had told other community members that she was offered a two bedroom home with a 'walking wardrobe' and advised to turn it into a third bedroom to avoid having to pay the extra tax.

VI.   Several other cases were mentioned of elderly people who were offered multi occupancy homes. The overall concern was that the council created this option to increase their revenue at the expense of people's freedom.

This finding corresponds with similar findings by Manzo (2014) with the American programme HOPE, to replace housing estates with mix-income communities with the aim to gentrify certain areas. The programme involved the forced displacement and demolition of housing blocks replacing them with housing designed to create sustainable communities. Some argued that the programme aimed to recover capital investment in inner cities by bringing middle class tax payers to those areas, others saw the fundamental error of the programme in the way in which the processes in place biased information and miss interpreted the realities and pathologies of vulnerable groups. The

result is ultimately grief, distress, disruption of social support systems and prolonged illness in the majority of the population involved (Manzo, 2014).

In The Meadows place-based networks and social spheres operated within enclaves defined by road morphologies, and strong place identity attitudes were found. The restructuring of the neighbourhood in 1970s and again in 2000s, and the recent replacement of social housing with more affluent eco-homes, caused repeated distress and anxiety to the community. This was evidenced by comments made in various focus groups and interviews. This neighbourhood has a history of change and people are apprehensive to radical changes. Participants claimed that the new tramline running along a former boulevard had divided the community further. One participant referred to the impact of the new tram line on the community:

> "*The tram has divided The Meadows in two. Divide and conquer!*"
> (TM Participant - 2014).

Sneinton, Dronfield and Killamarsh

However, the findings emerging from the analysis of qualitative data from interviews, focus groups and other events in the other neighbourhoods subjected to the study demonstrate that even when conflict is not present, road hierarchy still has the capacity to divide social groups. Across all four neighbourhoods residents shared a common understanding of spatial boundaries through mental mapping, which was independent of their socioeconomic backgrounds and lifestyles. The residents' mental map of the four neighbourhoods, and their sense of belonging, lined up with the urban fragments or enclaves created by road morphology. Neighbours and community groups adopted this division, and related geographically and

operationally to either one area or the other. Participants in all case studies were fully aware this was the case and commented about this:

"*People who live at the top* [of the hill] *know each other, we live here on the other side at the bottom* [of the hill] *and do not know who lives next door to us, but my brother in law lives just round the corner.*" (S Participant - 2015).

"*There is the people that live here at the old village* [1880s]*, and new-comers that live on the other side in the* new *states* [1970-80s]. *The ruined everything when they built them houses on the hills. We knew everyone here, now is like they're strangers.*" (K Participant - 2015).

"*We all know that Dronfield has two sides; the village* [the 1880s part of town near the railway station] *and the top* [the modern and 1970s extensions to the north of the railway]*. We often refer to people as coming from the other side of the rail.*" (D Participant - 2015).

Participants doing the walkabouts in Dronfield and Killamarsh enjoyed discussing how the physical and geographical aspects of place, particularly the railway and the hills, impacted on the ways in which the areas were perceived and where people felt they belonged. The communities considered this information extremely valuable and worth it of incorporation in their Regeneration Frameworks. There was mention of the need to integrate these areas further in functional terms through appropriate design measures. This evidences the presence of enclaves in residents' mental maps:

"*If we had a good, wide, illuminated pedestrian and cycling way from the village to the other side, more people would come to shop in the precinct and to the market.*" (D Participant, 2015)

"What we need is a safe pedestrian way coming from the top of the hill. At the moment with all those alleyways people do not walk down because it is dark and there has been antisocial behaviour. So they do not bother to come over to shop down here, they get the car and go to Sheffield." (K Participant, 2015).

Despite the spatial qualities and the historic changes being slightly different across the four case studies, participants had a similar interpretation of their neighbourhoods through mental mapping. The dominant parameters were road hierarchy and enclave belonging, followed by links (paths) and crossings (nodes). These mental maps formed by residents' perception of place were associated with some social divisions in their neighbourhoods. This was evidenced by the responses participants gave in all four case studies. Social networks seemed to operate with more strength within enclaves although there were different reasons for this: close-knit ties; social politics; socio-economic backgrounds (social housing vs home owners); history of the development (settled residents vs newcomers). In all four cases, road hierarchy, social networks operation and the mental mapping of residents created place-based social spheres. This is illustrated in the 'Social Spheres' maps in Appendix 1.b, where different colours represent the various social belonging attitudes, socio-political groups and/or social network operations. The boundaries between enclaves coincide with strong geographical boundaries (rivers and cliffs for example) or with roads, where the bus routes circulate, where there is more traffic than in streets or where houses have their back fences facing the road.

In The Meadows and Dronfield, despite these socio-spatial fragmentations, key actors managed to bridge a number of other types of networks that were based on common interests, cultural backgrounds and beliefs by hosting activities in neighbourhood landmark public buildings.

However, place identities and the sense of enclave belonging remained robust.

Some previously lonely and isolated people claimed to have found groups within the community where they felt welcomed; these activities were mainly run by volunteers. In Sneinton and Killamarsh, close ties and strong sociocultural group attitudes were partly associated with morphological enclaves because people chose to live in close proximity of their support networks. Some participants claimed to feel lonely, isolated and out-of-place, struggling to fit-in within the close-knit groups already in existence. Despite significant efforts made by community groups who organised activities to engage these people, inclusion and group bridging remained difficult to achieve. These findings support a view of fragmentation in all neighbourhoods where morphological and social structures go hand in hand, albeit for different reasons.

7.1.b Plot patterns, Informal contact and Place care

In all neighbourhoods, the urban tissue typologies correlated with the level of informal contact in public places. In cadastral tissues (mainly 1800s), where streets were narrow and terrace houses faced each other, more contact happened casually at a street level. People on their way to do their daily shop, waiting for the bus, walking the dog or taking children to school, were casually greeting each other and having short conversations. This was observed at all times when people came across with each other. Fewer instances of informal contact were observed in modern geometrical tissues. In 1970s tissues, where gaps between houses were larger and the street patterns were irregular, very little or none street contact was observed. The 1970s patterns were more reliant on the presence of public places, public

buildings and organised activities to achieve similar overall levels of social contact (formal plus informal mean values) than cadastral tissues, where people interacted more casually on the streets on a daily basis.

Qualitative evidence gathered also suggests that most people (circa 90%) prefer the 1880s cadastral patterns and that they dislike curvilinear areas. The reasons given related to the charm of the area, the 'neighbouring' feeling of the streets and the fact that they could navigate easily and taking shorter routes than in 1970s areas. Those who preferred curvilinear areas stated the main reason was being able to park and wash their cars on their drive.

This findings suggests that spatial arrangement of buildings might relate to the way in which interaction occurs on an informal basis. This correlates with the findings of an experiment carried out by Festiger, Schachter and Back (1950). The study showed that in a veterans village, those who lived in the houses at the end of the court, facing a different direction, presenting different opinions to the resident's association than the rest of the residents. This was related to the fact that people had fewer chances to interact with their neighbours and therefore they did not bond with the group as much the others (Halpern, 2005). Another study by Baum and Valins (1977) on student accommodation shows that students with private facilities were less withdrawn, happier and achieved higher marks as they were in control of their own networks and the way they developed them (Halpern, 2005). This last case poses a question about possible relations between the levels of spatial privacy and the ways in which we connect with others. Hester adds that more attention owe to be paid to the issue of sacredness as this transcends the interests of competing groups who normally find common ground and consensus about higher goals based on the strong sense of shared values in relation to these places. A *natural boundary*, the author states, is a

way of achieving *sacredness*. Another way is though particularities, elements that give the place a unique identity. Stevens (2007) explains that *liminality,* the Latin word for threshold, is anthropologically considered an essential element of human *rites of passage* from one status to another[3]. This concept, he says, is present in many aspects of human life, from a graduation to a marriage, and even a smoke break at work. Thresholds, he continues, are so important in urban design because they are a symbol of change into a site of new stimulations, they can generate new and unfamiliar perceptions and encourage us to create new relationships, for example in the transition between public and private spaces or between neighbouring districts. In all four case studies, cadastral patterns, where there were more instances of informal contact, had stronger definition of private and public spaces than other patterns. Halpern's argument creates a platform to review the 1980s and 1970s street/plot patterns. In cadastral areas, thresholds are more evident and easy to interpret through mental mapping. They provide more natural boundaries for example through the introduction of small front gardens that creates the sacredness of a private space that allows transitioning to the most sacred and safe area: the home. This transitional space allows people to experience the right of passage, which is often perceived as a shield offering security and safety.

Chapter 2 discussed the finding of various types of plot pattern typologies mainly related to historic periods of development. Looking at the finding of Chapter 4 regarding Informal contact, it can be seen visually in maps that some patterns mediate more informal contact than others. Across all cases, modern patterns had more limited Informal contact encounters

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[3] These views also resemble the work previously done by Eliade (1961).

between neighbours than cadastral 1880s patterns, but higher numbers than 1970s curvilinear areas, as shown in Table 7.3.

Table 7.3: Comparison of 1880s Cadastral and 1970s Curvilinear typologies

Curvilinear (1970s)	Cadastral (1800s)
Approx. 58% of the households.	Approx. 42% of the households.
Overall good feel, quiet and relaxing, suburban.	Overall good feel, rather active, urban.
Key asset: landscape.	Key asset: housing quality.
Neglected and under-utilised in-between areas.	Land used efficiently, no redundant spaces.
Unnecessary street furniture. Boundary treatments fragmenting the place.	De-cluttered. Boundary treatments are clear without fragmenting the place.
Minimal social interaction and activity on the streets.	Moderate casual/spontaneous social interaction and activity on the streets.
16 places acting as social activity hubs.	6 places acting as social activity hubs.

Urban pattern (Source: Google Maps, 2014)

Urban pattern (Source: Google Maps, 2014)

Street View

Street View

It was clear during the observations that in modern areas with modernist morphologies people knew each other rather well, as most times they addressed each other by their names or asked after other people they knew. In the curvilinear patterns implemented in the 1970s, fewer people were observed on the streets and when they came across each other, they had minimal (making eye contact or smiling at each other) or no contact at all. This happened across all enclaves with the exception of the commercial m was that more mulocks) of all case studies, where circa 70% of people engaged in casual talks with others whilst shopping. Areas with public activities and shops mediated more informal contact.

As explained in Chapter 4, in The Meadows, it was possible to associate numerical social cohesion data to enclaves. It was found that all urban tissues hosted similar levels of social cohesion. Since public places mediated social interaction at different levels across plot patterns, it is possible that: a) the levels of social cohesion are independent from 'plot patterns' and 'informal contact' patterns, and that social cohesion operates at a different scale or is the result of stronger determinants such as social capital; or b) that specific public buildings providing space to conduct 'organised activities' compensate for the lower levels of 'informal contact' at street level. Figure 7.1 shows a summary of the data for the various enclaves in The Meadows. Unfortunately, the limited amount of data available meant that arriving to any robust conclusion is not possible through this analysis. Further research on this point is necessary to clarify the phenomenon observed in The Meadows.
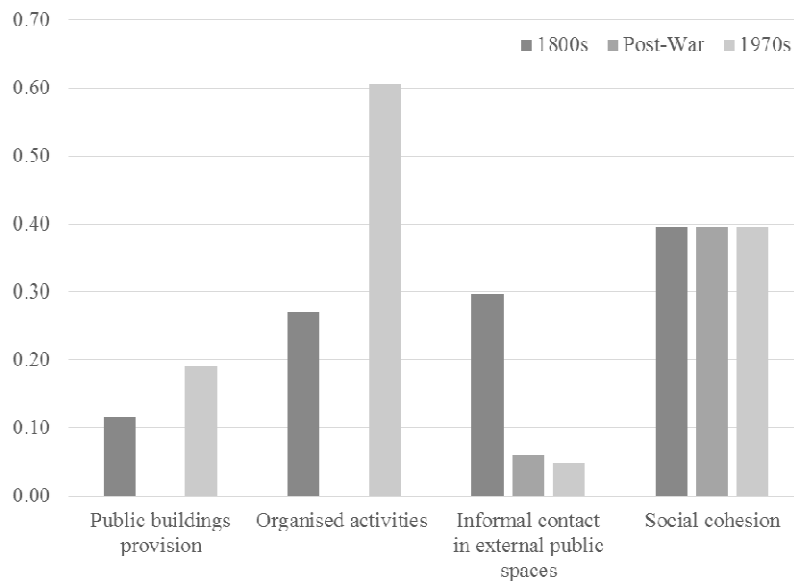
Figure 7.1: Key social dimension findings for each tissue typology in The Meadows, mean values.

Across all four cases, spontaneous appropriation of public realm and stewardship of street spaces was only evident in cadastral tissues where boundaries between different levels of privacy were stronger and more clearly defined. Small levels of appropriation were observed through the use of planters and benches. No appropriation or stewardship was observed in curvilinear patterns with the exception of one small patch of land in front of a single house in a corner in Killamarsh, where one neighbourhood planted flowers. This was a well-known case and neighbours mentioned it as something rather special at events:

"The gentleman in the corner beyond the library, he's retired, he keeps that little garden beautiful. I do not think it is his land, he just plants flowers there and we all love it." (K Participant, 2015)

Figure 7.2: Levels of privacy, appropriation and stewardship in cadastral patterns (left: The Meadows, 2014; right: Sneinton, 2017).

After detailed observation of all neighbourhoods, looking at signals that might indicate that people had placed personal items or that they have demarcated semi-public or public areas in some way, it was possible to establish some behavioural pattern. The findings across all four cases were consistent: neighbours did not appropriate or look after leftover spaces amongst modern patterns or between curvilinear patterns but they did expand their possessions onto cadastral pattern streets, demonstrating a sense of ownership for these public spaces. Also, the levels of stewardship and appropriation correlated with the levels of Informal contact, as shown in Table 7.4.

Table 7.4: Plot patterns, informal contact and place care across all four case studies.

PLOT PATTERN (Chapter 2)	INFORMAL CONTACT (Chapter 4)	PLACE CARE (Chapter 6)
Cadastral (1880s)	Frequent	Frequent to sporadic
Modern (1900-1950)	Frequent to sporadic	Rare to none
Curvilinear (1960-1980)	Rare to none	Rare to none
1970s (Block precincts)	Frequent	Rare to none

Newman (1996) found that anonymous places shared by numerous households did not trigger sentiments of affect or identity whilst private spaces or those shared by two families were well maintained and controlled

because the larger the number of people sharing a space, the smaller the individual claim to that place becomes and therefore the perceived right to conduct activities in the place also diminishes. Streets where people felt a sense of ownership, and where despite being open to the general public it could be perceived that one was entering a private zone, were calm and clean (Newman, 1996). This explains why stewardship was found in cadastral patterns with more definition between public and private spaces, as curvilinear patterns had spaces in between many houses in poor spatial relation to them. The number of units per street and particularly the orientation of houses meant these did not directly relate to green patches. As a consequence the spaces in between felt like no-man's land.

7.1.c Public place networks, Organised activities and Social value of place

Neighbours across focus groups in all cases identified the places they valued the most in a neighbourhood map. Unanimously, neighbours said they loved places where they spent time taking part in social activities, such as community centres, art and sport pavilions and shopping precincts. Natural features such as waterfronts, recreation grounds and historic green infrastructures also scored high values, although the primary feeling these places triggered was a sense of place care (see Chapter 6). They also added significant emotional value to places of historic interest such as historic and/or derelict landmark buildings, which they also wanted to protect and restore. For example, in Sneinton, residents valued the presence of the Green Windmill and in all four cases historic landmarks, the natural environments (parks and trees), and the relative lack of traffic and noise scored the highest marks. The quality of the architecture, the charm of the streets and the high level of voluntary community work were also mentioned as positive points across neighbourhoods.

During focus groups, participants identified public places of relevance to them that had not been identified by the study during the survey. This demonstrates the importance of having the community input when looking at public place networks. In The Meadows, a couple of public places under threat were not picked by the survey because the researcher believed these to be obsolete: a) a historic sports pavilion subject to regeneration which residents wanted to protect; and b) a food bank operating in a church, which was of great relevance to many neighbours as it provided social support as well as occasional meals:

"None of us understood that the Salvation Army and the St Saviours Bridgeway building would go! We did not expect Arkwright Walk to become another Queen's walk … the tram would be going there next, to bring the wealthy people from West Bridgford into the City Centre!" (TM Participant, 2014).

In Sneinton, an abandoned 1980s building, the Old School Hall, was not picked up by the public place network survey because it was closed off for access. However, neighbours mentioned this building repeatedly and eventually, a new group formed organically to protect this building form demolition. Negotiations with the local authorities continue and the neighbours are attempting to declare the building an asset to the community, and they are looking to bring it back to life. A similar case had occurred in the 1980s with the Green Wind Mill in Sneinton, when neighbours managed to protect and regenerate the historic asset converting it into a museum. It was then that the community in Sneinton have been working continuously to regenerate and rebalance their neighbourhood, and numerous groups were created for a number of projects since.

The historic Sneinton Community Centre is closing in mid September. What's going on, and what does the future hold for the site?

Word's got out that the Old School Hall community centre near to Green's Mill is going to close in mid September. The Council has taken the decision to close the building on safety grounds following surveyor's reports that put the bill (for repairs alone) at £400,000.

The medium term plan is to demolish the building in 2017, unless a viable new use can be put forward by the local community for a self-funding and presumably community-benefitting operation. Any ideas...?

Figure 7.3: Old School Hall online post by Sneinton Alchemy, 2016.

In Killamarsh, neighbours had formed the Chesterfield Canal Trust and had been trying to reinstate the old canal excluding a part of it that had been tubbed to build houses above in the 1970s. However, since neighbours did not manage to resource any funding, the project is at a standstill. Although the canal was indeed picked up as an important asset at survey stage, the importance of this area for the residents was not fully understood initially. The space around the water was of great significance to neighbours. People used the trail to walk dogs, collect berries with their children and those who remembered life in the village "*when it still had a heart*" prior to the 1970s extension, had fond memories of the canal being active. Although the canal project has not been successful yet, other projects emerged from this initiative. People in possession of historic records got together and they created a group to look at other heritage assets within Killamarsh. They are now organising historic country walks and seasonal pub quizzes themed around local history and memories.
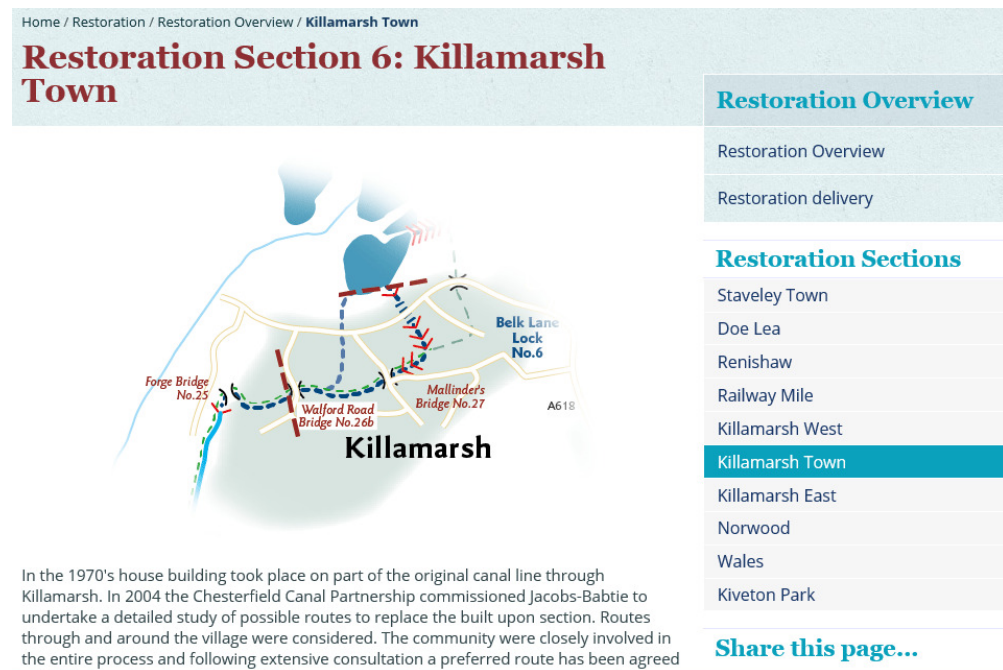
Figure 7.4: Killamarsh Canal Restoration online post by Chesterfield Canal Trust, 2016

In Dronfield, the community had gathered to create Friends of Dronfield Station, and they successfully regenerated the old railway station. This project, not only was the starting point for a number of other groups emerging in the community but it also gave the people of Dronfield great confidence to tackle other large projects such as the regeneration and running of the Dronfield Hall Barn[4], which includes an exhibition space, a café and events facilities; all run by the community.

All of these outcomes line up with Hester's (2014) findings. During the course of his research programme, he found that the most valued places were consistently emerging from people's childhood memories and that the majority of those places involved some sort of natural element.

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[4] http://www.dronfieldhallbarn.org/
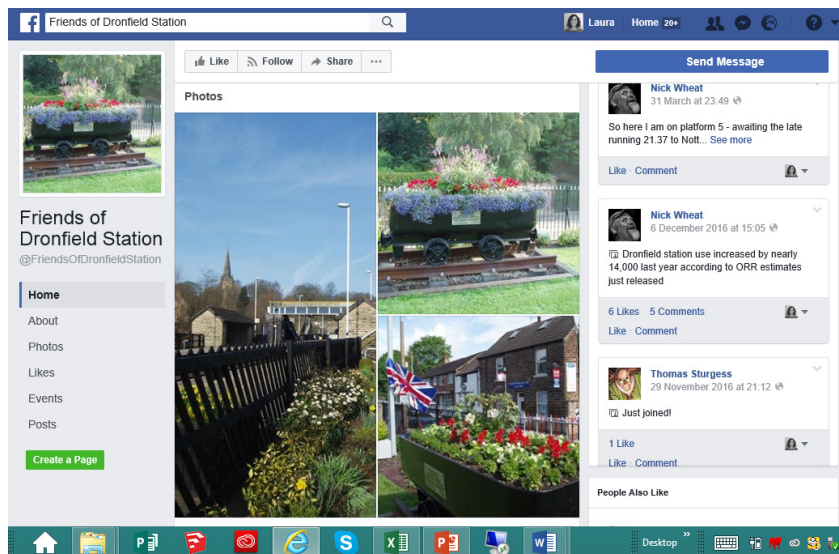
Figure 7.5: Friends of Dronfield Station Facebook Page, 2017
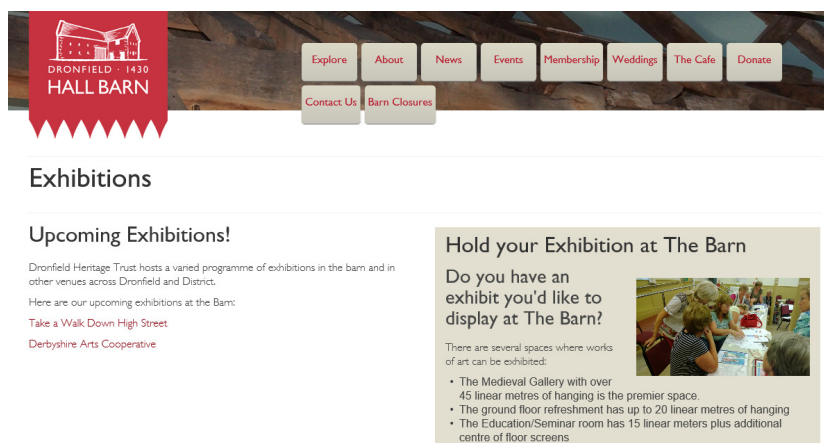
Figure 7.6: Dronfield Old Barn website, 2017

People also cared about their streets, particularly if they were not safe, if they were in disrepair or if they impeded circulation. Neighbours across all cases did not seem to regard streets as places where they could meet and socialise, although sometimes activity occurred. When asked which public places neighbours would prioritise for investment (care, time and money) they chose the places they valued the most.

These results were later on correlated with the measured Urban

Qualities conducted with Ewing and Clemente's method, this was explained in Chapter 6. The urban design quality indicators that best related to the neighbourhoods were identified. These were: Adaptability, Centrality, Meaning, Linkage, Activity, Interaction, Visibility, Access, Signage, Refuge, Legibility, Comfort, Natural features, Surveillance, Amenity, Enclosure, Landscape, Materials, Street furniture, Lighting, Upkeep (all ranked with a 0-5 scale in all public places found in task 1).

As demonstrated in Chapter 6, the Social Value of Place task showed that neighbours' values are based on the significance places have on their daily lives and not necessarily on the type or quality of the urban environment provided. The public places with higher quality value over all, did not achieve the highest social value when the neighbours scored the importance of these places. For example, old buildings in need of repair, waterfronts that lacked cleaning and landscaping or maintenance, and run down 1970s precincts were highly valued by the community across all neighbourhoods.

In The Meadows, the social network questions answered during interviews and focus groups suggested a strong trend: participants explained how group activities that took place in public buildings helped them feel part of the community, valued and supported.

"These buildings here [pointing at the Salvation Army day centre and the residential home for the elderly] *were recently closed due to lack of funding. We had excellent facilities, ample in size, and helped lots of lonely and isolated people, but the place is now almost inactive."* (Interview, Sneinton Salvation Army volunteer, 2015).

"…we open this and people come here with learning disability and depression, and people who do not know really how to mix with people. I was more

or less one of them and it just helps you to get to know people."(TM Participant, 2014).

"To get out from your house when you live alone as well, it just helps you." (TM Participant, 2014).

Public spaces around public buildings seemed to encourage people to have occasional brief talks, smile at each other or say hello. This was observed in equal measure for people that were aiming to take part in organised activities at the public building and for those who were only passing by. A similar phenomenon was observed around commercial areas and where shops were scattered. Figure 7.7 shows the Informal contact variable results mapped (in yellow). It can be seen more contact is present around public buildings, shown in dark grey. Streets that have commercial activity also have more instances of Informal contact.
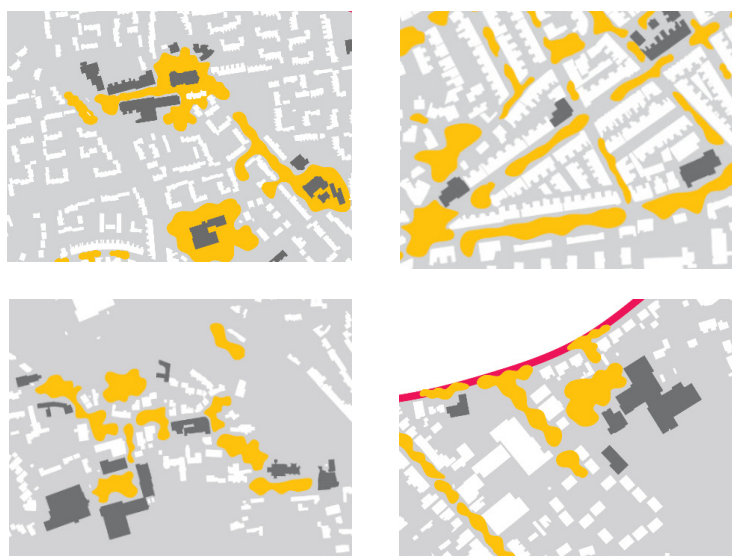
Figure 7.7: Informal contact (yellow) observed in public places by public buildings (dark) in The Meadows (top left); Sneinton (top right); Dronfield (bottom left); Killamarsh (bottom right).

During site observations in both The Meadows and Sneinton, several spontaneous casual conversations took place between the undercover

researchers and the public near shops and key public buildings. Historic buildings seemed to play a key role as internal public spaces in all areas. These assets hosted organised activities and allowed network growth and consolidation, and community bridging:

"I was looking for voluntary work…and I come to help when they do the teas and when they do the boules and everything. It is just to help you more or less to get back into the working environment … I find it quite helpful I got to mingle with people … it's helped a little community to get to know people." (Participant at the Old Queen's Walk Pavilion, The Meadows, 2014)

"…this building has been used as a hub for community work activities in the area. Because groups start up here then they get established and move on and get premises or get their place elsewhere and then. That has happened over the years and that has happened certainly with all the major projects in the area like the Meadows Partnership Trust, The Meadows Community Gardens and other small organisations such as tenants and residents associations…" (Participant at the Queen's Walk Community Centre, The Meadows, 2014).

"…the Hermitage Centre has a lot going on there. It could do with upgrading but it is still going. There's sports, sawing, children stuff…and you can hire the room for parties and so on." (Participant at the I Love Sneinton event, 2015).

For the case of The Meadows, it was possible to obtain quantitative social variables data per enclave for 'organised activities'; this is show in Chapter 4. The results showed that, given homogenous demographics and social cohesion distributions, the Old Meadows - with fewer available public buildings - hosted fewer organised activities.

Figure 7.8: Community activities hosted in historic buildings in The Meadows, 2014.

Figure 7.9: Community activities hosted in historic buildings in Sneinton, 2017.

This lack of internal public space in some of the enclaves forced other areas to deliver the capacity for the whole neighbourhood. This was possible through the use of surviving historic and public buildings, which are neighbourhood assets and play a fundamental role in bridging groups and sectors of the population. A similar phenomenon was found in Sneinton, Dronfield and Killamarsh, where heritage and public buildings within the 1800s' cadastral pattern served the whole neighbourhood. The number and frequency of organised activities across neighbourhoods did not relate to the plot pattern but to the number of venues where activities could occur.

Mihaylov and Perkins (2014) think that we create emotional bonds with our homes and communities whilst we create cognitive, knowledge and memory bonds with the natural and built environment around us, and then

try to protect those environments with collective behaviours at a community level. This study supports this view. The emotional bonding dimension was related to memories and experiences in the neighbourhood rather than to the actual places. This suggests people felt affection towards their experiences in public places, rather than the places themselves, and that they try to protect part of their identities when they aim to protect places[5]. This supports Stedman's (2002; cited in: Devine-Wright, 2014, p.171) views that people would fight for places that are associated with their identities, especially if the symbolic meaning of these places is under imminent threat. Public buildings were found to be key assets to develop place bonding, as they helped developing a multiplicity of identities[6]: spatial, social and individual.

7.2 Multiple correlations

The correlation of the findings for three dimensions of public places in neighbourhoods revealed some synergies between some of the variables across the three dimensions.

Fragmentation caused by road hierarchy triggered enclave identity and belonging divisions, creating place-based social spheres. This was evidenced despite some instances where morphological homogeneities were

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[5] Environmental disruption can trigger mobilization or acceptance and adaptation but apathy is also possible (Mihaylov and Perkins, 2014) and the changes in the physical environment of a neighbourhood always need to be understood in the framework of the physical and symbolic aspects of place and the centrality of the disturbed features (Devine-Wright, 2009, p.65; cited in: Mihaylov and Perkins, 2014, p.65).

[6] Uzzell et al. (2002; cited in: Carrus et al., 2014, p.156) showed that cohesive communities with a strong sense of identity are more inclined to have pro-environmental behaviours than weaker communities. Scannell and Gifford (2010, cited in: Carrus et al., 2014, p.157) showed that different types of place attachment have different impact on the attitude towards pro-environmental behaviours, for example, city attachment was less influential than attachment to natural environments.

present between urban tissues across enclaves. When plot patterns differed in form or character, the perception was that the fragmentation was stronger.

Conversely, where plot patterns where similar but road hierarchies were strong, perceptual fragmentation and social spheres were much weaker, or did not appear, especially if the said road had activity on both sides, 'stitched' the enclaves together. Table 7.5 on page 321 illustrates this point. Busy roads in all neighbourhoods did not appear as an edge or boundary in terms of perception at the time of the surveys or residents' mental mapping when they had commercial activity in both sides, this was especially the case when street patterns were continuous across this busy roads.

On the other hand, through understanding operability and processes concerning social network establishment and growth, it was noted that historic buildings, charged with identity and communal memories, were key to community networking and bridging. Good location, prime access and the existence of public places of good size surrounding large historic buildings were also reasons for the success of these assets as community hubs.

All in all, community places acting as social hubs or 'magnets' in neighbourhoods were of primordial importance. Their role in knitting the community together was fundamental to the development of social networks, support networks and ultimately social resilience. When public places were available for each enclave, there were occasions where stronger social fragments manifested in the ways in which place based social networks operated and in the strength of social spheres. This happened for various reasons: a) social clustering was associated to cultural values and therefore public places catered for specific groups in the enclaves; social groups with strong enclave belonging operated from public places available in their zones.

Conversely, when public places were strategically located, were inclusive, inviting and offered ample quality space, they attracted people from

various adjacent enclaves, and social spheres were less evident. This finding confirms the view of Gilchrist (2000), who talks about the importance of places in encouraging community connections and explains how public spaces that are friendly and inviting are more attractive and promote social use giving people a chance to meet up and interact with other groups.

Table 7.5: Road hierarchy and enclave fragmentation: perception of edge strength across different plot pattern enclaves.

The Meadows:
stronger fragmentation perceived

The Meadows:
medium fragmentation perceived
due to partial continuation of
patterns and built form

Sneinton:
low fragmentation perceived due to
continuation of pattern and
'stitching' activity (yellow)

Being well-connected, he says, is essential to develop people skills, increase job opportunities and exchange ideas in search for innovation. Hamdi (2010) believes that several attributes are expected from a place in order to be suitable to host participation and engagement. He looks for a place with the 'capacity and tolerance for change and inclusion of difference', which has 'space for human development' and 'enough ambiguity of context' to allow for enhancement of meaning. According to Hamdi's view, a secular community space that is perceived as 'impartial' has more social network power than a church for example. A 'neutral' space can attract a diversity of

groups and communities can assign their own local meaning to them based on routines and experiences shared by neighbours. This was also observed in all four case studies. Churches and community spaces looked after by groups with religious connotations struggled to attract the general public even when the events had no religious purpose. In The Meadows, St Andrew's Church managers claimed to find it difficult to bring new people into the church grounds when they organised small community events like markets or festival.

"People from other parts of Nottingham come over, even people from Mansfield have come, but they are all members of the church. We advertise in the shopping precinct and in other community spaces but when people see that it is the church organising it, they do not come." (TM Participant, 2014).

A similar phenomenon occurred in the other neighbourhoods although, in Dronfield some people attended events at churches because they had friends that attended. In Dronfield this pattern still occurred but it was not as pronounced as in the rest of the neighbourhoods. Dronfield was the area with higher levels of education and higher average income per capita. Levels of social capital in Dronfield were higher and people were better connected than in the other neighbourhoods. However, this was evidenced by qualitative data and numerical evidence is not sufficient to determine whether there is a specific relation between the levels of social capital and the extents to which people might venture to use a facility run by a group where they do not belong.

"We do all sorts of community events here, they are not necessarily religious, but people have a stigma about coming to the Muslim Organisation. This group here now has representation from seven different religions, but this is a first one. It took us years to achieve this, we had to come out and bring people in. Some would still not

come." (S Participant, 2016)

"I wanted to do community work for a long time in this town but people would not come to the church. I decided to create a Street Church to get people to come over to various events and support groups I have to go out to their houses and their businesses and offer the help we can give but I have to explain we do not expect them to convert or become members of the church. Otherwise people would not come over." (K Participant, 2015).

7.3 Evaluation: Correlation with previous urban practice

The study of the 2009 The Meadows Neighbourhood Plan revealed that the assessments and delivery processes were of the highest standards at the time. The plan was ambitious, visionary, comprehensive, well intentioned and thorough, but the methodologies available were based on cause-effect logics and an engagement process suited to the model. This research introduced a system-thinking approach based on emerging ecological urban models, importing tools from a variety of disciplines for bottom-up engagement processes. Table 7.6 on page 324 shows a summary of the correlations and discrepancies between both approaches.

The correlation of this research and the 2009 Neighbourhood Plan showed that the latter was carried out with full consideration of all physical aspects of the neighbourhood and bearing in mind its future impact. The social long term benefits of the plan were also considered. However, due to the lack of comprehensive assessment methods, key areas of analysis such as neighbourhood networks individual and collective psychologies and the socio-political structure of the community were largely absent in the report. Therefore, the social and perceptual dimensions of place was not accounted for, leading to confronted opinions between the local community and the

plan, see Table 7.7 on page 325.

Table 7.6: Correlations between this thesis and The Meadows 2009 Neighbourhood Plan apprised data.

	THIS THESIS	NEIGHBOURHOOD PLAN 2009	CORRELATION
Morphological dimension			
Historic	Accessibility and transport infrastructure. Water management.	All issues were fully considered with a view to sustainability and future needs.	Both methods collected sufficient meaningful data to inform the master plan.
	Strong primary structure defining sub-areas with two characteristic urban grains: α) The New Meadows; and β) The Old Meadows.		
Current	Socio-economic analysis		
	Two main types or urban character residential areas were identified in the field studies: curvilinear and cadastral.	The physical character of the neighbourhood and the issues emerging from the urban prototypes were fully understood and the plan embraces these, offering solutions.	Both methods collected sufficient meaningful data to inform the master plan.
	22 public places/hubs were identified in the neighbourhood.	All services and places of activity were identified as assets. No evidence of social network/cohesion analysis.	Thesis method resulted in richer data collected.
Urban qualities	The urban design quality indicators that emerged from the stage 1.a) and stage 1.b) analysis were systematically assessed in the 22 public places identified in stage 1.b).	Opportunities and constraints seemed to be understood and the proposals suggest correlation with the result of the *Social Value of Place* qualities assessment. No evidence of systematic appraisal.	Thesis method offered richer and more systematically collected data with the opportunity to correlate different variables.
Social dimension			
identifi-cation	All key social networks were identified.	Neighbours who were passionate to improve the area were identified and invited to participate.	Thesis method resulted in more positive engagement processes with lesser negative impact .
engage-ment	All key social networks and actors invited to create their own engagement processes.	Tenants and residents associations were represented in consultations.	
Perceptual dimension			
Mapping	*Social Value of Place* captured through mapping exercise, interviews and observations.	Absent from report	Thesis method resulted in richer, more comprehensive data collected.

Table 7.7: Correlations between Social Value of Place findings and 2009 Neighbourhood Plan proposals

Social Value of Place questions (ordered as formulated during the task)	**Mean overall urban quality (scale 0-5)**	**2009 Neighbourhood Plan Proposals**
1 Places people love	2.97	Complete demolition and new facilities provided in a different location
2 Places where people feel fear	3.36	Complete demolition and new facilities provided in a different location
3 Places that triggered stewardship	2.61	No evidence of investment programmed
4 Places that made people feel anxious	1.53	Total restructuring or removal
The Meadows area	**2.73**	

On close inspection, it was found that the process followed all contemporary guidance, delivering the best possible consultation and acting on the best interest of the community. However, the top-down approaches are being contested in urban practice and as a consequence, urban practice is moving towards bottom-up Placemaking approaches. This study supports that argument. Some of the comments made by participants about the 2009 Neighbourhood Plan consultation are listed below:

"I was frustrated because I could not get the answers or the information from anyone despite how loud I shouted. I went to church on Sunday and cried a lot."

"the process was being carried out in very insensitive manner, the residents were very distressed about leaving their homes and about the changes to their neighbourhoods…some had already have health issues emerging largely as a result. Several people developed symptoms of stress and depression, and one person had a stroke just after being told to leave the ex-council home they had bought…there had been no meaningful consultation nor any involvement. The plans were shown to the community but we did

not take part in any planning and we did not have a chance –or the time- to give our views on the plan."

" …we are only reacting now because the consultation were deceiving and led us to believe good outcomes would occur. We were asked questions such as:

- *Do you want to see more activity, more shops and more revenue in the area?*

- *Do you want better public transport and cycling routes in The Meadows?*

- *Do you want to see eco-houses being built in the area?*

We all agreed that when asked these questions…we did not realise that these things could happen in different ways. We were naive enough to believe that the eco-houses would be council homes…they want to gentrify the area because this land is valuable and they want higher revenue from it, but this land is ours, for our community".

"…consultation was for a selected crowd and some people were not invited and not welcome to participate…the consultation process was illegible and most people did not realise to ask for details. "None of us understood that the Salvation Army and the St Saviours Bridgeway building would go! We did not expect Arkwright Walk to become another Queen's walk…the tram would be going there next, to bring the wealthy people from West Bridgford into the City Centre!"

This research process is based on a bottom-up approach with a methodology that allows interpreting people's experiences, feelings and opinions in the broader context of local socio-political structures; based on empowering processes with an overall more positive result for participants and communities.

Table 7.7 below shows a comparison between both consultation processes.

Table 7.8: Correlations between this research and 2009 Neighbourhood Plan engagement processes

Engagement & Participation processes compared		
	This research	**Neighbourhood Plan 2009**
Approach	Bottom-up	Top-down
Inclusion	Every key social network	Selected residents
Timing	In parallel with Place Assessment and prior to any design considerations are made. Ongoing through the research and design process.	After each stage of the design process is completed. Three times during the process.
Management	Shared: Assessor & Key actors within the community	City Council, Planning Aid and the Consultants
Co-ordination	Assessor's role limited to explain the reasons for the research, provide the materials and listen to the participants building-up their own event.	City Council, Planning Aid and the Consultants
Feedback from participants	Conversations occurred in a relaxed atmosphere where neighbours managed their own times and talked around food and tea. The mapping exercise was conducted as a game to encourage discussions, jokes and laughter. Participants reported having had a great time, feeling like kids again, being relaxed and in good company. Friendly atmosphere, easy going, enjoyable, easy to understand, normal language, fun. "*I feel I'm finally being heard*".	Bad timings and venues, many people could not attend, consulted when it was all decided, no communication channels, inadequate communication methods and language. " *I was frustrated…I cried a lot*".

7.4 Conclusions

According to the findings of this study, residential neighbourhoods need to be appraised with consideration of multiple dimensions, and not solely with a focus on morphological issues. In fact, the weight of some of the findings on the social and perceptual dimensions override the spatial aspect or morphology. It could be argued that urban morphology could be therefore

redefined by consideration of the synergies with other place dimensions.

The correlations found amongst the various variables analysed in all four case studies revealed that:

1. Social cohesion was not directly related to the form of 'plot patterns' or to 'informal contact' patterns, but it might have operated at a different scale or be the result of stronger determinants. Length of residence came up as the stronger determinant. Perhaps specific public buildings providing space to conduct 'organised activities' were compensating for the lower levels of 'informal contact' on the streets in specific plot patterns. However these hypotheses need confirming through further research.

2. Road hierarchy was a fundamental parameter that determined fragmentation in neighbourhoods, especially when enclaves had different plot patterns. Road hierarchy led to the formation of social spheres and enclave belonging behaviours. These strong sense of place identities produced both positive place-care, and negative tribal attitudes.

3. Cadastral patterns with well-formed streets mediated more casual, informal contact at a street level and more place care attitudes (especially stewardship) than other patterns. Modern geometrical streets came in second place and curvilinear patterns showed the lowest rates of casual, informal contact.

4. Public buildings (and associated public open spaces around them) were crucial in neighbourhoods, as they facilitated the creation and development of social networks which in turn led to social cohesion and social support networks; essential to community resilience. These public

buildings needed to be accessible, open and neutral, and be strategically located to facilitate community groups bridging and social integration. Not every enclave had a public building. In fact, when adjacent enclaves had strong edges and there was no magnet or 'active stitch' to bring them together, the provision of public places in all enclaves led to further social divisions.

5. Neighbours valued places for social gathering, with local meaning, with natural features and streets, in that order. The most salient urban qualities appraised in valued places were: Amenity in places people love; and Natural Features in places that triggered place care sentiments. Neighbours felt anxious over places subject to eminent redevelopment, and they felt fear in areas of reported crime.

All the findings of this study suggest that enclaves divided by road hierarchy can be stitched together by; a) the incorporation of activity, strong links and continuity of pattern across enclaves; b) by the strategic location of open, accessible, neutral public buildings that act as magnets across enclaves; or, ideally, by a combination of both approaches. Based on the findings of this work, a series of recommendations can be made regarding the applicability of the appraisal of all variables in urban practice, as summarised in Table 7.9 on page 330.

This thesis applied a variety of tools and methods, including quantitative analysis and phenomenological interpretation. This was inevitable given the range of fields and approaches the study aimed to cover, but it was also positive because comparisons and relations were possible between phenomena and statistical analysis. In this sense, this study confirms Hernandez, Hidalgo and Ruiz's (2014) views that using both empirical and

qualitative analysis, could facilitate the transferability of measures to other fields of study, qualitative studies can help understanding place attachment in a more comprehensive way and that verbal and graphic tools are very effective to compliment empirical analysis (Hernandez et al., 2014). Chapter 8 discusses the thesis outcomes and concludes this thesis.

Table 7.9: Summary of recommendations for application in urban practice

OVRALL SIGNIFICANCE OF CORE FINDINGS					
DIM	**VARIA-BLE**	**CORE FINDING**	**PRACTICAL APPLICA-BILITY**	**VA-LUE**	**RECOMMENDATION**
Morphological	Road hierar-chy	Can generate fragmentation enhanced by character variations and geographical characteristics	Easy & low resources	High	1. Appraise this variable in combination with a social spheres/network structures analysis.
	Plot patterns	Relate mainly to historic periods of development	Easy & low resources	High	2. Design socially positive plot patterns, cadastral and geometrical with strong definition of private and public space.
	Building defining spaces	Key buildings such as historic landmarks or community buildings with spaces around are essential to the creation and development of social networks	Easy & low resources	High	3. Provide a good and clear public place network that includes well located, accessible and neutral public buildings surrounded by some public realm.
	Public space net-works		Easy & low resources	High	

Table 7.10: Summary of recommendations for application in urban practice (continuation)

Social	Informal contact		Locations where contact is more frequent where definition of public and private space is stronger.	Easy & low resources	High	4. Appraise existing patterns of informal contact and design with consideration of recommendations 2 and 3.
	Orga-nised activi-ties		Accessible, visible and neutral buildings are better at bridging groups.	Quantitative: Easy & medium resources Qualitative: Easy & low resources	Me-dium	5. Appraise existing patterns of organised activities and design with consideration of recommendations 1, 2 and 3.
	Social net-works		Early engagement facilitates participation, highlights existing leadership and builds up social capital.	Quantitative: Easy & high resources Qualitative: Easy & low resources	High	6. Engage with existing social networks from the outset identifying leaders and social network dynamics.
	Social cohe-sion	Close ties	No significant data found	Quantitative: Easy & high resources Qualitative: Easy & low resources	Low	
Perceptual		Length of residence	Stronger determinant of social support networks	Quantitative: Easy & medium resources Qualitative: Easy & low resources	Me-dium	7. Design flexible/adaptable homes and neighbourhoods where residents want to stay. Limit the amount of tenancies and temporary tenures.
		Levels of exchange	No significant data found	Quantitative: Easy & high resources Qualitative: Easy & low resources	Low	
	Mental ma-pping		Way finding and edges came up as the key concerns amongst participants	Easy & low resources	High	8. Walkabout with neighbours to find out how they perceive their places, what they like and dislike.
	Place attach-ment	Location dependency	Relates to expectations, which is linked to social capital	Quantitative: Easy & medium resources Qualitative: Easy & low resources	High	9. Find out local resident's expectations, dreams and hopes for their areas.

Table 7.11: Summary of recommendations for application in urban practice (continuation)

Perceptual		Emotional bonding	Primarily related to memories and nostalgia	Quantitative: Easy & high resources Qualitative: Easy & low resources	High	10. Research and consult on local rituals, festivals and other social activity that might be charged with local meaning.
	Place care	Participation	Dominant mode dependant on lifestyles	Quantitative: Easy & medium resources Qualitative: Easy & low resources	High	11. Plan participation methods and engagement events on the basis of socioeconomic analysis and local lifestyles combining various methods (1-2-1 and online).
		Stewardship	Group organised activities are predominant and individual cases are rare	Quantitative: Easy & high resources Qualitative: Easy & low resources	High	12. Appraise existing patterns of stewardship, where and how place care could be enhanced.
		Environmental behaviours	No significant data found	Quantitative: Easy & high resources Qualitative: Easy & low resources	Low	
	Social value of place		People value places in association with their experiences and not in relation to the apparent place quality	Easy & low resources	High	13. Appraise the social value of place as part of the place analysis and prior to any proposals being considered.
	Urban qualities		Professionals' subjectivity involved cognitive responses to place quality	Quantitative: Easy & medium resources Qualitative: Easy & low resources	Me-dium	15. Combine professional expertise with local perception of place to capture emotional connections that might result in social interpretation of place.
			Participants' subjectivity involved both cognitive and emotional responses to place value	Quantitative: Easy & medium resources Qualitative: Easy & low resources	High	

CHAPTER 8
8. Conclusions

This final section summarises the contributions of this thesis to knowledge and urban literature, it looks at how the findings might be transferred to urban practice and legislation, and it evaluates the constraints and limitations of the research. The section finishes by looking at new academic research avenues opened by this work.

8.1 Thesis achievements

In an effort to increase the delivery of sustainable urbanism, this thesis aimed to advance the appraisal of three key dimensions of place in British neighbourhoods with a focus on public life in the public realm. It achieved it by exploring the assessment of four variables for each one of three of Carmona et.al's (2010) six key dimensions of place[1]: morphological, social and perceptual. The study involved an exploratory in-depth literature review to understand concepts and strategies adopted by social sciences. Then, it looked at how social sciences tools could be transferred into urban practice. The empirical study involved the appraisal of four British neighbourhoods: two urban residential areas in Nottingham, and two semi-rural towns in North East Derbyshire. Figure 1 in the Introduction illustrates the areas of study.

8.2 Answers to the research questions

The main interest, which emerged during a general literature review, was to find out:

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[1] Carmona et.al (2010) identified the six key dimensions of place to achieve sustainable urban practice: 'morphological', 'social', 'perceptual', 'visual', 'functional' and 'temporal'.

How could urban practice improve the appraisal of the key dimensions of public places in British neighbourhoods?

An exploratory literature review revealed that as a new urban ecosystem model was emerging with a paradigm of resilience, the problem was that more multidisciplinary approaches and bifocal analysis (including both quantitative and qualitative data) were needed to deal with interrelated systems and to evaluate processes.

A gap was found in urban practice: social structures and place psychologies were being overviewed, particularly in the appraisal stages of residential areas and at a local level. Also, there had been a slow translation of theory into practice and legislation due to the lack of empirical data, primarily because appraisal indicators and variables were difficult to choose.

Based on that initial review, this thesis proposed the research question:

How could urban practice improve the appraisal of the key dimensions of place in British neighbourhoods with a focus on public life in the public realm?

An in-depth literature review helped narrowing the focus of analysis and establishing the thesis aims and objectives. A mixed methods empirical study of four neighbourhoods in Britain (see Introduction, Methodology) was the vehicle to answering the research question and meeting the aims and objectives of the thesis. Table 8.1 shows a summary of these points.

Table 8.1: Summary of thesis enquiries and answers found

THESIS PROPOSAL		APPROACH	ANSWER
RESEARCH QUESTION	How could urban practice improve the appraisal of the key dimensions of sustainable development in British neighbourhoods?	Exploratory literature review.	By incorporating areas of social sustainability (such as the social and perceptual dimensions of place) in place appraisals, involving processes of participation and engagement.
AIMS	To find out the benefits of appraising the social and perceptual dimensions of sustainable development in UK neighbourhoods, with a focus on public life in the public realm.	In-depth literature review.	Multiple benefits might become apparent as previous research demonstrated some correlation between place dimensions.
OBJECTIVES	To find practical and applicable ways to appraise two of Carmona's et. al. dimensions of place and Barton's dimensions of neighbourhoods in the UK: social and perceptual.	Exploring social sciences concepts, techniques and appraisal methods.	Adaptation of tools and techniques and application in urban practice.
	To explore the benefits of this addition to current morphological appraisal methods.	Comparison of this research against a previous analysis (The Meadows Neighbourhood Plan appraisal).	The addition of the social and perceptual dimensions of place to appraisals of neighbourhoods has multiple benefits.
	To test how practical it would be to apply these integrated appraisal methods in real cases in urban practice.	Testing the methods on research-led, community-led and authority-led life processes.	The application is feasible as long as some degree of flexibility for adaptation to specific scenarios is possible.

8.3 Contribution to knowledge

Carmona et al. (2010) summarised some of the arguments for and against curvilinear patterns. This study, based on empirical evidence, added another few points to the argument against curvilinear patterns:

- *Reduction of Informal contact*: curvilinear patterns tend to prompt fewer instances of informal contact between neighbours. Informal

contact is a generator of neighbouring relationships in neighbourhoods.

- *Reduction of stewardship*: curvilinear patterns tend to prompt fewer Place care behaviours – e.g. looking after planters or cleaning - towards streets and public spaces.

- *Sense of belonging*: in curvilinear patterns residents tend to get lost, this causes the feeling of being a stranger in one's own neighbourhood. Getting lost near our home can cause stress and anxiety.

Additionally, this work contributed to contemporary literature in the field of urban design, as shown in Appendix 5, showing the statements confirmed and argued by the evidence provided through this work.

8.4 Contribution to urban practice

This thesis new knowledge makes two main contributions to urban practice:

i. Methodological: from the introduction of feasible ways to appraise the social and perceptual dimensions of place in neighbourhoods.

ii. Empirical: evidence based validation of existing synergies between various dimensions of place in neighbourhoods.

The dissemination of this information is expected to take place over the near future in the form of publications (both academic and in industry), conference speeches, university lecturing and direct application in practice.

Design councils, house builders, training agencies and professional bodies[2] are already in contact with the author to disseminate the findings of this thesis. Also, direct application is planned for the development of new appraisal tools and improved design guidance:

- Stefan Kruckzcowski, author of Building for Life 12, has requested that the author contributes to the forthcoming edition.

- A review of NPPF took place with Robert Cowan and Mathew Carmona, who requested the author's contribution in the form of a lecture at a dedicated Urban Design Group event in London and a written review.

- Work with Place Alliance in the design of a manifesto for a Socially Ethical approach to urban practice, incorporating the learnings from this thesis.

Other opportunities to impact on urban practice will be actively pursued for the forthcoming future.

8.5 Constraints and limitations

Finding suitable case studies was difficult due to time and budget restrictions, but also due to the necessity to work in regular close proximity to the communities involved. This constraint was managed successfully and suitable case studies were found, but this required planning and strategic programming. Another constraint in finding case studies was that many communities and authorities were risk adverse and doubted the use of untested methods.

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[2] RIBA, the Academy of Urbanism, the Landscape institute, The Royal Town Planning Institute, the Urban Design Group, Place Alliance and Transport for London.

The issue of establishing appropriate boundaries for studies is often a problem also present in urban practice and outside the professional/researcher's control. As studies often have to line up with broader research or legislation in place, the boundaries are pre-determined and are not always the best option for particular studies. However strategies can be put in place to estimate and manage errors or to make cautious assumptions. For this research, the boundaries given for Dronfield and Killamarsh (adopted by the Regeneration Frameworks) were not suitable for the study and the researchers felt they needed to expand the boundaries and cover larger areas of study to achieve meaningful results. The authorities agreed to this for the purpose of the appraisal and evaluation stages but not for proposing ideas for investment within the Frameworks.

Importing social sciences techniques and adapting them for urban design practice was not problematic. However, some limitations appeared in the process, particularly with regards to resources, timescales and funding.

Achieving the size of population sample standard for social studies was not possible working with large, complex communities in a tight budget and constraint time schedules. Nevertheless, the methods were adapted in various ways to overcome this issue as much as possible through the management of the community events and communication channels that allowed group participation and multiple individual inputs at group events. This constraint is often also present in urban practice. In that sense, this study demonstrated that it is indeed possible to capture multiple views with limited resources. Overall, a representative sample was achieved and rich data and information was collected and later on verified by the public.

Collecting adequate size numerical data was not possible due to time, budget and resources constraints. However, phenomenology studies were

suitable to capture and understand most of the variables of this study. For example, for working with place attachment as a variable of neighbourhood design, Hester (2014) suggests to take the time to understand the community, the activities and daily routines, the community relationship with the physical aspects of place; not to assume that the needs and vulnerabilities of the community are as they come up in local government documents but instead, to investigate the issues directly from people; to understand the community skills; to learn about other ways of living (in poverty, for example); and to combine both theory and phenomenology for studies. The methods applied within this thesis were suitable to achieve this.

Completing social network mapping in the way that social sciences approach it, mapping the whole network and all actors within it, is time consuming, expensive and unrealistic working with communities. For example, some people might choose not to participate. Although results might be very interesting and provide meaningful information, a high level of skill and complex software is needed to interpret the findings. In urban practice, time is often a big constraint; authorities and practitioners do not have the necessary software and skills to complete these tasks. This thesis aimed to find feasible ways to incorporate some of the social and perceptual variables into urban practice. For this reason social network analysis had to be dramatically simplified for application in urban studies. However, it was found that a simple assessments involving the identification of key networks, actors and leaders significantly improved the chances of success during engagement programmes. The analysis opened communication channels, gave an insight to the dynamics of the communities involved, and revealed some local socio-political issues that could have jeopardised successful processes.

Another point to consider is that the communication landscape is

changing swiftly, specifically with regards to the increasing use of participative internet and social media worldwide, by individuals (Chou et. al, 2010) and by non-profit organisations (Curtis et. al, 2010). Social media involves any online tool from collaborative projects, blogs and social networking sites to virtual game worlds and virtual social worlds. Commonly known applications are Wikipedia, LinkedIn, YouTube, Facebook, Second Life, and Twitter (Kaplan & Heanlein, 2010). It is therefore important to develop a better understanding of these technologies and their social impact (Chou et. al, 2010). Social media can help increasing social capital by allowing members to reinforce their social identity (Harter, 1999), it can strengthen community ties through news and events updates (Park, Kee & Valenzuela, 2009), and it can make people feel connected (Zuniga, Jung & Valenzuela, 2012). However, although some argue that the use of social media is a positive tool for enabling participation in community processes (Bennett, 2008), others sustain it diverts people from local politics and active engagement (Hodgkinson, 2008). Zuniga, Jung & Valenzuela, (2012) stated that "*seeking information via social network sites is a positive and significant predictor of people's social capital and civic and political participatory behaviours, online and offline*". Nevertheless, there is still not sufficient empirical research in relation to how the use of social media might relate to participatory behaviours (also Ellison, Steinfeld & Lampe, 2007; Pasek, More & Romer, 2009; all cited in: Zuniga, Jung & Valenzuela, 2012, pp.319-333). More studies are needed to explore how contextual variables, such as socio-economic and living conditions, might relate to the community use of social media (Zuniga, Jung & Valenzuela, 2012). This gap in virtual media analysis tools was overcome by creating a virtual network analysis tools with specific emphasis in neighbourhoods. A journal publication demonstrating how this was achieved is included in Appendix 4 of this thesis.

Perceptions that subjective appraisal and interpretative methods offer biased and unreliable data for analysis is still a stigma rooted in urban practice and politics. Some individuals involved embraced the change during this process, enabling more systemic, dynamic and flexible ways of working, but there are still people who prefer to judge risk based on quantitative data and numerically projected estimates.

Table 8.2: Thesis limitations

LIMITATION	REASON	MANAGEMENT
Finding appropriate geographical boundaries	Need to match existing political boundaries although social boundaries might differ	Adopting the boundaries of the policy documents the study responded to
Only static measures of dynamic social processes were possible	Lack of time, resources and budget	Acknowledgement that longitudinal studies might be more appropriate but not often possible in urban practice
Population sizes were smaller than expected in social sciences	Lack of time, resources and budget	Worked in groups and capturing multiple entries in singular events to maximise data collection
Significant quantitative data to generate statistics was not possible	Lack of time, resources and budget	Adopted a phenomenological approach to quantitative data analysis
Social network mapping was not possible	Lack of data and access to every single network actor	
Virtual networks analysis methods for place-based networks was not found	This field was still under researched	A research method was created for this study and later applied in urban practice in a number of projects
Perceptions that subjective appraisal and interpretative methods offer biased and unreliable data	Urban design and planning practices are not familiar with phenomenological social sciences analysis	Adapted social sciences tools and translated them in a language and mechanics that urban designers and planners would feel familiar with

8.5.a Data collection in practice

In general during this process, the more numerical the data collected was, the higher the level resources required to perform the task. This was the case for a range of resources: skills, time, administration and stationary. This section looks at how the process of working with communities functioned and what could be learnt from the experience.

i- Working with communities

Based on these fours case studies, all communities had groups interested in keeping historic photos and records. This data was made available to researchers. Working closely with communities from the outset of appraisal stages is an advantage for accessing valuable local information. This approach saves researcher's time and resources, and it results in more positive engagement. Residents had stories associated with specific images and historic newspaper publications. Working alongside specific interest groups with an interest in local assets enriched the process and informed all three key dimensions of neighbourhood places simultaneously.

In the case of Sneinton, the community group Sneinton Alchemy had been carrying out questionnaires and interviews for four years. They felt that the population might have been over-consulted recently and that they had sufficient data in relation to some of the variables required for this study. An agreement was made that instead of collecting further data, this study would involve a pilot analysis of a randomly selected sample from the 2,500 interviews the group had commissioned. The leading community organiser provided 300 randomly selected forms for analysis to the author. This was a slow, time-consuming task, as it involved interpreting all the questions in all of the forms, which had been formulated with an open qualitative approach. However, due to the quality of the interviews, a similar data output to the one achieved for The Meadows was possible. Although, in the case of Sneinton, data could not be directly associated with its location, therefore exploring quantitative variances between enclaves was not possible for Sneinton. Once the data had been processed, it was agreed to share the results of the analysis with the community at an event organised by the Sneinton Alchemy called 'I Love Sneinton', which attracted more than 100

people. More than 50 participants were consulted during this event and they confirmed unanimously that the interpretation and analysis of the data was accurate and representative of the Sneinton community and its dynamics.

Working with communities in Dronfield was complex. Despite being invited to the events, many groups did not attend until contact had been made actively when the researchers approached the groups during their own meetings and explained the research was done independently by a charity (OPUN). The reasons participants gave for this was that they were suspicious of the opposition in the county government, trying to achieve their political party's goals by making the opposition work. People on the streets were polite but had two types of reactions: they either said there was nothing wrong with Dronfield and they had nothing to say; or they were keen to participate stating all the positives about their place, and going into detail in length about particular opportunities for improvement, such as cycling routes or crossings.

In Killamarsh there was a similar situation. There were also two types of answers: most people reacted with anger, saying there was nothing that could be done to 'fix' Killamarsh, that everything was wrong with it and could not 'be saved'; or they participated actively explaining their efforts and lengthy attempts to achieve positive contributions to their environments without any success.

The processes the community went through in the past were researched in more depth. The reasons for the failure in achieving their goals were in relation to social dimension issues: a) lack of organisation; b) failure to achieve successful levels of evidence to make their claims; c) lack of strong leadership; d) fragmentation of groups and dispersed efforts.

ii- Working with government and other agencies

In Dronfield and Killamarsh, the County Council authorities had tight deadlines imposed by national government to deliver the frameworks and they felt that engaging all groups in a discussion about a regeneration framework would delay the process. Instead, they decided to allow enough flexibility within the frameworks' methods and outcomes to permit different views to be expressed.

During inception meetings with North East Derbyshire County Council, it was discussed that the data collection methods had to be effective, efficient and low cost due to budget constraints. For this reason the recording of events, interviews and further transcriptions were omitted, instead it was decided that notes would be taken by the researcher and members of the OPUN team, all qualified urban design practitioners. It was assumed and accepted that, every single individual might have different views and experiences, and that it is virtually impossible to capture the views of every single person in a community, particularly as not everybody will be willing to invest time and effort in engaging. For these reasons, the team opted for an in-depth qualitative approach to data collection. Repetition in the data captured or in the answers given by participants, was assumed to be a clear sign that the key issues have been captured and they could be explored in more depth. It was also discussed that in order to conduct meaningful quantitative analysis a huge number of participants needed to be contacted. These are very costly processes which involve a great deal of time and resources. Qualitative data was favoured, as it can give relatively accurate results when the questions asked are punctual and specific. Also, when the nature of life experiences and human perceptions need to be captured, in-depth qualitative methods are more successful, as these allow researchers to

explore the issues in more depth and in a more economical way.

Events were organised across one week for each area. The programme of events was scheduled following a thorough socioeconomic analysis and a discussion with local members and officers, which informed the team about the type of lifestyles in the area. Based on that information, the team selected the optimum timetable to ensure the vast majority of the residents had an opportunity to attend events.

Due to the time constraints, the social dimension appraisal was conducted in a more informal way in these towns. Self-written questionnaires were not distributed to meet deadlines but also because the initial response of people approached casually was not very positive. This gave the team an impression that people were being disturbed and did not want to contribute. Conversations with the few neighbours who were willing to participate were detailed, this helped filling in some information gaps. A section on participation and social networks engagement was added within the regeneration frameworks to ensure all views were included during the process, and that key social and perceptual variables were considered.

Individuals, groups and institutions were invited to participate in a series of events involving: 1) an initial presentation to explain the purpose of the research; 2) a walkabout with local residents to highlight assets and areas of concern; 3) a series of casual questionnaires and interviews randomly approaching residents on the streets and other public places; 4) a design workshop to discuss and agree potential solutions; 5) a presentation where residents had an opportunity to comment on the results of the programme.

As the communication process within each task was almost completely led by the community and mediated by the team, a degree of

flexibility was necessary to ensure that the information received in each event informed the structure and dynamics of the following event, when conversations would be taken to different levels of detail. This flexibility and adaptability allowed the community to communicate efficiently and fluently with the team, discussing emerging issues in length and depth.

One issue mentioned by the county authorities was that due to their previous experiences working with similar communities, the level of participation expected was a concern to them. The participation trends found in The Meadows were presented to the County Council. A consensual decision was made to follow the findings of The Meadows to plan a participation and engagement strategy tailored to Dronfield and Killamarsh. Two different strategies were created for both towns based on the local demographics and estimated lifestyles.

Despite this tailored approach to engagement processes, the county authority was eager to offer equal opportunities to both towns and insisted in delivering the same consultation tasks and schedules in both areas but with different times and venues to suit the populations' lifestyles. This presented some operational difficulties, such as having to work long hours without breaks to cover both towns on the same days. But the reasons given were valid and it was consensually agreed that although the format of the tasks and the expected outcomes had to be set, there would be some level of flexibility in the techniques used during the events. This meant creating a range of options and being prepared to change the engagement approach if necessary on the spot at the time of the events to allow good open participation. The difficulty with that was that researchers had to be tactical during the whole consultation process and capable of reacting to unexpected behaviours, adapting rapidly to the sudden changes. Despite the tensions, this was

possible, and the team felt this was indeed the right approach to obtain large amounts of data in short periods of time. The County Council claimed that the consultation was carried out with an innovative bottom-up approach. A good level of placemaking was achieved because the format of all discussions was flexible and conversations were led by the community. However, in contrast to the opinions of the authorities, the author believes this was a top-down Placemaking process led by the authority because the County Council had control of the process to the detail at every step of the way.

Although Ewing & Clemente's (2012) urban qualities assessment was carried out to inform this thesis, OPUN team members did not acknowledge it as a valid way of collecting data, insisting the method was unreliable as judgements were subjective. This perception contradicts the application of other methods used by the team such as the character appraisal and the walkabout, which were also based on subjective measurements but which were accepted as valid because they had been long practiced in urban studies.

Overall there were no constraints in appraising the perceptual dimension with the walkabout and other tasks. The county authorities and community leaders alike were thrilled to see a different interpretation of their town, looking at how the physical and geographical aspects of place might impact on peoples' perceptions. The community considered this information extremely valuable and worth it of incorporation on their Development Framework. Overall, the main challenges in relation to the engagement process were:

- Leadership
- Trust and transparency

Both corresponded with previously debated arguments in relation to

social capital and cultural capital.

8.6 Thesis outreach

The thesis process strengthened networks for every agency involved: government and other organisations, the researcher and the University of Nottingham. It also contributed to societal gains, providing skills and information to communities, bridging key groups and contributing to policy making. Each one of the application cases has opened doors to a variety of activities and academic engagement as follows:

8.6.a Impact on communities

The community groups that contributed to the research continued to work in collaboration with the University of Nottingham as they found it to be interesting, fun and of great value for the future of their neighbourhood.

A local history video produced for The Meadows is in the process of being upgraded for publication and distribution to local schools, libraries and community centres.

A link was created with the students at Nottingham Trent University, who voluntarily worked in a scheme to provide design alternatives for the expansion of Queen Walk's Pavilion, amongst the proposals was an international award winning design. The community acquired a range of options and they are currently in discussions about what option is best for them; they are also resourcing the necessary funds to do the work.

The Place Alliance has offered to publish Sneinton Neighbourhood Plan process and experience as a case study and exemplar of community engagement. A link was established though Place Alliance with the current

Minister of Planning and Housing, who is interested in hearing about the Neighbourhood Plan process.

The researcher has made links with Nottingham Trent University for a group of undergraduate students to analyse some of the data Sneinton Alchemy has, as they have no resources to do the analysis task. A Nottingham Trent University project on mapping place identity in Sneinton was also triggered by this thesis. This engagement is likely to continue in the long term.

Sneinton Alchemy recommended that the author took part in a project bridging community groups and a local primary school through a community memory project. A booklet, a film and photographic exhibition reviewing memories associated with social dimensions of place will be displayed at the Nottingham Contemporary gallery in December 2017.

8.6.b Impact on policy

The findings of this study are being used to give shape to Sneinton Neighbourhood Plan. These will be done through the creation of a framework for protection, regeneration and action. Also, they were the core components of Dronfield 2035 and Killamarsh 2035 Regeneration Frameworks (see the Appendix section). These briefs have been adopted (with a full section of social dimension outcomes, programmes and deliverables) and they inform the new Local Planning Framework for the areas.

Dronfield City Council has recommended the author to conduct an appraisal of the town with a view to produce a Neighbourhood Plan.

Following a presentation at The Place Alliance Big Midlands Meet, the author was invited to give recommendations on a ten point strategy for the region. An agreement was made to pursue the author's idea to create a

Regional Manifesto for Ethical Development, to include social structures and perception of place as a guidance requirement for future schemes across the region.

8.6.c Dissemination and education

North East Derbyshire County Council has requested that the author becomes an external examiner for their new Academy of Urban Design. Tasks will include doing recommendations to the curriculum, lecturing and reviewing students' submissions to ensure all three dimensions of place covered by this thesis are accounted for.

The author participated as a panellist in an exhibition and event curated by Bahbak Hashemi-Nezhad at the New Art Exchange, to compare historic and current grassroots placemaking experiences in Nottingham. Guest speakers and the audience touched on a number of issues and debated obstacles that persisted through time when bottom-up placemaking approaches developed in the city. Engagement methodologies, leadership and civic organisational tactics practised by Hyson Green Tenants Developments Association in the 1970s were compared to those applied by Sneinton Alchemy forty years later; various correlations emerged through a rich and lively conversation. During this event, it was concluded that the dynamics, language and interests of the agencies involved seem to be in a state of constant asynchrony. Grassroots placemaking processes can only emerge if a certain level of trust is achieved within a community; they depend on strong leadership and, fundamentally, they require a nexus between the community and the authorities. In both cases, the 1970s and the 2010s movements, the nexus was established primarily through the charitable actions and determination of Nottingham Trent University lecturers. It appears that local academic institutions, non-profit organisations and other

skilled institutions can play an essential part within the placemaking jigsaw, possibly becoming key to closing the bottom-up placemaking loop. As a result, in August 2016, the author was engaged as a panellist and speaker in a summer course exploring participation trends in Nottingham neighbourhoods at Nottingham Contemporary.

The University of Manchester, Public Health England and Place Alliance invited the author to present the findings of the research as a series of PG lectures and public talks.

The Urban Design Group agreed to publish the key findings of the research on their journal as a way of bringing awareness to the issues around inappropriate or non-comprehensive appraisal methods being applied in practice.

The author has already performed lectures to master level students at the University of Nottingham, Nottingham Trent University and the University of Manchester about the issues raised by this thesis.

Conference papers, journal papers and other dissemination documents are included in the Appendix of this thesis.

8.6.d Application in practice

The regional head of Public Health England approached the author following a presentation. Collaborative work began on a draft for design recommendations to create happier and healthier neighbourhoods on the basis of social and perceptual dimensions of place. A design guide[3] adopted by alkiki CIC, a non-for-profit organisation that works with designers and

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[3] The design guide includes a 12 point check list to design happier, healthier neighbourhoods.

communities, is currently being applied in urban practice and taught through training programmes delivered to housebuilders Redrow, Davidsons and Barrat Homes. The guide was applied for a number of neighbourhood developments: Bottesford, New Lubbesthorpe, Old Dalby, Hinckley West, Hollywell Spring Farm, Grange Rd Coalville, Sketchley Brook, Earl Shilton, Uppingham, Gledding, Desborough (through their Neighbourhood Plan), and Radcliffe on Trent (through their Economic Master Plan). Redrow homes has commissioned a the author through alkiki CIC to produce a guidance for "creating communities"

Nottingham City Homes in partnership with the University of Nottingham are working on an innovative social housing scheme aiming to deliver sustainability at every level. Through working in practice at Lathams (architects and urbanists), the author has engaged with this scheme to provide consultancy in relation to socially sustainable design.

A project to provide alternative public places for young people to network, learn and play, is being drafted for North East Derbyshire. The author was invited to take part as an advisor on the basis of this research.

The author is currently working part time in urban design practice, testing new tools whilst working with communities. Also, exploring how much impact these types of tri-dimensional studies can have in real life schemes with the limitations of largely commercially-driven housing markets. Table 8.3 on page 353 summarises the outreach of this thesis.

Table 8.3: Thesis outreach summary

IMPACT ON COMMUNITIES	IMPACT ON POLICY	DISSEMINATION & EDUCATION	APPLICATION IN URBAN PRACTICE
Bridging communities and universities	Sneinton Neighbourhood Plan	NEDCC Academy of Urban Design	alkiki CIC design guide being used in urban practice
Historic video produced for The Meadows	Dronfield 2035 Regeneration Framework	New Art Exchange Panel and workshop (June 2016)	Training Redrow, Davidsons, Bloor Homes and Barrat Homes
Sneinton community to become best practice case study for Place Alliance	Killamarsh 2035 Regeneration Framework	Nottingham Contemporary Panel and workshop (Aug 2016)	Application in various residential master plans in practice
Design project provided to The Meadows	Potential contribution to Dronfield NP	The University of Manchester, The University of Nottingham, Nottingham Trent University, Public Health England, Urban Design Group and Place Alliance	Application on SOUL, a social housing project led by Nottingham City Homes and the University of Nottingham
Research support provided to Sneinton	Regional PA Manifesto for Ethical Development	Nottingham Contemporary exhibition (Dec 2017)	NEDCC young places for Killamarsh project
Dronfield cycleway was commissioned on the back of the Development Framework	NPPF review	Training to planners through the East Midlands Design Council	Redrow Homes guide to create communities through design

8.7 Steps forward

This thesis opened channels for further research:

- Other dimensions of place in combination with the morphological, social and perceptual dimensions.

- The relevance of social media analysis on Placemaking processes in British neighbourhoods. Future research could include a larger number of case studies and longitudinal data analysis to explore whether clearer and more consistent correlations can be found between online participation and Placemaking and governance processes, and whether the use of Facebook network analysis could become a useful tool for measuring and delivering neighbourhood resilience.

- The potential inverse correlation of the *Informal contact* and *Organised activities* variables.

- Whether the Length of residence could be a determinant of social cohesion.

- Design principles and place qualities as contributors to more positive attitudes and behaviours towards the environment.

The findings of this study have already made their way into urban practice through application in selected cases. Other dimensions of place also need to be researched in some depth. An optimum case scenario would include an in-depth longitudinal, interdisciplinary analysis of all six of Carmona et. al's (2010) dimensions of place.

8.7 Conclusions

The contribution of this work is twofold: the tri dimensional approach to place appraisal and the actual results of the application, both validate the need for this approach. The results of this study demonstrate that neighbourhoods must be appraised with consideration of these three dimensions in equal measure, and not solely with a focus on morphological

issues. There is an urgent need for urban studies to continue to develop simple ways to appraise and correlate the multiple dimensions of place in residential neighbourhoods, especially due to the richness of the interpretations these combined methods facilitate; informing more positive action and design. It is hoped that education institutions and other organisations involved in urban design and placemaking, embrace the need for a change in the ways in which place appraisals and urban practice are approached, adopting more systemic models and contributing to developing Carmona's Place-shaping Continuum idea.

Last but foremost, field practitioners and authorities are urged to note the relevance of multi-dimensional approaches to urbanism, an urgent reform that perhaps needs to be catalysed in urban policy. Pursuing positive change in this direction in the field of urban practice and planning policy frameworks, will remain the author's endeavour for the foreseeable future.

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APPENDIX 1
A1. Overview and maps

A.1.a Summary of data collection methods

Table A.1.a: Data collection tasks, outcomes and processes involved

Task		Techniques	Variables	Data	Engagement
Preliminary		**Place**			
	1.a	Historic mapping analysis	Patterns of physical change	Q	None
		Historic archive analysis, and historic literature review	Patterns of social change	Q	None
	1.b	Socioeconomic analysis	Current social context	N	None
		Current character appraisal and mapping analysis	Physical structure	Q	Top-down
		Social contact and activity assessment	Patterns of social relations in connection with place	N Q	None
	1.c	Urban design qualities assessment	Physical structure	N	Top-down
		Social Networks			
	1.d	Social network identification	Type and quality of social relations in connection with place	Q	Top-down
Placemaking	1.e	Social network engagement	Type and quality of social relations in connection with place	Q	Bottom-up
		Place Bonding			
	2.a	Public Places Questionnaire	Location dependency	N	Top-down
			Emotional connection	N	Top-down
			Residents' perception of public places	N	Top-down
			Socioeconomic	N	Top-down
		Community Life Questionnaire	Sustainable attitudes	N	Top-down
		Social Bonding			
	2.b	Semi-structured interviews	Type, length and strength of social ties	Q	Top-down
		Public Places Questionnaire	Casual contact in public places	N	Top-down
		Community Life Questionnaire	Levels of trust in neighbourhoods	N	Top-down
			Networks affiliation	N	Top-down
			Socioeconomic	N	Top-down
	1.c	Social value of place	Social emotions and values towards public places	N Q	Bottom-up
*Q = Qualitative; N = Quantitative					

Table A.2.b: Data collection methods summary

PLACE

	Sample	Method	Question	Results
1. Place Assessment	Whole area within defined boundary	Historic mapping, Historic research, Current mapping, Observation, Photographic record	Which public places act as social hubs in the neighbourhood?	Identified 21 public places which might have been acting as social hubs. The area was divided into sub-zones to ease research. **Outcome:** map, photos and briefs
2. Place Check	21 public places identified in *1. Place Assessment*	An initial place-check PPA1 and a more in-depth place check PPA2 were carried out to all 21 places identified	Which public places have a role in gathering people with a concern in neighbourhood places related issues?	From points 1 and 4, a total of 3 key public places which have a role as social hubs on neighbourhood places related issues were identified. **Outcome:** map and brief
3. Place Questionnaire	30 users: 10 people in each one of the 3 key social hubs identified in *2. Place Check*	People were randomly approached at the 3 key locations, and were requested to complete a self written questionnaire	Questionnaire QA2 designed to collect data in relation to PLACE indicators	Quantitative data in relation to PLACE indicators
4. Focus Groups/Interviews/Observations	20 Key Actors within identified Key Networks	3 Focus groups involving informal questionnaires, general discussions and mapping tasks. 6 Informal Interviews. Observations through attendance to neighbourhood meetings	How do neighbours feel about their public places and what is their social meaning?	Qualitative data in relation to PLACE indicators. **Outcome:** map and transcripts

NETWORKS

	Sample	Method	Question	Results
1. Informal Interviews	5 Key Actors within identified Key Networks	Open conversation held with key actors in order to capture information about: the nature and functioning of social networks in the neighbourhood	What are the key social networks, groups and associations acting in the area? What is their role in society and their involvement in the built environment?	Qualitative data in relation to SOCIAL NETWORKS indicators. **Outcome:** transcripts
2. Observations	Whole area within defined boundary	Walking the neighbourhood, talking to people casually and noting observations. Observations through attendance to neighbourhood meetings	How do people connect in the area? What is the role of the built environment in enabling peoples' relations?	Qualitative data in relation to SOCIAL NETWORKS & PLACE indicators. **Outcome:** transcripts and brief
3. Focus Groups	18 Key Actors within identified Key Networks	3 Focus groups involving informal and self written questionnaires, general discussions and mapping tasks	What are the key social networks, groups and associations acting in the area? What is their role in society?	Qualitative data in relation to SOCIAL NETWORKS indicators. **Outcome:** transcripts
4. Community Questionnaire	334 households representing 10% of each one of the sub-areas established in *1. Place Assessment*	A self written questionnaire QA1 was distributed randomly in households. A pre-paid envelope was provided for neighbours to return the questionnaire	What is the origin and strength of current neighbourhood networks in the area?	Quantitative data in relation to SOCIAL NETWORKS indicators

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A.1.b.1 Aerial photos
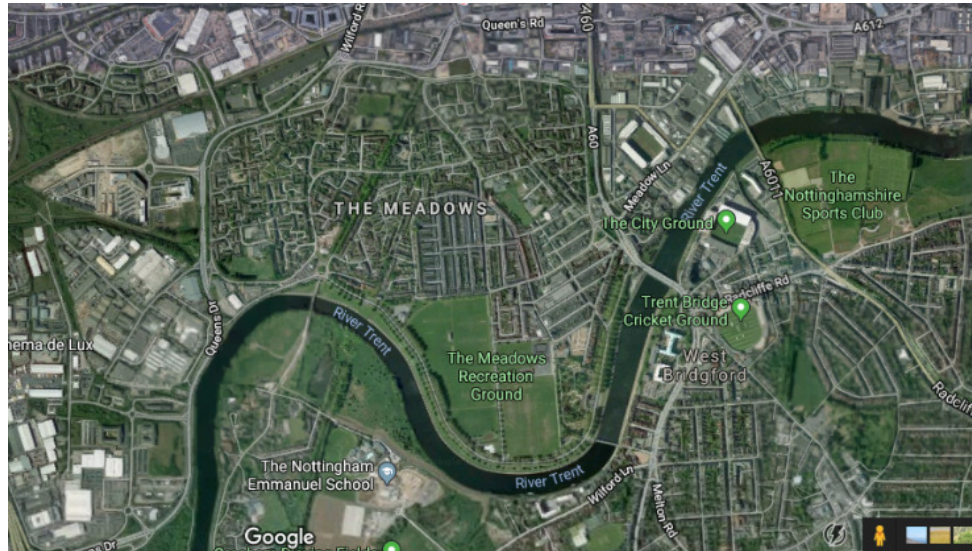
Figure A.1.1: The Meadows aerial photograph. Source: Google Maps, 2017.
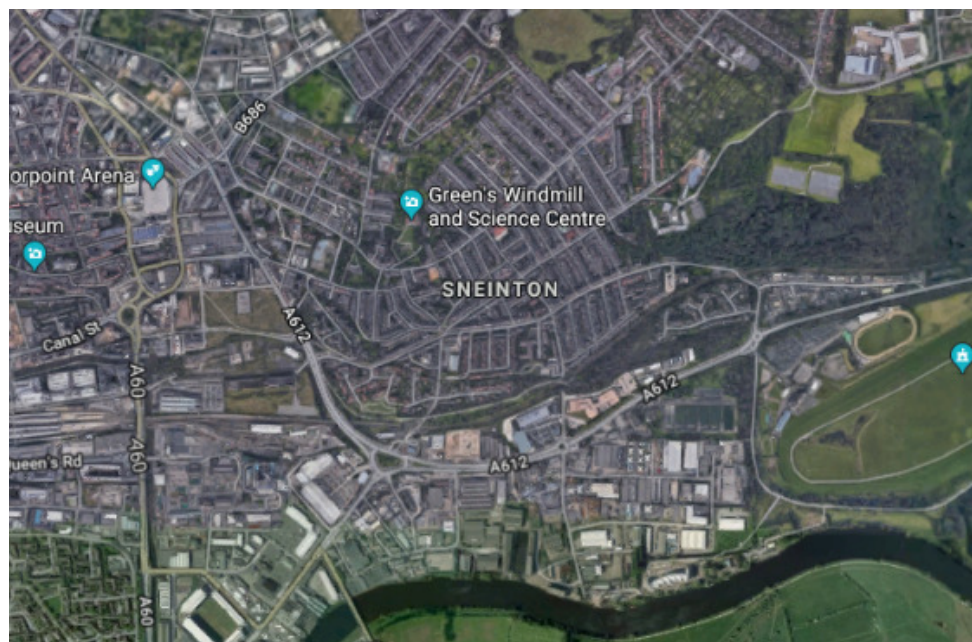
Figure A.1.2: Sneinton aerial photograph. Source: Google Maps, 2017.
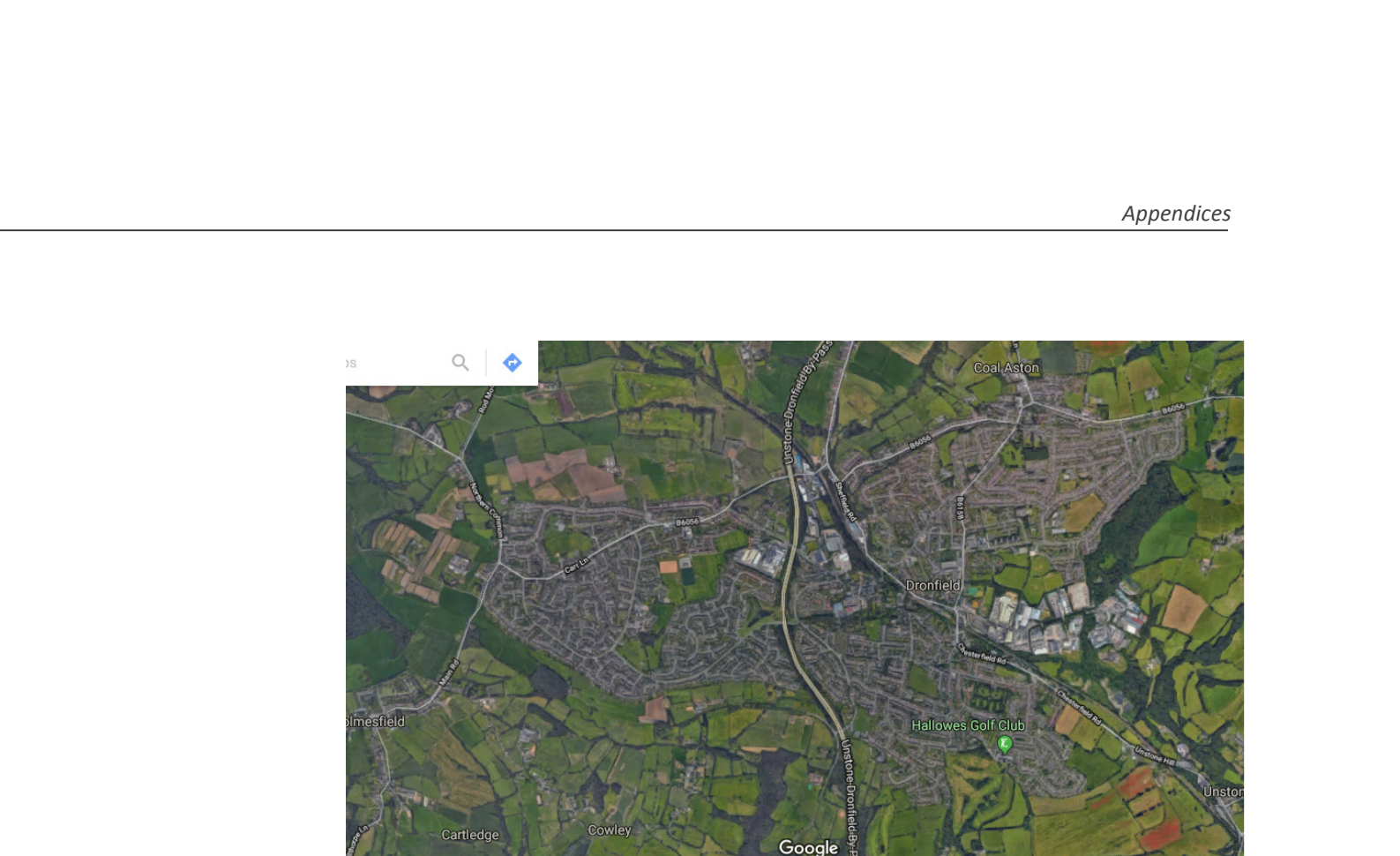
Figure A.1.3: Dronfield aerial photograph. Source: Google Maps, 2017.

Figure A.1.4: Killamarsh aerial photograph. Source: Google Maps, 2017.

A.1.b.2 Road hierarchy

Main roads are shown in magenta and pedestrian links in green, line thickness represents relative traffic circulation (thicker lines have larger number of vehicles circulating on average). The Meadows tram line and the railway lines are shown in dotted red lines.

Figure A.1.3: The Meadows road hierarchy.
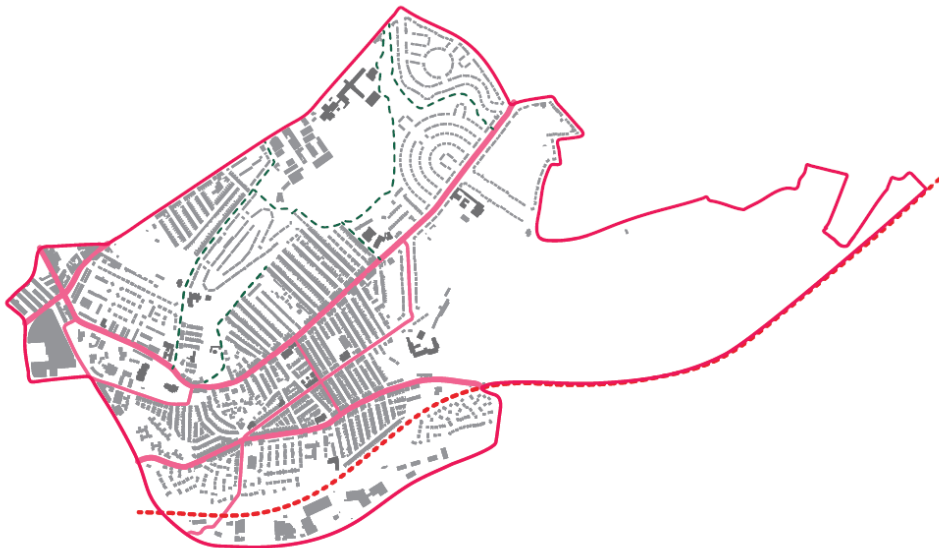
Figure A.1.4: Sneinton road hierarchy.

Figure A.1.5: Dronfield road hierarchy.
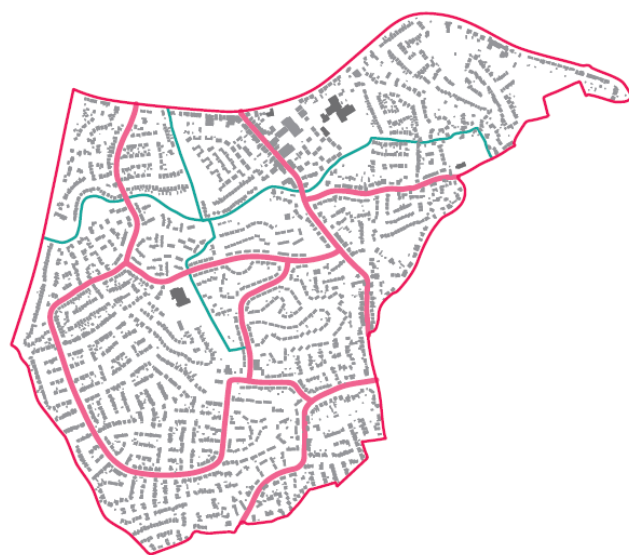
Figure A.1.6: Killamarsh road hierarchy.

A.1.b.3 Pott patterns

1800s development is shown in green, modern post-war development in yellow, 1970s curvilinear patterns in magenta and contemporary developments (2000s) in blue.

Figure A.1.7: The Meadows plot patterns.
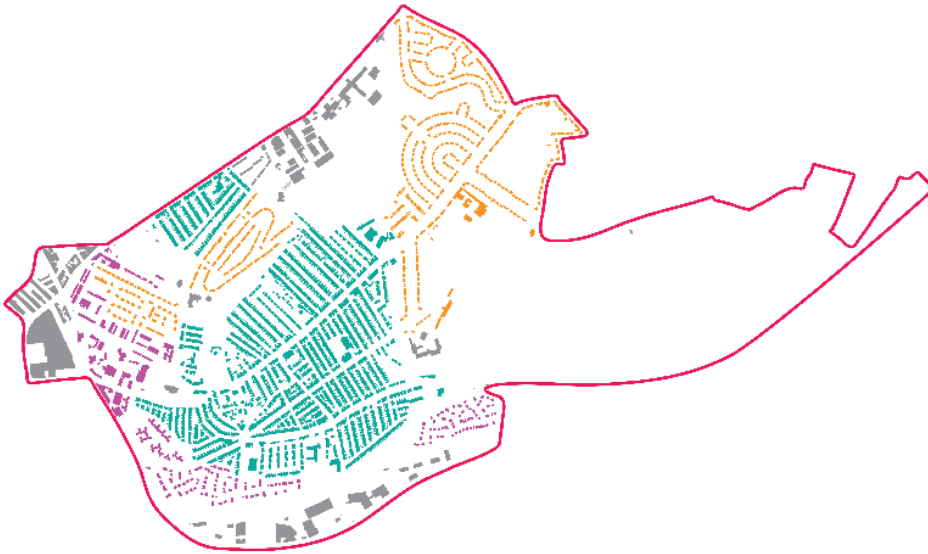
Figure A.1.8: Sneinton plot patterns.

Figure A.1.9: Dronfield plot patterns.
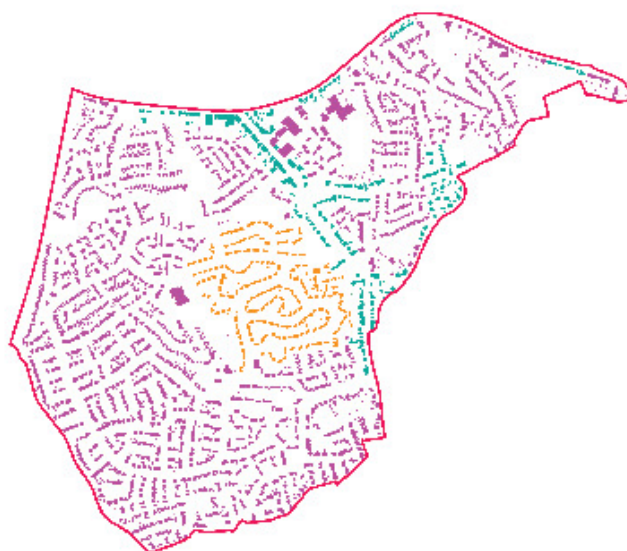
Figure A.1.10: Killamarsh plot patterns.

A.1.b.4 Informal contact location

Public buildings are shown in dark grey, private buildings in white and areas where frequent informal contact was found are shown in yellow.

Figure A.1.11: The Meadows informal contact location.

Figure A.1.12: Sneinton informal contact location.

Figure A.1.13: Dronfield informal contact location.
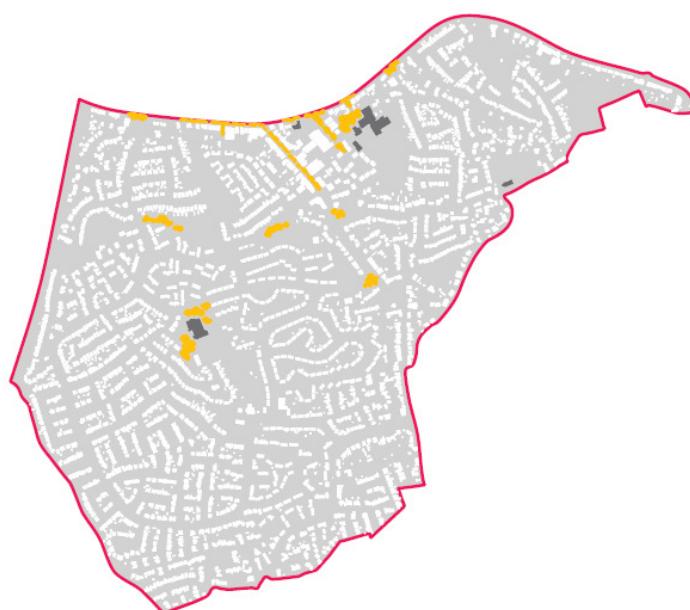
Figure A.1.14: Killamarsh informal contact location.

A.1.b.5 Social spheres

Areas of different colours denote various social spheres found, colours have no specific significance but to distinguish zones.

Figure A.1.15: The Meadows social spheres.
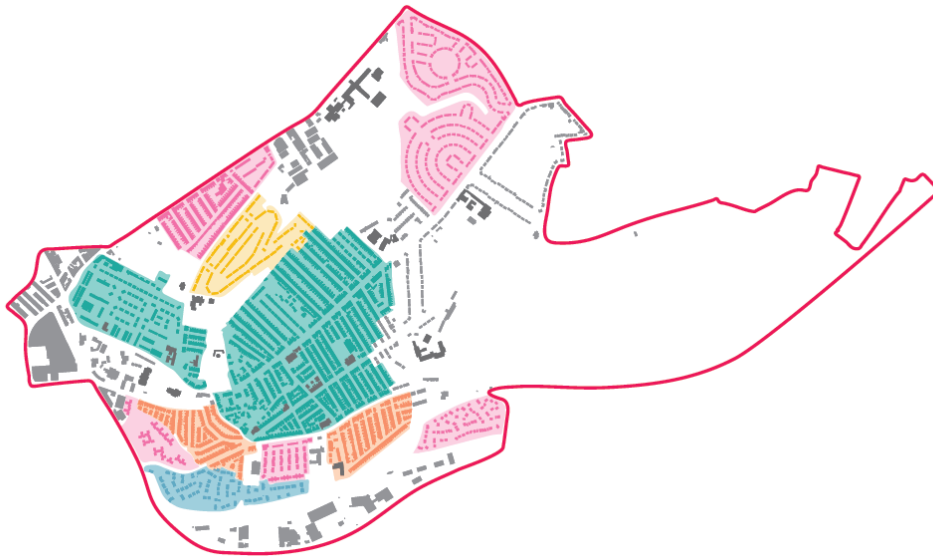
Figure A.1.16: Sneinton social spheres.
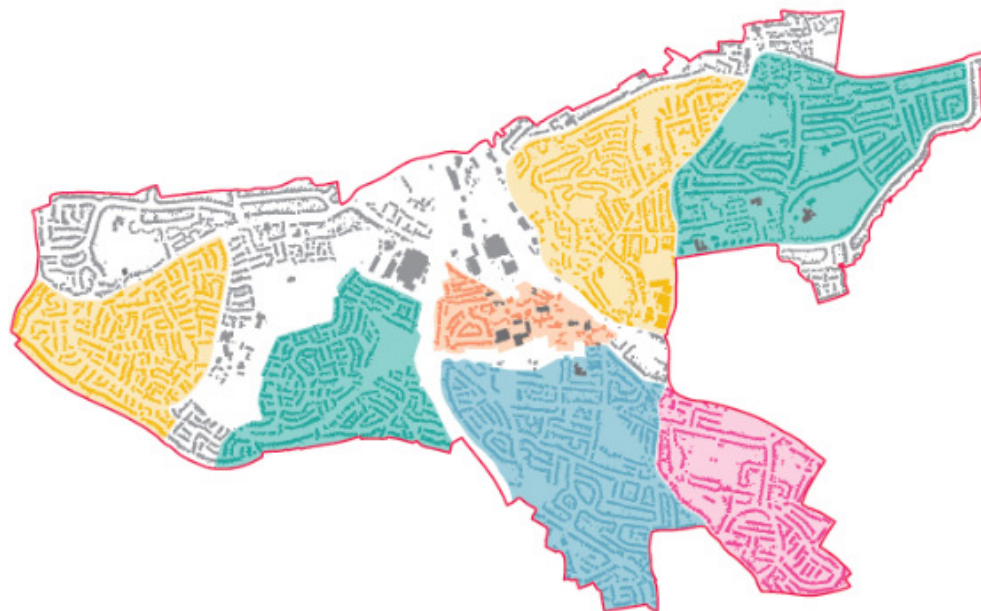
Figure A.1.17: Dronfield social spheres.
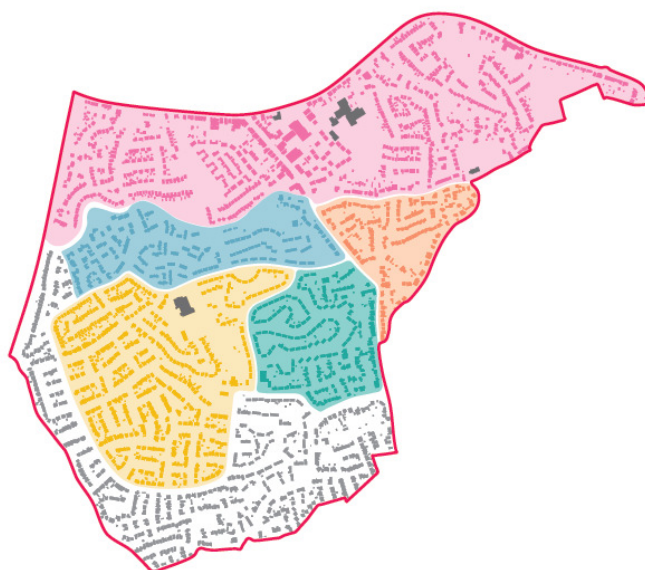
Figure A.1.18: Killamarsh social spheres.

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APPENDIX 2

A.2. Interviews and questionnaires:

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A.2.a Participant consent form

Project title: Community Life and Public Places

Researcher's name: Laura Alvarez

Supervisors' names: Dr. Lucelia Rodrigues and Dr Katharina Borsi

Dear participant,

You are about to take place in a study carried out by The University of Nottingham. Please note: participation is entirely voluntary and the data collected will be anonymous. The study aims to find out if the number, type and quality of public spaces available in neighbourhoods can help establishing and developing community groups. By completing this form you would help us finding out how we can create stronger communities and make better places in neighbourhoods, for people to enjoy.

- I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I understand that I might be audiotaped if I take part in an interview.
- I understand that the study might involve photographs of public places and I might appear on those photographs.
- I understand that data will be stored in a personal laptop and in a backup online folder, both with controlled access only known to the project researcher.
- I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.

Signed …………………………………………………………………………………… (research participant)

Print name …………………………………………………………………… **Date** …………………………………

Contact details

Researcher: *Laura Alvarez - laxlbal@exmail.nottingham.ac.uk*

Supervisors: *Dr Lucelia Rodrigues – lazltr@exmail.nottingham.ac.uk*
          Dr Katharina Borsi - lazkb@exmail.nottingham.ac.uk

School of Education Research Ethics Coordinator: educationresearchethics@nottingham.ac.uk
                              A.2.b Social Networks Interview

A.2.b Social Networks Interview

INTRODUCTION

Good morning/afternoon. Thank you for agreeing to do this interview.
I will briefly explain the reasons for the interview in the context of the study, then we will go through 15 standard questions and after that we'll have a more informal chat on any issues emerging from the questions that might need exploring in a little more depth.
This interviews are carried out to gather data about the ways in which community groups and other neighbourhood-based organisations get started, and how they develop and grow. The study aims to find if the number, type and quality of public spaces available for people to meet up and socialise in your neighbourhood, have any impact on the way community groups get established and grow.
Estimated interview time: *40 minutes*

SECTION A: Interview Questions (interviewer to read)

Thank you for agreeing to collaborate with this interview
Do you know how or why his group started?
How long ago was that? Tell me a little bit about the history of the group.
Was any physical place instrumental in setting or strengthening the group? If so, tell me more about the place.
How long have you been involved in the group?
Can you tell me how you became involved with the group?
What duties are involved as part of your role within the group?
Was your role always the same? If not, how did it change?
How often do you meet with other people involved in the group?
Have you made new contacts or friends through your involvement in the group?
If so, can you describe how you became friends?
Do you meet people involved in the group socially? If so, how often? Can you describe what type of activities you share?
What would you say is the main achievement or the most positive outcome of the group?
Do you think the group has been influential to other groups in the neighbourhood? If so, how do you think this happened?
Do you think there are some objectives that group did not meet, or something that could have been achieved but for some reason it did not happen?
Have you experienced any conflicts during your involvement in the group?
Can you describe the type of conflict and how/if it was resolved?
Once more, thank you for agreeing to collaborate with this interview.

SECTION B: informal Interview (interviewer to conduct)

This session involves conversations dealing with:
i) Response to place:
Mémoires, feelings of nostalgia
Vision, aspirations and hopes for the place
Worries and concerns about the place
Feelings of identity
Localism

Tools used during the interview will be:
Photos/images
Maps or aerial photos

SECTION C: About you…

| Age at last birthday: | | (in years) | **Gender:** | Male | | Female | |

Tick one per row	None	Primary	Secondary	University or higher education	I prefer not to answer
Highest level of formal education I achieved					

	I live on my own	I live as a couple	I am a single parent with children	I live with people who are not family	Other	Number of people living in my home	I prefer not to answer
My family status							

	Christian [1]	Muslim	Hindu	Other	None	I prefer not to answer
My religion						

	White (British)	White (other)	Asian (including Asian-British)	Black (including Black-British)	Other[2]	I prefer not to answer
My ethnic group						

	Employed or self-employed	Unemployed	Unable to work	Full time student	Other[3]	I prefer not to answer
My employment						

	Under £20,000	£20,000 to £40,000	£40,000 to £60,000	£60,000 to £80,000	More than £80,000	I prefer not to answer
The average household earning at my home						

Please use the section below to make any comments about your neighbourhood, your community, or any queries you might have regarding this interview.

_____

_____

_____

THANK YOU FOR TAKING PART IN THIS STUDY

[1] *Anglican, Roman Catholic, Presbyterian, Methodist*
[2] *Arab or any other ethnic group*
[3] *Single parent staying at home, housewife, carer, etc.*

A.2.c Public Place Questionnaire

Dear participant,
You are about to take part in a study carried out by The University of Nottingham. Please note: participation is entirely voluntary and the data collected will be anonymous. The study aims to find out if the number, type and quality of public spaces available in neighbourhoods can help in establishing and developing community groups. By completing this form you will help us in finding out how we can create stronger communities and make better places in neighbourhoods, for people to enjoy.
University of Nottingham
Infrastructure, Geomatics and Architecture Research Division

SECTION A: In this place, I feel…

Tick only one below	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Happy					
Comfortable					
Safe					

SECTION B: In this place, I come across…

Tick only one below	Never	Less than once a month	Once a month or more	Once a week or more	Once a day or more
Neighbours					
Relatives					
Other people I know					

SECTION C: About this place

Tick one or more below	Recreation	Sports	Socialising	Other *(PLEASE SPECIFY)*	
My main reason for visiting this place today was					

Tick only one below	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I feel this place offers what I need today					

Tick only one below	This is my first visit	Less than once a month	Once a month or more	Once a week or more	Once a day or more
I feel this place offers what I need today					

SECTION D: About my residential home and neighbourhood…

	Yes		No		
I Live in this neighbourhood		*Complete sections D to F*		*Go directly to section F*	

Tick only one per row	Home-owner	Private tenant	Council tenant	Other *(PLEASE SPECIFY)*	
I am					

	Location	Friends/family	Budget	Not my choice	Other
My main reason for choosing this neighbourhood was					

	Less than 1	1 to 5	5 to 10	10 to 20	More than 20
I have lived in this neighbourhood for *(YEARS)*					

SECTION E: I am a member of these community groups…(such as Residents Association, Church, Library, etc)			
Name one or more below:	**Since when? (MM/YY)**	**How did you hear about it? (SPECIFY)**	**What was your reason for joining the group?**

SECTION F: About me…

| Age at last birthday: | | (in years) | **Gender:** | Male | | Female | |

Tick one per row	None	Primary	Secondary	University or higher education	I prefer not to answer
Highest level of formal education achieved					

	I live on my own	I live as a couple	I am a single parent with children	I live with people who are not family	Other	Number of people living in my home	I prefer not to answer
My family status							

	Christian Anglican, Roman Catholic, Presbyterian, Methodist	Muslim	Hindu	Other	None	I prefer not to answer
My religion						

	White (British)	White (other)	Asian *Including Asian-British*	Black *Including Black-British*	Other *(please specify)*	I prefer not to answer
My ethnic group						

	Employed or self-employed	Unemployed	Unable to work	Full time student	Other *Retired, single, housewife, carer.*	I prefer not to answer
My employment						

	Under £20,000	£20,000 to £40,000	£40,000 to £60,000	£60,000 to £80,000	More than £80,000	I prefer not to answer
Household earning						

Please use the section below to make any comments about your neighbourhood, your community, or any queries yo

A.2.d Community Life Questionnaire

Dear participant,
You are about to take part in a study carried out by The University of Nottingham. Please note: participation is entirely voluntary and the data collected will be anonymous. The study aims to find out if the number, type and quality of public spaces available in neighbourhoods can help in establishing and developing community groups. By completing this form you will help us in finding out how we can create stronger communities and make better places in neighbourhoods, for people to enjoy.

University of Nottingham
Infrastructure, Geomatics and Architecture Research Division

SECTION A: In my neighbourhood …					
Tick only one per row	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I feel happy					
I feel comfortable					
I feel safe					
I can find my way round the neighbourhood					

SECTION B: With my neighbours, I exchange…*(include relatives who live in your area)*					
Tick only one per row	Never	Less than once a month	Once a month or more	Once a week or more	Once a day or more
Casual chats					
Lend objects *(tools, ladder, etc.)*					
Support emotionally					
Care or babysit					
Lend or borrow money					

SECTION C: I do the following…					
Tick only one per row	Never	Often	Very often	Almost Always	Always
I reduce or recycle my waste *(separate paper, plastic, glass, etc. as the waste collection service allows)*					
I switch the lights off *(when I am not using the room)*					
I turn the heating down *(when I am not using the room)*					
I grow fruit or vegetables to consume *(grow at home, in allotments, communal gardens, etc.)*					
I try to use sustainable transport *(walking, cycling, using public transport, etc.)*					

SECTION D: I am a member of these community groups…(such as Residents Association, Church, Library, etc)			
Name one or more below:	Since when? *(MM/YY)*	How did you hear about it? *(SPECIFY)*	What was your reason for joining the group?

SECTION E: About my residential home and neighbourhood…				
Tick only one below	Home-owner	Private tenant	Council tenant	Other *(PLEASE SPECIFY)*

I am					
Tick only one below	Less than 1	1 to 5	5 to 10	10 to 20	More than 20
I have lived in this neighbourhood for *(YEARS)*					
Tick one or more below	Location	Friends/family	Budget	Not my choice	Other *(SPECIFY)*
My main reason for choosing this neighbourhood was					

SECTION F: About me…

Age at last birthday:		(in years)	Gender:	Male		Female	

Tick one per row	None	Primary	Secondary	University or higher education	I prefer not to answer
Highest level of formal education achieved					

	I live on my own	I live as a couple	I am a single parent with children	I live with people who are not family	Other	Number of people living in my home	I prefer not to answer
My family status							

	Christian Anglican, Roman Catholic, Presbyterian, Methodist	Muslim	Hindu	Other	None	I prefer not to answer
My religion						

	White (British)	White (other)	Asian *Including Asian-British*	Black *Including Black-British*	Other *(please specify)*	I prefer not to answer
My ethnic group						

	Employed or self-employed	Unemployed	Unable to work	Full time student	Other *Retired, single, housewife, carer.*	I prefer not to answer
My employment						

	Under £20,000	£20,000 to £40,000	£40,000 to £60,000	£60,000 to £80,000	More than £80,000	I prefer not to answer
Household earning						

Please use the section below to make any comments about your neighbourhood, your community, or any queries y...
survey.

A.2.e Semi structured interview protocol

Interviewees:		Community Group leaders	
			Prompt
Interviewer:		Laura Alvarez	
Location			
Date			
Time			
Introduction	Hello my name is Laura Alvarez and I am a PhD student from the Infrastructure, Geomatics and Architecture Research Division, at the University of Nottingham.		
Overall purpose of research	The overall purpose of this research is to: The study aims to find if the number, type and quality of public spaces available for people to meet up and socialise in your neighbourhood, have any impact on the way community groups get established and grow. You have been asked to partake in this focus group as you have a keen interest in the development of the local community as part of you role in the local community group and your views are important to this research. Results from this focus group will also be used for a PhD research.		
Ground rules	This interview will take around one to two hours of your time depending on discussion. The session will be recorded however all of the information that you supply today will be anonymous and the data will be protected. The results of the interview will be used to identify how the connectivity of knowledge between past and present can be increased and how community groups relate to their neighbourhood places. The results will be reported as part of a PhD thesis.		Have you any questions before we start?
Round table background Questions:	Q. If you could each introduce yourself and tell us why you became involved in your community group?		
Length (round table questions)	Q. Can you remember how long have you been involved in the group?		
Origin (round table questions)	Q. Can you remember how you became involved in the group? Did anyone tell you about the group?		
Duties (round table questions)	Q. You have told us a lot about why you became involved in your community group can you tell me more about your own role?		Can you expand on this a little?
Ties (round table questions)	Have you made new contacts or friends through your involvement in the group? If so, can you describe how you became friends? Can you describe what type of activities you share?		

Role of group (round table questions)	What would you say is the main achievement or the most positive outcome of the group?	
Influence and bridging (round table questions)	Do you think the group has been influential to other groups in the neighbourhood? If so, how do you think this happened?	
Pre-test questionnaire	I have a small questionnaire relating to your neighbourhood and this venue. Would it be possible for you to fill it in?	Hand out Questionnaire (7min in total)
Mapping	Green sticker → Place it in the public place you most regularly visit, where you feel you are welcomed, you enjoy being there and you feel the place belong to you as a member of your community Red sticker → Place it in a place you do not visit, where you might feel you are not welcomed, maybe you feel in danger or under threat, maybe you feel the place does not belong to you as a member of your community but it belong to other groups. Blue sticker → Place it in a place you feel needs more attention and love from the community and/or from the authorities, a place you feel is being neglected but has the potential to be better Yellow sticker → Place it in a place you feel is under imminent threat, or where conflict is imminent or actually happening, either between different community groups or between residents and the authorities Finally tell us: What is you priority number one for this neighbourhood. If we could magically solve a problem or improve a situation: what would that be?	Display aerial photo.
Close of interview:	Thank you very much for participating in the interview your assistance is very much appreciated. If you have any further questions about our research please do not hesitate to get in contact with us.	(Present contact details to interviewee).

A.2.f Focus Group Questionnaire

See Appendices A.2.c and A.2.d

A.2.g Key actors interview

See Appendix A.2.b

A.2.h Community Focus Group (Social Value of Place)

INTRODUCTION – (interviewer to read)

Good morning/afternoon. Thank you for agreeing to participate in this focus group.

I will briefly explain the reasons for this exercise in the context of the study, then I will explain to you exactly what you have to do.

This focus group is taking place to gather data about the ways in which community groups and other neighbourhood-based organisations relate to the physical places in their neighbourhoods. The study aims to find if the number, type and quality of public spaces available for people to meet up and socialise in your neighbourhood, have any impact on the way community groups get established, operate and grow. Please note that participation is entirely voluntary and the data collected will be anonymous.

Estimated exercise time: 15 minutes

SECTION A: Forum exercise (interviewer to read)

In the provided neighbourhood map, please locate the following:

1- **Green stickers** → Place them in places you regularly visit, places where you feel you are welcomed, you enjoy being there and you feel those places belong to you as a member of your community

2- **Red stickers** → Place them in places you do not visit, places where you might feel you are not welcomed, maybe you feel in danger or under threat, maybe you feel those places do not belong to you as a member of your community but they belong to other groups.

3- **Blue stickers** → Place them in places you feel need more attention and love from the community and/or from the authorities, places you feel are being neglected but have the potential to be better

4- **Yellow stickers** → Place them in places you feel are under imminent threat, or where conflict is imminent or actually happening, either between different community groups or between residents and the authorities

Finally tell us:
What is you priority number one for this neighbourhood. If we could magically solve a problem or improve a situation: what would that be?

A.2.i Walkabout protocol

TOWN QUALITY CHECKLIST: The walk is intended to get your views and feelings about the town centre. We'd like to know what you like and dislike, where you like to visit or avoid and what does and doesn't work. We will use these forms to record your thoughts so that we can discuss and develop your ideas at the other events this week.
INSTRUCTIONS FOR THE WALKABOUT: We will walk through the area shown on your plan in small groups. Each group should agree a response to each question set out below. Try to reach a consensus through discussion. If you cannot agree then take a vote. Mark up the plan provided and make a note to remind you **why** your group selected a particular area.

1. Connections and ease of movement
Mark an area (**C+**) that is clearly connected to a network of other streets and public routes and where you have a choice of routes from A to B. Mark an area (**C**) which feels disconnected or where connections are not clear and where you have little or no choice of route from A to B. Make a note why these areas were selected:

2. Finding your way around
Mark an area (**W+**) where someone on a first visit could find their way around easily and without back-tracking. Mark an area (**W**) where you feel that they could easily get lost. Make a note why these areas were selected:

3. Pedestrian safety
Mark an area or location that you feel is the safest for pedestrians (**P+**) and mark an area or location that feels unsafe or threatening to a pedestrian (**P**), particularly at night. Make a note why these areas were selected:

4. Property security
Mark an area or location (**S+**) where you feel that residents' or other property security is protected. Mark an area or location (**S**) where you feel that property would be most exposed to burglaries, vandalism or other unwanted intrusions. Make a note why these areas were selected:

5. Liveliness and social interaction
Mark an area (**F+**) which you regard as the friendliest or most active, ie that offer the most opportunities for residents or others to have chance meetings. Mark an area (**F**) where you feel that there would be little chance of meeting people or opportunities for social interaction. Make a note why these areas were selected:

6. Streets and public spaces
Mark an area (**Sp+**) which you regard as the best or most useful street or public space in the town centre. Mark an area (**Sp**) which you feel is the worst street or open space in the town centre. Make a note why these areas were selected:

7. Contact with green spaces and nature
Mark an area (**G+**) where you feel some interaction with nature, open spaces and the landscape. Mark an area (**G⎯**) where you feel there is no interaction with nature, open spaces and the landscape. Make a note why these areas were selected:

8. Memorable
Mark an area or a location (**M+**) that you feel is memorable in a positive way – that you would put on a postcard of the town. Mark an area or location (**M**) which you feel is either memorable in a negative way (an eye sore rather than a landmark) or which is unmemorable and looks the same as many other places. Make a note why these areas were selected:

9. Overall desirability
Mark an area (**D+**) where you are most likely to use or visit. Mark an area (**D**) where you are least likely to use or visit. Make a note why these areas were selected.

A.2.j Sneinton Alchemy questionnaires

Sneinton Neighbourhood Plan Enquiry & Action Form

COMMUNITY ORGANISERS

Street		Time		Date	/ /	Gender	M/F	Ref	RC no
	What's good in the area/environment What make you feel happy and hopeful								
	In terms of the local environment what's bad? What make you feel angry, sad or frustrated?								
	What makes a neighbourhood good to live and work in?								

Sneinton Neighbourhood Plan Enquiry & Action Form

	What pressure affect the area now and in the future?			
	What needs to change?			
	Would you like to try something now?		**Y**	**N**
	I am carrying out this consultation on behalf of Sneinton Neighbourhood Forum (SNF). Nottingham City Council has recently approved the SNF and have designated Sneinton as the first area in Nottingham that can develop a Neighbourhood Plan, which is a community-led framework for guiding the future development, regeneration and conservation of an area. Here are some ways you can get involved	Join the SNF		
		Share your ideas at a meeting		
		Attend a NP workshop		
		Help to spread the word		
		Volunteer		
		Tell a friend		
		Other please state		
	Do you know others that share your view? Who? Would you be willing to talk to them about this discussion and see if it is OK for me to contact them?		**Y**	**N**

	Here's my card, Can I stay in touch with you about the progress of the Sneinton Neighbourhood Plan? What's the best way to do this? Your personal details will be kept confidential and not passed on to any other organisation but your ideas will be used to inform the development of the plan.					
	Newsletter	Email	Meeting	Telephone	Social Media	Text/SMS
	Other (please state)					

	Thank you very much for your time I would appreciate if you could provide me some feedback or comments on this experience. What can I do to get more people from your area to share their views with me

A.3.a Public place assessment – Part 1: activity and character

PUBLIC PLACE ASESSMENT FORM – Part 1

SURVEY DETAILS	
AREA CODE (e.g. A3)	
PLACE NAME	
DATE & TIME	
WEATHER	
SURVEYOR	
Other comments (if applicable)	

a- PLACE QUALITY - *Photographic evidence to be collected*

	POOR	AVERAGE	GOOD	VERY GOOD	EXCELLENT
MATERIALS					
STREET FURNITURE					
LIGHTING					
LANDSCAPE					
ACCESS					
SIGNAGE					
VIEWS/AMENITY					
SAFETY					
Other comments (if applicable)					

b - ACTIVITY

TYPE OF ACTIVITIES TAKING PLACE (describe)

	LOW	AVERAGE	MEDIUM	HIGH	VERY HIGH
LEVEL OF ACTIVITY					
LEVEL OF SOCIAL INTERACTION					
LEVEL OF STEWARDSHIP					
LEVEL OF APPROPRIATION					
	0-15	16-25	25-45	45-60	60+
AGE OF MOST USERS					
USER'S PROFILE, ATTITUDES AND BEHAVIOURS (e.g. any foreign language being spoken, abnormal or anti-social behaviours, other comments)					

A.3.b Public place assessment – Part 2: urban qualities

SURVEY DETAILS	
AREA CODE (e.g. A3)	
PLACE NAME	
DATE & TIME	
WEATHER	
SURVEYOR	

Other comments (if applicable)

c- URBAN DESIGN - *Photographic evidence to be collected*

ENCLOSURE	POOR	AVERAGE	GOOD	VERY GOOD	EXCELLENT
c.1 ADAPTABILITY the ability of the place to host different activities, whether they might be planned or spontaneous					
c.2 LEGIBILITY how easy it is to understand the purpose and function of the space and how easy it is to move around					
c.3 CENTRALITY how easy it is to establish a central point, not in the geographical sense but in the sense of 'the heart' of the place					
c.4 LINKAGE how well connected this place is to similar or significant places in the area and to the buildings and spaces that surround it					
c.5 ENCLOSURE how protected, surrounded and overlooked the place is. How much the place is defined and demarcated by vertical elements surrounding it (walls, trees, buildings, etc)					
c.6 MEANING how easy it is to understand the social and cultural meaning of the place, for example, the space					

around a church or a school will determine patterns of social use which are established norms within society and are clearly understood					
c.7 TERRITORIALITY if temporary or permanent appropriation of the public place can take place					
c.8 COMFORT if the place has the necessary infrastructure and services to allow people use the space without struggles (for example seating, lighting, etc)					
c.9 NAURALNESS if the place has natural features (trees, vegetation, water, soil, sand, rocks, etc)					
c.10 REFUGE how well protected from the elements the place is (for example having an undercover area, wind screen, etc)					
c.11 VISIBILITY how easy it is to find the place for an outsider					
c.12 UPKEEP how well maintained and cleaned the place is					

Other comments (if applicable)

A.3.c Public Place Survey protocol (The Meadows example)

Objectives

1 - Complete the Public Place Questionnaire QA2/1/V.1/…
2 - Distribute the Community Life Questionnaire QA1/1/V.1/…

Methodology

1- **Public Place Questionnaire QA2/1/V.1/…**
Approach people randomly at the places listed below, explain what the questionnaire is about exactly as per the introductory paragraph in the questionnaires, explain that it usually takes about 5 minutes to fill in the 2-page form, ask the participant to sign the consent form and file this in the provided envelope (A), hand in the questionnaire form and a pen, receive the completed form and place it in the provided envelop (B). Repeat this until the number of questionnaires stated below has been achieved for each location:
10 Questionnaires → Bridgeway Centre, Nottingham, NG2 2JD – Sub-Area F, Location 1
10 Questionnaires → Queen's Walk Park, Queen's Walk NG2 2DF – Sub-Area E, Location 2
5 Questionnaires → Queen's Community Centre, Queen's Walk, NG2 2DF – Sub-Area E, Location 5

Left: Sub-area F location map; Right: Sub-area E location map

If participants have specific questions about the possible answers, the interviewer can clarify the meaning or interpretation of the questions but this should be done without biasing the participant and without giving indication of what should be answered. Interviewers have been trained adequately in order to perform this task.

2- **Community Life Questionnaire QA1/1/V.1/…**
Distribute the number of questionnaire indicated in the table below, across the sub-areas shown in the map below, covering 10% of the houses in the neighbourhood. Do not distribute the envelope in houses that look vacant or ready for demolition. Ensure all housing prototypes are equally and proportionally covered, for example, if there are 50 houses and 80 flats, distribute envelopes in 5 houses and 8 flats.

	SAMPLE
A	46
B	71
C	49
D	25
E	36
F	48
G	60
TOTAL	**334**

Filed work sub-areas location

Health & Safety:

Interviewers are advised to:

- Carry identification card/badge with them
- If asked who they are or what they are doing, respond by stating the paragraph written as in introduction to all questionnaires, this is to avoid mixed-messages and confusion amongst the public
- Carry out the work in day light and remain in well-lit areas
- Do not exhibit valuables (iPads, mobiles, cameras, etc.)
- Avoid confrontation
- Avoid areas that are hidden and are not visible to the public

APPENDIX 4
4. Sustainable Cities and Society: The role of social network analysis on participation and placemaking.

APPENDIX 5

A5. Summary of contribution to literature

Table A5.1: Contemporary literature statements confirmed by this research

Porteus, 1977; cited in: Bell et al., 1996, p.349; Wilner et al., 1961; cited in: Bell et al., 1996, p.349; Haing, 1982; Myers, 1978; cited in: Bell et al., 1996, p.357; Bell et al., 1996, p.349; Bell et al., 1996, p.349; Fullilove (2014) (Gans, 1962; cited in: Bell et al., 1996, p.349) Back in 1962, Gans (cited in: Bell et al., 1996, p. 349)	In most cases, the effects relocation has on family relations is negative, causing grief symptoms and damage to their psychological and physiological health Regenerating neighbourhoods not only means demolishing or refurbishing the urban structure but also destroying social systems which are essential to many people's survival. Demolishing or refurbishing the morphology of neighbourhoods can, not only destroy social systems that are essential to many people's survival,
Toker (2005; cited in Zeisel, 2006, p.346)	Accessibility and visibility were directly related to the number of contact amongst non-leaders within the social network
Appleyard and Lintell (1972; cited in Carmona et. al., 2010, p.103)	The form and hierarchy of road structures are intimately related with the way in which we perceive and respond to our environments, both socially and individually.
Hopkins (2010, p.125) Kintrea et al. (2006: 6, cited in: Hopkins, 2010, p.122)	Neighbourhoods in disadvantage show stronger cases of territoriality that correlate strong social spheres. Found a link between social structures and some of the key factors that motivate territorial behaviours.
Hester (2006)	There is a sense of spiritualism that connects humans with their landscapes, increasing the community awareness of the place and enhancing their sense of belonging.
Hall and Ward (1998)	Saw the advantages of communal agriculture or recreation as a vehicle to make new communities more engaged and attached to their places.
Giuffre (2013)	Using social network analysis gives us a richer understanding of how communities operate
Halpern (2005).	In neighbourhoods with higher turnover, people have no time to bond and form roots; alienation is associated with weak and fragmented social networks which cause loneliness and depression
Alisky (1969) and Gray (cited in: Grunter and Kroll-Smith, 2007, p.47)	consolidated communities might be resentful and hostile towards a new organisation within their locality, or towards any type of transformation, and the reason for this, is that there is a communal feel of threat to their own identity and security.
Giuffre (2013).	Organic solidarity might fall short in offering sense of belonging and identity
Carmona et al.'s (2010).	Residents interaction can be influenced by design and depends on instances of visual contact or the time to maintain meaningful interaction.
Halpern's (2005)	Numerical measures of voluntary organisation density per area can lead to biasing important qualitative differences and that association-based measures can have poor predictive validity due to the lack of qualitative information about those affiliations.
Tiesdell & Oc (1998)	Accessible, equitable and inclusive are desirable public place qualities that inevitably require public place provision to exist.

Carmona et. al (2010)	Public spheres are formed by a series of overlapping and interacting public entities
Hester (2006) and also Arendt (1958) and Alinski (1971)	Outcomes of social networks engagement process reinforces the value of including its variables in urban practice for the delivery of democratic political stages.
Appleyard (1969; Evans et al. (1982); Weiman (1981), McNamara (n.d; cited in: Bell et al., 1990, p.75) and Collins and Quillian (1969; cited in: Bell et al., 1990, p.75)	The degree of visual access to objects, and the level of complexity are factors that relate to how we establish a place network in our memory.
Yi-Fu Tuan (1997).	we confidently move in space following a combination of 'known moves' and 'familiar landmarks'
Hester (2006; 2014)	The most valued places were consistently emerging from people's childhood memories. The majority of those places involved some sort of natural element. It is possible to design considering the social value of places.
Putnam (1993; cited in: Halpern, 2005, p.8) Lowndes et al. (2001; cited in: Townsend and Tull, 2004, p.14)	High levels of participation went hand in hand with the levels of trust, a measure of social capital. The main reasons for people to participate related to finding their interests compromised and that people did not participate when they did not trust their local governments.
Grunter and Kroll-Smith (2007)	Once there is an opportunity to bring up the word 'fairness' in a community in conflict, one or more parts to the conflict perceive themselves as victims of other parties' actions
Newman (1996)	Streets where people felt a sense of ownership, and where despite being open to the general public it could be perceived that one was entering a private zone, were calm and clean.
Mihaylov and Perkins (2014,) and Stedman (2002; cited in: Devine-Wright, 2014, p.171)	The emotional bonding dimension was related to memories and experiences in the neighbourhood rather than to the actual places. This suggests people felt affection towards their experiences in public places, rather than the places themselves, and that they try to protect part of their identities when they aim to protect places.
Hamdi (2010)	A secular community space that is perceived as 'impartial' has more social network power than a church for example. A 'neutral' space can attract a diversity of groups and communities can assign their own local meaning to them based on routines and experiences shared by neighbours.

Table A5.2: Contemporary literature statements argued by the evidence provided through this work

Cassidy (1997).	Within a community, neighbourhoods with equal distribution of class, ethnicity and culture, are the most successful as they enable multiple levels of interaction and sufficient levels of social support within close knit groups whilst allowing for group bridging
Uzzell et al. (2002) and Carrus et al., 2014, pp.154-156)	Place attachment is directly linked to pro and anti-environmental attitudes and behaviours. Cohesive communities with a strong sense of identity are more inclined to have pro-environmental behaviours than weaker communities.