Characterising the Post-Industrial City - A Case-Study of Industrial Era Residential Areas in Newcastle-upon-Tyne

PhD Thesis

OF

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ABSTRACT

This study proposes that urban post-industrial landscapes are defined by both the emergence of new post-industrial building types and uses, and the survival of 19th century residential areas that are typical in English cities. As such the post-industrial city is characterised by processes of change and continuity. The concern for and interest in the character of these residential areas is seen as indicative of current cultural values in the management of the (historic built) environment. This study suggests that in an increasingly complex post-industrial world the concern for character and sense of place are of paramount social and cultural importance, yet the notion of character is often in practice used in a prescriptive, limited capacity and this belies its inclusive and profound, but very complex, potential.

Combining historical research with the analysis of the current built environment, the aim of this research is, through a three-phased case-study of the Heaton Residential Neighborhood, to analyse the history, development and the subsequent changes that over the last 100 or so years have had an impact on Heaton as an area. The case-study is undertaken in the context of a theoretical framework developed from a critical reading of existing character conceptualisations within environmental disciplines. This theoretical framework understands the city and its character as a transductive matrix that combines the technical, physical, psychical and affective realities. The case-study is also contextualised in relation to current environmental management policies and a number of established built environment research methods are evaluated based on how they relate to the theoretical framework and address change within the built environment. The concluding chapters develop the case-study research further through historical and typological analysis, assess the merits of the research methodology used and connect the case-study research with the theoretical framework.

This study concludes that the research approach adopted allows for the critical assessment of the perceived key characteristics of the surviving 19th century residential areas. It is suggested that combination of historical research and analysis of the current built environment can shed new light on the development of the character of all residential areas. Furthermore, in moving beyond the physical appearance as the key constituent of character, this study high-lights the more abstract characteristics of 19th century residential areas within the post-industrial city.

ABSTRAKTI - Jälki-teollista kaupunkia luonnehtimassa.

Tämä tutkimus esittää että urbaanille jälki-teolliselle ympäristölle on luonteenomaista sekä uusien jälki-teollisten rakennustyyppien ja käyttöjen ilmeneminen, että 1800-luvulta lähtöisin olevien asuinalueiden säilyminen osana kaupunkimaisemaa. Näin ollen jälki-teollista kaupunkia määrittelevät sekä muutokseen että jatkuvuuteen liittyvät prosessit. 1800-luvun asuinalueisiin ja niiden paikan henkeen ja luonteeseen kohdistuva huomio ja huoli kuvastavat tälle ajalle tyypillisiä kultturiarvoja historiallisen ympäristön hallinnassa. Tämä tutkimus ehdottaa että yhä monimuotoisemmassa ja monimutkaisemmassa jälki-teollisessa maailmassa paikkojen henkeen ja luonteeseen kohdistuva mieleenkiinto on sosiaalisesti ja kulttuurisesti hyvin merkittävää, toisaalta kuitenkin paikan 'luonteeseen' viitataan käytännössä rajoitetussa ja normaativisessa kapasiteetissa. Tämä haittaa paikan luonteen kokonaisvaltaisen ja syvääluotaavan potentiaalin tiedostamista.

Historiallisen tutkimuksen ja nyky-ympäristön tarkastelun yhdistäminen Heatonin asuma-alueen kolmi-vaiheisessa tutkimuksessa edesauttaa alueen historian, kehityksen ja viimeisen sadan vuoden aikana tapahtuneiden muutosten vaikutusten analyysissä. Tämä tapauskohtainen tutkimus muodostuu uudesta teoreettisesta näkökulmasta joka perustuu ympäristöä käsittelevien tieteenalojen olemassa olevien paikan luonnetta käsittelevien konseptien kriittiseen arviointiin. Tämä uusi teoreettinen näkökulma ymmärtää kaupungin ja kaupungin luonteen transduktiivisena matriisina jossa tekniset, fyysiset, psyykkiset ja affektiiviiset todellisuudet yhdistyvät. Heatoniin liittyvä tutkimus kontekstualisoidaan tämän hetkisen ympäristön hallintaan liittyvän lainsäädännön ja käytäntöjen yhteyteen, ja valikoitu joukko käytäntöpohjaisia tutkimusmenetelmiä evaluoidaan sen pohjalta miten ne käsittelevät muutosta rakennetussa ympäristössä. Väitöskirjan loppuosan yhteenvetävät luvut käsittelevät tapauskohtainen tutkimuksen tuloksia historiallisen ja typologisen analysiin kautta, ja arvioivat käytetyn tutkimusmetodologian meriittejä sekä yhdistävät tapauskohtainen tutkimuksen ja teoreettisen näkökulmaan johon se perustuu.

Johtopäätöksenä tämä tutkimus esittää että omaksuttu tutkimusnäkökulma mahdollistaa 1800-luvulta peräisin olevien asuinalueitten luonteenomaisten piirteiden kriittisen arvioinnin. Käytetyn tutkimusmetodologian laajemman tarkoituksenmukaisuuden arviointi näyttää ehdottavan että yhdistämällä historiallista tutkimusta ja nyky-ympäristön tarkastelua voidaan valottaa kaiken ikäisten asuinalueiden kehityksen kulkua. Lisäksi, siirtymällä fyysistä ulkomuotoa laajempaan ymmärrykseen siitä miten paikan luonne muodostuu, tämä tutkimus kiinnittää huomiota 1800-luvulta peräisin olevien asuinalueitten abstraktimpiin luonteenomaisiin piirteisiin, ja näin ollen määrittelee uuden ontologisen näkökulman paikan luonteen olemuksesta.

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Chapter 1

Introduction

1.1 Preface

This research project starts from the premise that the legacy of nineteenth and twentieth century industrialism forms a significant part of the physical and mental landscapes of towns and cities, not only in the northern and central England, but also elsewhere in the so-called 'Western World'. With the decline of heavy industries in England, housing stock is perhaps the strongest physical remnant of the industrial-era on the contemporary urban landscape. All around us the existing housing stock of English towns and cities largely takes the form of superficially homogeneous mass housing dating from the 18th to 20th centuries. Yet this housing has been less researched and understood than, for example, sites of industrial production. Much of the present built environment and the wider urban landscape is the result of developments that have occurred during the industrial period, yet describing the city as post-industrial suggests that an appreciable difference can be identified in comparison with the same environment e.g. 100 years ago. In other words the term 'post-industrial' implies the occurrence of significant change in comparison to the 'industrial' phase. Thus ordinary residential areas originating from the 19th and 20th centuries are identified as centres of everyday life whose role and character in the post-industrial city has potential for further study.

In methodological terms the immediate backdrop to this research project can be identified in the 'Characterisation' work carried out by the English Heritage over the last 15 or so years. Historic Landscape Characterisation (HLC) is a GIS based research programme that maps the physical evidence of the past in the present landscape. English Heritage also describes characterisation as a programme of work that captures the overall idea of place. On a conceptual level, landscapes and places and their character emerge as issues that have fundamental importance in the formation of human experience and knowledge. The concern for and interest in the character of places and landscapes is in this study

seen as indicative of the cultural values employed in the management of the (historic) environment. Therefore, these concepts form part of the theoretical background of this study, and are reviewed in detail in the following.

1.2   Road Map

In summary the following chapters

- Assess the concepts of place, landscape and character.

- Introduce and critique an existing research programme called HLC and links these considerations to the concept of character

- Develop a theoretical framework for this study that allows for a new ontological understanding about the nature of character and propose, a multi-scalar, dynamic model of character of industrial era housing in the post-industrial city

- Review a range of selected practice based built environment research methods.

- Through this inter-disciplinary review of characterisation methods develop a case-study research approach that allows for the exploration of character of residential areas originating from the 19th century

- Develop the research ideas identified during the review phase of this study, and applies them to a selected case-study.

- Analyse the results of the case-study and places the case-study of 19th century residential areas in Newcastle in a broader historical and theoretical context.

- Analyse the applicability of the research methodology developed and evaluates the contributions to knowledge this study makes.

- In conclusion this study outlines the new ontological understanding of character in the light of the case-study undertaken

In the rest of the written study when a cross-reference to a preceding or a following Chapter is made the title of that Chapter will be high-lighted in *italics*.

1.3 Aims and Objectives of This Study

The specific aim of this study is to describe and analyse the character of surviving residential areas originating from the 19th century in Newcastle-upon-Tyne. More broadly, this study aims to question and critically evaluate the perceived key characteristics of 19th century residential areas.

This research firstly outlines and compares existing definitions for character and related concepts based on existing literatures, and distinguishes between character as an operationalised and an abstract concept. From the issues identified in the *Conceptualising Character* Chapter a theoretical framework is developed allowing for a more abstract understanding of character. Furthermore, the literature review and the conceptual development are used as a starting point for the development of a case-study research approach. Drawing from historical and contemporary data this study addresses the case-study area in an increasing level of detail. This study aims to move beyond the 'physical' character of residential areas and thus addresses the more abstract, processual characteristics of 19th century housing.

This study focuses on the character of 19th century residential areas in the context of the post-industrial city through an area-based case-study that seeks to address the historical development and the present day character of the urban landscape, before looking at the perceived characteristics of surviving 19th century housing in detail. The research undertaken is based on a critical review of existing conceptual literature and available research methods. Based on this critical review a theoretical framework of this study is outlined and a three phased, area based case-study research approach developed. The results of the case-study are analysed in the context of the existing understanding of the character of the 19th century residential areas, and their role in the post-industrial city. Through comparison of existing literatures and research approaches this study develops a case-study methodology that corresponds with the theoretical framework developed, and allows for the exploration of the more abstract nature of character. Within the case-study this study assesses how the physical character of the chosen case-study area has developed through history, outlines what the physical result of this development is in terms of the current historic landscape character, and analyses what can be learnt from a critical analysis of the defining characteristics of 19th century residential areas.

In the analysis of the case-study results it is the objective of this study to link the findings of this geographically specific case-study to the broader case of surviving 19th century residential areas, and the character of these residential areas in the wider post-industrial city and society. The analysis summarises the critique of the perceived key

characteristics of the 19th century residential areas, and outlines further considerations for each characteristic.

1.4   The Significance of Character

This study hypothesises that concern for the 'character' of the built environment reflects the importance of how people relate to their environments to the whole of the human experience. 'Character' appears to refer both to the more spiritual or abstract aspects of human experience, yet it has become a concern also in the practical management of the physical (built) environment. Of particular importance in this study is how the notion of 'character' influences the strategies and features in the discourse concerning the management of the historic built environment, with particular reference to 19th century residential areas. This study suggests that an integral part of this thesis is to consider how values associated with the (historic) environment are reflected in the objectives of current conservation policy. It is also necessary to evaluate how the use of character as a concept in various character assessments and in other historic environment research and management practice reflects these values and objectives, and to critically evaluate whether these considerations are compatible with the character of 19th century residential areas.

This study begins from an assesertion that 'character' as a concept can be conceived in two distinct ways, and that these conceptualisations relate to similar debates about the notion of 'place'. Both concepts can be used to generalise ideas about the environment, or to analyse or describe a location and its particular features. In other words, character can act as a general or a particular idea.

As a generalising concept character can be conceived as an 'ideal', and in this case 'character' refers to notions about a good environment, and an area with a certain 'type' of identifiable character. In environmental management assigning character definitions based on this typological approach to character informs assumptions about the physical and visual appearance of the said area. This study suggests that the idea about character as something that can be prescribed encourages management strategies focusing of uniformity (in order to maintain this identifiable character) and fosters adherence to the identified character type.

On the other hand character can be conceived as an assessment of 'facts' - the character and features of an area without preconceived ideas about its type, or normative assumptions about good or bad character and without uniform, visually coherent ideal

as the goal of management decisions. This approach focuses on character as it presents itself and is perceived in its varied detail. Flaws and changes are also part of this conceptualisation of character. This is in contrast to the first example of how character can be conceptualised where incongruous features can be 'out of character'.

Some of the earlier debates regarding the management of conservation areas appear pertinent to the consideration of management and study of 19th century residential areas such as Heaton (Larkham, 1990; 1996; Whitfield, 1995). According to Larkham many planning policies explicitly press for unity, and he points to this approach also being the philosophy underlying many academic approaches to urban landscape, such as M.R.G. Conzen's morphogenetic approach to townscape management (Larkham, 1990a; Whitfield, 1995). Larkham (1996, 23-24) discusses the debate about the role of UK conservation areas where the issue of the definition of character and its practical repercussions is, according to him, of intense significance and asks if we should '...aim for uniformity or diversity in enhancement schemes, new buildings and alterations to existing structures?'. On the other hand 'diversity' is considered a feature of successful places in current guidance on Urban Design (e.g. CABE, 2000; and 2003). In this context it appears that debates about 'character' and whether policy and practice should aim for unity or diversity apply to the management of all surviving 19th century residential areas, and in fact to all built environment.

In the context of 19th century residential areas their diversity as a type of neighbourhood can complicate the understanding of the effects of change and the values associated with these areas. This study hypothesises that considering 19th century residential areas as 'heritage' in the traditional sense contradicts the dynamic, evolutionary characteristics of these areas discussed in the *Case-Study* and *Character of 19th Century Residential Areas* Chapters. If previous conservation policies, as suggested by Larkham (1996, 23-24), appear to call for unity (in appearance) of e.g. conservation areas, the areas with mixed external appearance (such as Heaton) have not been considered worthy of special protection. The more more recent developments in historic environment management and evaluation have however begun to acknowledge that history is ubiquituous, and that every place matters and has character. This change in the appreciation of different kinds of historic areas is reflected in the recent publication of guidance on 'Historic Area Assessment' by English Heritage (EH, 2010a and b).

In summary this study is concerned with the idea 'character' for the following reasons:

- Character is an on-going and enduring concern in the environmental disciplines

- Character as a concept appears to be used ambiguously as part of the current

historic environment management discourse

- This study hypothetises that character is an indicator or cultural values associated with the environment and changing and evolving ideas about heritage

- This study also hypothetises that character works at different scales and resolutions, from landscapes to individual buildings, and from general to the particular.

Therefore this study suggests that the continuous process of change and modification that occurs in the everyday 19th century residential settings is an essential part of the character and heritage of these areas. This study seeks to develop a research methodology and understanding of 'Character' as a concept that allows for an analytical exploration of the perceived spatial, temporal and experiential aspects of the character of post-industrial cities and specifically 19th century residential areas within them.

1.5   Frames of Reference

As this study is concerned with the surviving 19th century housing as part of the built heritage of English Cities these frames of reference have been identified as relevant to the study of such built environments. The following introduces the Typologies of New Post-Industrial Building Types (Gospodini, 2006), the categories of Buildings Vulnerable in the Post-Industrial City (Nikula, 2005) and the Values in the Management of the Built Environment (Pereira-Roders, 2007) which are identified as key contexts for this study. Furthermore the concept of 'character' and an apparently related practice based research approach HLC are identified as key contexts for this study.

The following sections outline further key concepts and parameters of the study undertaken. These have been identified as:

- Ideas about the post-industrial society and city

- Analytical frames of reference that are used to contextualise the case-study

- Concepts of 'character' and 'sense of place'

- Historic Landscape Characterisation as an existing research methodology

- Policy context of the HLC research approach

- The collaborative partner

- Academic context of this research project

- The geographical location of this case-study, i.e. the city of Newcastle-upon-Tyne

- Time scale of this case-study

1.5.1 Post-Industrial City and Society

The idea and image of Newcastle as an archetypically post-industrial city is now both a social and economic fact, and part of popular imagination (e.g. Jeffries, 2008). The loss of heavy industry and manufacturing jobs in the North of England, and in the Tyne and Wear area particularly, has had a gradual but nevertheless profound impact on the region this research aims to study. Whether the post-industrial condition is consciously recognised as part of our everyday lives or not, the fact is, that in the UK we live in what can be termed as a post-industrial society, and make a living within a post-industrial economy. And, in the case of Newcastle especially, live in what can be called, or has been branded as, a post-industrial city. The on-set and impact of post-industrial development in the region has been discussed for example in *Post-Industrial Tyneside, An Economic and Social History* (Robinson, 1988). Robinson (1988) addresses many aspects of the post-industrial society that correspond with the six 'social and economic attributes of post-industrial society' summarised by Ritzer (2007). These attributes are:

1. Within the economy, there is a transition from goods production to the provision of services.

2. The importance of blue collar, manual work (e.g., assembly line workers) declines and professional (lawyers) and technical work (computer programmers) come to predominate.

3. Instead of practical know-how, theoretical knowledge is increasingly essential in a post-industrial society.

4. Post-industrial society seeks to assess the impacts of the new technologies and, where necessary, to exercise control over them.

5. To handle such assessment and control, and more generally the sheer complexity of post-industrial society, new intellectual technologies are developed and implemented.

6. A new relationship is forged in the post-industrial society between scientists and the new technologies they create. This, as well as systematic technological growth, lies at the base of post-industrial society.

It is in specific reference to the points 4, 5 and 6 that this study sees the current environmental management and planning policies, and thus the focus of this study. Social theorists and economists such as Bell (1974), Harvey (1990), Gershuny (2003) and Cohen (2008) have written about the social and cultural changes associated with the industrial to post-industrial transition. Castells (2000a and b) addresses the same process of transformation but refers to 'network society' and 'information age' as the replacements of the social and technological paradigms of the Industrial Age. The social and economic developments that define the post-industrial society have also influenced changes in the (built urban) environment, creating for their part the post-industrial city. This study proposes that the character of the surviving 19th century residential areas is an integral part of post-industrial cities. Thus, to connect the research undertaken to the wider world, frames of reference relevant to the post-industrial context have been identified in the existing literatures about post-industrial cities. The following section outlines these key contexts of this study.

1.5.2   New Post-Industrial Building Types

In terms of the built environment 'Post-Industrial City' conjures up all kinds of images; ranging from cultural regenerations icons to derelict, dis-used sites of heavy industry. Gospodini (2006) proposes the following typology for the new urban forms associated with the post-industrial city. The typology is essentially divided into two types which have sub-types. As illustrated in the following on pages 10 and 11 Type A is defined as 'signifying epicenters' in the inner city, and as 'creative clusters' forming new urban islands and edges. Type B is defined as 'diffused urbanity' in the urban fringe, consisting of dispersed built episodes.

However, this study suggests that the one characteristic urban form missing in Gospodini's (2006) typology of the new defining features of landscapes of the post-industrial city is the survival of large numbers of industrial era housing. Referring back to where Gospodini's (2006) new post-industrial forms and developments occur (i.e. mostly in the city centre and the urban fringe) it is evident that in between these two poles of post-industrial landscape are the everyday environments where most people live, and most of this in-between space, in the UK at least, constitutes of housing built during the industrial era. It is this in-between space or everyday landscape that is the focus of this research project. However, it should be noted that many of the Gospodini's new building types are actually new uses for old structures - the processes of adaptive re-use and gradual modification of the existing built fabric appears to characterise the post-industrial city. This seems to relate to the processes of change and continuity that appear to be at play within post-industrial cities, as already suggested above.

1.5.3 Buildings Vulnerable in the Post-Industrial City

In an apparently related and for this study useful development Nikula (2005) points to a classification of everyday residential buildings within post-industrial cities that due to societal and cultural changes associated with the move from industrial to post-industrial (and beyond) city, might be in danger of disappearing. In this classification Nikula identifies the following under threat types of buildings:

- Ineffectively built dwelling areas in expanding cities

- Humble apartment blocks anywhere

- Buildings which were built for special phases or processes of industry, transportation, commerce or business suddenly become useless (In this study this type is seen to incorporate housing that was built for workers engaged in these processes - as the industrial process becomes obsolete, the demand for associated housing is also likely to decrease.)

- Buildings which have from their construction been criticised as examples of 'bad architecture' seldom live long

The developments by Nikula (2005) and Gospodini (2006) are used to frame the broader context of this study, and Nikula's classification is adapted for the purposes of this study in the Analysis Chapters.

TYPE A1-Entrepreneurial epicenters.High level services in the Inner City	
Dominant land uses and activities	High level financial services, technology-intensive firms, knowledge-based institutions
Supplementary land uses and activities	Housing, trendy commercial shops, expensive restaurants
Kind of development	Redevelopment schemes
Urban morphology	Distinct street pattern and morphology - without reference to local milieu
Architectural forms	Innovative design schemes
Typical Cases	Platz (Berlin), Milan Fair area (Milan), the New Financial centre (Ciudad de las Artes y las Ciencas, Valencia), One North (Singapore)

Figure 1.1: Type A1 - Entrepreneurial epicenters

TYPE A2 High-culture epicenters. Clustering of Culture in the Inner city	
Dominant land uses and activities	Museums of various kinds galleries, theatres, operas, concert halls, convention centres
Supplementary land uses and activities	Bookshops, cafes, trendy restaurants
Kind of development	Renewal schemes or/and new development
Urban morphology	Conserved urban cores first developed during 15-19th century
Architectural forms	Heritage buildings (mostly old industrial) restored and reused and innovative architectural forms
Typical Cases	The Museum Quarter (Vienna), The Museum Quarter (Rotterdam), The Museum Quarter (The Hague)

Figure 1.2: Type A2 - High-culture epicenters

TYPE A3 Popular leisure epicenters. Clustering of Leisure in the Inner city	
Dominant land uses and activities	Popular music clubs, cafes, bars, restaurants, (ethnic and continental)
Supplementary land uses and activities	Antique shops, fashion design shops, music shops, bookshops, avant-garde small theatres
Kind of development	Renewal schemes
Urban morphology	conserved urban cores first developed during 15-19th century
Architectural forms	Heritage buildings restored and reused;usually old houses and warehouses
Typical Cases	Heritage buildings restored and reuse; usually old houses and warehouses

Figure 1.3: Type A3 - Popular leisure epicenters

TYPE A4 Clustering of Leisure in the Inner city and periphery	
Dominant land uses and activities	Museums of various kinds, convention halls, galleries, concert halls, theatres, parks and promenades
Supplementary land uses and activities	Cafes, restaurants, housing, offices
Kind of development	Redevelopment schemes
Urban morphology	Distinct street pattern and morphology - without reference to local milieu
Architectural forms	Mostly innovative design schemes, but also heritage buildings restored and reused (usually old harbour warehouses and old maritime industrial buildings)
Typical Cases	Southbank (London), Abandoibarra area along the Nervion River (Bilbao), Forum of the Cultures (Barcelona), Port Melbourne (Melbourne), West Kowloon (Hong Kong)

Figure 1.4: Type A4 - Popular Leisure Islands and Edges

TYPE B1 Exurban new centralities	
Dominant land uses and activities	Shopping centres theme parks and amusement parks
Supplementary land uses and activities	Offices, multiplex cinemas, sports facilities, exhibition centres, cafes, bars, restaurants
Kind of development	Mostly new development schemes but also renewal schemes of old industrial sites
Urban morphology	Clusters of building complexes and public open space
Architectural forms	Innovative and conventional design schemes
Typical Cases	a) Theme Parks: Disneyland (Paris), The City of Arts and Sciences (Valencia), Terra Mitica (Costa Blanca, Spain), (b) Amusement Parks: Efteling (Rotterdam)

Figure 1.5: Type B1 - Exurban new centralities

TYPE B2 - Exurban housing dispersal	
Dominant land uses and activities	Residence
Supplementary land uses and activities	-
Kind of development	New development
Urban morphology	Dotted detached houses and small housing development schemes
Architectural forms	Mostly conventional schemes but in some cases innovative design schemes
Typical Cases	Urban fringes in most metropolitan cities and large cities in Europe and North America - wherever planning laws and guidance allow development of detached houses and housing schemes outside planned settlements (i.e., suburbs, villages, small towns)

Figure 1.6: Type B2 - Exurban housing dispersal

1.5.4 Values in the Management of Post-Industrial Cities

In reference to the various post-industrial changes impacted on the built environment and society in general, Nigel Thrift (2007) is among the many writers commenting on how increased mobility, globalisation, access to wireless communications etc. are eroding the traditional ties that people have with their environments, and that the creation of 'sense of place' as an affective responses to the environment becomes, if not a political necessity, then at least something that can be politically desirable. This study proposes that these concerns are linked to the management of the (historic built) environment and that thus the idea of character as a concept which can be harnessed in the study of the historic environment as well as in its management, is indicative of current cultural values. This is interesting as both the concept of 'character' (EH, 2005) and the wider idea of 'cultural values' (Pereira-Roders, 2007) have been suggested as 'meeting places' for environmental management decision making.

Based on a critical review of over 30 Cultural Heritage Charters from agencies such as ICOMOS and UNESCO, and covering a period of over 50 years, Pereira-Roders (2007) provides a robust basis for any assessment of heritage or cultural values significant in the management of the (historic built) environment. Pereira-Roders (2007) identifies eight types of value indicators (social - identity; economic - worthy; political - symbolic; historic - authenticity; aesthetic - originality, scientific - rarity; age - patina, and ecological - continuity) within the built environment and proposes a ninth category 'cultural values' as a meeting place for people from different specialisms (see figure 3.2 on page 45). The value indicators identified by Pereira-Roders have significant parity for example to earlier work by Meinig (1976) who identifies ten different ways of looking at landscapes (which are discussed in Chapter 2) and the Heritage Values identified in *Conservation Principles* by English Heritage (2008). This study identifies 19th century residential areas as a significant part of the heritage of post-industrial cities. Therefore this study proposes that the values traditionally considered in relation to heritage (as defined as monuments) also apply to 19th century residential areas, whose management takes place largely outside the current conservation desognations.

Ecological	Social	Economic
Age	**Other Cultural values**	Political
Scientific	Aesthetic	Historic

Figure 1.7: Cultural values in the management of built heritage identified by Pereira Roders (2007, 142)

This study suggests that in the English context 'character' is one of the Cultural values (described as (Other) Primary Values in figure 3.2) that plays a part in the making of environmental management decisions. This point will be returned in the *Continuity and Change in the Post-Industrial City* Chapter.

1.5.5 What is Character ?

The conceptual literature review undertaken in Chapter 2 addresses the question: What is 'character'? through a discussion of the four related concepts of Spirit of place, Genius loci, Sense of place and Character, as they appear in chosen literatures. The consideration of this aspect of the post-industrial landscape is a central theme of this study. In the WordNet Dictionary of Princeton University 'Character' has the following definition :
Character; noun

1. an imaginary person represented in a work of fiction (play or film or story); 'she is the main character in the novel', synonym - fictional character

2. a characteristic property that defines the apparent individual nature of something; 'each town has a quality all its own'; 'the radical character of our demands' [syn: quality]

3. the inherent complex of attributes that determines a persons moral and ethical actions and reactions; 'education has for its object the formation of character'- Herbert Spencer

4. an actor's portrayal of someone in a play; 'she played the part of Desdemona'

5. a person of a specified kind, usually with many eccentricities; 'a real character'; 'a strange character'; 'a friendly eccentric'; 'the capable type'; 'a mental case'

6. good repute; 'he is a man of character'

7. a formal recommendation by a former employer to a potential future employer describing the person's qualifications and dependability; 'requests for character references are all too often answered evasively'

8. a written symbol that is used to represent speech; 'the Greek alphabet has 24 characters'

9. in genetics, an attribute that is determined by a gene or group of genes

The suffix -ise (as in character-ise) is used to form verbs from nouns and adjectives, the verbs having the sense of to 'make what it denoted by the noun/adjective'. This places 'characterisation' as a process in the context of conceptualisations of character, and as such these ideas and their use deserve further analysis.

This study also suggests that there appears to be scope for further theoretical exploration of the character conceptualisations, especially in reference to the recent theoretical developments on affect. The interest in affect is a particular and current concern in cultural and human geography and is associated with non-representational theory (e.g. Thrift and Dewsbury, 2000, Thrift, 2004, 2007). The critiques of non-representational approaches to affect have centred around the non -representational understanding of affect as being a-(or even anti-)historicist nature, as well as being non-personal or non-humanist, and thus ignoring the personal nature of emotions (Tolia-Kelly, 2006). Despite the challenges of linking this kind (i.e. affectual) of understanding of character with the idea of characterisation as a practice based research approach this study seeks to demonstrate that although through this kind of understanding character appears as a particularly complex issue, it could nevertheless still have practical applications within the study and management of the historic environment. The abstract exploration of affect, character and cities by Latham and McCormack (2004) has been particularly influential in developing the theoretical approach of this study. These themes are developed further in the *Conceptual Development* Chapter.

1.5.6 HLC and other environmental policies

This study addresses the character of surviving 19th century residential areas. Therefore, in terms of research methods, the 'Characterisation' work carried out by the English Heritage and the Countryside Agency over the last 15 or so years (Swanwick, 2002, 2003, Clark et al., 2004, Aldred and Fairclough, 2003, Countryside Agency, 2007, Fairclough et al., 2003) appears a natural point of departure. In one definition of what HLC encompasses Clarke et al. (2003, 90) state that HLC is a tool developed to provide an understanding of the historic dimension of the modern landscape. Further HLC is described as 'an archaeologists approach to landscape' which provides a context for appreciating how archaeological sites fit into the historic landscape (Clark et al., 2003, 91).

HLC is a Government backed research approach. The non-objective nature (or potential) of maps, mapping and GIS has attracted much debate over the last 20 years (e.g. Pickles, 1995, 2004, Wood, 1992, Jackson, 1989) and as HLC is a GIS based research approach it is important not to ignore this aspect of the research program. Although much of the HLC work has been carried since 1997 (when the Labour Party last came to power in the UK Government) the idea of HLC dates back to 1990 and the Conservative government of the time. The 1990 White Paper, *This Common Inheritance* stated out Government's Environmental Policy and in relation to the management of the historical environment invited English Heritage to consider the desirability of a list of landscapes of special historic importance. EH's subsequent advice was that comprehensive characterisation of all of the landscape was preferable to a Register of selected areas. This advice, incorporated in government policy in PPG15 (DoE and DoNH, 1994), was based on the conclusions of a one year national R&D[research and development] project on existing approaches to historic landscape (Aldred and Fairclough, 2003, 5). The conclusions of the R&D project were published later as *Yesterday's World, Tomorrow's Landscape* (Fairclough et al., 1999). In summary, the project concluded that it would be better to assess and understand historic landscape character everywhere, rather than selecting a few special areas for inclusion in a national register. It also recommended that a new, rapid and robust approach should be identified that could deliver multiple objectives and serve multiple uses and notably also raised awareness that the whole of the landscape has an historic dimension. The consultation process also suggested that issues relating to landscape were a major gap in current archaeological resource management, and that it was proving impossible to expand the historic coverage to wider landscape assessment through point-based SMRs .

Thus the technique of Historic Landscape Characterisation came to be developed and

it was pioneered in the first HLC project in Cornwall. The use of HLC has spread since 1995 and by the methodological review of 2004 (Clark et al.), 14 local authorities included a complete HLC in their SMRs. Since then between five and ten county-wide projects have been underway at any given time until now almost the entire country is 'covered'.

The current cultural values and political ideals about 'landscape' and 'place' can be seen as an ideological context for the HLC research programme. The same ideas and values are also manifested in various other governmental policies and publications, especially in relation to the management of the built environment and other environmental policies. Governmental (or Government backed) publications and policies ranging from *Historic Environment: Force for Our Future* and *Culture at the Heart of Regeneration* (DCMS, 2001, 2004) to *Characterisation and Sustainable Communities* web-site (EH, 2006a), and *Place Matters* (ODPM, 2007) to the new National Curriculum, all exercise some of the same 'place-centric rhetoric'. These policy publications and the wider sustainable development agenda are seen to form part of the political context of this research project too.

1.5.7 Summary

In summary, two post-industrial concerns emerge from the outlining of the key contexts of this study. First is the sense that world is becoming increasingly fast changing, and this has resulted in concern for the 'character' and 'sense of place' - and secondly, that the use of new technologies to manage the increasingly complex post-industrial world could be beneficial. This potentially encompasses ideas about the protection of the historic built environment and sustainable development. One of the ways in which the concern for character and sense of place and the complex demands placed on the management of the (built) environment in England has been addressed through the study of historical aspects of the current landscape, is an approach called Historic Landscape Characterisation. HLC is a research approach that aims to combine the two post-industrial concerns identified here in using GIS mapping in an attempt to elucidate the historical character of the whole of English landscape.

1.6 Collaborative Partner

This research is conducted in collaboration between the researcher, Newcastle University and a non-academic collaborative partner (a CASE-studentship), the Historic Environment Section of Newcastle City Council. The local knowledge and sense of what would

be beneficial to the work of the collaborative partner have had some influence in directing this research, both in terms of methodology and focus. In particular input from the collaborative partner has been influential in directing the research towards 'everyday' residential areas, where 19th century housing survives between areas of on-going regeneration and statutory protection of conservation areas.

1.7 Academic Context

As a collaborative research project this study could be viewed in many academic contexts, but in particular the following three different and overlapping contexts appear relevant. These are 1) historical GIS, 2) policy relevant research, 3) analysis of the built environment.

In a recent review of Historical GIS Gregory and Healey (2007) talk at length about the capacity and potential of historical GIS to incorporate both quantitative and qualitative data and thus serve to blur the strict distinction between the two. Gregory and Healey review work across the globe - however, they do not mention HLC. This is perhaps because despite roughly 15 years of history, HLC has produced rather little of academic out put. Existing articles written about HLC tend to concentrate on the characterisation process itself without much reference to the 'world outside'. This is in marked contrast with the aims of HLC, one of which is to make an academic contribution. Historical spatial development of Tokyo (Siebert, 2000), and social and economic change in Moscow (Pavlovskaya, 2002, 2006) are just some of the topics addressed with the aid of GIS. Scholarship and methodology of Historical GIS has been the subject of several books in recent years (see Gregory (2002), Gregory and Ell (2007), and Knowles (2002, 2008))

As described above HLC has a distinctive political (or policy) context, and is seen as having direct practical applications. Therefore it appears another context for both the HLC and this study specifically can be found in the recent debate about 'policy relevant research' within disciplines such as cultural and human geography. Whether being policy relevant is necessary, desirable or indeed lamentable, or even best avoided, is debated at length e.g. by Dorling and Shaw (2002), Ward (2005, 2006, 2007), and Bell (2007). Another example of 'policy relevant research' might be seen in 'Landscape Character Assessment' which is a parallel research programme to HLC, and has been promoted mainly by the Countryside Agency (Swanwick, 2002). LCA is seen as having particular influence in countryside planning and being relevant to rural development policies.

The third and most extensive context for this research can be seen in the hugely diverse

field that relates to the analysis of the built environment of the city. As discussed in the *Conceptual Development* Chapter in this research the city is understood as a transductive field. The research methods identified as useful in analysing the transductive field range from 'townscape (Solomon, 1966, Barrett, 1993, Reeve et al., 2007) and urban design (e.g. Burnley Borough Council, 2004) to structural (Wlodarczyk, 2005) analysis' and 'space syntax' (Hanson, 2000) to sociological work on 'place attachment' (Giuliani and Feldman, 1993, Bricker and Kerstetter, 2000, Hidalgo and Hernandez, 2001) and 'town character' (Green, 1995, 1999), 'sense of place' (Stedman, 2003, Nanzer, 2004, Billig, 2005, Jorgensen and Stedman, 2006) and 'landscape qualities' (Palmer, 2000), and so forth. This literature will be reviewed further in the Review of Research Methods Chapter (Chapter 6 of this study) and the results of the methodological review will be utilised in the development of my own research methodology. The research methodology utilised will be outlined fully in Chapter 7 on *Methodology*, before the description of the case-study. In the case-study the methodology developed is used to study the character of 19th century residential areas in Newcastle.

1.8 Newcastle

Another key context for this study is the physical location of the case-study within the city of Newcastle-upon-Tyne. The case-study chapter outlines the historical development of the city, both in terms of physical and population growth before moving onto the more detailed case-study.

Newcastle-upon-Tyne (often shortened to Newcastle) is a city and metropolitan borough of Tyne and Wear, in the North East of England. Situated on the north bank of the River Tyne, the city developed from a Roman settlement called Pons Aelius, though it owes its name to the castle built in 1080, by Robert II, the eldest son of William the Conqueror. The city grew as an important centre for the wool trade and it later became a major centre for coal mining and transportation. The port of Newcastle developed in the 16th century and, along with the shipyards lower down the river, became one of the world's largest shipbuilding and ship-repairing centres. These industries have since experienced severe decline and closure, and the city today is largely a business and cultural centre, with a particular reputation for nightlife. These qualities explain how Newcastle has become known as the post-industrial city (see e.g. Jeffries, 2008)

The city of Newcastle is the twentieth most populous in England and the larger Tyneside conurbation, of which Newcastle forms a part, is the sixth most populous conurba-

tion in the United Kingdom. According to the UK Government's 2001 census, the city of Newcastle has a population of 189,863, whereas the unitary authority of Newcastle has a population of around 259,500. However, when combined with the metropolitan boroughs of North Tyneside (population c.190,000), South Tyneside (population c. 150,000) and Gateshead (population c.200,000) which are also part of the Tyneside conurbation, the Newcastle-Gateshead metropolitan area has a total population of 799,000. In economic terms Newcastle has a diverse cross section and includes areas that are considered affluent as well as areas that are amongst the more deprived in England.

Within Newcastle the area chosen (and the areas initially considered) for the case-study represent areas where 19th century housing survives in numbers large enough to be considered to have impact on the 'landscape' of the city. Further the areas considered for the case-study are outside the current regeneration areas (in other words the HMR Pathfinder areas in West and East Newcastle) and are not designated Conservation Areas - unlike some residential neighborhoods in Gosforth and Jesmond where substantial numbers of perhaps more affluent 19th century housing survives. These considerations relate to Gospodini's (2006) *Typology of Post-Industrial Building Types* discussed above.

1.9   Time-Scale

Another important consideration in this study is its chronological context. When discussing 'industrial era' housing this study refers to the years 1800-1950 (although housing in the detailed case-study area dates pre-dominantly from the late 19th and early 20th centuries); and the post-industrial period is defined as after 1950. The relationship between the historical development and the current character of any residential area is a complex one. This study seeks to understand how the 19th century residential areas came to be built and how their character has developed through the planning policy interventions of the past 100 or years, to be what it is in the present day.

1.10   Conclusions

To conclude, this Chapter has outlined some key concepts and parameters of this study. This study is contextualised in the broadest terms in the realm of two post-industrial concerns emerging from this background. These are: firstly the sense that world is becoming increasingly fast changing, and this has resulted in a concern for people's sense of place and the character of places - and secondly, that the use of new technologies to ma-

nage the increasingly complex post-industrial world will be beneficial. This encompasses ideas about the protection of the historic built environment and sustainable development and includes the HLC research approach. Typologies of Post-Industrial Building Types, Buildings Vulnerable in the Post-Industrial City and Values in the Management of the Post-Industrial City are outlined above, and these are identified as important frames of reference for this study. Thus this study is also contextualised in the relation to the conflicting values people place on their environments, and the conflicting demands of change and continuity in our environments. This study proposes that these more abstract concerns also characterise the post-industrial city, and the surviving 19th century residential areas within.

This study uses an area-based case-study of a 19th century residential area in Heaton, Newcastle-upon-Tyne as a vehicle of enquiry. This case-study is placed in the context of current academic developments in relations to the concepts of landscape, place, city and character, as well as the current (historic built) environment management and planning policies. An existing research programme, Historic Landscape Characterisation, which is seen methodologically as key context for this study has been introduced in the above. The findings of the case-study will be discussed in the context of Gospodini's (2006) New Post-Industrial Building Types typology and Nikula's (2005) classification of Vulnerable Buildings is adapted for the purposes of this study in the *Analysis* Chapters. The understanding of the character of 19th century residential areas within the post-industrial city is based on the more abstract reading of what constitutes the city as proposed by Latham and McCormack (2004). In this study the concern for character is seen as indicative of the current cultural values (Pereira-Roders, 2007) attached to the environment.

Chapter 2

Conceptualising Character

2.1 Introduction

As in the most general terms this research can be described as a study of place, located within the wider urban landscape, and in the context of the post-industrial city it is the aim of this Chapter is to consider some of the published sources concerning the familiar, yet complex, concepts of city, landscape and place. In addition this review will pay particular attention to the concept of character and how this evocative term has been used to describe, understand and analyse the built environment. These concepts are central to this study and their adequate analysis and understanding is one of the pre-requisites for the development of appropriate research questions and design.

In everyday language words *place, landscape, character* and *city* are often used and seldom analysed. These four key concepts can be conceptualised and analysed quite abstractly. However, they also have a use in and connection to the practice of Environmental Management, and may provide a useful meeting place for collaborative working between stakeholders from various backgrounds. The (environmental) policy discourse relevant to this study includes the Government's Sustainable Communities Agenda, as well as the Heritage Protection Legislation Review and many other Planning or Historic Environment Management related publications.

The four key concepts identified above have been studied by a number of academic disciplines, and over the years this has resulted in a vast amount of published material. The challenge in this study has been to identify the most pertinent sources. The literature reviewed has been chosen based on the criteria of relevance and currency. However, some more established texts are also considered in order to contextualise the newer, emerging work concerning the chosen topics. The literature chosen is from a broad spectrum of

academic specialisms. This reflects the trans-disciplinary and collaborative aims of this study.

Another key idea central to this study is the notion of the everyday environment. This research project is not concerned with what have traditionally been considered as architectural monuments or landmark buildings. Nor is this research concerned with a particular style or type of building. Much of the case-study research will concern 19th century (or in more traditional architectural terms Victorian) terraced housing. However, the choice of case-study is not based on this stylistic or period criteria, but on an area based approach where the case-study location has been identified as forming part of the historic urban landscape of the post-industrial city. Above, in the *Introduction* Chapter, the role of 19th century housing as 'in-between space' between the new post-industrial developments has been introduced in conjunction with Gospodini's (2005) typology of new 'post-industrial buildings types'. This 'in-between space' forms a large part of the historic urban landscape of the post-industrial city and contains a varying degree of industrial era housing stock. It is the character and role of these industrial era residential areas within the post-industrial city that is the focus of interest in this research project. To outline the theoretical background of this study the remainder of this chapter will review the concepts of place, landscape and character. How city is understood within this research project is returned to in the *Conceptual Development* Chapter.

2.2 Approaches to Landscape and Place

2.2.1 Landscape

Landscape is an important area of research within disciplines such as geography, and this section draws from geographical literature as the human and cultural developments within geography have resulted in a number of approaches to landscapes and places that are, from theoretical and philosophical points of view, pertinent to this study.

Addressing the many different ways in which the landscape might be perceived geographer Ronald Baker (1992, 7; quoting Meinig (1976)) describes how:

> The 'ten versions of the same scene' has been elucidated by Donald Meinig who argues that different observers of the 'same' prospect might see the landscape before them, depending upon their 'perspectives', as representing nature (emphasizing the insignificance of people), habitat (as people's adjustment to nature), artefact (reflecting people's impact on nature), system (a scientific view of interacting processes), problem (for solving through social action), wealth (in terms of property),

ideology (revealing cultural values and social philosophy), history (as a record of the concrete and the chronological), place (through the identity that locations have), and aesthetic (according to some artistic quality possessed) (Baker, 1992, 7).

More succinctly, Conzen (1999, 3-4) has codified landscape studies into four principal approaches, reflecting respectively concerns with environmental awareness, with symbolic representation, with landscape design, and with landscape history. In practice, as Conzen (1999, 4) admits, these four approaches collapse into one because to view the landscape historically is to acknowledge its cumulative character; to acknowledge that nature, symbolism, and design are not static elements of the human record but change with historical experience; and to acknowledge too that the geographically distinct quality of places is a product of the selective addition and survival over time of each new set of forms peculiar to that region or locality. According to Conzen, studies of landscape, like those of ideologies, necessitate an historical perspective, and because landscapes have histories they possess a compelling human significance. Reflecting this compelling human significance a recent issue of *Journal of Material Culture* (2006, 11, 1-2) focuses on landscapes as part of material culture. In his introduction to this volume Tilley (2006) largely equates place with landscape and points to work of Barbara Bender who sees landscapes as phenomena that get

> . . . actively re-worked, interpreted and understood in relation to differing social and political agendas, forms of social memory, and biographically become sensuously embodied in a multitude of ways. (Tilley, 2006, 8).

The current historic environment policy discourse echoes these academic developments and English Heritage and the Countryside Agency seem to either equate landscape and place, or see landscapes as reflecting the relationship between people and place - a notion borrowed from the cultural landscape studies (e.g. Groth, 1997, 1). The management of the historic environment (or in other words, landscapes and places) in England is currently influenced by wider European policy relating to e.g. sustainable development. In this context the *European Landscape Convention* defines Landscape (very broadly) as '... *an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.*' (Council of Europe, 2000).

Statements like this are indicative of the paradigm shift to a more inclusive view of heritage from the traditional view of heritage as selected monuments. This paradigm shift reflects what is considered to be cultural heritage, and how value is attached to the perceived heritage. In England this paradigm shift is evident for example in the current

heritage protection legislation review, as well as in the Historic Landscape Characteri- sation Programme promoted by English Heritage. *Conservation Principles* (EH, 2008, 13-14) works as a useful link between landscape and place as it uses place as a short-hand word that covers every feature of the historic environment by referring to them as 'place'. However, whether this is a helpful clarification or a dangerous over-simplification can be debated. The proliferation of 'character' in the same policy discourse is also indicative of current cultural values in the management of the historic environment. This study is concerned with how such familiar terms are again used with new connotations without explicit discussion about what this actually means.

2.2.2 Place

In concordance with some other reviewed literature (e.g. Jiven and Larkham, 2003, Patterson and Williams, 2005) *Conservation Principles* (EH, 2008, 13-14) claims that the practice of recognising, formally protecting and conserving particular aspects of the historic environment has developed along parallel paths, trodden by different professional disciplines. There is a lack of a common, 'high level' terminology, which has created a barrier to articulating common principles. This in turn has meant that it is difficult to use these concepts to develop a more integrated approach. EH (2008, 13) has deliberately avoided the specialised terminology of current law and public policy relating to heritage designations, such as 'listed building' and 'scheduled monument'. Instead the word 'place' is used as a proxy for any part of the historic environment, including under the ground or sea, that people (not least practitioners) perceive as having a distinct identity, although recognising that there is no ideal term to cover everything from a shipwreck to a landscape. EH (2008, 14) go on to claim that the term 'place' goes beyond physical form, involving

> . . . all the characteristics that can contribute to a 'sense of place'. It embraces the idea that places, of any size from a bollard to a building, an historic area, a town, or a region, need to be understood and managed at different levels for different purposes; and that a particular geographical location can form part of several overlapping 'places' defined by different characteristics.

Addressing 'ordinary landscapes' and the use of the word 'place' in everyday language Hayden (1997, 112) describes place as

> '...one of the trickiest words in the English language, a suitcase so over filled that one can never shut the lid. It carries the resonance of homestead, location, and open space in the city as well as a position in a social hierarchy.'

However, this is not all, and it should be noted that place has also been extensively discussed in academic research outside the historic environment policy discourse. Underneath the multiple everyday meanings, place is a contested concept, whose nature and role in human existence and experience is not anywhere near as obvious as may seem. Buttimer (1980, 166) writes:

> There are many dimensions to meanings ascribed to place: symbolic, emotional, cultural, political and biological. People have, not only intellectual, imaginary, and symbolic conceptions of place, but also personal and social associations with place-based networks of interaction and affiliation.

In philosophical context, fundamentally place has been seen as 'subsidiary to space' (Malpas, 1998, 24) for the last few centuries. And Foucault (1986, 22) goes as far as describing the 20th century as being 'obsessed with space'. Recently 'place' has returned as a focus of study in Philosophy (e.g. Casey, 1993, 1997, Light and Smith, 1997, 1998) and other academic disciplines, as the fundamental concept for human experience, both of our selves and our environment. The renewed interest in place can be seen as part of the reaction against modernist ideas. Malpas describes how in the past philosophies of space and place have treated 'place' as 'modification of space - a 'location' within an extended spatial realm or a region within such a realm - or a modification of space to which attaches some emotional reminiscence or feeling' (1998, 38). Like Casey (1993, 1997) he posits that place is neither an objective physicality or a subjective interpretation or experience of such a physicality. Casey and Malpas both see place as fundamental to the human experience, and the possibility of that experience. Especially Casey has been critiqued (e.g. Brockelman, 2003) for his phenomenological approach to place being anti-modern and Casey's approach has some similarities to Relph's (1977) call for 'place' instead of 'placelessness'. One of the main debates about the nature of place concerns its nature either as a universal phenomenon or a particular experience. Connecting this philosophical consideration of place with practical research questions about the built environment can be challenging. In particular relevance to both of these concerns Janz (2004) writes:

> In the case of place, my sense has always been that there is a gulf between those who deal only with the particularities of place and those who deal with place as a universal concept (that is, a concept that is applied to or generalized over the particulars, rather than derived from them). I have been uneasy with both of those options. Places cannot be irreducibly particular-they become available inasmuch as they are imagined in the context of (or in the absence of, nostalgia

for, anticipation of, memory of) other places. But they also cannot be subsumed under some universal, as instances of a type. To suppose that we have understood a place when we are able to put it in a category such as *tourist destination*, *home*, *suburb*, *atrium*, or *memorial site*, is to miss what is human about a place. In some way, the particularities of place that are only available in human experience and the universals of place that make experience possible must be present at the same time. This is the hermeneutical circle of place.

As Malpas (1998, 39) succinctly puts it, finding place is a matter of finding our selves. Referring to the *HLC Review* undertaken in the previous chapter, it is revealing to consider this research programme in the light of the above quote. HLC frequently categorises landscapes according to land-use characteristics, for example as *Recreational* with possible sub-types of golf-course, caravan park, playing/sports field, racecourse and holiday camp (Ede and Darlington, 2002, 188-189). Thus HLC can be seen to provide some descriptive information about the overall spatial characteristics of the place, but to what extent this furthers our knowledge of these sites, or aids in understanding of these places, is another matter.

2.2.3   History, Landscape and Place

A further consideration relevant to this study is the notion of 'historic' or 'historical' environment and landscapes. According to Peter Howard (2009) all landscapes are historical, or there are no historic landscapes. What really is significant (and very English) about the HLC as an approach to landscape and place is the historical emphasis it affords to the study of the present day environment. This study proposes that this says something fundamental about the post-industrial society - at least as much as does our interest in place. The post-industrial city (i.e. place) is an arena for often conflicting demands of continuity and change. The first manifests itself in the appreciation of the status quo, combined with the sense of security endowed by the past; the second is the force of change, which may bring feelings of anticipation, surprise and hope. In the past few decades the coinciding processes of digitisation, globalisation, commercialisation, individualisation and mass migration, amongst others, have ushered in an era of unimaginable social and cultural dynamism accompanied by a huge desire for all things new. At the same time, an urgent need seems to have emerged for anchors, a movement to conserve things as they are. In this context it appears that in both history and place humans fundamentally seek themselves. This sentiment is not new, and for example 19th century German philosopher Wilhelm Dilthey (b.1833 - d.1911) (quoted in Harrington (2001, 320)) describes the significance of history to humans:

> The human being knows itself only in history, never through introspection; in-
> deed, we all seek it in history. Or, to put it more generally, we seek what is human
> in it, such as religion, and so on. We want to know what it is. If there were a
> science of human beings it would be anthropology that aims at understanding the
> totality of experience through structural context. (Dilthey, W., 1981)

Although Dilthey can't have foreseen the emergence of characterisation based environ-
mental management practices or discourses - the 'anthropology that aims to understand
the totality of experience through structural context' is conceptually close to what this
study proposes characterisation could achieve and should be working towards.

Understanding the character of the historic urban landscape is now seen as part
of the informed conservation of this part of our environment. In the context of the
management of historic built environment many international and national charters have
sought to define the guiding principles and best practice within the field. A recent
addition to these charters is the UNESCO Vienna Memorandum [1] (see figure 2.1 on page
28) which in direct relevance to this study addresses the management of the historic
urban landscape. The Vienna Memorandum forms the basis for the *'Declaration on
the Conservation of Historic Urban Landscapes'* (HUL) which was adopted by the 15th
General Assembly of States Parties to the World Heritage Convention in October 2005 at
UNESCO Headquarters in Paris (Resolution 15 GA 7). It is important to note that as the
Vienna Memorandum is not a Charter, it is not intended as a finalised document that
could guide urban development and conservation for decades to come. The document
does however represent a consensus-product, established with involvement of various
professional entities, and has served as a catalyst to open up the debate and further
refine the concept and tools. Outlining the future timeline for the production of a new
charter on Historic Urban Landscapes Roers (2007, 48) explains that the cycle of regional
consultations and specialized expert meetings will be completed over 2008 and 2009, after
which the drafting of a series of texts will commence during 2010. The final draft text
would then be presented to the Spring session of the Executive Board in 2011, for adoption
by UNESCO's General Conference at its 36th session (2011). It should be emphasised
that the proposed standard-setting document would not be specific to World Heritage
cities, but broadened to all historic cities. Although the memorandum doesn't carry the
same weight of authority as existing UNESCO Charters (such as e.g. the Washington
Charter for the Conservation of Historic Towns and Urban Areas) Roers, (2007, 48)

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[1]UNESCO(2005) World Heritage and the Management of Contemporaray Architecture. Managing
the Historic Urban Landscape. Accesible at `http://whc.unesco.org/document/5965`

suggest that as an interim development, the Vienna Memorandum was needed to bridge a time of preceived crisis in urban and World Heritage conservation, until new guidelines have been negotiated and approved. This study proposes that the Memorandum thus presents the most recent thinking on the best practice in the Management of Historic Urban Landscapes and as such it is deemed appropriate to quote from the memorandum in the context of this research.

Vienna Memorandum on:
World Heritage and Contemporary Architecture - Managing the Historic Urban Landscape

7. The historic urban landscape, building on the 1976 *UNESCO Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas*, refers to ensembles of any group of buildings, structures and open spaces, in their natural and ecological context, including archaeological and paleontological sites, constituting human settlements in an urban environment over a relevant period of time, the cohesion and value of which are recognized from the archaeological, architectural, prehistoric, historic, scientific, aesthetic, sociocultural or ecological point of view. This landscape has shaped modern society and has great value for our understanding of how we live today.

8. The historic urban landscape is embedded with current and past social expressions and developments that are place-based. It is composed of character defining elements that include land uses and patterns, spatial organization, visual relationships, topography and soils, vegetation, and all elements of the technical infrastructure, including small scale objects and details of construction (curbs, paving, drain gutters, lights, etc.)
...

10. The expanding notion of cultural heritage in particular over the last decade, which includes a broader interpretation leading to recognition of human coexistence with the land and human beings in society, requires new approaches to and methodologies for urban conservation and development in a territorial context. The international charters and recommendations have not yet fully integrated this evolution.

Figure 2.1: UNESCO - Vienna Memorandum (UNESCO, 2005)

The Memorandum connects the concepts of landscape and place with the historicity of the urban environment, and thus relates to the discussion about city in the following chapter. It is also worth high-lighting how the definition of constituents of HUL (Historic Urban Landscape) (as illustrated in figure 2.1 on page 28) include, among other things, 'all elements of the technical infrastructure'. This point is returned to in the following chapter.

2.2.4   Summary

he opening part of this *Conceptualising Character* Chapter has established the fundamental importance of landscape and place combined with history to the human experience. Furthermore it suggests that a study of place such as characterisation, should address not only the (historical) physicality of a place, or specifically in the context of this research; the 'bricks and mortar' that make up the post-industrial suburban landscapes. The complexity of the relationship between landscapes, places and humans means that in an attempt to connect the variously perceived aspects of places and landscapes, a number of concepts have developed in writings about places and landscapes that seek to address the distinctive qualities of places and how people relate to them. In order for characterisation to be more than an essentially pragmatic approach to the current concerns about development and management of the (built) environment, the epistemological utility of the concept of character in the study of places needs to be assessed. Thus the reminder of this Review chapter will address these character concepts.

2.3   Conceptualising Character

Lawson (2001, 230) quoting Alexander (1979) states that '...there is a central quality which is the root criterion of life and spirit in a man, a town, a building or a wilderness. This quality is objective and precise, but it cannot be named.' Yet this has not stopped numerous scholars from a variety of fields engaging in research and debates addressing just such issues. In an article central to the approach taken in this study to the reviewed literature, concepts and research methodology developed, Patterson and Williams (2005, 361) suggest that over the last decade many research projects have approached research into place (as a concept) hoping that the resolution of this 'problem' will come through attempts to develop constructs that can be operationalised (such sociological and psychological approaches are discussed e.g. by Jorgensen and Stedman, 2001; Kaltenborn, 1998; Lalli, 1992; Shamai, 1991; Stedman, 2002 and Davenport and Anderson, 2005).

However, this suggested solution does not appear to meet criteria laid out by other place researchers. For example, Relph (1976), one of the phenomenologically grounded pioneers in the development of the concept of place, early on expressed the view that place 'is not just a formal concept awaiting a precise definition ... clarification cannot be achieved by imposing precise but arbitrary definitions'. Similarly, Seamon (1987) suggests that attempts to operationalise place-related concepts into constructs like place identity eliminate the 'phenomenological essence of place as a psycho-social-environmental whole larger than the sum of its parts' resulting in a superficial treatment of the underlying phenomenon. In fact it appears that some of the recent recommendations for how to achieve conceptual clarity seem to contribute to continued erosion of consensus rather than resolve it (Patterson and Williams, 2005, 361). The 'operationalised concepts' referred to by Patterson and Williams (2005, 361) have not, however, remained solely the interest of sociologists and psychologists. Within environmental disciplines such as architecture and planning, there are other, older research traditions which also address the vital, but difficult to define relationship between humans and their environments and ideas about sense of place. These conceptualisations include the notions of *Spirit of place, Genius loci, Sense of place,* and *Character.* As this study is concerned with the characterisation of the urban built environment these four concepts are seen to be central to the understanding of the theoretical context of this research.

Discussing these ideas in planning or urban design context Jiven and Larkham (2003, 73-74) point out that in England planning and urban design in the post-war period have tended to use the terms 'sense of place', 'character', 'appearance' and 'genius loci' indiscriminately and interchangeably. Larkham (1996, 22) referring to Norberg-Schulz (1980) argues that this is incorrect:

> ... the concepts of sense of place and genius loci are distinct and operate at different levels. In many cases they have served as virtual synonyms for 'character' - itself often mis-used ... as a synonym for 'external appearance'. There is a clear view that genius loci and 'character' can be created through appropriate design and planning: this runs contrary to the view that these characteristics emerge from individual and community perception, values and experience. We suggest that the concept of genius loci, as expressed in the writings of Norberg-Schulz and Conzen, can contribute to our understanding of place making and the interpretation of place. This may be particularly relevant to the case of conservation, which is of increasing importance to settlements worldwide.

Furthermore, in addition to sense of place and related conceptions listed above, other writers (within geographical and built environment research) have used words like to-

pophilia (Tuan, 1974), insidedness (Kaltenborn, 2002), place and placelessness (Relph, 1974), rootedness (Tuan, 1980), place attachment (Altman and Low, 1992) and place satisfaction (Stedman, 2002), when discussing similar and/or related aspects of human experience of our environment.

There appears to be a certain consensus among the various researchers that studying place and the contribution the various notions of character make to the understanding of this concept is to study a very significant part of human existence and experience. Whilst there appears to be an agreement about the worthiness of place and character as research interests, there is less agreement about how these concepts should be defined or addressed. Nevertheless, character seems to be as fundamental to the notion place as the notion of place is to the human experience. This is why, in order to arrive at a clearer conceptualisation of character, the following discusses the past uses and meanings of the concepts of spirit of place, genius loci, sense of place and character as they have been used within the environmental disciplines.

2.3.1   Spirit of Place

Discussing spirit of place author D.H. Lawrence states (1991, 12)

> Different places on the face of the earth have different vital effluence, different vibration, different chemical exhalation, different polarity with different stars: call it what you like. But the spirit of place is a great reality.

As indicated in the previous section the various character concepts have many guises; Brook (2000, 139) describes spirit of place as 'a nexus of ideas' that is also sometimes called genius loci, character or sense of place. The different ways in which the term 'spirit of place' is used and the lack of clear definitions given by writers suggests that the idea is ambiguous. The ambiguity does not seem to arise from the number of disciplines involved: it is not that architects mean one thing and geographers mean something else by the term. It is not even the case that, for example, one school of geographers means one thing and another school means something else. The term seems to shift its meaning within one person's writing (Brook, 2000, 139-140).

As indicated above, Brook (2000) equates genius loci and spirit of place, but prefers to use the latter in her discussion about the 'shades of meaning' (2000, 141) attached to this ambiguous nexus of ideas (2000, 139). Brook lists these shades of meaning as ranging from the ancient notion that certain places are the abodes of special beings, to the more recent interpretations of spirit of place as energy fields, authenticity, coherent

narrative, local distinctiveness, essence, character, ecosystem, pantheism, panpsychism, health and special atmosphere. These considerations have some parity to the 'ten version of the same scene' discussed by Meinig (1976; see quote on page 22) and can also be seen to relate the cultural value considerations discussed in Chapter 2.

In the English discourse on heritage planning and conservation the term genius loci has over the years gained prevalence over spirit of place, yet recently ICOMOS (2008) adopted the concept as part of the *Quebec Declaration on the Preservation of the Spirit of the Place*; see figure 2.2 on page 32.

ICOMOS (2008) Quebec Declaration on the Preservation of the Spirit of the Place *Rethinking the Spirit of Place*

1. Recognizing that the spirit of place is made up of tangible (sites, buildings, landscapes, routes, objects) as well as intangible elements (memories, narratives, written documents, festivals, commemorations, rituals, traditional knowledge, values, textures, colors, odors, etc.), which all significantly contribute to making place and to giving it spirit, we declare that intangible cultural heritage gives a richer and more complete meaning to heritage as a whole and it must be taken into account in all legislation concerning cultural heritage, and in all conservation and restoration projects for monuments, sites, landscapes, routes and collections of objects.

2. Because the spirit of place is complex and multiform, we demand that governments and other stakeholders call upon the expertise of multidisciplinary research teams and traditional practitioners in order to better understand, preserve and transmit the spirit of place.

3. Since the spirit of place is a continuously reconstructed process, which responds to the needs for change and continuity of communities, we uphold that it can vary in time and from one culture to another according to their practices of memory, and that a place can have several spirits and be shared by different groups.

Figure 2.2: ICOMOS - Quebec Declaration

In Figure 2.2 clause 3 identifies a role for spirit of place in the management of 'change and continuity' in our environments. As outlined in the *Introduction* chapter, this relates

to the main arguments of this study about the nature of the post-industrial city. In reference to the earlier discussion about Historic Urban Landscape (HUL) O'Donnell (2008) states that the spirit of place resides within the Historic Urban Landscape. Spirit of place is sometimes used synonymously with genius loci. This term originating from Latin, is discussed further in the following section.

2.3.2   Genius Loci

Genius Loci is an ancient and persistent idea, and the literal translation of this Latin phrase is 'spirit of place'. As discussed above the two concepts have been used interchangeably in some contexts. However, Genius Loci was already a concept in use by the ancient Romans who believed that places, like people, had inner spirits that determined their essences. Just as they thought it was possible to read a person's character or spirit from observing the particularities of his or her face, so the genius of a place could be divined attention to its individual features. According to Thompson (2003, 67) this is a variety of animism, and similar ideas can be found in many cultures, and e.g. in the Finnish and Swedish languages the words for Tonttu / Tomte (meaning a spirit that lived in a particular locality) and Tontti / Tomt (meaning a plot of land) have the same origin.

In the eighteenth century, when landscape design was strongly driven by theory, the concept of genius loci was central to the guiding philosophy of the English Landscape School (Hunt and Willis, 1988). In context of the built environment Christian Norberg-Schulz (1979) makes the genius loci into a cornerstone of his architectural phenomenology. For M.R.G. Conzen genius loci is a guiding principle in understanding and managing historic townscapes (ISUF, n.k, Conzen and Whitehand, 1981, 82). In an article originally published in 1960 Conzen writes:

> As form after form is added to an already existing townscape by its occupant urban society in the course of history, only some of these forms replacing earlier ones, the whole townscape becomes the 'objectivation of the spirit' of that society in its broader cultural context.... Objectivation of the spirit becomes the spirit of place or the genius loci, which represents an important environmental experience for the individual even when it is received more or less unconsciously. In the physical arrangement of the townscape then, the objectivation of the spirit finds its particularized form or gestalt and affects the individual in three ways. At the practical everyday level it is necessary for independent orientation within the townscape, our mental map of the town depending on our functional experience of the identity of localities within it as perception studies have confirmed. At the aesthetic level we add an equally spontaneous emotional dimension to that experience, and at the

> intellectual level, depending on the individual's mental access to relevant informa-
> tion, we experience the townscape in its full socio-cultural context well beyond the
> confines of the individual town or the present time.

Conzen's approach or interpretation of genius loci is the basis for an entire acade-
mic specialism, namely 'Urban Morphology' and is fundamental to many publications
on the history and management of the historic urban environment (Whitehand, 1987,
Whitehand, 1992, Whitehand and Carr, 1999, Whitehand and Carr, 2001, Whitehand
and Larkham, 1992, Slater, 1990). Larkham (1996, 22-23) also prefers the term genius
loci, and echoes Conzen in quoting Lowenthal (1979) who has suggested that 'the past'
exists as both individual and collective construct, with shared values and experiences
being important within cultural groups. Group identity is thus closely linked with the
form and history of place, creating a sense of place or genius loci.

Jakle (1987) on the other hand, emphasises the individual, subjective nature of place
in his discussion of genius loci. To Jakle, the ideal person to experience and express the
genius loci is not the resident but the tourist, for tourism 'involves the deliberate searching
out of place experience' (Jakle 1987, 8). This conflicts with the views of many others,
who see the experience and perception of genius loci as a facet of long-term familiarity
with place. Walter (1988) has used the concept of genius loci in a study of the 'expressive
intelligibility' of places: a quality which can only be perceived holistically through the
senses, memory, intellect and imagination. In studying place in classical thought, he
contrasts Plato's subtle and complex views with the Aristotelian view of place as simply
an empty container: this view, he suggests, informs much current planning practice.
Young (2001, 682) echoes the post-industrial concerns high-lighted in the *Introduction*
Chapter by stating that in the beginning of the 21st Century 'genius loci is thinning and
becoming more transient.'

In some respects the ancient origins and seemingly originally religious connotations of
genius loci can make the conceptualisation seems quite ephemeral and intangible. Howe-
ver, it has been proposed by e.g. Larkham (2006) that genius loci is the characteristics
that make a place conservation worthy. Thompson (2003) argues that genius loci, is
something both real and useful. According to Thompson (2003, 75) humans need their
mysteries, and he goes on to suggest that they may take more care of an enchanted land-
scape than one that we value only in an instrumental way. Nevertheless, the notion of
genius loci as character, together with associated idea that character might be locally
distinctive, avoids the need to postulate mysterious spirits or essences and seems to be
the most useful for the designer of landscapes. Paying attention to the existing character

of a site offers a means to consider the aesthetic, ecological and social aspects of a place simultaneously.

These considerations suggest that some practitioners and academics see genius loci as having practical utility. For example Thompson (2003, 74) proposes that although positivists might argue that the range of interpretations attached to genius loci demonstrate that

> there is nothing to which genius loci genuinely refers, so the best policy would be to drop the expression altogether, that there are two other possible strategies. The first is to take an instrumental line. Talking about genius loci is useful if it helps us to define places that are valued, culturally or ecologically, against damaging forms of development. Genius loci has practical value as a rhetorical device which will help us to argue for sensitive approaches to planning design and construction. The second approach is to accept that there is something unambiguously real to which genius loci refers, and that this something would not be found amongst an inventory of the contents of a place or a description of our feelings about it.

Who should identify genius loci, or how genius loci is in practice assessed and preserved, is a more complex matter. When moving away from the spiritual dimension of genius loci and attaching more practical utility, or human components to this quality, genius loci acquires some of the qualities that are also attached to the notion of sense of place. This conceptualisation is reviewed in the following section.

2.3.3 Sense of Place

If spirit of place and genius loci are qualities of place that are universal in as much they arise from the place itself, then sense of place is essentially (in the context of this research project) understood as a human response to place. However, to add to the confusion, sense of place has also been used synonymously with genius loci, spirit of place and/or character. Manzo (2003, 47) reviews the recent literature on sense of place and related concepts and states that while all these concepts address people's relationships to places, the exact connection between them remains unclear. *Sense of place* is described as 'an experiential process created by the setting, combined with what a person brings to it' (Steele, 1981, 9). *Place attachment* is considered 'the bonding of people and places' (Altman and Low, 1992). Meanwhile, *place dependence* is described as the perceived strength of association between a person and specific places (Stokols and Schumaker, 1981). Finally, *place identity* has been defined as dimensions of the self that develop in relation to

the physical environment (Proshansky, 1978). Some argue that sense of place, place dependence and place identity are forms of place attachment (Williams et al., 1992, Bricker and Kerstetter, 2000). Others contend that sense of place is broader than place attachment (Hummon, 1992, Butz and Eyles, 1997, Hay, 1998). Shamai (1991) has argued that all these place concepts and others can be included under the umbrella term 'sense of place'. This is a working solution used by Jorgensen and Stedman (2006) in a recent article describing 'sense of place' as a multi-dimensional conception, comprising cognitive (e.g. beliefs and perceptions), affective (e.g. emotions and feelings) and conative (e.g. behavioural intentions and commitments) dimensions of human-environment relationships. Jorgensen and Stedman's cognitive - affective - conative three-dimensional understanding of sense of place partially reflects Canter's (1977) earlier development of over-all sense of place constituting of the physical locale, activities linked to the locale, and the subject's conceptual meanings linked to the locale. Canter's model is quoted by Groat and Wang (2002, 77) as an example of a model that many architectural case-studies either explicitly or implicitly adhere to.

Echoing Canter closely Stedman (2003b, 671) writes:

> Common to the rapidly proliferating definitions of sense of place is a three component view that weaves together the physical environment, human behaviours, and social and/or psychological processes. Empirical research [within sociology], however, has neglected the role of physical environment, focusing on place meanings and attachment as products of shared behaviours and cultural processes.

If sociologists and environmental psychologists are now becoming aware of the dearth of knowledge on how the physical environment affects the human 'sense of place', researchers and professionals involved in designing, making and managing that physical environment are faced with the same dilemma. In the current English environmental and social policy things have gone as far as the Department for Communities and Local Government producing a leaflet (2009) *Guidance on Building a Local Sense of Belonging*. From this and other environmental policy documents it appears that the English environmental policy discourse is increasingly using 'sense of place' instead of genius loci.

Sense of place, which is the desired result of place-making, is in urban design regarded as a human need, essential for well being and feelings of safety, security and orientation, and a remedy against feelings of alienation and estrangement. Sense of place has been termed 'the sense of being here' (Cullen, 1961); Alexander declares that it could be achieved through 'the timeless way of building' (Alexander, 1979) and showed how place-making was relevant on any scale, from a private veranda overlooking a public path to

whole regions (Alexander, 1977) and criticising modernism Lynch (1981) makes sense of place part of his *Theory of Good City Form.* Neo-Rationalists such as Krier and Rossi (Krier, 1979, Rossi, 1982) contribute to a more historical and morphologically focused approaches to urban design, but also indicate place-making as an alternative to the same criticized modernism. Like the English and American approaches, they presupposed contribution to community life, and tried to create a sense of place mainly through cultivating public urban space. These writing can be seen as parallel to the earlier mentioned influential publications by humanist geographers such as Relph (1976), Tuan (1977), Sime (1986) and others, who sought to provide place-making practice with a sound knowledge base.

As demonstrated in the previous Chapter, sense of place of people and the character of the places that they inhabit are inter-linked in the current English policy discourse. The following section reviews character in this context.

2.3.4   Character

Having in the above considered extra-human spirit of place and genius loci and intra-human sense of place, this section reviews the concept of character. Character is often equated to the physical appearance of a place or building, but has also been interpreted to be synonymous with spirit of place, genius loci and sense of place. Thus character appears to reside in the physical (built) environment, but also refers to the human perception of that physicality. However, character is not always articulated explicitly but expressions like 'townscape' and 'streetscape' implicitly assume that the particular part of town or street has a certain distinctiveness about it, that in other words, it has character.

For example in the following quote from Worskett's *Character of Towns* (1969, 30-31) 'townscape' and 'character' are discussed as synonyms:

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

be constituent parts of the character.

Although Worskett is here close to making character synonymous with physical appearance and size of town, he later goes on to add: 'The townscape is of course, not just a matter of bricks and mortar; it is also concerned with atmosphere and personal experience' (1969, 119). Furthermore, as discussed in the above some interpretations of other conceptualisations have been used to denote broadly the same notion. These include genius loci and sense of place, Brooks (2000, 67) suggests that spirit of place could be replaced by the use of character.

Using a limited reading of character as a concept Tugnutt and Robertson (1987, 42-44) equate 'character' and appearance in their guide for sympathetic design in historic environments. In recent comparison of English Heritage 'Characterisation' and research carried out by Urban Morphologists Birkhamshaw (2006) states

> . . . the character that forms the basis for each (morphological region or character area) may be viewed as a composite of town plan, building fabric and land use characteristics. However, this combination of town plan, building fabric and land use is strictly adhered to for morphological regions, whereas character areas often present an ambiguous mixture of the three.

In other words, there is now a growing consensus that character does not simply equate to appearance. In reference to Brook's idea that spirit of place is 'a complex nexus of ideas' this study suggests that the concept of character should be considered as operating on two different levels. On one level, which in the light of the above discussions could be described as 'operationalised' (Patterson and Williams, 2005), character is used in e.g. in the current environmental management and policy discourse. At this operationalised level character has, however, largely remained an implicit concept (this study suggests it is another 'complex nexus of ideas'; or in theoretical terms a 'black-box' as outlined through actor-network theory) - and it is assumed that others know what the word means. In reference to the analytical framework based on work by Pereira-Roders (2007) referred to in the *Introduction* Chapter this study proposes that in the English context *character* is now a cultural value, or an implicit indicator of a varying set of cultural values. As such it should be considered among the other value indicators in the making of management decisions. Therefore, in order to acknowledge that character is a 'complex nexus of ideas', this study, based on the literatures reviewed above, further suggests that in addition to being an operationalised concept used in the relevant policy discourses and the making of environmental management decisions, character also functions at another, more abstract level. In this context character is not a normative by-word 'good environment' but enables

an analytical approach to the study of a place.

2.4   Conclusions

This section has discussed existing approaches to the concepts of place and landscape, and reviewed in more detail various character conceptualisations that are used within the environmental disciplines. The above discussion has also established the fundamental importance of places and landscapes combined with history to the human experience. Literary and historical exploration of the uses of character (and related and synonymous concepts) has served to reveal a multitude of uses and meanings for this complex and versatile concept. In summary character is seen to function at an 'operationalised' level in environmental management as a cultural value among other value indicators. However, this study also suggests that there are some issues relating to character as a concept that appear to suggest that it also functions at a more abstract level.

These issues, emerging from the above review, relate to the following four main concerns:

1. Character appears to be more than the 'physical appearance', land-use type and lay-out of a place,

2. Character does not function purely at the level of personal emotion and

3. Thus character appears to refer to something that exists collectively, beyond just personal experience.

4. The inclusion of 'all elements of the technical infrastructure' as part of the constituents of the Historic Urban Landscape in the UNESCO Vienna Memorandum (2005) implies that technical infrastructure is also a co-constituent of character.

Reworking of the existing character conceptualisations seems to offer limited new insight to the understanding of the character of historic urban landscapes. It is necessary to try and define the focus for the case-study research undertaken in this study and to provide a theoretical framework for the methodological approach. This calls for an understanding of character of the city or urban landscape that allows for the inclusion of all the perceived constituents of character without privileging any one of these over the others. This theoretical development is undertaken in Chapter 4 on *Conceptual Development.* In reference to the four main issues detailed above, the theoretical framework for

this study seeks to be an abstract, inclusive understanding of aspects of city (as a place or landscape) and character, not a definitive or exclusive account of features.

Before embarking on this development the following chapter on Historic Landscape Characterisation reviews an existing characterisation methodology, used in and advocated for the management of the historic environment.

Chapter 3

HLC Review

3.1 Introduction

As discussed in the *Introduction* Chapter the concepts of landscape and place are used frequently and often seemingly interchangeably in various government policies and publications, especially in relation to the management of the built environment. And also as discussed in the *Introduction* Chapter, one of the immediate backdrops of this research project is seen to be in the 'Characterisation ' work carried out by the English Heritage (EH) and the Countryside Agency over the last 15 or so years (Swanwick, 2002, 2003, Clark et al., 2004, Aldred and Fairclough, 2003, Countryside Agency, 2007, Fairclough et al., 2003). Thus, in returning to explore these contexts of this study further, this chapter addresses, in the UK context, the links between the historic environment policies, 'Historic Landscape Characterisation', and this specific research project. An evaluation of current publications ranging from environmental legislation to planning guidance, and from publicity campaigns to the new National Curriculum, reveals that this diverse range of policy discourse makes frequent reference to the concepts of 'place', 'landscape', 'character' and 'sense of place'. This section firstly addresses the background and development of HLC as a research programme, and then places Historic Landscape Characterisation in its policy context. Finally this Chapter proceeds to introduce some perceived practical applications of HLC, and look at some potential criticisms that are pertinent to this particular research approach. Evaluation of these criticisms develops into an assessment of alternative research approaches and the development of the research methodology and approach utilised in the case-study.

Described briefly, Historic Landscape Characterisation (HLC) is an on-going English Heritage research programme, aimed at capturing 'the over-all idea of place' (EH, 2004).

As a government funded programme HLC links to the current policies and objectives for sustainable development and creating positive senses of place for communities, as well as valuing whole of the environment and not just selected monuments. Through an analysis of some key publications relating to the management of the historic environment the connections between HLC and wider environmental policies will emerge.

3.2 What is Historic Landscape Characterisation ?

3.2.1 Introduction

Historic Landscape Characterisation (HLC) is a key English Heritage research programme. The idea of Historic Landscape Characterisation dates back to 1990 and the Conservative Government's White Paper, *This Common Inheritance*. This publication stated out Government's Environmental Policy and in relation to the management of the historical environment invited English Heritage (EH) to consider the desirability of a list of landscapes of special historic importance. EH's subsequent advice was that comprehensive characterisation of all of the landscape was preferable to a Register of selected areas. This advice, incorporated in government policy in PPG15 (DoE and DoNH, 1994) was based on the conclusions of a one year national R&D [research and development] project on existing approaches to historic landscape. As the goals and possible outcomes and uses of HLC can be seen to be broadly compatible with New Labour's 'Third Way' politics (Tiesdell and Allmendinger, 2001) (especially in relation to the ideas surrounding various interpretations of 'sustainable development') the change in government in 1997 did not affect HLC, and the programme has continued to the present day. In 2001 the Government, in *A Force for Our Future*, endorsed the HLC approach as a leading method for managing change in the historic environment. The conclusions of the R&D project mentioned above were published later in a book called *Yesterday's World, Tomorrow's Landscape* (Fairclough et al., 1999). In summary the R&D project concluded that it would be better to assess and understand historic landscape character everywhere, rather than selecting a few special areas for inclusion in a national register. It also recommended that a new, rapid and robust, approach should be identified that could deliver multiple objectives and serve multiple uses and notably also raised awareness that the whole of the landscape has an historic dimension. The consultation process also identified the issues relating to landscape were a major gap in current archaeological resource management, and that it was proving impossible to expand the historic coverage to wider landscape

assessment through point-based SMRs[1].

3.2.2 Principles of HLC

Thus Historic Landscape Characterisation came to be developed and it was pioneered in the first HLC project in Cornwall. The use of HLC has spread since 1995 and by the methodological review of 2004 (Clark et al.), 14 local authorities included a complete HLC in their SMRs. Since then between five and ten county-wide projects have been underway at any given time until now the landscape of almost the entire country has been analysed in this way.

The Cornwall HLC project (Cornwall County Council, 1996) helped to define the HLC's guiding principles (Herring, 1998, 12). These principles are the foundation of all subsequent HLC work and state that the method should:

- characterise the whole landscape, in the present day;

- be straightforward, consistent, repeatable and verifiable with further assessment;

- be as far as possible objective, with areas of subjectivity made transparent;

- consider no part of the landscape to be greater in value than another;

- generalise, i.e. identify dominant historic landscape character;

- use a concept of mainly visible time-depth over long periods of time;

- use present-day 1:25000 OS maps as the primary base;

- map discrete areas of HL character within the present-day landscape;

- use a pre-defined classification;

- provide a common, easily understandable language for users and a starting point for further research;

- use an archaeological approach to the interpretation of HL character.

Based on these principles the landscape is divided into GIS polygons that are classified into the pre-defined broad categories. Herring (quoted in Turner (2005) has explained

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[1]All Counties and Unitary Authorities in the UK maintain a 'Sites and Monuments Record' or SMR, consisting of a list of known archaeological sites. SMRs are now being developed into much broader Historic Environment Records (HERs) which also include information about historic buildings and designed landscapes.
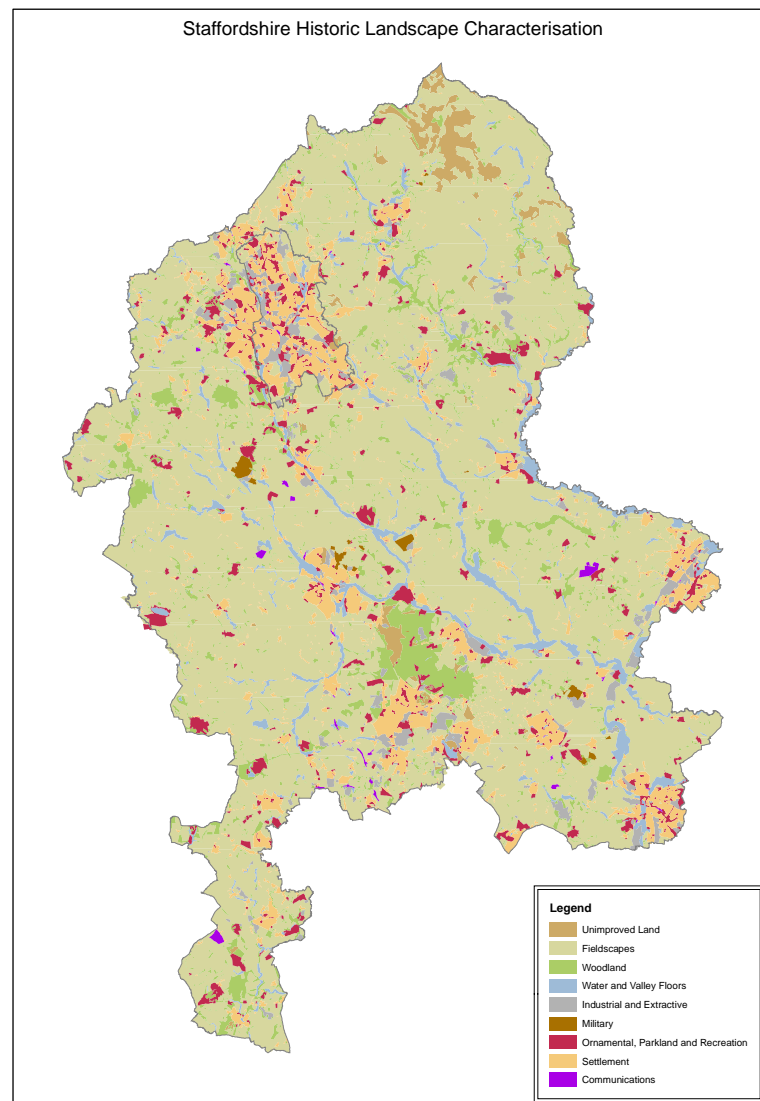
Figure 3.1: Staffordshire HLC Map

the basis of the Cornish method as follows:

> Closer examination [of the landscape] reveals that particular groupings and pat-
> terns of components which recur throughout the county can be seen to have been
> determined by similar histories. Cornwall's historic landscape can, therefore, be
> characterised, mapped and described, using a finite number of categories or types
> of *historic landscape character*. (Herring, 1998, 11)

Essentially this means that the present-day landscape is examined using modern Ord-
nance Survey maps and characterised according to its physical appearance into landscape

'types'. These 'types' are classified in advance of the characterisation mapping and define the broad characteristics which areas of land with similar past uses exhibit. In the Cornwall assessment, seventeen 'types' of landscape were identified. These types ranging from rough ground to water bodies, are listed in figure 3.2 on page 45.

1. Rough ground	10. Industrial (disused)
2. Prehistoric enclosures	11. Industrial (active)
3. Medieval enclosures	12. Communications
4. Post-medieval enclosures	13. Recreation
5. Modern enclosures	14. Military
6. Ancient woodland	15. Ornamental
7. Plantations and scrub woodland	16. Water (reservoirs etc)
8. Settlement (historic)	17. Water (natural bodies)
9. Settlement (modern)	(Herring, 1999, 21)

Figure 3.2: Types of Landscape Character in HLC

Further information is provided through a database associated with the GIS map which includes 'Attribute data' recorded for each polygon.

For example the specific aim and objectives of the Lancashire HLC are described (Ede and Darlington, 2002, 4) as: 'To characterise the distinctive, historic dimension of today's urban and rural environment in Lancashire.' In order to achieve the aim the following objectives were established:

- To create and document appropriate criteria to characterise the present landscape into HLC Types based upon identified attributes reflecting present land use, land management and settlement patterns, and visible and inferred evidence for changes through time.

- To review sources and identify broadly uniform levels of data to be collected to inform the characterisation process.

- To collect data from identified source.

- To identify attributes of individual units of landscape.

- To characterise the units of landscape into categories based upon the attributes.

- To produce detailed descriptions of individual landscape characterisation HLC Types.

- To prepare GIS-based maps of landscape characterisation HLC Types.

- To review those HLC Types and assess the potential for further stages of development.

- To produce an archive and a report summarising the project.

The results of the project form a permanent and renewable database. The perceived applications of HLC include providing information for a variety of planning, conservation and management-led initiatives and strategies. Many of the complete HLC projects now have public user interfaces accessible via the internet, making HLC data available to the general public, as well as to professionals in planning, countryside and heritage management.

Taking Stock of the Method (Aldred and Fairclough, 2003) describes how the HLC programme,

> . . . was designed to be evolutionary and experimental. Each new project was encouraged not to copy earlier methods but to improve on them, to borrow successful aspects but also to test new approaches and techniques, a process that has been hastened by the rapid development of GIS during the period acting as catalyst.

This has lead to what has been called 'healthy diversity' or 'flexibility' of method. It is thus noteworthy that despite the provision of a model project template with the 2003 HLC Review (Aldred and Fairclough, 2003) not all HLC projects adhere to the same broad categorisation of landscape type, or use the same attributes for the landscape polygons. Thus the way in which time depth or change over time is (re)presented also varies from project to project. There is also variety in the average size and thus the relative number of polygons between different HLC projects. Despite this, English Heritage publicise the approach as a unified research approach and propose further larger than county level characterisations combining data from different HLC projects (Aldred and Fairclough, 2003, 31).

The Historic Landscape Characterisation programme is now seen to be well established and both its results and its methodologies *Historic Landscape Characterisation, Taking Stock of the Method* (Aldred and Fairclough, 2003) and *Using Historic Landscape Characterisation* (Clark, J., J. Darlington, et al., 2004), have been published. In reference to the function of HLC as a tool for participation and learning, most complete HLC projects now have some type of public interface accessible via the relevant County Council's web-site. Some of these can also be accessed via English Heritage's 'Landscape Characterisation' web-site. The Historic Landscape Characterisations of Devon (Turner, 2006), and Lancashire (Ede and Darlington, 2002), set a good example of how HLC information

can be made accessible to the public. A definition of HLC, in the *Pathways to Europe's Landscape* report, by Clarke et al. (2003, 90) states that HLC is a tool developed to provide an understanding of the historic dimension of the modern landscape. Further HLC is described as an archaeologist's approach to landscape which provides a context for appreciating how archaeological sites fit into the historic landscape (Clark et al., 2003, 91). Characterisation has also been described as '... a highly diverse range of work that has in common an exploration of [the] link between ideas and things' and as a shorthand word aimed at capturing the 'overall idea of a place' (EH, 2004, 2). It is perhaps worth noting again the apparent interchangeable use, or at least intimate connection, of landscape and place as they are used in these publications and in policy language generally. In a more recent discussion on the aims of HLC, Turner (2006, 385) states that Historic Landscape Characterisation recognises that landscape is ubiquitous, and that it is fundamentally about perception, so that landscape can be seen in many different ways.

the Lancashire HLC report (Ede and Darlington, 2002, 3) sees HLC as an approach (in which the whole of an area of landscape is assessed and characterised) that is in line with methodologies of landscape assessment undertaken for 'non-historical reasons'. The general purpose of these has been defined by the Countryside Agency (Countryside Commission 1993, 1998; Countryside Agency 1999) as assisting local authorities, land use and conservation agencies and the private sector to:

- Understand how and why landscapes are important.

- Promote the appreciation of landscape issues.

- Successfully accommodate new development within the landscape.

- Guide and direct landscape change.

In addition to these more generic approaches English Heritage (2004, 3) describe the functions of characterisation as

1. a research tool, helping us to understand our world, and broadening our horizons from a few special monuments to the whole of community's environment

2. a tool for participation, providing a meeting place '... in which to draw together public and personal opinions as well as specialist values.'

3. a tool for positive spatial planning, useful not only to heritage professionals, but also to '... planners and developers, politicians and owners, communities and individuals.'

3.2.3   The Urban HLC Projects

In terms of archaeological research the broad characterisation work carried out within the HLC programme at a county-wide scale has been complemented by Extensive and Intensive Urban Surveys of archaeology conducted in towns and cities across UK (Anon., 2005; 2007b).   These projects see characterisation moving from the broad landscape context into more detailed surveys of urban areas (EH, 2007).   In addition there are now Urban Historic Landscape Characterisation projects underway in many of England's largest conurbations (e.g. Black Country (2007a) ; South Yorkshire (2007d; SYAS, 2009); Merseyside (2007c); Greater Manchester) and other cities such as Lincoln (Walsh, 2007).

As the focus of this research is also urban, it is these urban HLC projects that have particularly attracted my interest. The 'broad character types' as defined for the South Yorkshire Urban Historic Landscape Characterisation Project are detailed in Figure 3.3 on page 49.

However, referring to the broad character types described in Figure 3.3, in the context of heavily urbanised areas such as Sheffield (part of the South Yorkshire Urban HLC) or Newcastle, describing large swathes of urban landscape just as 'residential' is informative only in a very generic sense. Again, in relation to this research project, of more interest are the 'Historic Environment Character Types' used in the South Yorkshire Urban HLC. These are the sub-types into which each broader type is divided into. Figure 3.4 on page 50details the Historic Environment Types for the 'Residential' broad type.

Further attributes recorded in the South Yorkshire Urban Historic Landscape Characterisation database for all the *Residential* types are Density, Layout pattern, Private Open Space, Public Space, and Legibility. These attributes and sub-divisions into Historic Environment Types allow for a more detailed analysis of the residential landscapes. Appendix E at the end of this study gives more detailed examples of the attributes recoded in the South Yorkshire UHLC project.

3.3   Summary

Thus from the first paper-based HLC projects, where hand-coloured maps were supported by a computerised database of attributes (as in Cornwall and Axholme HLC projects), with the advancing technology HLC has moved into GIS. Similarly the move is from very broad county wide surveys to more detailed analysis of urban environments. However, the principles of the HLC remain the same. Likewise, HLC remains a desk-based approach - aerial photographs and ordnance survey maps still form the core research resource.

Broad Types Description		
Communications	Main communication nodes. Linear features such as roads and canals are not generally marked unless the scale / grain of the surrounding urban landscape warrants this step. Records areas such as train stations, transport interchanges, airports, major road junctions etc.	
Enclosed Land	Land that has been demarcated and enclosed for agricultural purposes, particularly fields	
Extractive	Areas involved with the extraction or processing of commodities and minerals such as fuel or building materials.	
Horticulture	Large scale commercial gardening enterprises such as major orchards, nurseries and market gardens.	
Industrial	Areas concerned with industrial processes.	
Institutional	Areas (with or without buildings) connected to large establishments, associations and organizations. Particularly schools, hospitals, military sites etc.	
Ornamental, Parkland and Recreational	Designed ornamental landscapes and those used for recreational purposes.	
Residential	Areas where people live. Includes large individual houses and housing estates.	
Unenclosed Land	Unimproved land, open land, moorland, and urban areas reverting to scrub like flora.	
Water Bodies	Large water bodies including reservoirs and lakes. Does not include millponds which are characterised as Industrial: Water Powered Sites.	
Woodland	Land with dense concentrations of trees.	

Figure 3.3: Broad Character Types - South Yorkshire Urban HLC

However, as with all archaeological work, historic landscape characterisation has its challenges. For example, the categorization of landscapes into different types relies on a researcher's ability consistently to identify areas in the correct categories. Also a single dominant character type needs to be defined despite an area potentially having features from several periods of land-use types contributing to overall character. This consideration also leads to problems associated with time-depth; a recent landscape (e.g. one created by nineteenth-century enclosure) may conceal strong elements of another kind of landscape. Various techniques have been used to overcome these problems, but within HLC use of GIS in tandem with explanatory text now appears to provide the best solution (Herring, 1999, 22). Using a GIS gives considerable flexibility and allows each of the character areas or polygons (i.e. coherent blocks sharing the same historical develop-

Historic Environment Types	
Residential Burgage Plots	Long narrow plots aligned with roads and associated with settlement
Elite Residence	Large country houses, usually associated with parkland and concerned with the display of wealth and status, etc.
Vernacular Cottages	Small-scale buildings built in local materials and styles to traditional rather than 'polite' styles
Estate Village	An estate built by a landowner to a clear overall design
Farm Complex	A complex of farm buildings including house, barns, sheds, etc. Generally only recorded when no longer part of a larger 'enclosed' landscape e.g. when part of a nucleated village or engulfed by later suburban housing estates
Back-To-Back / Courtyard Houses	Early types of urban, industrial housing typically built with communal courtyards with only one fenestrated elevation
Terraced Housing	Conjoined row housing with elevations to the front and rear of each property
Villas/ Detached Housing	Large and individually distinct houses, generally built for the affluent middle classes from the 19th century onwards and typically associated with generous gardens or within parkland.
Semi-Detached Housing	Describing less affluent middle class housing, often in ribbon developments not conforming to other categories. May in some circumstances differ little from mid C20 social housing.
Planned Estate; Social Housing	Council or housing association estates built on a large scale to an overall design.
Prefabs	Prefabricated housing. Mostly post war or early 20th century.
High Rise Flats	Tower blocks and other high density blocks of flats
Low Rise Flats	Flats with generally less than five floors
Private Housing Estate	Private housing estates built by speculative developers. Often identified by a greater variety of plan forms and piecemeal development pattern

Figure 3.4: Historic Environment Types for Residential Broad Type

ment) to be given more than one descriptive characteristic (Wills, 1999, 38-9). In current landscape characterisations, including e.g. the Devon HLC [2], the database attached to the GIS allows a range of attributes to be linked to individual polygons so that a detailed picture can be built up of the historical development of the landscape.

The discussion above has introduced the basics of the HLC research programme - what it is, and how it came to be. The following section assesses the political and policy

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[2]Accessible at: http://www.devon.gov.uk/index/environment/historic$_e$nvironment/landscapes/landscape− characterisation.htm

context of HLC - how does it relate to other environmental management issues, and maybe also why this research programme emerged?

3.4 HLC - Policy and Practice

3.4.1 Introduction

Historic Landscape Characterisation has what could be called its 'ideological context'. The current political ideals about 'landscape' and 'place' can be seen manifested in various government policies and publications, especially in relation to the management of the built environment and other environmental policies. In an academic context the other than objective nature (or potential) of maps, mapping and GIS has attracted much debate over the last 20 years (e.g. Pickles, 1995, 2004, Wood, 1992, Jackson, 1989) and it is important to acknowledge this aspect of HLC.

Two statutory organisations, advising the UK Government in the management of the English built environment are English Heritage and Commission for Architecture and Built Environment (CABE).

> CABE or the Commission for Architecture and the Built Environment, is the government's advisor on architecture, urban design and public space. CABE was set up in 1999 and it is now a statutory body, funded by the Department of Culture, Media and Sport and the Department for Communities and Local Government (CABE, 2008)

> ENGLISH HERITAGE is the Government's statutory adviser on the historic environment. Officially known as the Historic Buildings and Monuments Commission for England, English Heritage is an Executive Non-departmental Public Body sponsored by the Department for Culture, Media and Sport. (DCMS). The powers and responsibilities of English Heritage are set out in the National Heritage Act (1983) and they report to Parliament through the Secretary of State for Culture, Media and Sport. Although sponsored by DCMS, English Heritage works with a range of Government Departments, notably CLG and Defra, to help realise the potential of the historic environment. (EH, 2008a)

English Heritage and CABE not only advise the government, but take an active role, through involvement in production of new legislation (e.g. the current Draft Heritage Protection Bill (DCMS, 2008)) and publications (e.g. Douglas et al., 2004), and influencing the discourse on the management of the historic environment. It is this discourse that this section aims to analyze.

3.4.2 Environmental Policy and HLC

This study suggests that the perceived thought chain that links broad government policies and goals with a specific research programme such as HLC can be described in the following way:

1. SUSTAINABLE DEVELOPMENT - is one of the over-arching themes of the current government and touches just about every aspect of life and politics.

2. SUSTAINABLE COMMUNITIES - are an integral part of sustainable development and are healthy, happy and enabled to play their part in civil society.

3. 'SENSE OF PLACE' - is an important aspect in the make-up of sustainable communities

4. THE BUILT ENVIRONMENT - Apart from people (i.e. communities), the (built) environment and available amenities are important 'creators' of 'sense of place'.

5. GOOD MANAGEMENT - of the (historic built) environment can be part of sustainable development in itself, but can also help bolster and create a positive 'sense of place', and thus sustainable communities.

6. UNDERSTANDING - 'the resource', i.e. the (historic built) environment is vital (together with appropriate legislation) to the good management of the (historic built) environment.

7. HISTORIC LANDSCAPE CHARACTERISATION - is seen contributing to both the understanding of the 'resource' and 'sense of place'.

These points are further illustrated through quotes from selected key publications in Figure 3.5 on page 53. The publications quoted have been chosen on the basis of being recent (post year 2000) and illustrative of the wide ranging debate and discourse surrounding issues relating to the wider environmental policies, heritage protection and character. Many of the ideas outlined in Figure 3.5 are included in the recent *Conservation Principles* document by English Heritage (2008). However the issues highlighted in e.g. the white paper for the new heritage protection bill (DCMS, 2007, 8) and the consultation document *Belonging* are equally relevant as they demonstrate the sustained use of these ideas in the heritage policy discourse and show how the *Conservation Principles* outlined by English Heritage (2008) were arrived at. Therefore, in this case it is considered more authoritative to quote from a variety of sources rather than from a single one.

1) SUSTAINABLE DEVELOPMENT (is one of the over-arching themes of the current government and touches just about every aspect of life and politics)	*Securing the Future - UK Government sustainable development strategy* (HM.Goverment, 2005, 6) outlines the four agreed priorities of the strategy as: • sustainable consumption • climate change • natural resource protection • and **sustainable communities**
2) SUSTAINABLE COMMUNITIES (are healthy, happy and enabled to play their part in civil society)	*Heritage Protection for the 21st century* (white paper for the new heritage protection bill) (DCMS, 2007, 8) The historic environment is an essential element of building sustainable communities. Whether through traditional building styles, ancient street patterns, or historic green spaces, **heritage provides communities with a sense of identity and place**. The effective reuse of historic buildings can provide a focus for regeneration and economic development and can ensure the sustainable use of resources.
3) 'SENSE OF PLACE' (is an important aspect in the make-up of sustainable communities)	*Building Sustainable Communities: Actions for Housing Market Renewal* CABE (2003, 3) Place **the historic environment** at the centre of considerations when planning for new developments. An appreciation of a neighbourhood's historic development and its potential assets can play a role in the creation of desirable sustainable neighbourhoods, which have good layouts, provide links with the past and have **a sense of place**.
4) THE (HISTORIC) (BUILT) ENVIRONMENT (- Apart from people, the (built) environment and available amenities are important 'creators' of 'sense of place'.)	*Belonging – Review of Policies Relating to the Historic Environment:* Discussion paper from Working Group 2 on public involvement and access - June 2000 (EH, 2000) 8 All people should be able to feel that they belong to a place, to a community and to a time in history. **The historic environment provides much of the justification for this feeling** – it is the big picture within which everyone should be able to see themselves. History is a living entity that survives through continual reinterpretation, which at its most effective involves everyone in society.
5) GOOD MANAGEMENT (of the (historic) (built) environment can be part of sustainable development in itself, but can also help bolster / create a positive 'sense of place', and thus sustainable communities)	*Heritage Protection for the 21st century* (white paper for the new heritage protection bill) (DCMS, 2007, 7) The proposals in this White Paper reflect the importance of the heritage protection system in preserving our heritage for people to enjoy now and in the future. They are based around three core principles: • Developing **a unified approach to the historic environment**; • Maximising opportunities for inclusion and involvement; and • Supporting sustainable communities by putting the historic environment at the heart of **an effective planning system**.
6) UNDERSTANDING ('the resource', i.e. the (historic built) environment is vital (together with appropriate legislation) to the good management of the (historic built) environment.)	*Heritage Will Save The Thames Gateway's Soul* (EH, 2006) Investing in the historic core of towns and villages is the essential first step in revitalising communities and giving residents a home with a soul. ….Heritage-led regeneration brings out the soul of a place by drawing out the features that make it loved, welcoming and unique. Identifying and then regenerating historic hubs provides an economic, geographic and civic focus for new places. Even more importantly, it prioritises improving quality of life for the communities that are already there. … That's where our characterisation research comes in. It's been tried and tested all over the country, and is **the single best way to understand … area's unique historic character.**
7) HISTORIC LANDSCAPE CHARACTERISATION (is seen contributing to both the understanding of the 'resource' and 'sense of place'.)	*North Yorkshire Historic Landscape Characterisation Project Newsletter Autumn/Winter* (NYCC, 2007, 3) Historic Landscape Characterisation can also be brought into context with wider European landscape context. The United Kingdom is now a signatory of the European Landscape Convention (Council-of-Europe, 2000), which defines landscape as **"An area perceived by people, whose character is the result of the action and interaction of natural and/or human factors."** *North Yorkshire County Council website* (NYCC, 2008) One of the strengths is that HLC has at its heart the European Landscape Convention that states that landscape is **"...an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas "**

Figure 3.5: Connecting wider environmental and social policy ideas with the HLC

The few examples mentioned here constitute by no means a comprehensive deconstructive reading of sense-of-place and related issues as they manifest in the current environmental policies. However, these examples help to illustrate that concepts such as

landscape and place, and the notions of sense of place and character, as well as the HLC research programme, are all linked together and can be seen as responses to the challenges of living in the post-industrial world.

3.4.3 Practical Applications of HLC

Among other things population growth and changing economic situations currently place huge demands on the management of the environment. According to English Heritage

> The planning system - and the role of heritage within it - is undergoing substantive change at present. Regional governance, the empowerment of local communities, housing market restructuring and renewal, urban and rural regeneration policies, designation reviews and greenbelt agendas all overlap and have far-reaching impacts upon planning and conservation. HLC will have a role, both as a tool and as an output that will facilitate the delivery of these new agendas and ensure a voice for the historic environment. As the changes come into being and moves towards regional assemblies are realised, in addition, regional HLC synthesis will become increasingly relevant. HLC may be used to inform Regional Spatial Strategies, Planning Guidance, Economic Strategies and Sustainability Frameworks. Indeed the principles set out in Draft PPS1 form a perfect context for HLC and for characterisation applied more widely. (Clarke, Darlington, Fairclough, 2004, 55)

Despite certain methodological and ideological misgivings associated with the HLC research approach, it would appear that HLC does produce data that can be operationalised in the making of management decisions. In *Using Historic Landscape Characterisation* Clarke et al. (2004, 12) divide potential uses of HLC into four categories:

1. *Landscape Management* the role of HLC in advising agri-environment schemes and influencing the targeting of Countryside Stewardship Schemes and Special Projects. How HLC is used by Historic Environment Countryside Advisors (HECAS), and how it is influencing the Countryside Agency's Landscape Management Initiatives.

2. *Landscape Character Assessment and Strategies* using HLC to define, understand and describe Landscape Character Assessment types, and to inform Landscape Strategies, at county and district level.

3. *Spatial Planning* using HLC to inform new planning policy and SPG in Development Plans, as well as to advise on planning applications and hedgerow removal applications.

4. *Partnership, Learning and Outreach* many projects and initiatives outside of the originally anticipated applications have recognised the value of HLC to support other aspects

of environmental management as well as to inform research in both local authorities and universities; HLC information can be provided in a variety of formats (reports, mapping, Internet and CD ROM), helping to raise awareness of the historic landscape.

In *Using Landscape Characterisation* (Clark et al., 2004, 52) 'Guiding landscape management' is defined as the primary function of HLC. In this context HLC is seen as a tool for promoting a broader and more comprehensive understanding of the historic environment and for providing recommendations for managing future landscape change. The strengths of the approach are the ability to establish an overall framework in which discrete heritage assets may be located (2004, 52). In other words HLC might be more about the context and less about the content. Furthermore, the separation of 'discreet heritage assets' and 'landscape' appears contradictory to the claims about HLC as an inclusive approach where everything and everywhere matters.

However, Clarke et al (2004, 55) identify 'Under-pinning Spatial Planning' as another potential function of HLC. The planning system - and the role of heritage within it - is undergoing substantive change at present. Many aspects of the wider planning policy such as regional governance, the empowerment of local communities, housing market restructuring and renewal, urban and rural regeneration policies, designation reviews and greenbelt agendas all overlap and have far-reaching impacts upon planning and conservation. According to Clarke et al, (2004, 55) HLC will have a role,

> . . . both as a tool and as an output that will facilitate the delivery of these new agendas and ensure a voice for the historic environment. . . . HLC may be used to inform Regional Spatial Strategies, Planning Guidance, Economic Strategies and Sustainability Frameworks. Indeed the principles set out in Draft PPS1 form a perfect context for HLC and for characterisation applied more widely.

It is this *Spatial Planning* context of the HLC that is seen to have specific relevance to this research project. As an example, there is a well publicised need for millions of new homes in England in the near future. Depending on sources this need ranges from 3 million by 2020 (Cooper, 2007) to 5 million new homes needed in ten years (Heartfield, 2006). Currently the construction industry is not building enough to satisfy this demand, and the preservation and prolonging the life of existing buildings is one of the ways in which to cope with this short-fall.

From these view points alone conservation, regeneration, sustainable development and the creation or preservation of people's sense of place are important concerns in the management of the built environment. Housing Market Renewal is another area where HLC can make a contribution, for example when assessing the survival, condition and

future potential of older housing at a city-wide scale. English Heritage is keen to promote the applicability of the HLC approach in the urban planning context and Clarke et al. (2004, 56) write:

> Development within towns has always been high on the agenda and will continue to be so. Consequently, a fast-developing area of innovation is the field of historic urban character studies, pioneered by authorities such as Cornwall, Lancashire and, most recently Merseyside, the Black Country, South Yorkshire and the Sussexes. ... Both the traditional mainly rural HLC and its urban townscape equivalent will be used to inform the large-scale development initiatives, such as the Office of Deputy Prime Minister's Housing Growth Areas and Pathfinder Areas.

Specifically in the context of Newcastle it seems a missed opportunity that the Tyne and Wear HLC is still at the planning stages, yet the extensive Pathfinder programmes to east and west of the city centre (and in Gateshead) are on-going. Many other practical applications of HLC data are introduced in *Using Historic Landscape Characterisation* (Clark et al., 2004), and the *Lancashire County Council Joint Structure Plan* (LCC, 2001) makes full use of the Landscape and HLC Assessments made in the County. The aim of this research is to study industrial era housing as a significant part of the landscape of present day cities. The following example from Lancashire illustrates, at a more tangible and practical level, how HLC projects can be used for the research and management of residential areas originating from the 19th century.

> Lancashire County Council has, through the EUS (Extensive Urban Survey) programme, pioneered the extension of HLC-type approach into urban areas. Lancashire is characterised by very extensive areas of 19th century urbanisation: worker's housing, mills, chapels, pubs and other institutions. Now, large areas are proposed for clearance. In East Lancashire, under the Housing Market Renewal programme some 25 000 houses (many of them Victorian terraces) may be demolished in the next few years. The Lancashire Historic Towns Project[3] aims to characterise the 33 most important towns of the county. It builds on the Lancashire HLC, mapping and defining historic urban character types. The use of generic types means that comparisons can be made between towns: for instance, all the survivals of 'byelaw' housing in the county can be mapped and identified. An important part of the project is to produce Historic Town Management Guidance for each town: a summary of the historical development and management strategies for the historic environment. Strategies are grouped under three headings: townscape, below-ground archaeological remains, and historic buildings and structures.

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[3]See Newman, C. and R. Newman (2008) for extended discussion of this project

Each section includes both generic and asset- or area-specific recommendations. This guidance has been welcomed by Lancashire local authorities. The approach is comprehensive, flexible, positive and focused on the historic dimension of the present day. It is being adopted for a range of purposes, including development plans and Supplementary Planning Guidance. Further potential uses include community strategies, conservation area appraisals and the emerging local development networks. (EH, 2004, 16-17)

On the basis of this on going research into the potential practical applications of HLC, Simon Thurley's comments on the 'soul of Thames Gateway' (quoted in Figure 3.5, on page 53), recent reviews of the method (Turner, 2006; Turner and Fairclough, 2009; Newman, 2009) and anecdotal evidence from archaeologists working on the urban HLC in South Yorkshire and Lincoln, it seems that there is real demand for the kind information HLC can produce and that it does have many uses in the hands of the planning and conservation officers, designers and developers. A current PhD project at the University of Sheffield aims to study the utility of HLC (Dobson, forth-coming) as a decision making tool in this practical context.

3.4.4 HLC Critiqued

Whilst acknowledging that HLC can have practical utility, there is certain amount of methodological criticism surrounding this approach. In addition to the practical methodological difficulties discussed above (i.e. the concerns for consistency of interpretation, or the possibility of human error, as well as the problems presented by the often multi-layered nature of the present day landscape), HLC has attracted further debate. For example in two recent TAG Conferences (Theoretical Archaeology Group, 2007, 2008) [4] there has been a lively debate surrounding approaches to Historic Landscapes, and the whole notion of utility of 'Historic Urban Landscapes' as a concept or entity in the management of cultural heritage has been debated. One of the areas where the championed possibilities of HLC become a little vague, and have attracted criticism, is the function of HLC as 'a tool for participation, providing a meeting place...in which to draw together public and personal opinions as well as specialist values' (English Heritage, 2004, 3). Despite the publicity perhaps suggesting the contrary, HLC projects are conducted by small teams of (landscape) archaeologists, and are therefore based on expert opinion or assessment of the facts. The limitations of resources (i.e. time and money), mean that this approach is the most expedient way of achieving landscape assessment of e.g. a whole county. Thus in practice HLC projects have not included extensive exercises

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[4]Web-site accessible at: http://antiquity.ac.uk/tag/index.html

in public participation, resident surveys or the like. One of the statements (made by someone intimately connected with the inception and implementation of the whole HLC programme) that contradicts the aims published in Clarke, Darlington, Fairclough (2004) is:

> Understanding [about the cultural landscape] will only really be enhanced when we persuade everyone to recognise that there is a longer and broader history of the landscape than that revealed by historical documents of the past few centuries. (Fairclough, 2002, 31)

This comment appears to indicate that within HLC there is an archaeological bias towards older landscapes as more important than the later ones. Yet in another near contemporaneous document the lauding of traditional types of farming or land use is criticised:

> In describing such lifestyles, the word traditional is often used as a short cut to a series of powerful but unhelpful myths that lie at the heart of the sentimental view of the cultural landscape: harmony with nature, the noble savage (or at least the dignified peasant), even Edens . . . These myths romanticise non-modern, usually rural lifestyles that are too often now almost entirely unsustainable; in doing this, they prevent real engagement with the cultural landscape as the historic dimension of the real world. (Fairclough, 2003, 31)

Finch's (2007) study into the fox-hunting landscapes of the English Midlands shows that HLC has a capacity to promote medieval landscape features over e.g. the 18th or 19th century ones, even when the current landscape shows hardly a visible trace of the older landscape. In short, HLCs may be biased towards older historical layers (or politically un-fashionable issues such as fox-hunting, are actively discriminated against), and it remains unclear how the approach addresses landscape 'as perceived by people' - although it claims to do so. Therefore it is also erroneous to claim (or think) that HLC addresses sense of place in any comprehensive way.

In the context of this research another perceived problem of the HLC approach is that the reliance on pre-prescribed categories might introduce too rigid a framework in often very varied urban fabric. Furthermore the reliance on polygons as the only feature class is GIS excludes potentially interesting data that could be represented by a linear or a point-based feature such as roads, tramlines and bus-stops. Another potential problem could arise from describing areas of housing purely according to their stylistic or chronological characteristics, as this approach ignores the potential variation in functions of houses even in a residential context. Industrial era housing areas often included secondary shopping

streets, corner shops, pubs, schools, libraries and other forms of suburban infrastructure that generalising polygonisation (of HLC) masks, and thus potentially distracts from the functional dynamics of a residential area. These concerns are echoed in critiques by Austin (2007) and Williamson (2007).

Williamson's (2007, 69) criticism of HLC's approach to landscape character as something that can be addressed 'from above' and depicted in plan, as mapped data, appears particularly pertinent. Williamson (2007, 69-70) goes on to point out how

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

Later in the same journal, Austin (2007, 103-104) summarises his criticisms claiming that despite EH's claims to the contrary, HLC is driven primarily by process rather than audience-related outcomes. According to Austen HLC simplifies and flattens complexity inherent in the historical landscape through morphological classification, and fails to deploy critical method in relation to change and it makes massive untested assumptions about date and event. In reference to the identification of continuity and change as key characteristics of the post-industrial city, this potential inability or unwillingness to adequately address change within the landscape is of fundamental concern for this study. Another perceived drawback of HLC is that it conveys a sense of historical certainty to most users, yet beyond a small group of trained landscape historians and archaeologists there are few who can conduct a sceptical critique of the HLC method. According to Austen (2007, 104)

> HLC peddles a form of dominant meta-narrative that is untested in any academic research forum. It deploys fixed top-down classifications, again untested, that give the false impression of objectivity and absolute authority. It disconnects fragments of landscape from each other, and thus de-contextualises. It privileges top-down users and centralised authorities and it consequently disempowers communities and their connections to the landscape. It gives the impression of a harmonious and neutral landscape development, sanitising by ignoring the continuing process of conflict and the existence of alternative view points which lie at the heart of all communities and their bro. Indeed, it fails, as yet, to identify how such alternative interpretations and evaluations might be built into the whole HLC process, despite the assertions of its proponents that this is possible and part of the aspiration. It, finally, disassociates itself and its practitioners from the embed-

ded processes and narratives of specific cultural identity and ownership and thus it dispossesses fundamentally important elements of our society.

However, Austin (2007, 104) goes on to conclude on a more positive note, saying:

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

It is to this call for 'next generation of analysis' that this study aims to answer. This study proposes that by using HLC as a base-line of enquiry - but combining it with other research methods which look at the urban landscape at different scales and from different view points - some of the problems mentioned above can be resolved and a more nuanced research methodology will emerge that will result in a better understanding of the characteristics of surviving industrial era housing as part of the historic urban landscape of post-industrial cities. Mitchell and Lunn (2009, 15-16) discuss the *Greater Manchester Urban Historic Landscape Characterisation* and point to ways of integrating the HLC data with existing Extensive Urban Surveys and making the HLC data available more widely to planning and conservation officers throughout the Manchester Metropolitan Area. Likewise, they agree that HLC appears as a good starting point for further analysis and study.

3.5   Conclusions

To conclude, Historic Landscape Characterisation is an archaeological research tool developed over the last 15 years and it is being promoted as the leading method in the management of the Historic Environment. The discussion above has demonstrated that this research programme is not just engaged in creating complex GIS packages because research funding is available, but that whilst it seems a potentially valid tool in the management of the (historic built) environment, it also has its critics. Thus it seems wise to consider that the HLC process may not be as inclusive, unbiased and objective as it claims to be. This is firstly because like any research programme of this type, HLC is a child of its time, reflecting the interests and cultural values of its era; and secondly because despite the seeming unity, there exists, between different HLC projects, what has been called '. . . a healthy diversity of method' by some (Aldred and Fairclough, 2003) and 'a methodological inconsistency' by others. Furthermore some of the perceived possibilities and functions of HLC are (thus far) unfulfilled. As such it remains to be seen how

comprehensively HLC can continue to contribute to the understanding and management of the historic environment, and what other longer-term legacies it might prove to have.

As this study aims to use HLC as part of its case-study research, it will use some of the same data sources and research approaches. These considerations have also been developed with reference to the Tyne and Wear HLC Project Design developed by Jayne Winters and Newcastle City Council[5]. Through the critical appraisal of intended aims and outcomes of HLCs a number of potential areas of development have been identified. These include the implicit use of 'sense of place' and 'character' as part of the justification for the HLC approach. It appears that these concepts and their use in the study and management of the historic environment could benefit from a more rigorous analysis. In other words, to become a part of the academic process HLC needs to engage with wider conceptual and theoretical issues within the study of the historic environment. Therefore other approaches to the mapping of urban character (e.g. Weich et al., 2001; Burton et al., 2005; Dunstan et al., 2005; Caughy et al., 2001 and Green, 1995 and 1999) will be considered as ways of adding detail to the HLC, and furthering the conceptual understanding of urban character. From these further conceptual and methodological strands of enquiry, a methodology for the case-studies will be developed.

Nevertheless, this study suggests that in looking at the existing materiality of city and at a landscape scale, the HLC methodology has potential for assessing some of the spatial characteristics of the urban landscape, as well as appreciating the change that has already occurred. When complemented with research using different methods at different spatial scales, HLC can be used as base-line of enquiry to study many aspects of the built environment, depending on the kind of information required. This means that despite the issues raised above, the HLC approach is seen to be relevant in the development of the case-study research approach for this study.

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[5]See http://www.newcastle-city-council.gov.uk/cab2007.nsf/allbykey/3F45BA3540783F118025732300396FE9/$FILE/ for details

Chapter 4

Conceptual Development

4.1 Introduction

This chapter on *Conceptual Development* outlines the theoretical framework developed on the basis of the issues raised in the first three chapters of this study. The theoretical framework allows for a more informed assessment of the character of the surviving 19th century residential areas within the post-industrial city, and thus is of fundamental importance to this study. The seemingly multiplying definitions of character and sense of place reviewed in *Conceptualising Character* Chapter appeared to offer limited new insights into the understanding of character. Of the four key concepts of landscape, place, character and city the first three were reviewed in Chapter 2. Based on the four further considerations developed in the *Conceptualising Character* Chapter it appeared a logical next step to develop a theoretical framework that would accommodate both the practical research concerns of addressing the character of surviving 19th century residential areas as part of the post-industrial city, as well as an increasingly abstract understanding of character. As discussed in Chapter 2, emerging from the literature review 'character' appears as more than the physical appearance, land-use type and lay-out of a place, and as more than a personal emotion. Thus character appears to refer to something that exists collectively, beyond individual experience. And finally, the inclusion of 'all elements of the technical infrastructure' as part of the constituents of the Historic Urban Landscape in the UNESCO Vienna Memorandum (2005) implies that technical infrastructure of a place is also a co-constituent of its character. The connections between current human and cultural geographical writing about the nature cities and the understanding of character emerging from the literature review offer an interesting opportunity for further conceptual development. In this section these connections are organised into a theoretical

matrix that addresses the perceived complexities of city and character.

The essentially experiential and personal nature of character means that any given place can only be fully 'characterised' by actually experiencing that place. Yet it is envisaged that a meaningful and informative study of an area can be presented in this study, and that the theoretical framework developed allows for exploration of 'character' as a historically and spatially constituted complex reality. This study suggests that even the seemingly mundane, everyday places can always be experienced a-new, and that they are experienced in the context of other places, both physically and chronologically separate.

4.2   City as a 'Transductive Field' ?

This section seeks to explore two questions. These are, firstly: 'What is a city ?' and thus, secondly: 'What constitutes the 'character' of cities ?'. In the planning context for instance in Manchester (MCC, 2007) the supplementary planning guidance adopted in April 2007 starts with a section on 'Sense of Place' (2007, 2) and continues with 'Design: Character and Context' (2007, 3). This document states:

> What a city looks and *feels* like is a crucial part of its identity ... We want Manchester's buildings, neighborhoods, streets and spaces to convey a sense of place where their identity, character and role are clear, relevant and special. (italics added)

Examples such as this indicate that at the operationalised level there is an implicit awareness of the complexity of the relationship between people and places. However, the above discussion about different character conceptualisations seems to suggest that the existing definitions offer limited new insight into what actually constitutes character. Thus this study seeks to respond to the emerging concerns about the existing discussions about landscape, place and character raised in the *Conceptualising Character* Chapter, by developing MacKenzie's (2002, 34-35) proposal of the possibility of understanding the concept of city (and thus its character) as corporeal materiality. MacKenzie's proposal represents a more abstract understanding of character and is thus relevant to the concerns about the existing definitions and understandings of character outlined in the previous chapter.

MacKenzie (2002) suggests that addressing the troublesome category of corporeality (i.e. the state or quality of being corporeal; bodily existence) and materiality (i.e. the state or quality of being material, or physical) allows the formulation of questions such

as: Does the apparently meaningless neutrality of matter already harbour unspoken or sedimented differentiations? And: Is matter, in its very appearance as malleable, plastic, fluid, volatile or solid, already a sedimented reservoir of historical determinations ? In short, such considerations are seen to move, from understanding contingency as something intransitive to contingency understood as bordering, touching and contaminating articulation of diverse realities with each other. Thus, according to MacKenzie (2002, 35), *'Corporeal materiality . . . appears not as a substance, but as a pre-eminently transductive field in which physical, psychical, technical and affective realities precipitate'.*

Transduction is an idea borrowed from cell biology and genetics where it refers to how information is transduced e.g. from one cell to another in an immediate way. MacKenzie's idea of 'corporeal materiality' as a transductive field is developed and discussed further by Latham and McCormack (2004) who propose that in the context of geographical research understanding 'a city' as a corporeal materiality and thus as a transductive field, would offer increased abstraction for the study of cities. It is from this point of view that this research became interested in the idea of transductive field. It became apparent that as various existing character conceptualisations seemed to offer limited new insight into the study of the character of 19th century residential areas, approaching the possible case-studies from a more abstract point of view could be beneficial. This study suggests that if the city (and its character) is understood in the four fold fashion (the transductive field) as suggested by Latham and McCormack (2004) a fuller understanding of both character and city emerges.

The table in Figure 4.1 on page 66 is based on work by MacKenzie (2002) and Latham and McCormack (2004), and demonstrates the connections between the abstract conceptualisation of the 'transductive field' and surviving 19th century residential areas. When a city and its character is understood as a transductive field [see summary in figure 4.1] the four components of the corporeal materiality are like cells, and change in one will immediately be transduced to all the others. In figure 4.1 the four different layers of reality proposed by MacKenzie (2002) are listed in column one. Developed from the consideration of the four aspects of reality during this research; column two considers the research paradigms engaged in the study of each of the four aspects. Column three gives examples of how the research paradigms addressing each of the four aspects of reality produce actual research outputs. As an example the technical aspect of reality is addressed by the study of flows and networks, which in practical terms results in studies of e.g. transport history.

Layer of reality (MacKenzie, 2002, 35)	Research Paradigms - relevant in the context of this study / study of built environment more generally	Research Outputs i.e. types of study / approach
Psychical	place attachment and emotional geographies	landscape preference research, place attachment studies, 'place-lessness'
Physical	architectural styles and building typologies	townscape / urban design analysis, or any descriptive architectural / geographical etc. study
Technical	building materials and technology or any study of 'flows and networks'(e.g. supply, transport or communication networks)	any history of building techniques or materials, transport history, studies of history of civil engineering and history and theory of planning
Affective	notions of 'genius loci', 'character', some definitions of 'sense of place' are after- the-event names for the pre-conscious affective response to the (urban) environment	non-representational theory

Figure 4.1: Above table is based on: MacKenzie (2002, 35) *Transductions: Bodies and Machines at Speed*

Latham and McCormack (2004) go on to propose further abstract conceptualisations that could be useful in approaching the city as a central field of interest within human geography. However, their proposals are theoretical in nature and do not address any specific research questions or aim for direct practical application. This means that further conceptual development is necessary to make the transductive field with its four layers of reality more applicable to this study.

4.3 City as a Transductive Matrix

Firstly, the use of the word *field* to describe the four-layered reality that is the corporeal materiality of a city, appears to be a misnomer. After all a field suggest a flat, two dimensional feature, perhaps something that could specifically be depicted on a map. Thus this study suggests that the word 'field' should be replaced with 'matrix', which takes better into account the 3-dimensional nature of a) physical space, and b) the further development of the transductive field proposed here. These assertions are particularly relevant in the context of this study as the case-study at hand is partially historical in nature. Thus the

study has an inherent time-depth - and it is important to consider the above frame work not as rigid and two dimensional (space - reality), but as and three dimensional (space - reality - time). Secondly, the historical nature of the case-study undertaken appears to suggest a further consideration developed within structuration theory by researchers such as Pred (1984). This is the conceptualisation of 'path and project'. If the corporeal materiality of the city is understood as a three dimensional transductive matrix, then paths of projects weave their way through this matrix, through time and space altering the four layers of reality as they go. The third, and related consideration is the acknowledgement that certain fixed points might exist within the proposed transductive matrix. As much as the proposed theoretical framework accommodates the idea of change over-time, it is also important to consider the importance of these monuments in the way generations of people have experienced a certain place. The fourth proposed modification or addition to the model initially developed from Latham and McCormack's (2004) article is the concern for the human experience of these four aspects of reality. Clearly 'psychical' and 'affective' realities imply that someone is experiencing the effects of corporeal materiality (living in fact), and in addition humans are instrumental in the making and maintenance of 'technical' and 'physical' realities. However, non-representational concerns such as affect have been criticised as being non-humanist. This study considers - through the inclusion of emotions as part of the psychical layer of reality - humans as part of the theoretical framework. As much as the focus of this study is within the 'physical reality', the idea of 'undissolvable unity' (Stewart and Mukunas, 1990, 9) between people and the world, which is central to phenomenological research, is also important to this study.

Connecting the theoretical framework developed above to possible practical applications of the case-study research is one of the challenges of this research project. In terms of the four modifications to the theoretical framework of this study proposed above, the following quote helps to illustrate the relevance of these modifications for a case-study of 19th century residential areas. Although not articulated in the terms of the transductive matrix discussed above, English Heritage (2003, 1) in the *Heritage Counts Report*, states:

> Heritage encompasses not just buildings and streets but also gardens, parks, monuments, industrial complexes, waterways and roads, archaeological sites and open landscapes. It is estimated that only 5% of this resource is protected by statutory legislation. Our heritage also includes languages, stories, traditions and foods. An awareness of heritage gives people and places an identity and significance. It gives localities their distinctive character and marks their individuality as neighborhoods and as part of the wider town.

Thus within policy discourse there seems already to be an implicit acknowledgement and understanding that the different facets of a heritage are intimately bound together. In the context of this study it is argued that the same applies to cities and places.

In the following sections the four 'layers' of the transductive matrix will be considered in more detail. As the concept of transductive matrix is all encompassing the literature reviewed has been chosen on the basis of being particularly pertinent to this research and also giving a starting point for further exploration of the respective 'layers'.

4.3.1 Technical Layer

Cities have in the past been represented variously as machines, but also as bodies or organisms. In this research the 'technical layer' of the transductive matrix is seen to encompass the 'bodily functions' that have allowed the urban landscape to develop. Of particular interest to this study is that much of the 19th century housing was built at least in part as a response to the unsanitary living conditions that had developed in the rapidly expanding industrialising cities. Thus the hygiene improving agenda that was the driving force behind the initial bye-laws was in fact driven by concerns relating to the 'technical layer' of reality. Of particular relevance to this study and the understanding of the character of surviving 19th century residential areas, consideration of the technical layer high-lights how the impact of new terraced housing on people's lives would not have been the same unless they were also provided with access to running water, some from of sewage disposal and other (now considered) basic amenities. In this study the idea of the 'technical layer' was first thought of as this infrastructure of pipes and cables. Furthermore the physical expansion of cities would not have been possible without for example the construction of transport networks.

From the underground-city of sewage pipes the idea of technical layer has developed to consist also of networks of communications, transport, distribution of food, and flows of information, pollution, people etc. In particular pertinence to this study two academic specialisms that study the technical layer are 1) the history of engineering, which researches the technical innovations that enabled e.g. the building of sewers, and 2) urban environmental history, which according to Tarr (2001, 38) identifies the following five primary themes as the foci of this academic specialism:

- the impact of the built environment and human activities in cities on the natural environment,

- societal responses to these impacts and efforts to alleviate environmental problems,

- exploration of the effect of the natural environment on city life,

- the relationship between cities and an ever widening hinterland,

- the role of gender, class and race in regard to environmental issues.

According to Schott (2004, 521) the impact of the built environment on the natural environment, Tarr's theme number one, and societal responses to these impacts, number two, have been most thoroughly studied in relation one of the central research fields, the 'networking of the city'. Urban environmental historians as well as historians of technology have investigated how since the middle of the 19th century a multi-layered complex of infrastructures for the provision with and disposal of basic resources and services has developed in European and American cities, a second or 'invisible' city underground. This complex of water and sewage pipes, gas pipes, electricity, telegraph and telephone cables, and public transport lines has proven of fundamental significance for the maintenance of urban civilization. Special characteristics of these networks are their capital intensity, their longevity and the path dependence they imply (Hietala, 1987; Tarr and Dupuy, 1988; Tarr, 1996; Melosi, 2001). The concept of path dependence has found increasing acceptance in economic history and history of technology, and refers to the phenomenon that choices for certain key technologies and systems can limit the future room for manoeuvre in municipal policy and urban development. The chosen path can only be revised at great expense, and this clearly inhibits a change of direction in how cities manage their resources. In the context of Newcastle a good example of this would be the initially controversial development of the Great North Road as a by-pass and motorway. What might have been grandiose in the 1960s is now struggling to be fit for purpose. Re-siting the road now however would incur such costs that it must be described impossible.

Another idea explored by the urban environmental historians addresses the networked nature of cities. According to Melosi (2001) these networks should be understood as historical responses to specific constructions of problems. The networks offer solutions to certain problems as they were being perceived at the time of their implementation; they document which problems had then been given priority. Studying the making of these networks also drives home the insight that they did not result from a quasi-natural evolution towards technological progress. Rather, they were products of a decision-making process, which comprised scientific concepts, technical expertise, alternative technical options as well as cultural values and financial restrictions.

However, Schott (2004, 522) further proposes that the networking of the city was not

just a technical task. The implementation of these networks also generated a social and cultural process of adaptation, leading to fundamentally changed behavioural patterns of urban residents in their use of resources and disposal of waste. If the growth of cities during the industrial era generated a process of cultural and social adaptation, this process of adaptation has carried on ever since, and is especially evident in cities such as Newcastle where the transition from an industrial to post-industrial city has had both very visible, physical results (i.e. the disappearance of industrial complexes etc.) as well as significant social and cultural implications. Thus historians studying the networks within cities, while originating from history or technology, have in recent years embraced a wider research agenda by conceptualising the city as an urban metabolism. This concept, derived from human ecology, has been developed in many variations.

Fig. 1. The urban metabolism. The diagram applies the concepts of 'social metabolism' and 'colonization of nature' as developed by Fischer-Kowalski (1997) and her group for the urban metabolism. The aspects listed under inputs and outputs are only meant as examples and do not include the totality of urban inputs and outputs.
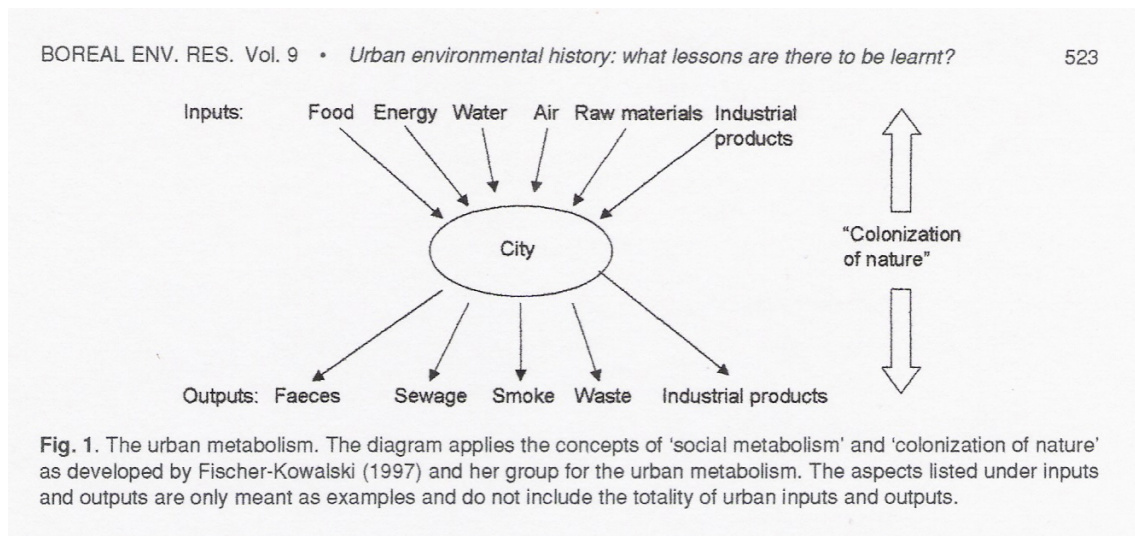
Figure 4.2: Urban Metabolism

The diagram in Figure 4.2 is based on Fischer-Kowalski (1997) and used by Schott (2004, 523). The aspects listed under inputs and outputs in this Figure are examples, and are not meant to represent the totality of inputs and outputs.

According to Schott (2004, 524) urban networks and effects on urban metabolism are central to any discussion on the role of the city in environmental terms. This is because studying the genesis of modern water and sewage systems, or energy and transport systems will help to demonstrate their historical, and to a certain extent contingent, character. This implies that not necessarily the 'best' or most advanced technology won the contest, but the technology which in view of the criteria selected, the expectations of relevant actors, the technical expertise available and the financial funds at disposal

promised to bring the largest benefit at least costs.

In Schott's opinion (2004, 525) urban environmental history can also demonstrate that when setting up these networks engineering was dominated by centralising paradigm. Projects such as setting up of water and drainage facilities were set up as systems of networks, which were designed to concentrate the management and distribution of resources in large controlling and coordinating premises. The structure and mode of operation of such facilities was meant to exclude the ordinary citizens from the day-to-day running of the networks. In contrast to these historical systems the modern water and sewage networks should be seen as self-acting systems where no active intervention of a citizen beyond the normal use of his household appliances would be expected. As a further consideration this study would like to emphasize that the spatial context of these networks may have changed considerably.

In the context of this case-study research into to the character of 19th century residential areas it is of interest that authors such as Daunton (1983a) and Kelleher (2008) include discussion of various institutional buildings, sanitation and building regulations in their books. As shown in figure 4.3 on page 72, Daunton (1983a) even illustrates the various types of early water-closets used in Newcastle and Gateshead. However, in contrast with this study, these earlier contributions to the study of the development and character of the 19th century residential areas, do not discuss the importance of these developments as part of a theoretical framework that would explicitly take into account the contributions of the 'technical layer' in the formation of character of an area.

Urban environmental history can thus raise awareness for the fact that these systems in their historical genesis have environmental, social and cultural effects far beyond their period of primary implementation. In terms of the transductive matrix, of which the technical reality forms one part of four, a further interesting and vital component of the technical layer is what Schott (2004, 526) calls the 'software dimensions' of the field of interest in urban environmental history. This refers to how for example in terms of environmental problems certain patterns of wasteful and inefficient resource use and pollution have developed as the result of social and cultural adaptations to historical new technologies. Therefore they may only be altered by a combined approach, reviewing both the material infrastructure as well as their manifestation in law, administration and urban culture. In particular relevance to the issues about industrial to post-industrial transformation this study seeks to address, this aspect of urban experience, addressed through the contribution the various infrastructures and networks has attracted an increasing number of theoretical contributions in recent years (e.g. McFarlane and Rutherford, 2008;
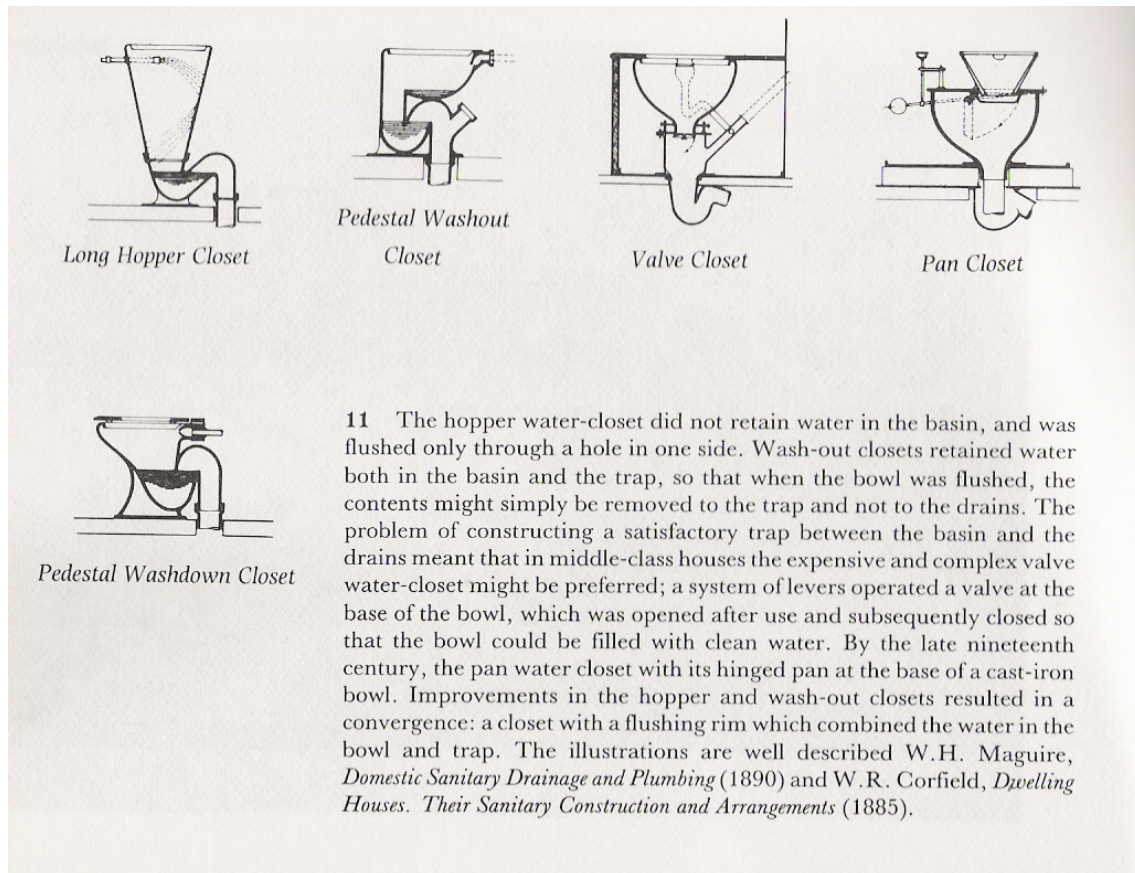
Figure 4.3: Different 19th Century water-closets

Bouzarovski, 2009; and Evert and Jackson, 2009).

In this study the remnants of housing originally built in the 19th century are seen in part as the manifestations of not only the available building technology but also as manifestations of the 19th century law, administration, urban culture and so forth. The administrative machinery that guided the building process according to the latest bye-laws, from preliminary vendors plans to the approved detailed plans and eventually to construction, and sale or letting, is as much part of the technical layer as are the methods of brick manufacture or supply networks of roofing slate. The results of the functioning of the technical layer are manifested in turn as the 'physical layer' of reality.

4.3.2 Physical Layer

As the focus of this study is mostly within the 'physical layer' of the transductive matrix the some of the possible research methods which might be used to gather knowledge

in such a geographically situated, area based study, are reviewed in greater detail in the following *Review of Methods* Chapter. Architectural studies are perhaps the most obvious source of data about the physical reality of the city. Within architecture the sub-specialism of 'tectonics' (e.g. Frampton, 2001) argues that architecture is invariably as much about structure and construction as it is about space and abstract form. Thus defined tectonics can be seen as a possible link between technical and physical aspects of building construction and architecture. Urban Design is another environmental discipline mainly concerned with the physical layer of reality. Urban Design became a concern as a reaction to modernist architecture, and the impact de-industrial and post-industrial developments were having in cities. Aravot (2002) reviews the development of urban design as a specialism. Various publications throughout history have addressed how the physical layer should be designed and constructed, and have analysed what makes certain places attractive or unattractive, to work or not to work. As the traditional sphere of the built environment research many different approaches to the study of the physical layer of reality have emerged over the years. Despite the differing nature of their individual research outputs authors like Lynch (1981, 1960), Rossi (1982), Rowe and Koetter (1978) and Cullen (1961) are among the key writers whose influence and importance is currently widely recognised in the discipline (e.g. Carmona and Tiesdell, 2006 or Larice and McDonald, 2006).

In relevance to how the 'physical layer' of reality is and should be addressed, it can be argued that we currently live in a culture that awards predominance to the visual dimension over all other aspects of humans' capacious sensory experience. We are bombarded with imagery in our everyday encounters, semblances of things and experiences are presented to us as pictorial representations in art and media. Thus vision is privileged as the singular sense that informs our perception of the world. The problem with this is the tendency of this ocularcentrism to subvert and eliminate the contribution of our other senses, and may isolate our perception to the sphere of vision. In such cases it can be argued that the visual distances us from the world in which we dwell because it suppresses the haptic engagement with our surroundings. It impoverishes the other senses and alienates us from our sensuous physical world. This study proposes that the privileging of the visual for example in the study, teaching and experiencing of architecture (or more broadly the 'physical layer' of the transductive matrix) has contributed to the idea of architectural styles which are essentially identified as combinations of certain stylistic elements and details. In turn these stylistic clues have come to form a significant part of the 'character and appearance' of e.g. conservation areas.

Architecture is traditionally designed in plan, section, and elevation; the building represented by these two-dimensional drawings is rarely experienced as the architectural drawings illustrate it. The bodies of built work critiqued and observed as precedent are presented to the architecture community in magazines and monographs primarily as hygienic, uninhabited exterior images. Architectural photographers document the compositional beauty of the building before it can be altered by the process of being lived in. This captures the building as a snapshot, locking it into a perpetual present, ignoring the effects of time and traces of use. For example, Frampton (1988, xx) condemns this camera-hungry architecture, referring to photography as

> . . . an insidious filter through which our tactile environment tends to lose it concrete responsiveness. When much of modern building is experienced actually, its photogenic, sculptural quality is denied by the poverty and brutality of its detailing.

The solely visual interpretation of the physical environment denies the more involved experience of how the building engages its audience (or resident or user) on an intimate, active level. Through this haptic, personal experience buildings emerge as a real, everyday things. In considering the 'physical layer' of reality as part of the three dimensional transductive matrix this study seeks to high-light the physical, bodily experience of buildings as an important consideration when attempting to define or describe the character of a place. Spaces, as people dwell in them, are experienced as a series of connected corporeal events that engage all of our senses: the opening and entering of a door, ascending a staircase, traversing across a room, pausing to lean on a railing and glance around at our surroundings. The meaning of these experiences lies in their temporal and sequential aspects; they are dynamic experiences that immerse us in an ever-changing corporeal engagement. The haptic view of architecture challenges the dominance of visual approach to architecture, and within the context of the transductive matrix emphasising the physicality of architecture and buildings - the environment in general - appears particularly pertinent for this study.

In other words, whether considering the life in the 19th century industrial cities now or a hundred years ago, the world is not a series of snapshots for us to take in through our eyes; it is understood through simultaneous engagement of all of our senses. We feel, see, hear, smell, and taste our world. Holl (1996, 11) describes this experiential movement through space:

> When we move through space with a twist and turn of the head, mysteries gradually unfolding, fields of overlapping perspectives are charged with a range of light - from the steep shadows of the bright sun to the translucence of dusk. A range of smell,

sound, and material - from hard stone and steel to the free billowing of silk - returns
us to primordial experiences framing and penetrating our everyday lives.

The critique of the visual hegemony is prevalent in critical regionalist and pheno-
menological writings on architecture. It is one of Kenneth Frampton's primary themes
in his regionalist manifestos as well as his case for tectonic architecture, opposing the
scenographic and calling for a more tactile architecture decoded through experience. For
example Pallasmaa (2005) criticises our design culture of '... instantaneous imagery and
distant impact...' claiming that the architecture of the eye detaches and controls, whe-
reas haptic architecture has the capacity to engage and unite. Considerations such as this
are also evident in the work of phenomenological philosophers such as Merleau-Ponty on
multi-sensory perception. When considered in this way it is easier to see how the demar-
cation between e.g. physical and affective and psychical layers of reality begin to blur
and how the experiencing of the physical layer transducts information to and from the
other layers of reality. In terms of design practice it has been suggested that this haptic,
experiential approach to architecture leads to working from inside out, from the design of
the details and moments in which the building directly engages its audience rather than
beginning with building design as a formal construction.

Architecture is sometimes conceived of as the big, landmark, public buildings (or mo-
numents) designed by famous architects. In the context of this study, and the theoretical
framework it is especially important to think inclusively about the built environment.
The discussion about architecture here applies as much to the everyday environments
of 19th century residential areas as it does to monumental architecture. While the vi-
sual aspect of architecture is clearly important, it should be considered critically and
understood in the context of collaboration with the rest human sensory perception. This
study intends to acknowledge realism and tactility of 19th century residential areas, not
merely through a visual syntax but also through their functional, and thus experiential,
technical, psychical, and affective qualities too.

In other words, the physical layer of the transductive matrix is probably the most
familiar aspect of reality, and the visual qualities of the physical layer might be the easiest
and most familiar way-in into the analysis of the built environment. This study, however,
sees buildings (as part of the physical layer of the transductive matrix) immersing their
users into a sort of corporeal narrative that leads them through a series of sensorial
engagements in which they are involved not as static objects but as dynamic bodies
that move through space, interacting with it. This consideration applies to individual
buildings as well as to neighborhoods or cities as assemblages of haptic structures.

4.3.3   Psychical Layer

The psychical layer of the transductive matrix is addressed by a variety of academic specialisms, perhaps most obviously by research in environmental psychology and within geography by work focusing on 'emotional geographies' (See e.g. Manzo, 2003; Williams et al., 1992; Davidson and Bondi, 2004; Davidson et al., 2005), and 'perception' (e.g. Rasmussen, 1964; Pallasmaa, 2005). A recent development relating to both emotional geographies and affect (discussed further in the next section) is the founding of a new journal called Emotion, Society and Space (first issue published October 2008) which aims to provide a forum for interdisciplinary debate on theoretically informed research on the emotional intersections between people and places. These aims are broadly conceived to encourage investigations of feelings and affect in various spatial and social contexts, environments and landscapes. Questions of emotion are relevant to several different disciplines, and . . .

> Submissions will investigate the multiplicity of spaces and places that produce and are produced by emotional and affective life, representing an inclusive range of theoretical and methodological engagements with emotion as a social, cultural and spatial phenomenon[1].

Again, although emotion and affect are not discussed within the theoretical framework developed for this study, the editors of the new journal imply that different layers of reality are intimately connected. Although research into emotions and affect is an emerging field of research, some earlier (phenomenological) work within e.g. geography has addressed similar concerns. Authors such as Bachelard (1969), Tuan (1974, 1977) and Relph (1976), have addressed people's attachments and emotional connections to place from a phenomenological point of view. More recently, what this study refers to as the 'psychical layer' of the transductive matrix has also been discussed by Pile (2005, 1)

> Often enough, it can seem that what is real in cities is all material stuff of life: buildings, infrastructures, money, labourer processes, schools, housing, hospitals, consumption, and so on. This was not mistake made by Robert Park, a leading member of the Chicago School. While attempting to define the essence of cities, he observed that: The city [. . .] is something more than a congeries of individual men and of social conveniences - streets, buildings, electric lights, tramways, and telephones, etc; something more, also, than a mere constellation of institutions and administrative devices - courts, hospitals schools, police and civil functionaries of various sorts. The city is, rather, a state of mind, a body of customs and traditions, and of the organized attitudes

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[1]See http://www.sseas.org/publications.html for further details. Accessed 11.5.2009

and sentiments that inhere in these customs are transmitted with this tradition. The city
is not, in other words, merely a physical mechanism and an artificial construction. It is
involved in the vital processes of the people who compose it; it is a product of nature, and
particularly of human nature. (Park and Burgess, 1925, 1, emphasis added)

Whatever it is that makes a city a city, it has much to do with their social processes,
their customs and traditions. The city does not just express itself in the buildings, the
streets, the traffic that seems to define it, but in the ways in which people live, work, trade;
their customs, habits, pleasures, crimes, angers. From this perspective, Park's statement
that the city is a state of mind appears an important consideration. Pile (2005) goes on
to suggests that what is real about cities, then, is also their intangible qualities: their
atmospheres, their personalities, perhaps. As graphic novelist Neil Gaiman observes:

> Each city has its own personality, after all. Los Angeles is not Vienna. London is
> not Moscow. Chicago is not Paris. Each city is a collection of lives and buildings
> and it has its own personality. (1993, 18)

This study suggests that it is the psychical and affective layers of reality that mean
something about city life lends itself to being read as if it had a state of mind, a per-
sonality, as having a particular mood or sentiment, or as privileging certain attitudes
and forms of association. For sure, this has something to do with the buildings: with
their built form, the super-structures and infrastructures of the city. In agreement with
Pile (2005, 3) this study proposes that what is real about cities is as much emotional as
physical, as much visible as invisible, as much slow moving as ever speeding up, as much
coincidence as connection. In the context of this study, the role and importance of emo-
tions in the formation of 'character' is recognised in their inclusion as an essential part
of the transductive matrix. Recent discussion between Relph (2008) and Malpas (2008)
continues the debate about the post-phenomenological approaches to the experiential or
perceptual (and thus emotional) qualities of place.

The distinction between what constitutes emotion, and what an affect is still an
intensely debated issue. The following section seeks to define how the distinction between
these two intimately connected aspects of the transductive matrix is understood in this
study.

4.3.4 Affective Layer

> There is a central quality which is the root criterion of life and spirit in a man,
> a town, a building, or a wilderness. This quality is objective and precise, but it
> cannot be named.

> The search which we make for this quality, in our own lives, is the central search
> of any person, and the crux of any individual person's story. It is the search for
> those moments when we are most alive. In order to define this quality in buildings
> and in towns, we must begin by understanding that every place is given its character
> by certain patterns of events that keep on happening there. (Alexander, 1979)

The above quote from Alexander's (1979) influential book *Timeless Way of Building* address what in this research is called the affective layer of the transductive matrix. In accordance with McCormack (2003, 501) this study proposes that while '...implicated in corporeal sensibility, affect is never reducible to the personal quality of emotion.' This notion appears in accordance to what Alexander is trying express in asserting that 'Spirit of place is vital reality. It is precise and objective but cannot be named'. Affect is a central issue of interest within Non-representational theory - a loose group of thinking and thinkers operating mostly within (cultural) geography - from where the idea of affect has been recently further developed and discussed. Non-representational theory emphasises the process and performance of 'embodied experiences' (thus relating to corporeality discussed above) that constitute the every-day experiences and knowledge. This study proposes that in relevance to the study of surviving 19th century residential areas the experiencing of the character of a place is one of these embodied or corporeal experiences.

The challenge in this research which is in part historical in its focus, is to find a working relationship between seeing character as an affective, immanent quality that is continuously formed in the NOW, whilst relating character to 'characterisation'(as in the HLC research approach) as a historical research programme which essentially only represents some mapped, physical elements that in part constitute character. In a seminal article Thrift (2004, 57) describes cities as 'rolling maelstroms of affect'. According to Thrift (2004, 57) particular affects such as anger, fear, happiness and joy are continually on the boil in the city, rising here, subsiding there, and these affects continually manifest themselves in events which can take place either at a grand scale or simply as a part of continuing everyday life.

Separating affect and emotion can be challenging, and for example McCormack (2003, 495), addressing how affect differs from emotion, describes his understanding as being based the Spinozist idea of affect '...insofar as it provides a way of more fully realising the implications of attending to the body and emotion in the context of geographical research. This notion of affect is neither reducible to nor interchangeable with emotion, although it is nevertheless implicated in the emotional sensibilities of experience (Deleuze, 1988).' The distinction between affect and emotion is also articulated by Massumi (2002),

who draws upon Deleuze's (1988) reworking of Spinoza's cartography of affect. Massumi suggests that emotion can be defined as a subjective content, the sociolinguistic fixing of the quality of an experience which is from that point onward defined as personal. Emotion is qualified intensity, the conventional, consensual point of insertion of intensity into semantically and semiotically formed progressions, into narrativizable action-reaction circuits, into function and meaning. It is intensity owned and recognised (2002, 28).

Emotion therefore works in an already established field of discursively constituted categories in relation to which the felt intensity of experience is articulated. Invoking emotion therefore conceives of experience as always already meaningful even if this meaning is not immediately available. It refuses to grant sensibility and sensation the freedom of a movement and force that exists prior to such economies of meaning. As Massumi goes on to argue, thinking in terms of affect acknowledges the importance to experience of the non-human force of movement and sensation. Affect, for Massumi, is unqualified intensity, implicated in the sensible materiality of corporeality, but in a way that opens up the actuality of experience to what Massumi, following Deleuze, calls the virtual. As Massumi puts it,

> Something that happens too quickly to have happened, actually, is *virtual*. The body is as immediately virtual as it is actual. The virtual, the pressing crowd of incipiencies and tendencies, is a realm of potential. (Massumi, 2002, 30; emphasis in original)

The virtual dimension of affect is accounted for by the fact that much of what happens in a world of activities and relations happens before it is registered by conscious thought, or, in other words, by the fact that 'the skin is faster than the word' (Massumi, 2002, 25). As such, this cartography of affect remains attentive to sensibilities that, while playing out before reflective thinking comes into play, are nevertheless felt as ways of going on in the world; felt, but not containable, as 'joys and sadnesses, increases and decreases, brightenings and darkenings' (Deleuze, 1988, 145). In other words the affect of fear exists in the virtual before we get a chance to articulate that we are scared; joy awaits in the virtual before we realise our happiness, and the character of places moves us in the virtual before being articulated into expressions such as genius loci or sense of place.

The challenge in this study - bound as it is inseparably with the physical reality of the case-study area - is to find some references that address both the affective and the physical realities of the transductive matrix in a manner that can be seen as relevant in the context of this area based case-study. Dewsbury (2003, 1914) describes affect [or research addressing affect] as having methodologically the courage to present rather than represent.

He describes the power that art and place can have to move us, and which, in translation to the rational space of academic argument, hold their argument in the way they present to us something other, arrive unannounced, unattended, and without destination. Writing about affect is not as a rule based on empirical (quantitative) research, and this makes evidencing affect in a way that is meaningful to the study of the physical environment a challenge. Wynn's (2007) exploration of Las Vegas and the abandoned ghost towns of Nevada desert is perhaps the most pertinent study come across. Many writers interested in 'affect' also reflect upon how past memories and future expectations affect the way a certain moment in time and place is experienced. Landscapes have been seen as the sites of memory (Hayden, 1995), as places haunted by ghosts of the past (Bell, 1997). These considerations of affective responses to the environment again suggest an intimate connection between people, place and history also referred to in section 4.2.3 in the previous Chapter. The following section considers the implications of this connection for the transductive matrix, and continuity and change as features of the post-industrial city.

4.4 Time / Change / History

The way in which MacKenzie's corporeal materiality of the city is addressed through the conceptualisation of transductive field seems somehow void of any historical dimension. This is despite the fact that time and history are discussed elsewhere in the same book (MacKenzie, 2002, e.g. 87-116). As this study addresses what is characteristic about the 19th century housing in the post-industrial city, this a-historicity needs to be addressed.

In the case-study phase of this research an initial exploratory period of research (a Pilot Study) helped to identify this time-depth and resultant change as a key characteristic of the post-industrial city (and society). It is proposed that the current built environment of the surviving residential areas originating from the 19th century, is at least as much about what has happened since 1950, as it is about what has happened before this time. The associated processes of change have often been gradual, but have on occasion been quite dramatic. In combining time or history into the transductive matrix described above a better understanding of the origins of the proposed case-study area can be achieved. This approach will in effect create a form of historical narrative about the development of the study area. Further this historical consideration of change over time helps in the analysis of the changes that have occurred in the transition from the industrial to the post-industrial city.

The full case-study moves from a broader spatial scale to a smaller and more detailed

one, and acknowledges more than just the 'physical reality' of 19th century residential areas. This study proposes that such a nuanced research approach will result in a better understanding of the dynamics and characteristics of surviving industrial era housing. Moving onto analysing the case-study data in the context of deliberate interventions, as manifested in the various planning policies, means that this type of area based study can show what is typical of the area throughout its history, but to also make clear distinctions between those elements that illustrate wider national and regional trends, and those which are locally distinctive or genuinely unusual. Further the analysis of the case-study data in the context of the planning policy interventions over the last 100 years will in effect address the 'software' aspect of the technical layer, as discussed above.

4.5 Conclusions

Thus for the purposes of this study the MacKenzie's (2002) model of 'corporeal materiality' has been adapted to enable the consideration of city and the proposed case-study on the character of 19th century residential areas, in this context. The three dimensional transductive matrix (constituting of space, time and reality) is understood, not as an a-historical time-slice, but as a window in time. The idea of transductive field proposed by MacKenzie and discussed further by Latham and McCormack (2004) is in this Chapter further adapted by four added considerations. These include

1. 'Time depth', i.e. time as a third dimension of this conceptualisation,

2. The role 'path' and 'project' play in construction of character, and how these notions from structuration theory might help in addressing the difficult consideration of change over time,

3. How certain 'monuments' (as tangible heritage) or 'customs' (as intangible heritage) persist over time, as constants in an ever-changing world; and how this may help addressing the continuities present in the post-industrial landscape

4. Consideration of the role of human experience of reality represented in this way. Together these considerations result in understanding of the 'corporeal materiality' of the city, not as a field, but as a three dimensional matrix.

To try and visualise the conceptual development undertaken in this Chapter an analogy of the Rubik's cube could be helpful. The idea of the 3D transductive matrix, comprising of the four layered space and reality model proposed by Mackenzie (2002)and

Latham and McCormack (2004), combined with the passing of chronological time could be represented as a solved Rubik's cube, [see figure 4.4 on page 82]. In this analogy looking at a case-study area at an increased level of detailed could be equated to starting by considering the whole of the cube, and then limiting the area of interest to only one of the smaller cubes that make up the whole, and finally studying that one cube through a magnifying glass.
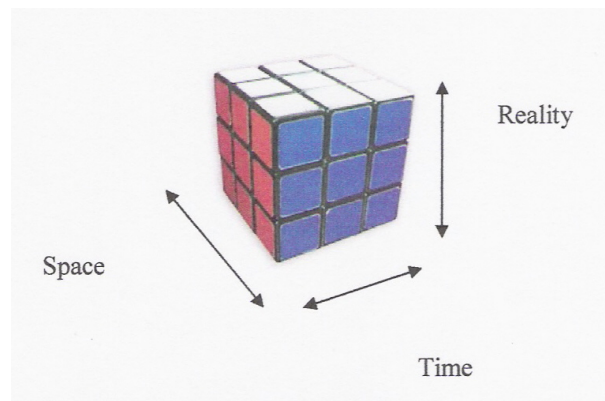
Figure 4.4: Conceptual model represented as a Rubik's cube.

This study is however keen to emphasise that the world is actually more complex and confusing than the neatly solved model would indicate. It should be born in mind that different layers of reality can combine in unexpected ways and connections are made in new ways, so that the world is continuously at a flux (see illustration on the left in Figure 4.5), and that individual experience of the four aspects of reality in effect creates different worlds (see illustration in Figure 4.5 on the right).

Figure 4.5: Further consideration of the Rubik's Cube analogy

The purpose of these illustrations is to visualise how different aspects of reality combine often in unexpected ways and connections are made in new ways, that the world is continuously at a flux, and that individual experience of the four aspects of reality in effect creates different worlds.

This Chapter has outlined the conceptual development undertaken for this study. To re-iterate, the sense of place conceptualisations (place attachment, sense of place, character and genius loci) are in this study understood, within the context of the transductive matrix, as part of either the psychical or affective layers of reality. Depending on the particular definition of each concept these conceptualisations could perhaps be located in either (or both) of these layers, but on the main it seems that spirit of place, genius loci, and sense of place are after-the-effect (or more accurately after-the-affect) descriptions of the affectual response to a certain place or environment. Place attachment, and related concepts within environmental psychology, appear to refer more directly to the emotional connection people can form with a place, and character - which was the starting point for this whole chapter, is seen as both the naming of the cause for an affectual response to place, as well as the affect itself.

Therefore, in contrast to sense of place and genius loci this study sees character as more all-encompassing than any of the other concepts discussed. Character, in this research, is understood to include elements from all the layers of reality, whether people experience (or indeed, 'witness' (Dewsbury, 2003)) these layers consciously or not. Character is not about the physical characteristics of a place alone, it is also about the technical layer of reality, in as much as how different 'hardware and software' networks enable and structure life. Character is also about the more personal, emotional involvement with places as addressed by the psychical layer of reality, and it is about the ephemeral and difficult to grasp affective layer of reality. In fact it is in the affective layer of reality that the concept of character truly resides in.

In the following Chapter existing research approaches to study of place are reviewed in the context of utilising character (as an operationalised concept) in the management of the historic environment and the transductive matrix developed in this chapter (which gives character its second, more abstract meaning). The focus of this review is on methods that are seen to address the physical layer of reality, and which in case-study research could be used in conjunction with the HLC approach.

Chapter 5

Review of Selected Research Methods

5.1 Introduction

The aim of the emprical research is to create a case-study that describes and analyses the chosen area addressing

1. the historical development of the study area,

2. the nature of the current character as the result of this historical development, and thus creating

3. a better understanding and appreciation of the characteristics of surviving industrial era housing.

As the objectives of this case-study have a practical focus (to create and demonstrate a method of research that provides information for the understanding and management of the 19th century residential areas) the reviewed research methods are mainly 'practice based' and deal with data gathered from existing environmental set-ups or from people who are in some way stakeholders in these environments. The purpose of this *Review of Methods* Chapter is to introduce and consider some the existing approaches that the researcher found potentially relevant in evidencing either people's sense of place, quantifying the physical aspects of the built environment, or addressing the relationship between the two – and how these approaches could also be used to evidence 'change'. The approaches chosen include methods already well established within the management of the built environment (e.g. conservation area or townscape assessment and urban design

analysis), but also recent contributions to the study of other than just physical aspects of the environment.

The research methods reviewed have also been chosen based on the critical review of the HLC research programme as well as existing character conceptualisations. This case-study aims for a considerably more detailed study than the county wide HLCs, and as outlined in the *Conceptual Development* Chapter, this study proposes that the data mapped in the HLC projects could be enhanced by a more abstract interpretation of 'character' as a concept. Thus through the critical appraisal of intended aims and outcomes of HLCs a number of potential areas of development have been identified and other approaches to the mapping of urban character (Weich et al., 2001, Burton et al., 2005), (Dunstan et al., 2005), (Caughy et al., 2001) will be considered in the following to assess their potential in adding to and enhancing the existing approach (i.e. HLC), and thus furthering our understanding of the character of surviving 19th century residential areas within the wider urban landscape of post-industrial cities. Older approaches such as Landscape Evaluation (Fines, 1968, Penning-Rowsell and Hardy, 1973, Penning-Rowsell, 1975, Turner, 1975, Swanwick, 2007), and likewise approaches that base their data on other than directly on the physical environment, maps or archival material (Green, 1995 and 1999) have been assessed as not current or applicable to the aims of this study.

This Chapter provides a short introduction to each approach, considers their specific merits and drawbacks and the contributions they can make to the study of change in the built environment and understanding of character. In terms of the theoretical development undertaken in *Conceptual Development* Chapter, the research approaches considered in the following have been chosen because they initially appeared particularly pertinent to the study of 'physical layer' of reality, which is the main focus of this research project.

In reference to the three dimensional transductive matrix which has been developed as the theoretical framework for this study, and as outlined in the *HLC Review* Chapter, Williamson's (2007, 69) and Austin's (2007, 103) criticisms of HLC's approach to landscape character as something that can be addressed 'from above' and depicted in plan, as mapped data, are particularly pertinent. Furthermore, based on the issues discussed in the *Conceptualising Character* Chapter above, it is proposed that many of the existing characterisations are based on a too narrow and literal understanding of what constitutes character. This assertion, and the resulting changed understanding of the nature of character and how it might apply to the built environment of cities, has fundamental implications to the choice of any research approaches and methodologies. Thus, the

research methods reviewed in the following are linked to *Conceptual Development* undertaken as part of this research. As such this Chapter forms an important link between the theoretical development and the case-study research of this study.

5.2   Classification of Reviewed Methods

In order to find alternative approaches to the study of the built environment, and to character that could complement or be used in conjunction with the HLC, a review of various other research methods has been conducted. In the following some familiar and some less obvious built environment research approaches are categorised according to how they are seen to evidence (or could be used to evidence) change within the built environment. The chosen research methods are applicable in addressing foremost the physical aspects of reality, but in addition they should enable making connections between the different aspects of reality. These broad categories of research approaches are:

1. Approaches that address historical change through 'expert judgement',

2. Approaches that could be used to address change through comparison of data (mainly quantitative, but could also be qualitative or both) from different dates,

3. Approaches that address change through 'non-expert opinion', and

4. Approaches that do not necessarily address change, but study e.g. the historical (or archaeological) properties of the built environment and peoples responses to it.

The aim of this study is create a case-study that addresses the character of a 19th century residential area called Heaton in Newcastle –upon –Tyne, through the gathering of historical and descriptive data. Through inductive reasoning the findings of this case-study are related to the wider contexts of 19th century residential areas, and their role within the post-industrial city. The chosen research methods are therefore relevant for the analysis of 1) the current built environment, 2) the analysis of how past is present in the current environment, or 3) perceptions or experiences of these two. Some of the approaches (e.g. urban design and conservation area assessments) outlined in the following may be used in more normative capacity if required, but as the objectives of this study are more analytical and less evaluative in nature, these approaches too are understood as tools for description and analysis.

The specific research methods reviewed here include:

1. Approaches that could complement HLC through 'expert judgement'.

- Townscape Analysis

- Urban Design or Structural Analysis of the Built Environment

- Other Survey Methods Associated with English Heritage / Heritage Protection

    - Measuring Change in Conservation Areas (Anon., 2004)
    - Rapid Urban Survey.i (Menuge and Taylor, 2004)
    - Heritage Appraisal
    - Conservation Area Assessment

- Urban Morphology

2. Approaches that (could be used to) complement HLC through the comparison of data (can be either qualitative or quantitative, or both) from different dates

    - Space Syntax

    - BESSC and REAT Survey of Residential Environment

    - Other Quantitative Survey Methods (e.g. Census analysis of post-codes etc.)

3. Approaches that complement HLC through 'non-expert opinion'

    - Qualitative Surveys; these include various 'housing / residential satisfaction surveys', also research into 'landscape preference' ; this includes the sociological approaches to the study of 'sense of place', 'place attachment' etc.

    - various 'oral histories' could be used to gather data of e.g. residents perception of change and used as 'recollective data'

4. 'Complementary Methods'; these approaches do not necessarily address change (at a landscape scale), but study the properties of the built environment (or people's responses to it) and could be used in conjunction with characterisation. There could be any number of these approaches but the two reviewed here are:

    - Visualisation (Historical GIS)

    - Archaeological recording of buildings

The following sections will look at each of these approaches in turn.

5.3   Research Methods Contributing to 'Characterisation'

5.3.1   Through Expert Judgement

The body of this chapter is structured around the four categories of analytical approaches identified in the previous section. The following sections introduce and evaluate approaches that are based on 'expert judgement', comparative methods, approaches that are based on 'non-expert opinion', and complementary methods in turn. The first section reviews four different groups of approaches that are used in the analysis of the (historic) built environment, namely Townscape Analysis, Urban Design or Structural Analysis, Survey Methods Associated with Heritage Protection and Urban Morphology. These approaches have been grouped together in this category as they asses the built environment based on the judgements made by the professional assessor conducting the study.

Townscape analysis

English Heritage[1] advocate using '... townscape analysis to identify the visual, spatial and historical qualities that make the area special.' Townscape analysis has been described as an analytical but visual approach (see figure 5.1 on page 90) to the study of the present built environment (Worskett, 1969). As such assessment of change (and judgements about the quality, character and cohesion of the environment are based on the professional judgement of the assessor. The townscape concept was developed by the 'visual school' of planning, and its proponents advocate the utility of this approach in the management and conservation of the built environment. In part the townscape approach can be seen as a reaction against the impact that the modernist developments of the 1960s and 70s planning were having in the cities. The townscape approach calls for more sympathetic relationship between old and new development and the treatment of the existing environment and the building of new structures. Notable advocates of the approach in the UK were Gordon Cullen (1961), Roy Worskett (1969) and Thomas Sharpe (1968) but the ideas of townscape assessment have been applied internationally, see e.g. Solomon (1966).

More recently the methodology of 'doing townscape' has been discussed for example by Barrett (1993) and Reeve et al.(2007). Some conservation area appraisals and the

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[1]http://www.english-heritage.org.uk/server/show/nav.00100200500d002\T1\
textquoteleftStreetsforAll\T1\textquoterightaccessed21.11.07
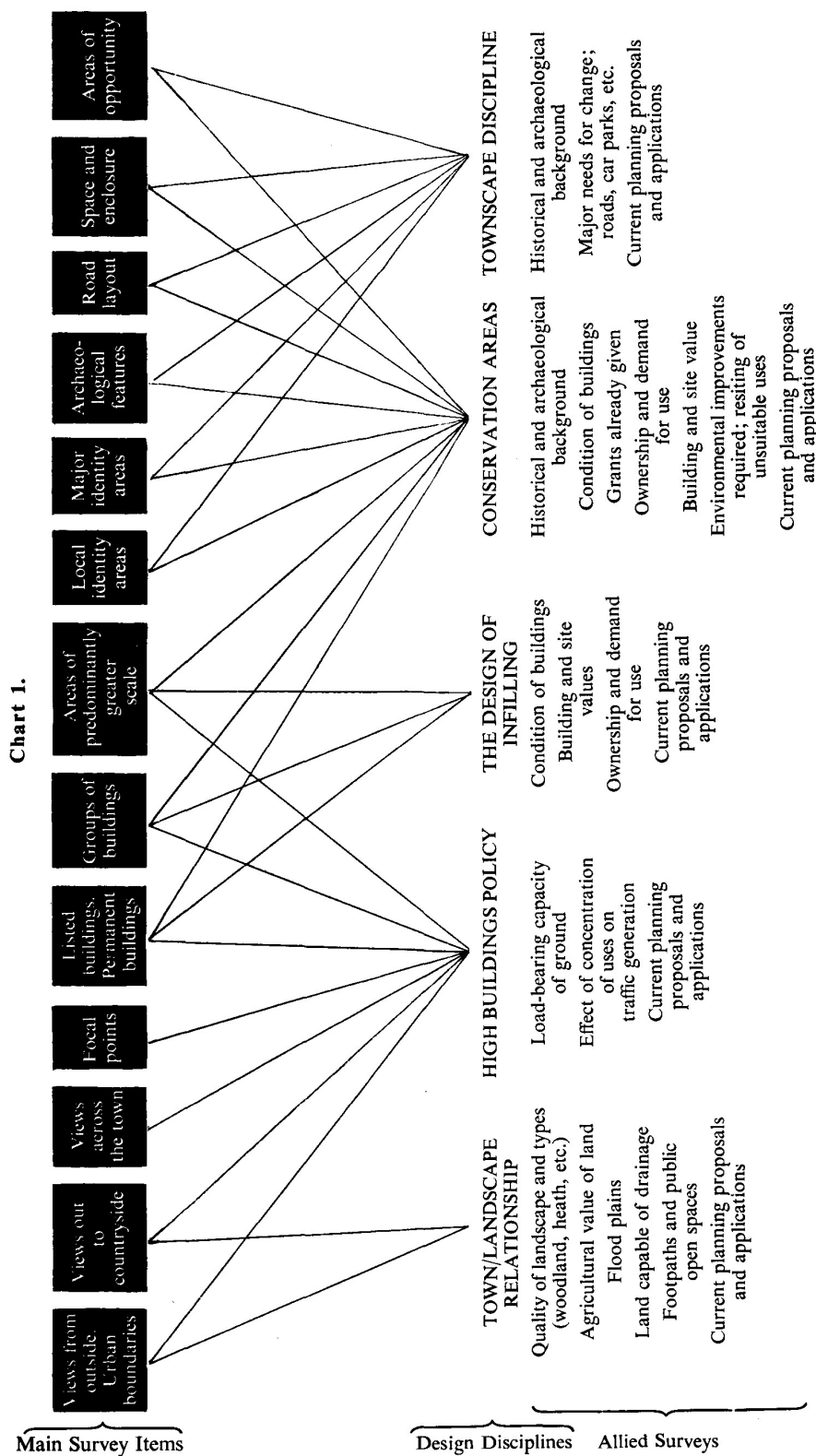
Figure 5.1: Townscape Analysis and other surveys (Worskett, 1969)

work carried out in analysing the historic environment in some regeneration areas include elements of townscape assessment. Recently completed Historic Townscape Analysis in the City of Lincoln, combines the townscape approach with the principles (and the use of GIS) of HLC as well public participation workshops.

The main conclusions to emerge from this review is that there is no single template for a townscape assessment. Thus the features of the built environment which are scrutinised in such an assessment may vary considerably. The length of the report produced and the depth of analysis it contains, as well as the way in which any findings are presented is also varied. As an example Croydon City Council[2] asks for 'Site and Townscape Analysis' to give context to a Design Statement. This context will provide '. . . a set of external opportunities and constraints that should inform the design' (p. 9). The Site and Townscape analysis is described as a written, drawn and photographic account of the development site and its surrounding locality covering the following :

1)Building styles,   2)Heights,

3) The rhythm of the streetscene,   4) The urban grain,

5) The building Materials,   6) Massing,

7) Character and setting,   8) Spaces between
                                         buildings and their use,

9) Description of historic buildings   10) Topography,
and conservation areas,   .

11) Existing vegetation,   12) Biodiversity,

13) Views to and from the site,   14) Vehicular and
                                         pedestrian access points,

15) Connection points and routes,   16) Public transport nodes,

17) Drainage and services,   18) Orientation,

19) Microclimate and noise sources,   20) Contaminated soils and filled areas,

21) Fences and boundaries,   22) Other notable features.

In summary the strengths and positive aspects of townscape assessment lie in its adaptability to different types of environments, and to different spatial scales. The approach is also tried and tested, familiar to built heritage professionals, informative (both descriptive and analytical), and is already perceived as a useful tool in creating conservation and

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[2]'Preparing Design Statements – Advice Note for Applicants and Agents' by Croydon City Council `http://www.croydon.gov.uk/content/departments/570803/570946/Design_Statements_Advice.pdf` (accessed 21.11.07)

design guidance. Furthermore the approach potentially allows for the assessor to address the more ephemeral qualities of the environment, for example through high-lighting distinctive, vibrant, friendly areas, or pointing to abandoned or neglected sites verging on dereliction and potentially attracting crime etc. On the negative side the limitations of this approach include the fact that any assessment of the 'original' features, 'positive' or 'negative' aspects of the existing environment and so forth are mostly (or entirely) based on the individual judgement of the 'assessor'. Furthermore, it can be argued that the townscape assessment emphasises the visual aspects of the built environment and might not high-light the more difficult to assess, intangible aspects of the area, or the functional aspects of the existing layout.

Urban Design Analysis / Structural Analysis of the Built Environment

By structural analysis of the built environment this study refers to ideas and approaches perhaps most prominent in the field of urban design and architecture. The work of Norberg-Schultz (1980) and Alexander (1979, 1977) is often sited as inspiration for this 'school'. Aravot (2002, 201-202) describes how urban design emerged as a distinct professional field in the 1980s in response to what was seen as the placeless outcome of the modernist urbanism. The aim of Urban Design was then defined as and directed towards 'place-making'. Urban design was established in opposition to modernist urbanism and, despite variations in approach, ranging from empiricism to historicism, there is a broad common denominator among creators of normative theories, namely, the intention to reestablish quality of place in the public realm. Wlodarczyk's (2005) recent contribution in this field, analyses structural elements of suburban housing and appears particularly relevant to this study. **Objectives of Urban Design**

In the UK context, CABE's *By Design* (2000) defines the objectives of urban design as creation of places that have their own character, have clearly defined public and private areas, good quality public spaces, and are easy to get to and move around in. Furthermore, these 'good' places need to be clearly legible, adaptable to change and diverse. However, the legitimacy of the normative interpretation of these urban design considerations (especial in relation to 'character') is not clearly or explicitly discussed and this is a major drawback of this analytical approach. CABE's definition of aspects of urban design considers the following issues:

- *Character* - A place with its own identity
  To promote character in townscape and landscape by responding to and reinforcing

locally distinctive patterns of development, landscape and culture

- *Continuity and enclosure* - A place where public and private spaces are clearly distinguished
  To promote the continuity of street frontages and the enclosure of space by development which clearly defines private and public areas.

- *Quality of the public realm* - A place with attractive and successful outdoor areas
  To promote public spaces and routes that are attractive, safe, uncluttered and work effectively for all in society, including disabled and elderly people

- *Ease of movement* - A place that is easy to get to and move through
  To promote accessibility and local permeability by making places that connect with each other and are easy to move through, putting people before traffic and integrating land uses and transport.

- *Legibility* - A place that has a clear image and is easy to understand
  To promote legibility through development that provides recognisable routes, intersections and landmarks to help people find their way around.

- *Adaptability* - A place that can change easily
  To promote adaptability through development that can respond to changing social, technological and economic conditions

- *Diversity* - A place with variety and choice
  To promote diversity and choice through a mix of compatible developments and uses that work together to create viable places that respond to local needs.

CABE's (2000) guidance further considers the layout of the urban grain and structure, density and mix of the development, the scale, massing and height of buildings, as well as their details and materials, and the surrounding landscape as aspects of the development form that urban design (and thus urban design analysis) should pay attention to.

Aspects of the Development Form

Layout: urban structure The framework of routes and spaces that connect locally and more widely, and the way developments, routes and open spaces relate to one other. The layout provides the basic plan on which all other aspects of the form and uses of a development depend.

Layout: urban grain The pattern of the arrangement of street blocks, plots and their buildings in a settlement. The degree to which an area's pattern of blocks and plot subdivisions is respectively small and Frequent (fine grain), or large and infrequent (coarse grain).

Density and mix The amount of development on a given piece of land and the range of uses. Density influences the intensity of development, and in combination with the mix of uses can affect a place's vitality and viability. The density of a development can be expressed in a number of ways. This could be in terms of plot ratio (particularly for commercial developments), number of dwellings, or the number of habitable rooms (for residential developments).

Scale: height Scale is the size of a building in relation to its surroundings, or the size of parts of a building or its details, particularly in relation to the size of a person. Height determines the impact of development on views, vistas and skylines. Height can be expressed in terms of the number of floors; height of parapet or ridge; overall height; any of these in combination; a ratio of building height to street or space width; height relative to particular landmarks or background buildings; or strategic views.

Scale: massing The combined effect of the arrangement, volume and shape of a building or group of buildings in relation to other buildings and spaces. Massing is the three-dimensional expression of the amount of development on a given piece of land.

Appearance: details The craftsmanship, building techniques, decoration, styles and lighting of a building or structure. This includes all building elements such as openings and bays; entrances and colonnades; balconies and roofscape; and the rhythm of the facade.

Appearance: materials The texture, colour, pattern and durability of materials, and how they are used. The richness of a building lies in its use of materials which contribute to the attractiveness of its appearance and the character of an area.

Landscape The character and appearance of land, including its shape, form, ecology, natural features, colours and elements, and the way these components combine. This includes all open space, including its planting, boundaries and treatment.

These are used as basis of many urban design analysis documents results of analysis are illustrated with maps and short written description and analyses. The nature of urban design statements can lead to qualitative judgements being expressed, for example the character or quality of the built environment can described as 'poor' or 'illegible'.

Area Based Survey Methods Mainly Associated with English Heritage

As a leading authority in England on the protection of the historic environment English Heritage endorses a number of area based research approaches that often combine the analysis of the present day environment with some historical data.   The approaches reviewed here are Conservation Area Appraisals (EH, 2006a and b), *Measuring Change in Conservation Areas* (The Conservation Studio, 2004), Rapid Urban Survey (Menuge and Taylor, 2004 and Keller, 2008) and Heritage Appraisal (Burnley Borough Council, 2004). The following reviews each of these approaches in turn.

a) Conservation Area Appraisal

This appraisal is method of assessing areas which, as Conservation Areas, are protected by statutory legislation. The current guidance on Conservation Area Appraisals has been summarised by English Heritage (2006a, and 2006b). The data sources consulted, and the actual outcomes of the Conservation Area Assessment can be quite varied, but this study suggests that a 'Heritage Appraisal' has a similar role in areas of no statutory protection to that of Conservation Area Appraisal has within the Conservation Area management. The role of Conservation Areas has been discussed by Morton and Suddards (1991), Barrett (1993), Larkham and Jones (1993) and Larkham (1994a, and 1994b) among others. One of the key criticisms of the Conservation Area Legislation in England is the perceived lack of power for statutory development control in this legislation.   In other words 'permitted development rights' in Conservation Areas include so many small alterations that the cumulative impact of these changes can have significant in the over all character of the area. To address this concern English Heritage commissioned a study into this phenomenon. The study was published in 2004 as the *Measuring Change in Conservation Areas* report (The Conservation Studio, 2004), and has influenced the recent *Conservation Areas at Risk* campaign (EH, 2008c).

b) Measuring Change in Conservation Areas

As outlined above, *Measuring Change in Conservation Areas* (The Conservation Studio, 2004) is an English Heritage commissioned report. The aim of the report is to quantitatively measure changes to building fabric in the Becontree Council Estate Conservation Area[3]. Based on a field-survey of the houses within the conservation area this data collection method quantifies the loss of original features such as doors, windows, rain water goods, and chimney's not covered by conservation legislation. The concern for

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[3]4 `http://www.english-heritage.org.uk/upload/pdf/Measuring_change_part3.pdf` (accessed 21.11.07) has the survey pro-forma, analytical maps, statistics and other methodological information

the changing character of Conservation Areas has recently been published in the *Heritage at Risk - Conservation Areas report* (EH, 2008).

Taking an approach more akin to 'urban morphology' the same phenomenon (small incremental changes impacted by the property owners through changes not covered by the planning or conservation law) but including also some social commentary and analysis has been conducted by Whitehand and Carr (1999 and 2001). Their study concentrates mainly to London and the Midlands, but in relevance to this research, also has a small section analysing the Southlands area of High Heaton in Newcastle.

c) Rapid Urban Survey

The results of the 'Rapid Urban Survey' research project undertaken by Menuge and Taylor (2004) in the Anfield and Breckfield areas of Liverpool are now published in Kelleher (2008). Geographically this study covers a reasonably small area and uses map regression and historical research, mainly through historical directories. The Rapid Urban Survey approach employs the kind of detailed historical research in conjunction with present day fieldwork, which appears compatible with the aims and objectives of this study. To provide further information about the Rapid Urban Survey carried out in Anfield and Breckfield Appendices 1 and 2 of this study are the survey pro-forma, and a research questions prompt list associated with the project[4]. A recent CABE and English Heritage publication (Samuels and Clark, 2008) reviews the current state of affairs regarding many of these characterisation approaches, with specific reference to their use in Housing Market Renewal Areas. The area based approach of the Rapid Urban Survey project has been influential in the development of this study and it is compatible with the consideration of the 19th century housing as part of the urban landscape of post-industrial cities. Heritage Appraisal is another approach used to study and understand the nature 19th century residential areas.

d) Heritage Appraisal

Heritage Appraisal is a more recent 'survey' approach associated with the work of English Heritage and the urban regeneration underway in many English Cities. This approach appears to have particular relevance to the aims and objectives of this study, as these Appraisals recognise how "...some elements of historic environment are already recognised as nationally or locally important and are protected by law through statutory

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[4]The report itself, listed as Menuge and Taylor, 2004 in the Bibliography, as well as additional information included in Appendix 1 was un-published in 2007 when Collum Giles from English Heritage made these available for this research.

designation such as Listed Buildings and Conservation Areas. However, it is the case in many English towns and cities that the particular local historic character of a place is not always marked by any of these formal designations, even though it is appreciated and well known to local people." (Or it might not even be known to or appreciated by local people). Heritage Appraisals are described as a method of recognising this special quality of 'ordinary' places and according to practitioners (e.g. the Burnley Borough Council, 2004) they are now becoming an established approach in Conservation Planning.

> Heritage Appraisals ... show how seemingly mundane, normal or everyday historic elements can contribute significantly to the overall quality and character of places or may be interesting in their own right. Opportunities to retain or enhance the local character will be identified through this process and will inform the production of urban design guidance.
>
> Heritage Appraisals offer an evaluation of heritage interest and characterisation of the NAP (Neighborhood Action Plan) areas. This means understanding how the historical evolution of the NAP areas has shaped their present day character and distinctive qualities of the neighborhoods. It is intended to use this understanding to guide regeneration proposals so that they acknowledge and build on that character. Heritage Appraisals recognise that change is desirable, but urges that it should respect, rather than detract from, the existing environment. (Burnley Borough Council, 2004, 4)

Heritage Appraisals can include features common with the Townscape and Urban Design Analysis and Conservation Area appraisals. The elements considered can, amongst others, include :

- historical development and associations

- pattern of street layouts and historic transport routes – canal, rail and road

- activity and vitality of land-uses

- building materials, styles and architectural detailing

- quality and relationship of buildings

- prominent landmarks, vistas and panoramas

- setting and topography

- trees, parks and open spaces

Within the regeneration or other planning process Heritage Appraisals aim to assess the origins and development of e.g. the NAP (Neighborhood Action Plan) areas (or any other 'study area', however defined) to provide a good under standing of the historic environment of the neighborhood and its role in modern life and local communities. Heritage Appraisals can help to define and evaluate the qualities which create the distinct character of an area, its heritage resources and the contribution these make to the quality of the townscape. Furthermore, Heritage Appraisals can be used to identify opportunities to retain, strengthen and enhance local character and identity and inform the production of design guidance. In summary this approach reflects the importance of local character in the definition of sense of place as emphasised in English Heritage's policy statement *The Power of Place* (2000).

e) Summary on 'area based' approaches supported by English Heritage

In summary all these 'area based approaches' have been used to produce practical information for historic environment management decisions. They potentially combine historical analysis, appraisal of subsequent change, and the description of current character all in one report. Information included in the Conservation Area Appraisals especially can have direct relevance and use in the management of the area in question. Likewise Heritage Appraisals have (so far) been commissioned in areas where development pressure seems to make future change imminent.

On the other hand these approaches are based on 'expert judgement' and might be viewed as elitist or 'top-down' as they do not involve the 'public'. As the name of the category suggests these approaches are suitable for the assessment of areas of a limited geographical scale, and they can be labour intensive, especially if historical research is carried out. Further more, these methods are not 'standardised', one person's Conservation Area Assessment is not necessarily comparable to a similar exercise conducted by someone else. This can be viewed both as giving these approaches flexibility to adjust to particular needs or research interest of a particular location, but also as creating inconsistency of approach which may lead to difficulty if data from different assessments needs to be compared. However, this criticism does not imply that these approaches are too subjective to be useful, but rather points out that what is lacking is a uniform approach to the analysis of the historical built environment within (and between) each approach introduced in the above.

Urban Morphology

Another approach which has been used to conduct assessment of the historical develop-
ment of an 'area' is urban morphology. This approach develops a fine grain analysis
of the development of urban form through time – often at the level of individual plot
/ house. This is a historically thorough approach in addressing 'change'. The develop-
ment of urban morphology as a distinctive approach within historical geography is closely
associated with Professor M.R.G. Conzen. His studies of Alnwick (Conzen, 1969) and
Newcastle city centre (Conzen, 1962) (See Figure 5.2 on page 101) are examples of the
kind of detail this approach can produce. Advances in Historical GIS are now allowing
new analysis to be made of these original paper-based studies (Koster, 2004).

As this study aims to use Historic Landscape Characterisation as part of the case-
study it is pertinent to consider the relationship between these two approaches. A forth-
coming paper by Dobson (2010) implies a straightforward and compatible relationship
between urban morphology and Historic Landscape Characterisation. This study howe-
ver, is in closer agreement with Birkhamshaw (2006) who suggests that

> In principle a 'character area' [the geographical unit of analysis in HLC] and
> a 'morphological region' [the geographical unit of analysis in Urban Morphology]
> represent the same thing: an area of coherent character, distinct from that of
> neighbouring areas. And the character that forms the basis for each may be viewed
> as a composite of town plan, building fabric and use characteristics. However, this
> combination of town plan, building fabric and land use is strictly adhered to for
> morphological regions, whereas character areas often present an ambiguous mixture
> of the three. . . . also morphological regions have sub areas and sub-sub areas which
> might be closer to reality than uniform polygonisation.

To re-iterate, urban morphology sees the plot structure, building form and land use as
the main constituents of 'character' of a morphological region. The undoubted strength of
urban morphology approach is in its methodological rigour and in its ability to show the
timing of the 'original phase' of construction and potentially subsequent change over time.
Urban morphology has significantly contributed to the understanding of the development
of urban landscapes in the North East of England, Conzen's (1969, 1981) studies of
Alnwick, Whitby and Newcastle town centre have become part of the foundations of this
research approach. However, the processes of urban morphological analysis is slow and
time consuming. As a method mainly associated with academic practice the approach
may also be less well know among the planning and design professionals, than more
familiar methods or urban design and townscape analysis. Urban morphology can be

seen as part of historical geography and the approach it adopts is not always relevant to the assessment or study of current built environment. (See Figure 5.2, on page 101; the latest phase of development considered is from the beginning of the 20th century.)

Of course change could be evidenced by comparing historical data to the current situations, but sometimes the connections between the two, and the reasons for the intervening change might not be clear without further analysis. More recently, projects such as *Mapping Medieval Towns* (Lilley, 2000 and 2001, and Lilley et al., 2005) have used morphological analysis, but projects like this may further support the suggestion that urban morphology is not always relevant top the current character of the urban environment. Whitehand and Carr (Whitehand and Carr, 1999 and 2000) have however, used this type of approach to analyse change in 1930s suburbs up to the present day.

5.3.2   Through Comparison of Data

The following section reviews quantitative approaches to the study of the built environment and people's responses to that environment. These approaches give a representation of the situation at a given moment in time and in order to demonstrate change over time, data sets from different times periods are be needed to facilitate comparison. The approaches reviewed in the following are methods use a 'pro-forma' for the gathering of quantitative data, the space syntax method, and other quantitative methods which utilise existing data sets to analyse the built environment. Although the approaches in this category may appear more objective than methods solely based on the judgement of the assessor it must be noted the final analysis of the data gathered through these means is still processed and analysed by a professional researcher.

Methods Using a 'Pro-Forma' for the gathering of quantitative data

These surveys address the impact of the built environment, and to a degree, perceptions of the built environment, to human (mental) health. The publicised surveys reviewed include the following used in studies conducted in the UK:

1. BESSC (the Built Environment Site Survey Check-list) (Burton et al., 2005) also used in Weich et al.,(2002 and 2001) and

2. REAT (Residential Environment assessment Tool) (Dunstan et al., 2005)

3. The Neighborhood Characteristics Questionnaire (Barnes McGuire, 1997)

Figure 1. Growth of the built-up area of Newcastle and Gateshead, 1610–1918. Based on various cartographic sources.
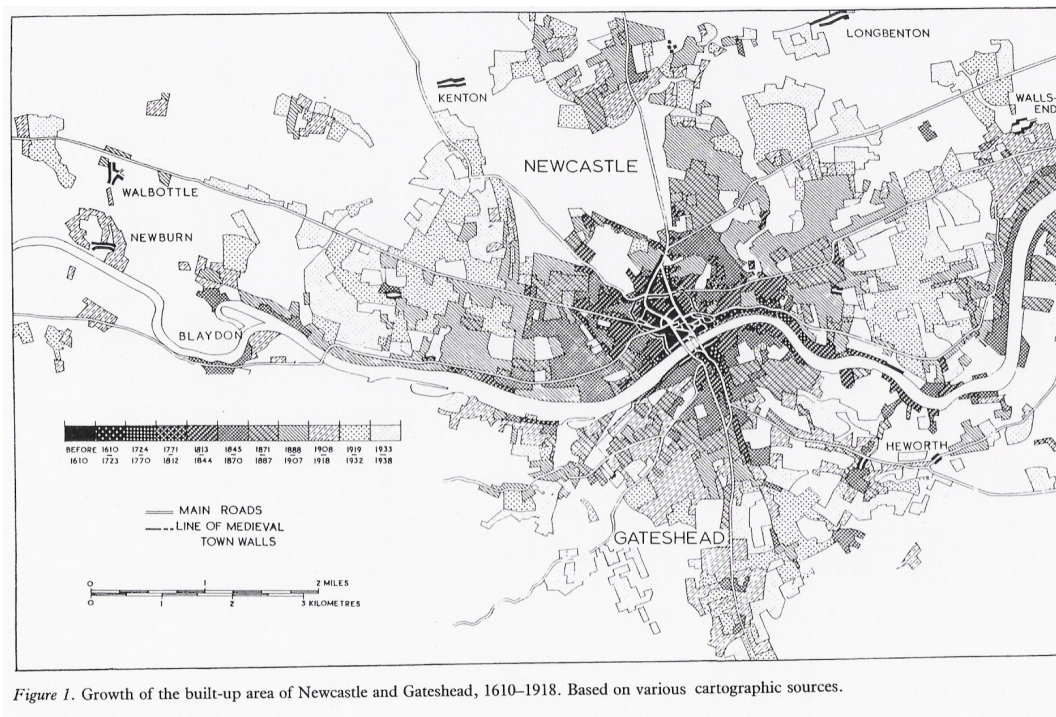
Figure 5.2: Growth of Newcastle and Gateshead (1610-1918)

Both BESSC and REAT are based on an individual 'surveyor' walking around the defined study area making judgements about the state of the built environment. The results of the survey are analysed statistically using different weightings, and are grouped into 'indicators' that have a certain numerical value to enable comparison of scores between different areas or different indicators within an area. These scores in turn are linked to information about the resident population, e.g. occurrence of depression etc. If data like this was collected at for example 5 or 10 year intervals over a period of time comparison of the datasets would allow for assessment change within the study area. The perceived strengths of BESSC or REAT surveys lie in their capacity to produce quantitative, practical information that could have direct relevance and use in making future design decisions, as well as the benefits for public health research. They can also address the more qualitative aspects of people's relationships with their living environments. 'Neighborhood Characteristics Questionnaire' (Barnes McGuire, 1997) concentrates on neighborhood as the social relations thus focusing on the psychical and affective aspects of the environment. This approach gathers data about the impact of the environment on people through residents filling in a pre-designed survey form. In reference to the transductive matrix surveys like this could be used to address the complex transductions between the physical, technical, psychical and affective layers of reality.

Surveys of this type and the associated statistical analysis require specific skills and knowledge, and making convincing connections between the results of the surveys and the built environment can be challenging. However, the use of BESCC survey as part of more than one study could suggest that the approach is appropriate in a variety of settings. However, again, the labour intensive nature of conducting surveys such as these means that they are limited to a manageable geographical scale.

Space Syntax

The term space syntax encompasses a set of theories and techniques for the analysis of spatial configurations. Originally this approach was conceived by Bill Hillier, Julienne Hanson and colleagues at The Bartlett, University College London in the late 1970s to early 1980s as a tool to help architects simulate the likely social effects of their designs. In contrast to many 'environmental disciplines' discussed above the space syntax approach to the study of the urban environment is both steeped in theoretical discussion on the concepts used as well as discussing some interdisciplinary approaches to the study of space and people (Peponis et al., 2001, Hanson, 2003, Anon., 1997, Anon., 1999, van Nes, 2005). Seamon (1994, 35) defines space syntax (quoting Hillier and Hansen, 1984, x-xi) as research examining the relationship between physical space and social life, or, more precisely, 'the social content of spatial patterning and the spatial content of social patterning'. The general idea of the space syntax work is that spaces can be broken down into components, analyzed as networks of choices, then represented as maps and graphs that describe the relative connectivity and integration of those spaces. The idea of space syntax rests on three basic conceptions of space:

- an isovist (popularised by Michael Benedikt at University of Texas), or viewshed or visibility polygon, refers to the field of view from any particular point

- axial space (idea popularized by Bill Hillier at UCL), is a straight sight-line and possible path (commonly for a pedestrian), and

- convex space (popularized by John Peponis and his collaborators at Georgia Tech), which is an occupiable void where, if imagined as a wireframe diagram, no line between two of its points goes outside its perimeter, in other words, all points within the polygon are visible to all other points within the polygon.

From these components it is thought to be possible to quantify and describe how easily navigable any space is, useful for example in the design of museums, airports,

hospitals, and other settings where wayfinding is a significant issue. Space syntax has also been applied to predict the correlation between spatial layouts and social effects such as crime, traffic flow, sales per unit area, etc. Space syntax has grown to become a tool used around the world in a variety of research areas and design applications in the fields of architecture, urban design, planning, transport and interior design. In general, the analysis uses one of many software programs that allow researchers to analyse graphs of one (or more) of the primary spatial components. The principles and methodology of Space Syntax are set out in the much quoted *Social Logic of Space* by Hiller and Hansen (1984). Although the computer software and processing power available for processing spatial data has increased dramatically in the last 25 years, the focus of Space Syntax however remains in analysing the integration or segregation of the built environment through 'isovists', 'axial lines', access analysis etc. These techniques of analysis have also been applied to analysing the movements of people inside single buildings such as museums.

Some of the space syntax work has links with structural analysis of the built environment described above. However, space syntax articles can be quite technical in nature and discuss e.g. the development of algorhythyms used in space syntax computer programming. (See e.g. Tucker et al., 2005; Ratti and Richens, 2004). Recent space syntax studies of suburban (or urban) neighborhoods, that rely more on direct observation and field work, and thus appear more relevant to this research project include Hanson (2000), Stahle et al. (2002) and Vaughan (2006). Especially the historical comparison of changing urban plan forms used by Hanson (2000), and the axial analysis of the suburb of Borehamwood conducted by Vaughan (2006) could work well within the context of this research. In relevance to this study Chapter 3 in *Social Logic of Space* also deals with the analysis of estate or settlement layouts (Hillier and Hanson, 1984).

Hanson (2000) analyses the neighborhood of Hulme, Manchester and Somers Town in London through the comparison of the physical layout of the neighborhoods in the 19th century, and after the 1960s 'slum-clearances'. This 'pre-syntactic' (Hanson, pers.comm. 2007) approach uses indicators derived from the space syntax analysis of housing neighborhoods to analyse the impact of changes in the environment through time. These pre-syntactic measures are: *Maze Index*, *No-neighbours score*, *Separation Index*, *Constitutedness Rate*, *Neighbourliness Scores*, and *Interface Decomposition Score*.

These pre-syntactic measure are defined in the following way:

1. Maze Index: The mean depth of the axial system from the surrounding streets

2. No-neighbours score: The mean depth of the convex system from the dwelling

entrances

3. Separation Index: The mean depth of surrounding streets from the nearest dwelling entrance

4. Constitutedness Rate: The percentage of convex spaces that are constituted by dwelling entrances

5. Neighbourliness Scores: The average number of dwelling entrances per constituted convex space

6. Interface Decomposition: Score : The mean steps between dwellings in the shortest path that links all dwellings in the layout together

In addition to the measures described above, Hanson also uses built space vs. open space diagrams and interface maps to analyse layouts. In specific relevance to this study Space Syntax has also been used to study the relationship between the built environment and social exclusion (Vaughan et al., 2005; Marcus, 2007), and what constitutes a successful suburban high-street (e.g. Griffiths et al., 2008 and 2010 forthcoming)[5].   The perceived strengths of space syntax relate to how it appears to offer a more objectively analytical way of analysing the built environment than e.g. townscape analysis, which is largely based on the professional judgement of the assessor – and not on the kind of tangible evidence that space syntax appears to be based on. Although Space Syntax requires specialist skill and knowledge as well as some considerable computer processing power, in relevance to this study it would appear to have distinct advantages as it is an approach which can demonstrate links between technical and physical layers of reality. Provided that the challenges of space syntax as a technical exercise could be overcome, it could form a valuable addition to the existing characterisation methodologies.

Quantitative methods

By quantitative methods this study refers to approaches to the study of the built environment that aim to utilise existing datasets in their analyses. For example, quantitative data from recent Census entries have been used by Burton (2002, 2003) to characterise aspects of existing housing. In Newcastle context Emamy (2003) uses GIS to compare Census and Local Authority housing data. Combining existing (present day or recent) GIS data with historical analysis of the urban landscape is a promising prospect but

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[5]See `http://www-research.ge.ucl.ac.uk/sstc/index.html` for the project website

requires compatibility between the existing systems, and expertise in how to handle such different data-sets together.

In reference to this research Newcastle City Council has NNIS (Newcastle Neighborhood Information service) available through the council's web-site which, using census type indices, gives geographically located data about the residential areas within the city.
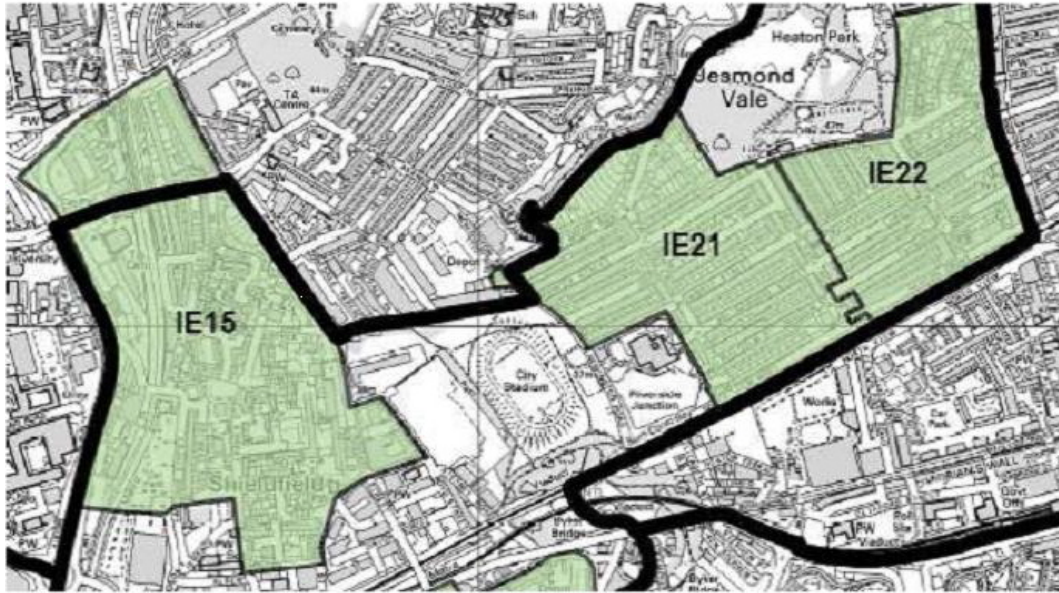
Figure 5.3: Neighborhood areas in the 2007 NNIS analysis of Ouseburn area in Newcastle

The South Heaton Character Area (the focus of the case-study research in this study) comprises of the NNIS-areas IE21 and IE22 shown in figure 5.3.

One advantage of using existing data sets or sources is the saving in time and resources in data gathering. The challenges of using existing data come from demonstrating the relevance and connections of existing data to for example characterisation of the built environment, and also from the fact that boundary changes between for example census surveys make consistent acquisition application of geographically specific, area based data potentially very difficult. Furthermore the boundaries of areas such as post-code locations and historic landscape character areas are unlikely to correspond making meaningful comparisons or demonstrating a relationship between the two data sets challenging.

5.3.3 Through 'Non-Expert' Opinion

The following section reviews approaches that study the built environment and people's responses to that environment through quantitative methods, or a combination of qualitative and quantitative methods. These approaches are an opportunity to address change

through non-expert opinion by allowing residents and other stakeholders themselves to discuss, explore or evaluate change as part of their residential environment. As with the Comparative Methods reviewed in the previous section the final analysis of the data gathered through these means is still processed and analysed by a professional researcher. Thus although the approaches in this category may appear more objective than methods solely based on the judgement of the assessor it possible that bias on the part of the researcher may lead to misrepresentation of the residents' views.

Ethnographic and Other Qualitative methods

The qualitative data gathered in a study of this type can be geographically located the relationship between peoples' responses and their physical environment is challenging to address. Stedman (2003, 671) describes the situation within sociological research:

> Common to the rapidly proliferating definitions of sense of place is a three component view that weaves together the physical environment, human behaviours, and social and/or physiological processes [see e.g. Gieryn (2000, 464-5)]. Empirical research however, has neglected the role of the physical environment, focusing on place meanings and attachment as product of shared behaviours and cultural processes.

Studies of how people invest places with meaning and value such as Hidalgo and Hernandez (2001) and Burholt (2006), and approaches to 'sense of place' as the human response to a particular environment (Jorgensen and Stedman, 2006 and 2001; Williams and Kaltenborn, 1999; Kaltenborn, 1998) could be useful in understanding how positive or negative associations with a particular physical location are formed. This in turn could be a valuable insight into what creates (or hinders the creation of) sustainable communities. In addition many built environment studies quote from existing studies such as *Family and Kinship in East London* by Young and Willmott (1957 / 2007)[6] (based on interviews of residents of the case-study area) to illustrate, compare or contrast residents' lives and attitudes within a given study area.

Another development that has been used to gauge people's responses to proposed new or redevelopment in their neighborhoods is Public Participation GIS (PPGIS) (Innes and Booher, 2000; Harrison and Haklay, 2002; Townsend and Tully, 2004). This approach allows combination of qualitative and quantitative information, gets participants involved, and presents complex information in a 'non-specialist' fashion. There are also non-GIS

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[6]See the 2007 're-study' of Bethnal Green area 'New East End' for comparison

based Public Participation approaches used in the assessment of the built environment. These approaches are promoted by e.g. the Countryside Commission and English Heritage, and include approaches such as Village and Neighborhood Design Statements.

Among methods used in the study of inter-action between built environment and humans is participant observation as discussed by Knigge and Cope (2006) – Knigge and Cope's article also makes a powerful case of integrating qualitative and quantitative research methods and data. Observation research similar to this is also carried out within space syntax and movement analysis about preferential movement routes through areas (e.g. Stahle et al., 2002). Somewhere between the sociology approaches, townscape assessment, residents survey and visual evaluation of the character of the built environment (but included here because of the use of photographs of key elements of townscape rated by residents as part of the assessment) is Green's (1999 and 1995) approach to the study of *town character*.

Another study of the character of the urban environment relying on ethnographic interview techniques is Charlesworthy's (2000) phenonomenological study of Rotherham. In some respects this study characterises the working class areas of Rotherham without a single illustration, but through an analysis of residents opinions and experiences of their environment. The intimate connection between the physical and other layers of reality (both in the rise and the subsequent decline of the area) is illustrated through quotes such as

> Rother'am's a nothin' kind'a place, thi's nowt 'ere, it' wo just an industrial than an' all wot's 'ere, all wot you can see nahr, it wo just built fo industry rahnd it. All these 'ouses wo just fo workers. It's like Sheffield shit, an' aht cem Rother'am. (Charlesworthy, 2000, 49)

Advances in computer technology have led to a number of methodological developments and are changing the way in which quantitative data can be analysed and linked to other forms of research data. New emerging techniques include critical discourse analysis, q-analysis, and NVIVO.

The advantage of these approaches is that they do address the more intangible, psychical and affective layers of reality. Ethnographic approaches can provide 'flesh' to the bones of quantitative research, and add human interest to the consideration of 'character', thus enabling the consideration of psychical and affective layers of reality.   The emerging new techniques in this field could be used to complement other characterisation methods. The disadvantages of these approaches are again the requirement of specialist skills and knowledge necessary to conduct this type of research. As outlined by Townend

and Whittaker (2008) the challenge of applying qualitative research in the archaeological, conservation or heritage assessment of value and places lies in how to demonstrate the link between people's perceptions, feelings and experiences and the physical and technical layers of reality.

5.3.4 Complementary Methods

The following section discusses two further research approaches or methods that this study sees as having potential value if combined with the kind of data a Historic Landscape Characterisation produces. These approaches are Visualisation and Historical GIS, both of which use GIS mapping (also the basis oh HLC) to gather and analyse data, and Archaeological Recording of Buildings which is used to survey and analyse historical buildings in depth. As such both of these 'complementary approaches' are seen to be potentially relevant to the kind of case-study research this study undertakes.

Visualisation and Historical GIS

The strength and interest of Historical GIS as a research method lies in its ability to make complex information easier to understand, and how the approach facilitates comparisons. However, the creation of good Historical GIS is time consuming and requires expertise.

Examples of the use of this approach in the urban context are the historical development of Tokyo studied by Siebert (Siebert, 2000). The focus of this study is specifically on the development and impact of the local transport infrastructure. In terms of this research project and the transductive matrix as its theoretical framework, Siebert's approach appears particularly relevant in high-lighting the transductions between the physical and the technical layers of reality. Focusing on more recent or current developments, events and social interactions of people in the city (Pavlovskaya, 2002) in Moscow, and (Knigge and Cope, 2006) in Baltimore, GIS is used to analyse and visualise data gathered from a variety of sources. In the context of this research (and Newcastle as a city) research such as that done by Barke (1991) on the distances people in the 19th century travelled to work, or by Barke and Buswell (1992) on various aspects of the development of Newcastle, could now be visualised in its geographical context through the development of Historical GIS. Historical GIS is already used to combine various data in the context of the 19th century built environment in the 19th Century East London by e.g. Vaughan and Geddes (2009) [7]

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[7]See the project web-site at `http://www.space.bartlett.ucl.ac.uk/projects/` `mappingthelabyrinth/MOL_14.swf`

Archaeological Recording of Buildings

Archaeology of buildings is involved in the recording, research and analysis of the fabric, form, and function (Morriss, 2000) of a building. The information gathered through the use of archaeological techniques is different from what an 'ordinary' building survey provides. Through production of variety of levels of records of standing buildings; stratigraphic analysis of the construction phases; identification, examination, and dating of construction methods and materials; relevant archival research; and interpretation of these results buildings archaeology can present a lot of information vital to the informed conservation and management processes.

Archaeological recording of (most often) individual buildings or small building groups as they stand now is recommended in PPG15 (paragraph 3.24). The guide published by the Association of Local Government Archaeological Officials (ALGAO, 1997, 1) identifies three situations that affect historic buildings where this section of PPG15 should be applied and where involvement of a buildings archaeologist could be warranted. These are

1. instances where proposed repairs and alterations must be informed by a documented understanding of historic character and appearance, in order to take the implications of what is being proposed fully into account.

2. When during repairs and alterations a need may arise to record information, often previously hidden, which adds to understanding of the building and is relevant to the works in progress

3. If a loss of particular features, or demolition of the whole building, is considered to be unavoidable, usually as a result of a development proposal, a record may need to be made; its purpose is to benefit understanding and future management of that type of building, and to improve appreciation of the historic environment.

In terms of practical applications of this study Archaeological Recording of buildings is part of the heritage or conservation planners existing 'tool-kit'. The approach is familiar to built environment professionals, and is seen to be accurate. In fact 'preservation by record' in cases of demolition as a loss mitigation strategy is considered a valid goal on its own right. However, the disadvantages of the approach include the time consuming nature of this type of approach and the fact that by definition the approach tends to focus on individual buildings and the wider context of the building is usually not considered at the same (if any) level of detail.

5.4   Evaluation of Reviewed Methods

The review of the selected research approaches detailed in the preceding sections leads to the following evaluation of the utility of these approaches. The reviewed methods are evaluated against a criteria relevant to the kind of case-study this research aims to pursue. The main criteria for choosing which research methods to use relate to the aims and objectives of this study. This study aims to use a historical-descriptive case-study as a vehicle of enquiry. In order to address the concerns about character outlined in Chapter 4 through the theoretical framework of transductive matrix developed in Chapter 5 this historical-descriptive case-study would need to based on research methods that

1. are area based, and take account of both

2. the historical development of the area, and

3. the present day built environment,

4. focus on the built environment (i.e. the physical layer of reality),

5. use archival data to support inferences made about original built environment when assessing the results and impact of later changes, and ideally

6. have been proven to 'work' in the study of 19th Century residential areas.

Figure 5.4 on page 111 summarises how this criteria was assessed to correspond with the Research Methods Reviewed above. In this illustration each x corresponds to a 'point' and a bracketed (x) to 'half-a-point'. Approaches gaining more than 3.5 points were considered relevant to the overall objectives of the proposed case-study. However, as the specific focus of the case-study would be the built environment, approaches that were not area-based, or focused in the main on the residents of an area were deemed not relevant to the specific aims of this study.

Thus main criteria in choosing which approaches (or aspects of these approaches) were selected for use in the case-study were Focus on the Built Environment and being Area Based. *Townscape analysis* and *urban design analysis* appear useful in their focus on the current environment. However, they may focus on the current built environment to the extent that analysis of the historic development is over looked. This is why these approaches can be part of the case-study research methodology, but not the only approaches used. *Conservation Area Assessment* can incorporate variety of data (old maps, new photos, current maps etc.) with detailed written description that takes into account

	Focus on built environment	Area-based	Historical development	Present day	Archival Data	19th Century Areas	Focus on People	
Townscape	x	x		x		x		4
Urban Design	x	x		x		(x)		$3\frac{1}{2}$
Cons Area	x	x	x	x		x		5
Change in cons areas	x	x		x		x		4
Rapid Survey	x	x	x	x		x		5
Heritage assessment	x	x	x	x		x		5
Urban Morphology	x	x	x		x			4
Space Syntax	x	x		x				3
Quantitative		x		x				2
BESCC/ REAT	x	x		x				3
Qualitative		x	(x)	x			x	$3\frac{1}{2}$
Sociology		x	(x)	x			x	$3\frac{1}{2}$
PPGIS	(x)	x		x			x	$3\frac{1}{2}$
Visualisation / Hist GIS	x		x		x			3
Arch. Build.	x		x		x	x		4

Figure 5.4: Evaluation of Reviewed Methods

both historical development and the current environment. However, this approach is already based on assumptions about the conservation worthy character of the area under scrutiny and may include normative judgements about e.g. the unified character of the built environment. *Measuring Change in Conservation Areas* identifies some likely features that are often subjected to change within residential environments. This provided a useful starting point for observations during fieldwork. The researcher critically evaluated the utility of items observed during the Pilot Study. As Measuring Change in Conservation Areas study makes no reference to archival data, inferences of what is or was an original feature are based on the expertise of the assessor, which may introduce some errors into the results. *Rapid Urban Assessment* considers the development of the built environment throughout its history and up to the present day. The original study focuses of the Anfield and Breckfield areas of Liverpool, and as such studies a residential area comparable to this case-study. Rapid Urban Assessment also effectively identifies non-residential features of these areas, which appears a valuable contribution to the understanding of 19th century residential areas. The absence of building plans meant that this data source could not be used in the Anfield and Breckfield example – but the abundance of historical plans available for 19th century housing in Newcastle means this is a data source this case-study can and shall utilise. *Heritage Area Appraisal* incorporates variety of data (e.g. old maps, new photos, current maps etc.) with detailed written description that takes into account both historical development and the current environment, and like the Rapid Urban Assessment, has been conducted in areas comparable to this case-study. However, the data gathered in a Heritage Area Appraisal is in a form of short, condensed report aimed at generic audience and contains limited analysis, explanation or referencing. As with all of the approaches considered in the above archival data is not considered. *Urban Morphology* on the other hand involves a detailed historical analysis based on cartographic and geographical analysis and consultation of building plans and other archival data. In contrast with the approaches discussed above which focus on the current built environment urban morphology is part of historical geography and as a consequence morphological analysis is not always brought all the way into the present day. Based on the review conducted in this chapter this study proposes that by combining aspects of approaches detailed above a case-study methodology corresponding with the aims and objectives and the theoretical framework of this study shall emerge.

The *Space Syntax* approach provides robust analytical data about the built environment and importantly concentrates on the space about the houses and how this space is used rather than the houses themselves. In a historical-descriptive case-study however,

acquisition of data for historical comparison requires the repetition of the syntactic ana-
lysis (using mapped data) from different dates and this is likely to be time consuming. It
is felt that providing space syntax data about just the case-study area in its current form
would not be informative enough to justify acquiring the specialist technical and ana-
lytical knowledge and software that the approach requires. *Quantitative Methods*, such
as the analysis of Census data from post-code areas could provide valuable additional
information for the kind of case-study proposed here. The challenge with this approach
is how to link geographically different areas (e.g. post-codes) with for example character
areas or case-study neighborhoods in a manner that makes existing quantitative data
relevant. *BESSC and REAT Surveys* differ from Quantitative Methods in as much as
they can be carried out in a geographical area that can be the same as e.g. the character
area under study. These tools have also been tested in case-study research and are readily
available for application. Both of these survey methods appear to provide data about
the built environment normally acquired through qualitative interviews or other surveys
of the resident population. Thus the perceived advantage of these two surveys is that
as they are based on the work of an individual assessor they do not require recruitment
of the sample population of people. On the other hand reliance on one person as the
dat source may introduce individual bias to the survey results. Furthermore, although
proven in other contexts the relevance of these surveys for a study with the focus on the
built environment is un-tested.

Ethnographic and other Qualitative approaches enable data gathering about people's
experiences and perceptions of their environments, and thus these approaches addresses
not just the physical but the psychical and affective layers of reality as well. These
approaches require a 'sample population' of people to study which presents its own chal-
lenges, and as the focus of this study is the built environment it was decided that the
resources available for PhD study would not allow the exploration of this aspect of the
built environment. PPGIS enables data gathering about people's experiences and per-
ceptions of their environments and thus may addresses psychical and affective layers of
reality, as well as gauging peoples opinions about e.g. the proposed new developments.
Thus the approach requires recruitment of participants (i.e. people). As with Qualitative
surveys and Sociology approaches it was decided that the existing expertise and resources
available for this research would not allow the exploration of the case-study through these
methods.

Visualisation and Historical GIS enable appreciation of complex historical data vi-
sualised through maps. Development of a full GIS-package requires time and expertise

not available for this study nor is the development of a GIS-package part of the aims of this research. *Archaeology of Buildings* provides detailed information (and a record) of the development of the structure under scrutiny. This approach to the study of the built environment is time consuming when conducted at the level of individual buildings, and in contrast with the aims and objectives of this study this approach is not area-based. However, archaeological approaches appear useful to the type of case-study this research proposes to undertake, and may be used to study the wider area, but not at the level of individual buildings. In the future, archaeology of buildings approach could be suitable for a themed study (e.g. shops within the area) or selective sampling of more detailed studies of individual buildings

5.5 Conclusions

This chapter has reviewed selected built environment research methods. The methods chosen can be described as being 1) practice based, 2) relevant to the criticisms of HLC, and 3) addressing mainly the 'physical layer' of reality. This study suggests that the HLC approach could function as the 'base-line' of case-study enquiry, and be complemented by the methods reviewed in this Chapter. However, formulation of more specific research questions is necessary to 'elevate' characterisation into a research method that contributes to the understanding of the environment in a more abstract way. Depending on the specific research question at hand any research wishing to use 'characterisation' as part of its data gathering, could choose from a number of additional research approaches. Some of the possibly applicable approaches have been reviewed in the above. This study proposes that by using HLC as a 'base line' of enquiry some of the problems discussed in Chapter 3 can be resolved and a more nuanced research methodology will emerge that will specifically result in a better understanding of the characteristics of surviving industrial era housing.

	Physical	**Technical**	**Psychical**	**Affective**
Townscape	x			x
Urban Design	x	x		
Cons Areas	x			
Change in cons areas	x			
Rapid Survey	x	x		
Heritage assessment	x			
Urban Morphology	x	x		
Space Syntax	x	x		
Quantitative	x	x		
BESCC/ REAT	x	x	x	
Ethnographic and Qualitative			x	x
PPGIS	x	x	x	x
Visualisation / Hist GIS	x	x		
Arch. Builds.	x	x		

Figure 5.5: Reviewed Research Methods in Relation to the Four Layers of Reality

Thus, as outlined in the Introduction to this Chapter, this *Review of Methods* provides an important link between the theoretical development and the case-study research undertaken in this study. The approaches reviewed above were chosen on the basis that they have 'the physical layer of reality', i.e. housing or the (built) environment (or the experiences there of), as their main focus of enquiry. Table 5.5 on page 115 summarises the Reviewed Research Methods in relation to how they are seen to contribute to the understanding of the different aspects of reality, as outlined in the *Conceptual Development* Chapter.

Thus the considerations outlined in Table 5.5 summarise how the Reviewed Methods relate to both the *Conceptual Development* undertaken earlier, and the specific research approach developed in the following Chapter on *Methodology*. The connections described in figure 5.5 (on page 115) are the key to understanding the relationship and relevance between the preceding theoretical and methodological considerations and the case-study research discussed in the following. As such this chapter forms an important link between these two aspects of this study. The very idea of 'transduction' between the different aspects of reality, means that no research method can be absolutely demarcated as contributing to the knowledge on only e.g. physical and technical realities, and nothing else. As the research methods themselves have been interpreted in varying ways, and used to answer research questions with a variety of foci, the summary represented in figure 5.5 is one of the possible interpretations. It is nevertheless, the interpretation adopted in this

study, and the basis from which the actual case-study research approach is developed. Based on the review work outlined in the preceding chapters this study develops its own case-study research approach. This approach is introduced and justified in the following section.

Chapter 6

Methodology

6.1 Introduction

In addition to the academic and theoretical contexts discussed in the previous chapters, as a CASE-research project conducted with the Historic Environment Section of Newcastle City Council as the collaborative partner, this study also relates to the current Archaeological Regional Research Framework for the North East of England (Petts and Gerrard, 2006). Regarding the 'spatial development of the towns and cities in the North East' the framework states:

> SU13: Our understanding of the spatial development of the region's towns must be improved. Whilst the existing extensive urban surveys offer an initial base point for this work, more detailed work should draw on methodological techniques developed for Historic Landscape Characterisation, but be tailored to tackle the complexities and rate of change in urban contexts and ensure that they cover the 20th century. These urban mapping projects should take advantage of GIS technology.
>
> (Petts and Gerrard, 2006, 207)

Referring to the proposal of the Regional Research Framework above, one of the aims of this study is to develop a research methodology that addresses the spatial development of urban areas in the region and could be adopted as a tool and applied to the whole of Newcastle, or when required to specific areas, or even be replicated elsewhere.

Considerations such as population growth and changing economic situations currently place huge demands on the management of the whole of the environment. As an example - there is a well publicised need for millions of new homes in England in the near future. Depending on sources this need ranges from 3 million by 2020 (Cooper, 2007) to 5 million

new homes in ten years (Heartfield, 2006). Currently the construction industry is not building enough to satisfy this demand, and the preservation and prolonging the life of existing buildings, is one of the ways in which to cope with this short-fall. From this viewpoint alone conservation, regeneration, sustainable development and the creation or preservation of people's 'sense of place' are important concerns in the management of the built environment. Housing Market Renewal is another area where this research approach could make a contribution, for example when assessing the survival, condition and future potential of older housing at a city-wide scale.

It is intended that this study will use case-study methodology to address the complexities of character and the impact and origins of change through a trans-disciplinary approach which aims to combine the study of historical origins of the area, with the assessment of the current built environment (Lawrence and Despres, 2004). Thus it is envisaged that the case-study shall act both as a linear analytic and as a theory generating vehicle of enquiry (Groat and Wang, 2002, 349). The triangulation of data sources and data gathering methods provides a sound foundation for any inferences made. The findings of the case-study are discussed through the analysis of the impact of planning policy and regulations, emergence of local building type (the Tyneside flat), persistence of the 19th century row house in the present day and changes in the built environment explored through local shops. It is intended that this exploration of 'character' – whilst not being a full account of the character of 19th century residential areas and housing within the post-industrial city (as if that was possible) - will never the less allow for a more nuanced reading of what constitutes 'character' in this context. A Pilot Study is used as an important method of exploration and enquiry which allows for the development and refinement of research methodology which will connect these themes of research with the theoretical framework developed above.

6.1.1 Connecting the Theoretical Framework and the Case-Study

The conceptual development of this study has lead to an understanding of the city (or the historic urban landscape etc.) and thus the character of the city; as more than the sum of the environment, people and the experiences thereof. It is one of the central issues of this study that the understanding of character could benefit from "...more abstraction, not more definition" – as suggested in terms of the whole (geographical) study of the city by Latham and McCormack (2004, 708). Latham and McCormack (2004, 708) develop MacKenzie's (2002, 35) conception of 'corporeal materiality' and applying it to the context of city, and state that when seen in this way the city does not appear as a substance, but

as a pre-eminently "...transductive field in which psychical, physical, technical and affective realities precipitate". As outlined in the earlier *Conceptual Development* Chapter, understanding the city as a transductive matrix has implications to how the character of the city is conceived. The theoretical framework developed for this study proposes that the corporeal materiality of the city should be understood as a three dimensional transductive matrix, which consists of the four layers of reality (i.e. psychical, physical, technical and affective layers) and also has spatial and chronological dimensions.

This study to focuses on the physical layer of reality without denying the impact the other three layers have on 'character'. In parity with the recent discussion of 'territory, place, scale and networks' as the four essential dimensions of 'socio-spatial relations' (Jessop et al., 2008) this study proposes that at least two of the four elements should considered together to gain a fuller understanding of the city. This study proposes that this abstraction of the city and its character alleviates the conceptual confusion created by the various earlier attempts to define 'character concepts' as outlined in the *Literature Review* Chapter. Understanding 'character' as the naming of the affective response to the totality of the city, constituting of the technical, physical, psychical and affective realities, allows for the exploration of 'character' from a new perspective.

As discussed in the preceding chapters, the concept of character, has become widely used in planning and other environmental disciplines. Evan and Jones (2008) discuss the utility of such concepts as 'meeting places' or 'shared territory' for stakeholders involved in various environmental decision making processes. Some approaches to these concepts are reviewed in the *Literature Review* Chapter above, concluding that from the literature reviewed two broad approaches to this 'shared territory' emerge. Either it is implicitly assumed that everyone already knows what is meant by the various concepts, or a considerable effort is spent explaining and defining each author's own understanding of the concepts used. The first approach is common in non-academic publications such as planning and design guidance, and the latter is prevalent in the more academic publications with an emphasis on theoretical development, rather than practical application. Linking character with notions of spirit of place has perhaps only necessitated more definition and provided limited new insights into the understanding of the built urban environment. In response this study has sought to develop a more abstract conceptualisation of character. Based on this development, and in order to establish methods most suitable for studying the physical layer of reality a Review of Research Methods was carried out. *Review of Research Methods* Chapter, as detailed above, evaluates various existing built environment survey methods.

To demonstrate a connection between the abstract conceptualisation of the 'transductive matrix' and surviving 19th century residential areas, the following table has been devised. Here the four different layers of reality proposed by MacKenzie (2002) are listed in column one. Developed from the consideration of the four layers of reality during this research column two considers the research paradigms engaged in the study of each of the four aspects. Column three gives examples of how the research paradigms addressing each of the four aspects of reality produce actual research outputs. As an example the technical aspect of reality is addressed by the study of 'flows and networks', which in practical terms results in studies such as transport history.

Layer of reality (MacKenzie, 2002, 35)	Research Paradigms - relevant in the context of this study / study of built environment more generally	Research Outputs i.e. types of study / approach
Psychical	place attachment and emotional geographies	landscape preference research, place attachment studies, 'placelessness'
Physical	architectural styles and building typologies	townscape / urban design analysis, or any descriptive architectural / geographical etc. study
Technical	building materials and technology or any study of 'flows and networks'(e.g. supply, transport or communication networks)	any history of building techniques or materials, transport history, studies of history of civil engineering and history and theory of planning
Affective	notions of 'genius loci', 'character', some definitions of 'sense of place' are after- the-event names for the pre-conscious affective response to the (urban) environment	non-representational theory

Figure 6.1: Above table is based on: MacKenzie (2002, 35) *Transductions: Bodies and Machines at Speed*

To this understanding of reality, the dimensions of space and time are added to create the transductive matrix that is an abstraction of the corporeal materiality of the city. The challenge posed by the introduction of the conceptualisation of transductive matrix as the theoretical framework for this study, is how to provide a narrative, or description of a place that is based on sound data and evidence, and to show this data to be relevant to this theoretical framework. It seemed that a research methodology using a combination of research tactics and multiple data sources would be required to adequately respond to this

challenge. As a number of interesting research themes were emerging from the *Literature* and *Research Method Reviews*, conducting a Pilot Study appeared a useful next step. The following section discusses the objectives and outcomes of this exploratory period of research. Essentially the Pilot Study considers the possible data sources and methods of data collection and analysis, and enables the development of the research strategy utilised in the full case-study.

6.2 Pilot Study

6.2.1 Overall Objective and Benefits of the Pilot Study

This Pilot Study tests the research methodology proposed for the 'Characterisation of Industrial Era Housing in Newcastle' research project. The benefits of this, or indeed any, Pilot Study are seen in an opportunity to refine the research methodology proposed for the full case-study. A Pilot Study also enables the production of preliminary research outputs and results, which can influence the direction the full case-study will take, or high-light particular areas of interest that hadn't been apparent in the research planning stages. Preliminary research outputs can also be discussed in seminars or research groups (and in this research with the collaborative partner) to hear the opinions and gauge interest of academic peers and other stakeholders. In specific relevance to this case-study research the exploratory nature of the Pilot Study allowed for the researcher to become more familiar with the 19th century residential areas in Newcastle, as well as establishing contacts with relevant repositories of information, and the assessment of how much and what type of existing information would be available. Initial period of research also allowed for testing of some of the embryonic research ideas, and enabled the analysis of opportunities and challenges posed by these ideas and approaches. This period of exploration was important in developing the over-all approach to the case-studies and in designing the research strategy.

6.2.2 Background of the Pilot Study

As suggested by Petts and Gerrard (2006, 207) above, and discussed in the HLC Review chapter, the background to this Pilot Study can be seen in the Historic Landscape Characterisation research programme carried out by English Heritage and County Councils over the last 15 years. Briefly described HLC is currently developed as a GIS-map based resource depicting the historic element within the current landscape. Within HLC the

landscape is divided into 'polygons', areas that have a discernible character, consistent with pre-prescribed broad categories. This GIS resource is supported by a database containing information about the specific character (i.e. 'attributes') of each polygon. Most counties in England have now completed their HLC projects or have a HLC in progress. In North East England, Northumberland and County Durham have completed HLCs and in Tyne and Wear HLC Project is at a design stage. The project design is being developed by Jayne Winters and the Historic Environment Section of the Newcastle City Council. The county-wide HLC-programme can be considered as being well established; both its results and its methods (Aldred and Fairclough, 2003) and (Clark et al., 2004), have been publicised. However, in response to the methodological concerns discussed in the HLC Review section, this study seeks to develop or build on or from the HLC approach in order to gain a more comprehensive understanding of a place – as is suggested by how the complexities of the city are addressed through the theoretical framework. Thus the Pilot Study seeks to aid in the development of a research strategy which is essentially Area Based (Menuge and Taylor, 2004), yet takes into consideration more than just the physical character of the case-study area.

It is proposed that this study will produce an area based analysis of a place which is much more detailed in its analysis of the character and its constituents than the county wide HLCs, and thus the methodology used will also draw from some existing Urban Characterisation Projects, which already operate on a more detailed scale. These include the Lancashire Historic Towns Survey (Anon., 2005), the Black Country Historic Landscape Characterisation (Anon., 2007a), the South Yorkshire Historic Environment Characterisation (Anon., 2007d), and Characterisation and Sustainable Communities (EH, 2006) web-site as well as the Historic Town Surveys conducted as part of the Extensive Urban Survey Programme in the late 1990s to early 2000s (ADS, 2005). When compared with county-wide HLCs these 'more detailed historic characterisations' are seen to emit a greater range of insights, and reduce (though they cannot entirely eliminate) the risk of mis-interpretation. From a point of view of potential practical application it is important to consider and understand which parts of an area have the power to engage hearts and minds, which are indispensable or important visual assets, which help to underpin the overall character of the area or render it historically intelligible, and which, on the other hand, could possibly be lost without detriment or with positive benefit. Townscape Analysis (through the Review of Research Methods) appears as an approach that has the capacity to address 'qualitative issues' and thus make connections between the physical and the affective layers of reality. The focus of the case-study, however, remains the

physical aspect of the character of the case-study area.

6.2.3 Data Sources

As part of the research design development during the Pilot Study a series of visits to on-going Urban Landscape Characterisation projects in Sheffield (South Yorkshire) and Lincoln wereundertaken. Information gained during these visits and the personal comments from Collum Giles at the York Office English Heritage and unpublished English Heritage documentation (i.e. Menuge and Taylor, 2004) were valuable at the initial research design phase. (See Appendix 3 for the research 'prompt list' used by EH in Pathfinder Housing Market Renewal Areas.)

As an Area Based approach the research strategy developed in the case-study has similarities with e.g. the research approach used in a recent *Mapping the Medieval Urban Landscape* project (Lilley, 2000, Lilley et al., 2005). This research method is summarised in the diagram 6.2 on page 123[1].
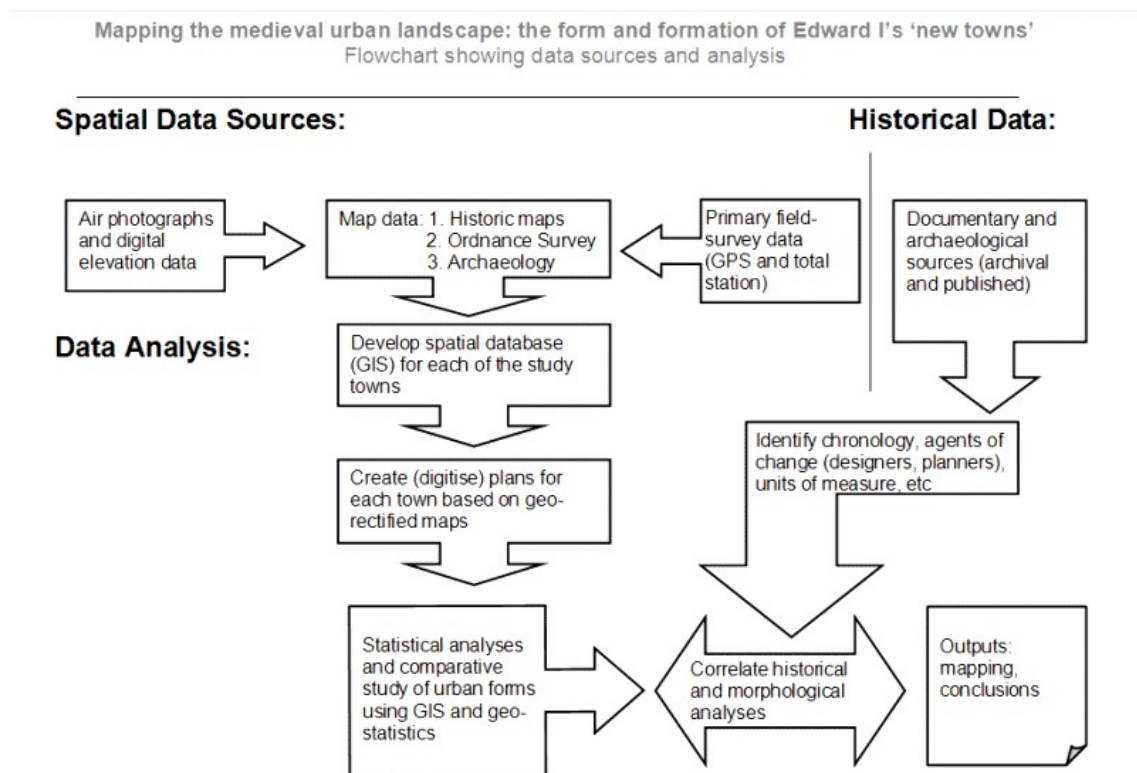
Figure 6.2: Summary of Methodology in Mapping the Medieval Urban Landscape project

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[1]See http://www.qub.ac.uk/urban_mapping/index.htm. Accessed 7.11.2008

The research approach adopted in the *Mapping the Medieval Urban Landscape* project together with the Area Based Assessment undertaken by English Heritage (Menuge and Taylor 2004, published as (Kelleher, 2008)) in an area more comparable with the proposed case-study of 19th century housing, were influential in the formulation of the research approach developed for the full the case-study.

The research approach described in the above diagram, together with potential data sources identified in Menuge and Taylor (2004) (i.e. current and historical maps and historical directories) were used as a basis for Pilot Study set out to test the research ideas emerging from the *Literature* and *Research Method Reviews*. In reference to the possible data types and sources described above – the following sections outline the data sources and data gathering methods that were identified as having potential in the study of surviving 19th century housing in Newcastle. The summary table on p. 8 describes how the findings of the pilot study were used or developed further for the actual case-study.

6.2.4 Strategic Approach – Practical Results

As the focus of this research is partly historical, it seemed natural to begin with 'map regression', i.e. looking at the development of the chosen areas through gradually older an older mapped data. The map data consulted included: OS MasterMap, OS 1st 6" edition maps in digital format, OS 2nd – 4th edition 6" and 25" maps in digital format, maps available at the Seymour Bell Map Collection in the Newcastle Local Library and subsequent National Grid Maps in digital and printed format. In practice this resulted in the production of several digital and paper-based maps. (See Appendix 5 for Illustrations). These maps initially explore the chronological geographic expansion of Newcastle, and later on (in historical terms) illustrate areas of demolition and re-building. Digital data set for the 1851 parish boundaries was combined with current digital mapping to analyse whether parish boundaries had significant impact on the development of the built environment. The extent of the built up area of Newcastle was mapped for the years 1914 and 1940. The current maps were compared to pre-WWII maps to establish were the post-war change of the built environment has occurred.

Referring to 'BOX 1. – Initial Research Outcomes' in the Summary table (Figure: 6.4) provided on page

This process of analysis identified the areas in Newcastle where 19th century housing is still the prominent house type. In discussions with the collaborative partner a number of neighborhoods where no formal studies or assessments of the built environment have been carried out were identified. To add to the existing information available for the

making of historic environment management decisions it was agreed that the areas of Benwell and Heaton appeared particularly appropriate for further investigation.
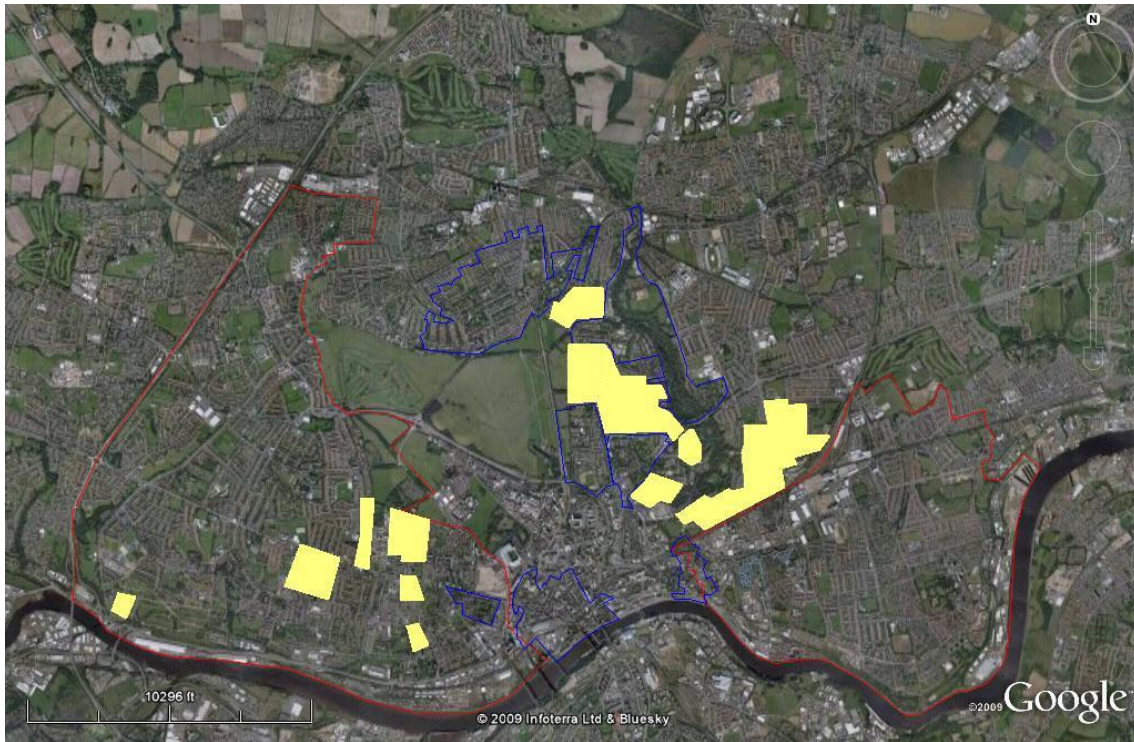
Figure 6.3: Areas of surviving 19thCentury terraced housing high-lighted in yellow.

In Figure 6.3 on page 125 the currently designated conservation areas are outlined in blue, and the Housing Market Renewal Pathfinder Areas are outlined in red. The principles of HLC were tested in these two study areas and the areas were divided in to relevant 'character polygons'. (The Pilot Study is further illustrated in APPENDIX D of this study.) Once the pilot study had tentatively identified potential case-study areas where a the dominant house type appeared to be 19th century terraced housing, exploration of the history of the pilot study areas (i.e. Benwell and Heaton) was conducted through archival materials at the Tyne and Wear Archive Service (TWAS). Historical written sources at the Newcastle Local Studies and Newcastle Philosophical Society Libraries was carried out and the Victoria County History of Northumberland (Dodds, 1930) and other historical directories, namely Kelly's Directory of Newcastle, were consulted. Where available pictorial and other representations of the area were investigated. Field boundaries from 1850s OS1 map were digitised for the two study areas to explore the persistence of field boundaries in the current built environment. An abundance of surviving building plans from 1850s on-wards at the TWAS and the existence of Rate-books

from late 19th and early 20th centuries were identified as a positive resources for further research.

During this research it also became obvious that changes in administrative boundaries would present another consideration for the availability of historical data. Initially neither Benwell nor Heaton belonged to Newcastle. They were incorporated at different times, and administratively Benwell and Fenham were a separate Unitary District, before being incorporated to Newcastle in 1904. The different administrative histories mean that although some building plans from the relevant area and era survive in the case of Benwell, the available information is considerably less than for Heaton, both in terms of volume and detail. This consideration, coupled with the fact that Benwell has been a focus of social concern and thus various studies and continuing planning interventions since the 1930s begun to point to Heaton as a more likely area for more detailed research.

To test this idea an initial period of fieldwork recording and assessment of the 'South Heaton' pilot study area was carried out. This work involved developing a field survey form which would enable the quick recording of relevant details whilst out and about, and the taking of some photographs for reference. (See Appendix 4.)

While analysing the data from this phase of the pilot study *Conservation Area Character Statements* prepared for the existing Conservation Areas in Newcastle were consulted for the type and level of information they contain. A visit was also arranged to view the Newcastle Historic Environment Record and the Newcastle Urban Record at the to ascertain what archaeological data were already available for the Heaton Pilot Study Area.

Referring to the 'BOX 2. – Development of the Research Strategy' in the Summary table (Figure: 6.4) provided on page

The pilot study period also allowed for experimentation with other spatial analysis methods namely that of space syntax. The researcher feels that this approach potentially has huge promise if used in combination with HLC type data. However, the explorative research seemed raise more questions, both in terms of theory, practical application and technical know-how, than would be possible to tackle within a study that was already developing into a complex multi-disciplinary enquiry. Thus with some regret it was decided not to pursue this investigation further within this study. Communication with Dr. Julienne Hanson and Dr. Laura Vaughan, who are both involved in the teaching and development of Space Syntax at the UCL, however, was personally very encouraging, and Hanson's paper (2000) on *pre-syntactic measures* influenced the built space vs. open space diagrams used in the case-study.

Summary of the Progression of the Pilot Study

Two groups of relevant data sources identified ; Initial Data Collection

| SPATIAL DATA:
current paper maps
historical OS maps (paper and digital)

- preliminary field work
- photography | HISTORICAL DATA:

census and historical directories data of
residents and building uses
development control building plans
archaeological data (i.e. the HER) |

BOX 1. – Initial Research Outcomes

1) identify all areas of surviving 19th c. housing in Newcastle
2) highlight areas of whole scale change
3) identify other areas of housing
4) identify potential case-study neighbourhoods, and areas within them for more detailed study
5) identify further relevant data sources

Analysis of Pilot Study Data

BOX 2. – Development of the Research Strategy
a) usefulness of three phases and scales identified
b) begin the development and documentation a house typology
c) begin development and documentation of a more detailed typology of external decoration
d) propose the creation of an address database identifying rent, rateable-value and building use (in 1890)
e) propose shop premises as an additional theme of interest

THE FULL CASE-STUDY
Finalising the research strategy based on combination of data and mixed method of data collection and analysis

Figure 6.4: Pilot Study - data sources and developments

6.2.5   Conclusions

During the pilot study it became evident that whilst the HLC type approach can be useful in identifying character areas within larger neighborhoods. However, it could not provide the level of detailed information which seemed vital to the understanding of the intricacies of character of residential areas as proposed within the transductive matrix. To address these concerns conducting research at different spatial scales and at different levels of resolution was deemed to be important. Thus a three phase research methodology was devised. Focusing this research to an area at an increased level of detail allows for the development of an ad hoc research methodology combining established research methods in a new way. Although the devised methodology is in part based on techniques widely used in urban design and planning research it is intended that the combination of these techniques (i.e. triangulation) will provide new insights into the character of surviving 19th century housing. These established research methods already influence practical decision making and environmental management concerns. However, it is also the intention of this study to provide a link between the field-based research and the current theoretical and academic concerns, and to show the potential of approaching the city 'as a transductive matrix'. The following section describes the historical-inductive case-study research methodology generally, and the three phased research strategy devised for this particular historical-inductive case-study specifically, as a methodological approach relevant for addressing the character of 19th century housing in the post-industrial city.

6.3   Case-Study as a Methodology

6.3.1   Introduction

The beginning of this section introduces some general characteristics of case-study research methodology before proceeding to discuss in more detail how they apply to this particular research project. This research studies the characteristics of surviving 19th century housing in the post-industrial city through an area based assessment. This implies that the study will not focus on single buildings individually. Instead the primary focus of this research is the physical reality of the case-study area. The research explores the study area as a transductive matrix where the buildings are part of a complex reality.

Essentially the research undertaken will be based on the case-study methodology, with the chosen study area as 'the case'. According to Feagin et. al (1991) the case-study is an ideal methodology when a holistic, in-depth research is needed. Case-studies have been

used in varied investigations, but particularly in sociological studies and in architectural research case-studies have become the dominant research form (see e.g. Johansson, 2000 for commentary and history of the method within architectural context). In other fields of academia where experimental or quasi-experimental research more commonly takes place, the data collection and analysis methods are acknowledged to hide some details (Stake, 1995). Case-studies, on the other hand, are designed to bring out these details by using multiple sources of data. Yin (1993, 1997), Stake (1995), and others have developed robust procedures for case-study research. The advocates of the case study methodology have sought to demonstrate that when these procedures are applied, the researcher will be following methods just as well developed and tested as in any other (more quantitatively based) scientific field.

6.3.2   Types of Case Study

Tellis (1997) identifies the following four features as inherent to the case-study methodology;

- firstly, case-study research is not sampling research is a fact asserted by all the major researchers in the field, as mentioned above. However, selecting cases must be done so as to maximize what can be learned in the period of time available for the study.

- Secondly, the unit of analysis is a critical factor in the case study. It is typically a system of action rather than an individual or group of individuals.

- Thirdly, case-studies tend to be selective, focusing on one or two issues that are fundamental to understanding the system being examined.

- And fourthly, case-studies are multi-perspectival analyses.

This means that the researcher can consider, try to understand and analyse the 'case' from different perspectives and elucidate relevant connections and interactions between the 'case' and e.g. various stakeholders, environments and situations (Feagin et al. 1991).

Yin (1993) has identified some specific types of case studies: *Exploratory*, *Explanatory*, and *Descriptive*. Exploratory cases are sometimes considered as a prelude to social research. Explanatory case studies may be used for doing causal investigations. Descriptive cases require a descriptive theory to be developed before starting the project. In all of the above types of case studies, there can be single-case or multiple-case applications.

Stake (1995) includes three others: *Intrinsic* - when the researcher has an interest in the case; *Instrumental* - when the case is used to understand more than what is obvious to the observer; and *Collective* - when a group of cases is studied. This case-study research project has exploratory as well as explanatory and descriptive characteristics. This case-study is also instrumental as it seeks to explore the development and underlying 'causes' for the current character of the case-study area. The physical character of the study area is 'plain to see' to an observer, but to understand how this character has formed analysis beyond the immediately obvious is necessary.

6.3.3   Triangulation

The idea of triangulation is central to case-studies as a research strategy. By triangulation Stake (1995) refers to the protocols that are used to ensure accuracy and the consideration of alternative explanations before any inferences are made are. Snow and Anderson (cited in Feagin et al., 1991) assert that triangulation can occur with data, investigators, theories, and even methodologies. Denzin (1984) identifies four types of triangulation. These four types can be adapted to a built environment or architectural case-study. In this adapted model data source triangulation refers to the acquisition of data from a number of sources; Investigator triangulation would occur when several investigators examine the same phenomenon (i.e. in this case a site / building etc.); Theory triangulation, where case-study data is interpreted from different theoretical view points; and Methodological triangulation, where one approach is followed by another, to increase confidence in the interpretation. This case-study research primarily relies on the triangulation of data sources and methods.

The data gathered through appropriate forms of triangulation are used in case-study research to draw case-specific conclusions but can also be used to make generalised inferences about similar cases or phenomena. According to Tellis (1997) criticism towards the way in which case-studies are used to arrive at generalised conclusions about wider issues has appeared in the literature with regularity. It is a frequent criticism of case-study research that the results are not widely applicable in real life. However, Yin in particular (1993, 1994) has refuted this criticism by presenting a thoroughly constructed explanation of the difference between analytic generalization and statistical generalization. According to Yin (1984) in analytic generalization, previously developed theory is used as a template against which to compare the empirical results of the case-study. In contrast in statistical generalisation a representative sample is considered an adequate source of 'evidence' and thus a firm foundation for any inferences made. In case-study

research using analytical generalisation it is inappropriate to assume that some sample of cases has been drawn from a larger universe of cases. Thus it is also incorrect to use terminology such as 'small sample', as though a single-case study were a single respondent. In reference to this particular case-study this implies that inferences can be made about e.g. impacts of the planning policy interventions from the perspective of reasonably intact 19th century housing area without having to conduct in-depth historical analysis of all other residential areas in Newcastle.

Yin (1994) assigns four applications for a case-study research model. Thus according to Yin (1994), case-study research can be used

1. To explain complex causal links in real-life interventions,

2. To describe the real-life context in which the intervention has occurred,

3. To describe the intervention itself and

4. To explore those situations in which the intervention being evaluated has no clear set of outcomes.

Case-Study Methodology has been examined in the more specialised context of architectural or built environment research by e.g. Groat and Wang (2002) and Johansson (2000, 2007). Johansson (2007) describes how, in specific relevance to this study "... when a physical artefact is the case (instead of an individual or a social group) the gap between case study and history diminishes. An artefact is a carrier of its history." This means that in effect all architectural case-studies are also histories, as the context of design and the context of usage may be separated in time, but are normally equally important to the understanding of the case of a building (or indeed any other kind of artefact). This observation certainly applies to this specific case-study. Thus, in reference to the four categories of application proposed by Yin (1994) and Johansson's assertion of inherent historicity of architectural or built environment case-studies, the four categories introduced above can be modified so that they are more applicable to this case-study research.

In summary as outlined above historical case-study research into architecture or the built environment could be used to

- Explain complex causal links of change and continuity in the built environment

- Describe and analyse the real-life context in which the change (or continuity) has occurred

- Describe the kinds of changes that have taken place and to describe areas or features of continuity

- Explore situations in which the changes and continuities being evaluated have no clear sets of outcomes or well defined boundaries

These four possible considerations are elucidated further on p. 44 to develop appropriate research questions for this study. In order for the case-study research to be applicable in these ways, an adequate amount of information about the case must be gathered. In the following section types of data applicable to this case-study research will be considered, before moving on to analyse in more detail the data types used in this case-study.

6.4 Collecting Data in Case-Study Research

6.4.1 Types of Data

In a seminal introduction to case-study methodology Yin (1994) identifies six primary sources of evidence for case study research. These sources are: 1) documentation, 2) archival records, 3) interviews, 4) direct observation, 5) participant observation, and 6) physical artefacts. Not all data sources are relevant or essential in every case-study, but according to the principles of triangulation (as discussed above) the use of multiple sources of data is paramount to the reliability and rigorousness of the study. No single source has a complete advantage over the others; rather, they might be complementary and should be used in tandem. For this case-study documentation, archival records, direct observation, and physical artefacts (i.e. the built environment) are seen as particularly relevant.

Documentation and Archival Records are seen as stable sources of information, and they enable research over a period of time (i.e. historical research), and are unobtrusive – i.e. the research process does not create the data, as the data already exist. Documents and Archival Records may also enable quantitative analysis of data. The retrieval of these types of data can however be slow or difficult and may even be entirely blocked for e.g. privacy reasons. It is also possible that bias enters the data gathering and analysis either through biased selection of source, or through author bias in the reporting stage. In contrast, direct observation covers e.g. events in their original context, and allows for observation of data in real-time, as events unfold. However, direct observation can be time consuming, limits in the human observational capability may introduce errors through missed facts, and if observing human interactions the presence of the observer may cause

changes in people's behaviour. Using physical objects as data allows for exploration into cultural features of e.g. artefacts and gives an insight into technical operations. The challenges of using physical objects as data lie in data selection and availability. The considerations about the strengths and weaknesses of data types used in this case-study are summarised in figure 6.5 on page 133 based on the work by Tellis (1997) and Yin (1994, 80).

Source of Evidence	Strengths	Weaknesses
Documentation	stable - repeated review, unobtrusive - exist prior to case study, exact - names etc. broad coverage - extended time span	retrievability - difficult biased selectivity reporting bias - reflects author bias access - may be blocked
Archival Records	Same as above precise and quantitative	Same as above privacy might inhibit access
Direct Observation	reality - covers events in real time contextual - covers event	context time-consuming selectivity - might miss facts reflexivity - observer's presence might cause change cost - observers need time
Physical Artifacts	insightful into cultural features insightful into technical operations	selectivity, availability

Figure 6.5: Sources of Evidence in Case-study Research

The four data types outlined in figure 6.5 are of particular interest to this case-study as they provide data about the physical reality of the case-study area, whilst also allowing for the consideration of the other three (technical, psychical and affective) aspects of reality.

1. Documents can be letters, memoranda, agendas, study reports, or any items that could add to the 'case-study database'. The validity of the documents needs to be carefully reviewed so as to avoid incorrect data being included in the database. One of the most important uses of documents is to corroborate evidence gathered from other sources. However, the potential for over-reliance on document as evidence in case- studies has been a source of criticism. According to Yin (1994) there could be a danger of this occurrence if the investigator is inexperienced and mistakes some types of documents for unmitigated truth. In this case-study this specific refers to current and Historical OS mapping, census data of residents, and data from historical directories and rate-books.

2. Archival records are useful in some studies since they include service records, maps, charts, lists of names, survey data, and even personal records such as diaries. However, the investigator must be meticulous in determining the origin of the records and their accuracy. The main source of archival records in this research are the development control building plans from the Tyne and Wear Archives Service.

3. Direct observation in a case-study occurs when the investigator makes a site visit to gather data. The observations could be formal or casual activities, but the reliability of the observation is the main concern. Using multiple observers is one way to guard against this problem. In this research the direct observation data is gathered during fieldwork, i.e. physically going to the case-study area and conducting survey and photography. To ensure and demonstrate the reliability of the direct observation data in this study, the fieldwork undertaken is documented through photography, mapping and field notes.

4. Physical artefacts could be any physical evidence that might be gathered during a site visit. These might include tools, art works, notebooks, computer output, and other such physical evidence. In reference to 'direct observation' above, the 'physical artefact' of the city / neighborhood / house (etc.) is considered as primary evidence. Supporting evidence, in this study, is sought from existing written documents (both primary and secondary), as well as other archival materials such as building plans.

6.4.2 Types of Data in This Case-Study

In specific relevance to this research the data sources used to study the physical reality of the case-study area can be considered either as 1) Historical Data, or 2) Spatial Data. Historical Data which are mostly sourced from documents and archival material include: census data of residents, and historical directories which give information about the residents and their occupations and building use. These data also allows extrapolating the order in which the houses were constructed. Census data also indicate household size and number of occupants, and whether the premises were being used as a lodging house, or if the household employed live-in servants. Development control building plans (TWAS) which can be used to indicate the chronological order of building, and what was built and where, but also by whom (i.e. who's financing the build), and which architects and builders were involved. These data are also helpful in the definition of typologies. 'Ratebooks' (from 1890) indicate occupancy, type of property (i.e. rented or owner occupied), ownership of the building and the rateable value of the house. These data can be used

to construct patterns of house occupancy and ownership, as well as to add data to the housing typologies. Archaeological data (e.g. the Tyne&Wear HER) identify any known archaeological sites, ancient historic monuments, listed buildings etc in the study area. These data indicate in part what is already known about the area, and which parts have already been identified as 'heritage'. The historical data is combined with Spatial Data which are mainly gathered through direct observation and assessment of the buildings and the environment themselves, but also from documents and other archival sources. These include data sources such as: Current maps, Historical OS mapping and Field work (i.e. direct observation and analysis of the physical artefact). These data sources allow spatial definition of character areas, and presentation of data. They also illustrate the historical development pattern of the area, and help in urban design and townscape assessment of the area, and in the construction of house typologies.

Ultimately the case-study will also act as 'record' of the area. Documents, archival records, direct observation and physical artefacts are seen to provide the type of data pertinent to the conceptual framework developed earlier and relevant to the overall objectives of this study. It is especially important to combine data sources and data collection methods that can address the time depth inherent in the study area. It is also important to consider using available data in new ways to illustrate the role of the less tangible aspects of the transductive matrix, i.e. the technical, psychical and affective elements of the study area.

Thus in using these multiple data sources it is vital to adhere to the further two principles of data collection for case-studies identified by Yin (1994); which are to 1) create a case-study database 2) to maintain a chain of evidence. The reason for using multiple sources of data is the triangulation of evidence. Triangulation is seen to increase the reliability of the data and the process of gathering it. In the context of data collection, triangulation serves to corroborate the data gathered from other sources. The data that are collected during this phase must be organized and documented just as it is in other (e.g. experimental) studies. Typically in social sciences case-study research two types of required database are the data and the report of the investigator. The design of the databases should be such that other researchers would be able to use the material based on the descriptions contained in the documentation. All types of relevant documents should be added to the database, as well as tabular materials, narratives, and other notes. The recommendation for maintaining a chain of evidence (e.g. Yin, 1994) provides an avenue for the researcher to increase the reliability of the study. In reference to this specific research project the visual documentation (photographs etc.) for the external features of

houses and their floor-plans is meant to serve this 'chain of evidence' purpose.

6.4.3 Types of Evidence in This Case-Study

When initially considering the research design and approach that would be the most appropriate and informative for the type of case-study this research project was proposing to pursue, a range of relevant data and appropriate data collection methods were identified. In order to provide a convincingly analytical case-study that would address both the historical development and the current environment of the case-study area it was deemed important to full-fill the requirements of triangulation, both in terms of methods and data. As discussed above in *Review of Methods* section there are many different approaches that could have been used to study the built environment of the case-study area. Methodological appropriateness, rather than any preference for either qualitative or quantitative methods was the main criterion when choosing how to proceed with the case-study work.

The choice of data collection methods and analytical approaches to this data essentially centres on the following two issues: Firstly, as discussed in the *Conceptualising Character* Chapter, the concept of 'character' is theoretically a complex one. In practical terms 'character' as a concept is intimately bound with current planning policy and objectives, as well as the current Heritage Projection legislation review. In academic terms it has interested scholars from various disciplines and as outlined above 'character' is an integral part of the conceptual and methodological development of this study. Secondly, 'change' through time has been identified as a significant characteristic of 19th century housing areas. Both of these considerations are bound to the transductive matrix developed as the theoretical framework for this study in the *Conceptual Development* section above. The concept of character is seen to emerge from the unique combination of the four aspects of reality (technical-physical-psychical and affective) at any given moment in time, and 'change' within the built environment is seen as the path that the project (e.g. the 'built environment') has taken through the transductive matrix.

To evidence such complex issues, triangulation of both data and methods for data acquisition seemed methodologically appropriate. As one of the aims of this study is to demonstrate links between the historical development of an area and the current environment both historical and present day data are used in the case-study. The choices for the data sources need to be justified in the context of the conceptual framework introduced above. Groat and Wang (2002, 154-9) categorise four types of evidence typically used in historical-interpretive research. These categories are: 1) determinative, 2) contextual, 3)

inferential, and 4) recollective. As far as relevant to this specific case-study in the following sections the connection between the types of data sources, data collection methods, and the kinds of evidence these can yield will be demonstrated.

Determinative evidence is of primary importance as this type of data can situate the object of study in the time and space of the 'one historical world'. Dates are one obvious type of determinative evidence. Groat and Wang (2002, 154) suggest that because architectural history research involves the material object, archaeological research tactics that can pin-point dates are useful as determinative evidence. Referring to the types of data sources discussed above, documents and archival records are the main sources of determinative evidence in this case study. Contextual evidence in architectural research can often come from the buildings themselves, as elements of the built environment are often used to situate the object of enquiry in context. Thus architectural objects, themselves situated in time, can be used to compare the design of (x) with the design of (y), and further archival evidence may point to influences, and thus evidence context. In this particular case-study contextual evidence can be gathered by comparing the physical make up of the case-study area to other housing areas. The areas of comparison could be e.g. within Newcastle but of different dates, or from other cities, but of similar date. Further contextual evidence could come from e.g. assessment of the building regulations or law which will have had an impact on the physical layout and look of the study area. Case-Study fieldwork, combined with the information that can be called determinative, will provide the main contextual evidence for this case study. Inferential evidence is arrived at by logical deductions, even though "hard" connections may not be available. As an example inferences can be made about the changes in the use of buildings from the way in which the houses have been altered and modified by their various inhabitants. Recollective evidence in interpretive historical research usually refers to data (memories) gathered in interviews, rather than present day reactions to things. Groat and Wang (2002, 159) suggest that with recollection, all of the previous kinds of evidence maybe involved.

The above methodological discussion has provided justification for the interpretative-historical case-study methodology as a research approach pertinent to this study. The purpose of this specific case-study in this research project is to address the complexities of 'character' and the impact and origins of 'change' through a trans-disciplinary approach which aims to combine the study of historical origins of the area, with the assessment of the current built environment, and combine these in the analysis of the impact of planning policy and regulations, emergence of local building type (the Tyneside flat), persistence

of the 19th c. row house in the present day, changes in the built environment explored through local shops, and the historical 'character' of working class living in the early 20th century. It is hoped that this exploration of 'character' – will allow for a more nuanced reading of what constitutes 'character' in the context of the 19th century housing within the post-industrial city.

The remaining sections of this Chapter describe how the research methodology decsribed above is applied to the heaton case-study area and thus outline the structure of the *Case-Study* Chapter.

6.5   The Case-Study – How the Methodology is Applied

6.5.1   The Case-Study Area

As discussed in the Introduction section above, it has been the intention of this study from the beginning to address industrial era housing in Newcastle through selected case-studies. Thus the data gathered in this study relates to these chosen locations specifically. However, it is also the aim of this study that some of the general characteristics of post-industrial cities will emerge through the analysis and comparison of the case-study data. The pilot study described above tested out some of the characterisation techniques used for example in the HLC process, in the context of industrial era housing in Newcastle.

The pilot study was conducted in two areas, namely in Benwell and Heaton. It enabled analysis at a level that allowed for decision making based on a map based assessment and review of the various parts of Newcastle, identifying the areas of surviving 19th century housing. The pilot study and discussion with the collaborative partners at the Newcastle City Council allowed for further definition of areas that appeared more pertinent to this research. It was also decided that as this research seeks to link academic research and the interests of a 'practice based' collaborative partner, an existing research approach (i.e. HLC already in use and being promoted for the management of the historic environment, would be a useful tool in identifying the areas surviving 19th century housing, and provide a geographically located meeting place for the diverse interests of the stakeholders in the research project.

Thus once areas of 19th century housing had been identified, it was agreed that areas of housing to the north of the city centre, i.e. Gosforth and Jesmond, might not be the best subject for this study, partly because these areas have been studied in the past and

are also partially covered by recent *Conservation Area Appraisals* (NCC, 2005, 2007). Areas such as Shieldfield and Byker were not chosen because the industrial era housing has largely been replaced with post-war housing developments, and Byker especially has been subject of number of social and architectural studies in the past (Pendlebury et al., 2006). Although characteristic of the development of the post-industrial city, in terms of their construction date the outer suburbs of Newcastle such as Kenton fall outside the 'industrial' time period set for this study. And finally it was decided that this study should not focus exclusively on the areas under-going major changes during the Housing Market Renewal regeneration programme that is under way in Newcastle and Gateshead (Bridging NewcastleGateshead, 2006) at the time of conducting this research. As befits a research project of this nature, this process of 'elimination' was conducted collaboratively, and in the end it was decided to focus on areas of housing in Heaton in East Newcastle, and Benwell in the West.

The choice of case-study areas also reflects the researcher's broader interest in the 'everyday environments' of residential neighborhoods where much of the 'practice of everyday lives' (De Certeau, 1988) takes place. In practice, however, during the analysis of the pilot study data, it became evident that the research methodology proposed would be more valuable in producing a focused and detailed study of a smaller area, rather than covering a larger geographical area in less detail. Thus it was, again collaboratively, decided that the full case-study should focus on the Heaton residential area, as Benwell has been the focus of many planning interventions and studies already. In other words, in the context of Newcastle's built environment, Heaton appears to have 'fallen into the gap' between world famous landmark project such as Byker, on-going and long recognised problem areas such as West End of Newcastle, and the 'beautiful suburbs' of Gosforth or Jesmond. In the past Heaton might have been described as 'having little interest in its history' (Dendy, 1921), but as an ordinary, yet perhaps surprisingly resilient and adaptable area, it now appears particularly appropriate for the aims of this study.

6.5.2 Structure of the Case-Study

In reference to the 'many landscape disciplines' engaged in the study of 'places' and 'landscapes' discussed in Chapter 2, the research strategy developed for this case-study is trans-disciplinary (Lawrence and Despres, 2004) in nature (as already intimated on page 4 of this chapter).

This section outlines the research method applied to the full case-study as elaborated and defined through the first explorative phase of research, and particularly as tested

in the Pilot Study. Essentially, this research employs an 'area based' 'case-study' as the research methodology addressing the character of surviving industrial era housing in Newcastle-upon-Tyne. The research method is summarised in figure 6.6 on page 142, to which the italicised titles in this section of the text refer to. The Introductory Phase of the case-study operates on a city wide scale and includes a short introduction to the history and development of Newcastle, which is followed by a consideration of some aspects of the technical reality that makes up (and maintains) the city. This introduction to 'technical' Newcastle addresses what is usually called 'infrastructure', and operates at a city wide scale (see Figure 6.6). A review of existing knowledge about the development of some of these infrastructures, allows for the emergence of a picture of this often ignored part of the city. Although often unnoticed and taken for granted part of the transductive field of the city, the technical layer structures the human existence, in turn enabling and restricting our lives. Many forms of this technical reality converge in a unique way, in the physical reality of our homes.

Subsequently the physical aspects of the study area are explored through a three phased case-study research strategy. The three phases of the case-study research consist of:

1. Phase 1: 'Archaeological Desk-based Assessment' which looks at the development of the wider case-study area through historical / archaeological research utilising this established research approach.

2. Phase 2: HLC is then used to divide the wider case-study is then divided into 'character areas'. Each character area is documented and described in terms of their Historic Landscape Charteristics.

3. Phase 3: The study then focuses on a single character area in –depth. Both the current built environment and the development of the area through history is scrutinised.

Thus the three phases define the case-study to a geographically decreasing area in an increasing level of detail. The three phases of research use both present day and historical data to analyse and illustrate the relationship between the two showing areas and impacts of continuity and change.

In using different research methods each of the three phases has different research objectives. For *Phase 1* the objectives are historical and archaeological in nature. In other words Phase 1 seeks to describe and illustrate the historical sequence of development of the built environment (or path and project in theoretical terms). *Phase 2* has more explicitly

analytical objectives in aiming to link present day and history through the division of the present day urban landscape into character polygons that not only reflect the pre-defined HLC categories (which are essentially based on broad land-use types), but also analyse the impact of historical development on these polygons through assessment of the age of prominent land-use character, and the survival historical patterns in the present day landscape (or the end result of the project). The objectives of *Phase 3* are in this study described as project specific. This refers to the flexibility purposefully built-in to this part of research. Phase 3 allows for the exploration of project specific research questions which Phases 1 and 2 contextualise (in other words Phase 3 analyses the impact of the path and project). In using historical research in combination with archaeological research approaches, and combining these with the assessment of the current built environment through urban design and townscape analysis, and in developing house typologies – this research draws from research methods used by a number of academic disciplines.

Finally the Analysis Phase of the case-study will develop into to consideration of case-study data in a wider context. Figure 6.6 on page 142 also seeks to demonstrate how, if this approach was adapted to study the whole of the urban landscape of Newcastle, the rest of the blank squares in the table could be 'coloured in'. The research tactics used in each of the three phases are discussed in further detail in the following pages.

Summarising the Structure of the Case-Study

PHASE of Research	Dimension of the 3D Matrix Focussed on	Geographical SCALE of Enquiry	RESEARCH OUTCOMES			
Introduction	Implicitly discusses all three dimensions	'whole of Newcastle'	- Introduction and historical back-ground to Newcastle - Exploration of some aspects of the 'technical' reality of the city			
Phase 1	_Time_ (i.e. historical assessment)	'Newcastle divided into study areas'	Eg. Benwell	Heaton 'desk-based assesment'	Jesmond	Walker
Phase 2	_Space_	'study areas divided into character areas'.		'HLC'		
Phase 3	_Reality_	'single character area studied in detail'		1 2 3 4 x y z q w		
Analysis	Synthesis of All Three Dimensions		- Analysis of gathered data in wider context - Contextualising working-class life in the early 20th century - Any other analysis			

- (1,2,3,4 Represent different character areas (polygons))
- (X, Y, Z, Q, W represent different modes data gathering and analysis)
- The turquoise area represents the extent of the case-study

Figure 6.6: Model of the research strategy used in the construction of the case-study

In conducting the case-study research in the way described in the above text and in the figure 6.6 on page 142 this thesis addresses the chrolonological, spatial and reality

dimension of the post-industrial city conceived in this study as a transductive matrix. However, it is necessary to acknowledge that in the phase 3 of the case-study which addresses the reality dimension of the matrix, the focus of the case-study is in the 'physical' aspect of reality. Although the case-study gives some consideration to technical aspects of reality, the data-collection methods used give little information about the psychical and affective aspects of the charcater of the case-study area. This is in keeping with the collaborative nature of this research project which suggested that the focus of the study should remain within the physical historic built environment of Heaton.

6.5.3   Data Collection in This Case-Study

As discussed above the specific data sources used in research, identified and deemed most relevant during the pilot study, can be divided into Historical and Spatial Sources, and include the following: Historical Data; census data of residents, and historical directories ; development control building plans ; rate-books and archaeological data, and for Spatial Data; current maps (printed and digital); historical OS mapping and field work. These data are used throughout the three phased case-study research. The specific approach taken in each phase is detailed in the following.

Phase 1: Archaeological Desk-based Assessment

The aim of 'an archaeological desk-based assessment' is to identify and assess the significance of sites, buildings and finds of archaeological and historic interest within a given location, with the aim of gaining a greater understanding of the historic development of the area, and the potential for the survival of sub-surface archaeological features or deposits within it. Within the context of this study the focus of attention will be on the 'over-ground' archaeology, and the under-ground deposits are not assessed as rigorously as they might be in a 'stand-alone' piece of desk-based assessment. However, types of data consulted, the use of map progression and consideration of changes over time are drawn from the methods established and recognised as valid in desk-based assessment. The following sources of information have been consulted in order to meet the requirements of the desk-based assessment, and are in line with the guidelines laid down by the Institute of Field Archaeologists for such work (IFA, 2001).

Archaeological archives and databases The Tyne and Wear Historic Environment Record (HER) holds information on previous archaeological finds and investigations within the study area. Tyne and Wear Archives were consulted for historic maps and plans, antiquarian histories and other documentary sources.

Listed Buildings Information regarding Listed Buildings is available from the Newcastle City Council Historic Environment Section and from English Heritage's 'Images of England' website.

Scheduled Monuments Scheduled monument information comes from the government's on-line environmental GIS website 'MAGIC'.

Other designations Information on other designated sites of archaeological or historic interest can be found from the Tyne and Wear HER and the 'MAGIC' website.

Published and unpublished documentary sources A range of published and unpublished material was researched and consulted. This includes academic journals and publications, trade directories and local histories, together with general sources on the area and its wider archaeological and historical background. These are listed in the bibliography.

Geological and soil surveys Information on the underlying geology and soils within the study area is available from data collected by the former Institute of Geological Studies, now the British Geological Survey (BGS 1969a; 1969b).

The purpose of this 'desk-based assessment' is to give historical time-depth and context to the study area, and thus address the time aspect of the transductive matrix discussed above in Conceptual Development section. Desk-based assessment is among the 'archaeological research tactics' referred to by Groat and Wang (2002, 154) that can be used to gather determinative evidence about the physical environment. The information gathered in the desk-based assessment is use used in conjunction with archival research and field work to divide the study area into character 'polygons' in an approach akin to that used in HLC.

Phase 2: 'Historic Landscape Characterisation'

In addition to the published HLC methodology the scope and timescale of this research project has allowed for the designation of 'character polygons' based not only on cartographic evidence, but also on the relevant data from archival research and fieldwork. Not with standing the various criticisms levelled at HLC (e.g. Finch, 2007, Austin, 2007, Williamson, 2007, Watson, 2009), and recent concerns about whether a landscape based approach is appropriate to the study of the historic environment of cities, it is proposed that the type of 'contextual awareness' HLC analysis offers can make it a valuable approach into the assessment of the historic environment. In this regard HLC gives an insight of the archaeological potential of an area, and gives context to e.g. a scheduled monuments or the group value of surviving railway cottages. Therefore, this study takes a reference the map-based character polygons as defined by HLC and attempts to develop

a more refined and in-depth definition of the polygons.

In dividing the whole study area into 'character polygons' this study relies primarily to cartographic (i.e. Ordnance Survey) data, and the data available in Vendor's Plans at the Tyne and Wear Archives. These are planning documents in which the landowner proposes the development of his land into streets and building plots. The vendor's plans indicate the planned road layout, drainage arrangements, and usually include some indication of the typology of houses. Once the plan had been approved, the land owner would have undertaken the construction of necessary infrastructures such as roads and sewers and then sold the building plots in small parcels to would be developers. The developers engaged the services of an architect to finalise the building designs and employed a builder to undertake the work. Sometimes the landowner would engage directly in the building activity and end up acting as the landlord for the finished houses, and sometimes the builder would speculate in buying some building lots and either selling the finished houses to an owner occupier or a landlord, or acting as a landlord themselves. Constructing the 'character polygons' this way helps to reveals pockets of later in-fill within the polygon, as opposed to such as area becoming identified as a separate character area.

Phase 3: Detailed Analysis

This study proposes that concepts such as 'characterisation' can be an asset in creating trans-disciplinary approaches to complex issues such as the (historic built) environment, but at the same time such concepts remain complex and fuzzy, and it can be difficult to define the exact research question that 'characterisation' as an approach should (or does) address.

To specifically address the issue of industrial era housing in the post-industrial city, the change from industrial to post-industrial era has been identified as a major theme of interest, and it is in reference to this characteristic that the in-detail analysis of the single character areas has been designed and developed. It is also intended that if this study approach was developed for a city wide scale, the phases 1 and 2 (described above) would be carried out uniformly throughout the whole study area, whereas in the detailed study phase (phase 3) different methods could be used to address the different forms of changes that have occurred in different character areas. The same research approach simply might not be equally informative on areas as diverse as Byker and Gosforth, for example, whilst the structure and general method of the study would allow addressing such specificities.

The following part of this section outlines the research approaches used in this de-

tailed analysis. Firstly, typological analysis of the external elements of houses and the analysis of the current built environment is discussed, further examples from the case-study database draw from the data gathered relating to house types and residents. The research approaches utilised in this thrid phase of the case-study are chosen soecifically to focus on the physical aspects of the character of the study area.

1) Typological Analysis of Houses and Their External Decorative Elements

Typology is concern in the study of systems of order and classification in many related disciplines such as Archaeology, Architecture, Anthropology, Linguistics (including all media), Sociology and Theology. Typology and classification are an essential foundation of much of modern thought, especially within the social sciences. More specifically in relevance to this study, in architecture and built environment studies typology (e.g. Krier, 1983; Rossi, 1984; Moudon, 1994; Pertruccioli, 1998) is concerned with distinctions between the particular and the general, involving taxonomic classification of characteristics common to groups of buildings including shape, organization of parts, construction, symbolic meaning, and use. However, typology in architecture is also about origins (Leatherbarrow, 1993)– finding the essence of an architectural work in place and time, and can be used to study the measure and/or procedure of transformation of elements from one building to another.

Typological approach is useful for the comparison of data when gathering visual data (i.e. photographs and drawings) to document e.g. the visual characteristics of an area of housing. In particular reference to this study, and the 19th century housing in Newcastle it appears that as previous studies of Tyneside flat have concentrated upon the plan form of the house, they have limited their scope of analysis. This is limiting in understanding – just as only analysing architectural style (Victorian: (Dixon and Muthesius, 1978, Curl, 2002, Clark, 1962), Edwardian: (Long, 1993) (Swenarton, 1981)) also misses something essential about 19th century row-house, or the inter-war semi.

In taking a look at the external embellishment of the houses in conjunction with the main plan form, together with historical research into the rateable values and rents realised, this study gives a much more varied and telling picture of the lived built environment of the 19th century suburbs. This analysis also relates to the conceptions of city and character developed earlier. This study proposes to analyse the main plan typologies and the variations within the study area concentrating on the ways in which the front door and main front-window (often a bay-window) are embellished. The relationship between the house and the plot of land appears another important element that influences the amount of external decoration which often appears to be related to the amount of private

space (i.e. front yard or garden) available to each individual property.

2) The Case-Study Database

The case-study database combines the addresses of all the houses within the detailed study area with information about the typology of housing (i.e. terrace, flat or cottage), and data about the owner, value and main occupant of the house. These data are provided for all the houses from the year 1890, and if the house was already built in 1885 then this data is included too.

The notion of the case-study area as 'residential' has been challenged by the findings of the case-study research and the provision of local shops as part of the 'technical layer' of the area started to appear increasingly interesting as the research progressed. The initial case-study data base was therefore developed further through the identification and analysis of shop premises. The following pages introduces the kind of data the database holds:

Analysis based on this data will help to illustrate the range of properties, and thus the range of inhabitants in the study area immediately after (or even during) its construction. Detailed analysis of the fabric of the built environment of the area helped to high-light a perhaps surprising variety of houses. The data about the rateable value of the houses and the range of occupations of people inhabiting them appears to support this initial realisation. The case-study database also allows for analysis of properties other than residential within the study area. Apart from the Presbyterian Church and Hall on Heaton Road, the Library at the edge of Heaton Park and the School on Heaton Park Road the study area contained no notable public buildings. However, this does not mean that the area was otherwise exclusively residential. In the late 19th and first half of the 20th century Stratford Road and Heaton Park Road were in effect high streets of their local neighborhoods, and undoubtedly, in a society were most people's main mode of transport was walking, acted as centres of local shopping activity. As the retail premises account for a relatively small number of properties it has been possible to extend the chronological scope of the database to cover years 1901, 1910 and 1916.

This study proposes that statistical analysis of this shop data in combination with the visual and analytical data gathered about the physical environment illustrates the kind of effect that the reduction in the number of shops catering for the neighbourhood has had, both in terms of the physical characteristics of the area as well to the wider character of the neighbourhood during the 20th century.

3) Elements of Urban Design and Townscape Analysis

In addition to typological analysis of the 19th century housing stock, the third phase

Bolingbroke Street 1890

No	Type	ref	Type 2	status	value	Owner	Occupant in 1890	profession	in 1885
36	Tyneside	9783	(b)		12	Richard Nichol	Davies, D.	fruiter	Allan, J.
34	Tyneside	9783	(b)		11	Richard Nichol	Wilson, W. H.	draughtsman	Hopper, G.
32	Tyneside	9783	(b)		12	Richard Nichol	Stewart, J.	Mrs.	
30	Tyneside	9783	(b)		11	J. Kirkley	Kirkley J.	agent	
28	Tyneside	9783	(b)	OO	12	J. Kirkley	Kirkley J.	gentleman	Kirkley, J.
26	Tyneside	9783	(b)	OO	11	James Aitchison	Aitchison, J.	cement tester	
24	Tyneside	9783	(b)		12	James Aitchison	Allan, J.	guard	
22	terrace	9840	a)		17	William Eltringham	Holmes, R. H.	builder	Eltringham, S. G.
20	terrace	9840	a)		17	W. H. Kingdom	Richardson, W.	clerk	Maughan, E.
18	terrace	9840	a)	OO	17	W. Wright	Wright, W.	grocer	Wright, W.
16	terrace	9840	a)		17	William Smart	Scott, T.	com. traveller	Scott, T.
14	terrace	9840	a)		17	William Smart	Robinson, G. F.	butcher	Smart, W.
12	terrace	n/a	a)	OO	17	R. Trobe	Trobe, R.	miller	Trobe, R.
10	terrace	n/a	a)	OO	17	J. Havre	Havre J. J.	waterman	Havre, J. J.
8	terrace	n/a	a)		17	J. J. Elliott	Hopper, G.	hairdresser	Elliott, T. J.
6	terrace	n/a	a)	BS	17	Peregrin Building Society	Reed, J. G.	draper	Oxnard, P. H.

Figure 6.7: Example of data from the case-study data-base

No = house number Type = Typology Ref = the number of the relevant building plan in the Tyne & Wear Archive Type 2 = more detailed analysis of the distribution of the two different types of bay-window Status = OO denotes an owner occupied property and BS stands for Building Society Value refers to the 1890 Rateable (for tax) value of the house

of the case-study addresses the urban design and townscape aspects of the detailed study area. As discussed earlier in the *Review of Methods* chapter, among the features commonly considered as part of urban design analysis are issues relating to 1) Land-use (is the area used for residential, industrial, recreational, transport, or infrastructure (etc.) purposes); 2) Landscape Features, and 3) Community Facilities (especially relevant in residential areas, community facilities typically include libraries, community centres, churches, doctor's surgeries, shops and post-offices.) In addition to these concerns urban design analysis can address the functional aspects of an area, such as transport links and ease of movement through and within the area, as well as more intangible elements such as character. Urban design analysis also often makes some form of qualitative judgements based on the assessor's professional judgement about the attractiveness, cohesion and quality of the area or its individual features.

In this case-study the urban design analysis focuses on six topics which are seen to be central in the creation of successful neighborhoods. The six topics, as discussed in the Review of Methods Chapter, have been defined by CABE (2000) and are: 1) *Character*, which addresses whether the Study Area is a place with its own identity; 2) *Continuity and Enclosure*, which explores the quality of outdoor areas within the study area; 3) *Quality of the Public Realm*, which seeks to assess whether the public and private spaces within the study area are clearly distinguished; 4) *Ease of Movement* assesses how easy it is to get to and move through the study area; 5) *Legibility* evaluates whether the study area has a clear image and is easy to understand; and 6) *Diversity* which aims to explore whether the Study Area is a place with variety and choice. Addressing these issues urban design analysis seeks to answer these questions concerning the identity of place summarised in the table below:

4) Urban Design Considerations

Addressing the questions:

1. CHARACTER - Is the Study Area a place with its own identity?

2. CONTINUITY AND ENCLOSURE - Is the Study Area a place with attractive and successful outdoor areas?

3. QUALITY OF THE PUBLIC REALM - Is the Study Area a place where public and private spaces are clearly distinguished?

4. EASE OF MOVEMENT - Is the Study Area a place that is easy to get to and move through?

5. LEGIBILITY - Is the Study Area a place that has a clear image and is easy to understand?

6. DIVERSITY - Is the Study Area a place with variety and choice?

Depending on the focus of interest 'townscape analysis' can encompass many different things, and be either a very brief written description, or an elaborate report illustrated with maps, drawings and photographs as discussed earlier in the *Review of Methods*. In fact 'urban design analysis' and a 'townscape assessment' often have similar concerns and common elements.

Like the topics for 'urban design analysis' above, the townscape features of the study–area are analysed in an illustrated report, which forms part of the following chapter of this study. In this case-study the 'townscape analysis' is used to map, illustrate and asses the features of the case-study area outlined in table 6.8 on page 150.

In this case-study the urban design analysis and townscape assessment appear particularly important, as when addressing the physical built environment, they also consider the visual, technical, functional and qualitative aspects of the case-study area through direct observation.

However, it would be against the intellectual premise and the aims and objectives of this study to try to either evaluate the built environment of Heaton in comparison to other similar areas in Newcastle or cities elsewhere, or to rank Heaton against some perceived design ideals, based on urban design or townscape criteria. In other words, this case-study – as part of inductive reasoning about the characteristics of 19th Century residential areas uses CABE' s (2000) Urban Design criteria and the chosen elements of Townscape Assessment as descriptive and analytical tools instead.

6.5.4 Proposed Analysis of the Data

Referring again to the theoretical framework developed for this study and considering the case-study area as a complex three dimensional transductive matrix, consisting of affective, psychical, physical and technical realities it becomes apparent that the consideration

1) Significant Local Buildings
2) Large Scale Alterations to the Area
3) Changes to the Public Realm
4) Effects of gradual, small scale change

Figure 6.8: Proposed features of townscape analysis in this study

of the built environment as more than just a 'physical reality' implied by both of these research approaches will in effect gather data of all the four layers of the reality of the city. In addition it is the intention of this study to demonstrate, that it is especially in this third phase of the case study that additional, alternative or complementary research methods could be used to formulate further information about the chosen study area addressing its specific qualities and character.

Within the Case-Study Chapter

The detailed analysis conducted in Phase 3 of the case-study will involve both the assessment of the urban design, and townscape elements of the area, as well as an analysis of the typology of housing with specific reference to the external embellishment of superficially 'monotonous' row-housing.

Reiterating the research questions of this study first outlined in the Introduction Chapter, and referring to Yin's (Yin, 1994) four applications for a case-study model (as already introduced and further explored above in this Chapter), this case-study research about the character of the built environment in Heaton develops the following four considerations:

1. Research question: How has the physical character of the study area developed through history? Describing the historical development and the context of the study area (Phase 1 of case-study research; chronological dimension of the transductive matrix). Describe physical results of the development of the study area;

2. Research question: What is the physical result of this development in terms of urban historic landscape character? (Phase 2 of case-study research; spatial dimension of the transductive matrix)

3. Research question: What characterises the detailed study area ? Explore the outcomes of e.g. the planning policy interventions, and the societal changes that have occurred. These changes might not have an immediately obvious clear set of outcomes, but could be addressed in a new way in the context of the transductive matrix (Phase 3 of case-study research; the four layered reality dimension of the transductive matrix)

4. Explaining complex causal links in the (historical) development of the area, highlighting areas of change and continuity within the detailed study area, analysing the impact of 'interventions' within the detailed study area (Analysis)

As the main focus of this case-study is the 'physical' reality of the case-study area in Heaton, Newcastle, various aspects of the built environment are addressed in the main body of the case-study chapter. As such this case-study can be seen as a 'descriptive' case-study (Yin, 1993). The conceptual framework established for this descriptive case-study calls for consideration of the case-study area as part of a city that is understood to be a transductive matrix, consisting of technical, physical, affective and psychical realities.

As discussed above 'change' has been identified as a key characteristic of industrial era housing in the post-industrial city. The types of change that have occurred will be a key feature of the analysis of the data gathered about the case-study area. Some of the areas of changes and continuity, and thus elements of further study addressed within Phase 3 of the case-study include:

- Persistence of 'variety' within the physical reality of the detailed case-study area. Evidence for this will emerge from the urban design and townscape analysis, especially when comparing this data to information gathered during the desk-based assessment. These small scale changes also reflect some of the cultural and societal changes that have taken place over the last 100 or so years.

- Small scale change instigated by the residents themselves. Evidence for this emerges from the urban design and townscape analysis, especially when combining this data with the information gathered in the case-study database.

The assessment of these characteristics of the detailed case-study area are contextualised more widely in the concluding Analysis and Discussion sections of this study.

In Character of 19th Century Residential Areas Chapter

Following the 'report' covering the Introduction and the three Phases of the case-study research, the first Analysis chapter of this study moves on from the geographically specific analysis relating to the detailed study area and makes connections between findings of the detailed case-study and broader characteristics and contexts of the 19th century terraced housing in England. The topics for this wider assessment include

1. the terraced house type and in the case of this study specifically, the emergence of Tyneside flat. This analysis is done through comparison of existing literature and data this study has gathered

2. the impact of planning policy interventions of the last 100 or so years within the detailed study area (and for 19th century residential areas in general); and

3. the impact of change in the built environment of 19th century residential areas, through changes in the 'suburban infrastructure', specifically local shops.

From the analysis of these three characteristics of the detailed case-study area the second Analysis chapter develops into a consideration of the more abstract characteristics of 19th century residential areas within post-industrial cities.

In Continuity and Change in the Post-Industrial City Chapter

One of the key issues to be addressed in the analysis of the case-studies is the role of Victorian Building Regulations in creating the built environment, and the subsequent role of Master Planning in changing it. Newcastle had far reaching and very ambitious plans regarding the built environment in the 1960s. The contrast between was planned at the time and what actually has taken place (i.e. how much demolition and rebuilding has occurred) is marked. Analysing the case-study data in the context of deliberate interventions, as manifested in the various planning policies, should mean that this kind of area based study will show what is typical of the area throughout its history, and also make clear distinctions between those elements that illustrate wider national and regional trends, and those which are locally distinctive or genuinely unusual. If the 'technical' layer of the city is seen to consist of not only the physical networks of 'infrastructures' but also of networks and flows of people, communications, etc. then the planning interventions impacted on Heaton since the building of the area, can bee analysed in this context too. These issues are mostly related to the change across time (or history), and thus address the broad research question about the change from industrial to post-industrial society and city. Among topics the second Analysis chapter discusses are the reasons for the 'survival of Heaton' (and 19th century housing in general) in the light of the study undertaken, and how changes in peoples behaviour, for example in the form of car ownership and changes in shopping habits, are driving change in the remaining 19th century residential areas. Evidence for these analysis emerges from the urban design and townscape analysis, but also from comparison of field work data with the information gathered during the desk-based assessment.

Essentially the second Analysis chapter discusses change, continuity and the conflict of values that affects the management of the (historic built) environment as three defining characteristics of 19th century residential areas within post-industrial cities. These considerations bring the discussion back to issues pertinent to historic environment management, and thus link the case-study and the theoretical framework it is based upon to the practical concerns of this collaborative research project.

6.6 Reflection on the Research Methodology Developed

This study has from the inception sought to contribute to the study, understanding and management of the historic built environment in a trans-disciplinary way. In taking a broad look at sense of place and character conceptualisations this study high-lights the fragmented nature of the debate around these concepts and proposes a more abstract understanding of the city and thus its character. In this study the city is understood as a corporeal materiality matrix, which combines time, space and reality; and reality is seen as a transductive matrix consisting of technical, physical, affective and emotional dimensions. This new abstract understanding can be problematic in as much as although it draws from some recent emerging theoretical thinking in terms of affect, networks, and complexity, it can be challenging to demonstrate a clear significance and connection between such theoretical developments and a collaborative case-study research project that ultimately should have some practical applicability. Following a review of several existing research methods, this study responds to this challenge through development of a case-study research methodology combining existing research approaches in a new way. Approaching the case-study area using archaeological, historical and townscape research methods enables this study to demonstrates how connections between the past and present can be made. It is hoped that an approach like this could be a meeting place for future innovative research into all kinds of places, not just the residential areas of 19th century.

6.7 Summary

Referring to the central issues of this dissertation this chapter has recalled the conceptual design behind the case-study to be undertaken in the following chapters, and outlined the research methodology developed for this case-study research. This methodology uses an Area Based approach (Menuge and Taylor, 2004) as a base-line of enquiry, but in order to gain a fuller understanding of the development and change that characterises the industrial era housing in the context of the post-industrial city – the methodology adopted addresses the development of the urban landscape at three different spatial scales through a three phased research approach.

In Phase 1, for the broadest scale an 'archaeological desk-based assessment' is conducted for the whole study area. In Phase 2 the study area is then divided into 'character

polygons' according to the principles of HLC, but also using archival evidence to support decision making. The character polygons are 'characterised' both in terms of their historical development, and the subsequent change. Finally, in Phase 3, an individual character polygon in analysed in greater detail using information gathered into a database. This information covers archival data, information about the physical aspects of the house as well as details about the residents. As already discussed above, in using different research methods each of the three phases has different research objectives. For Phase 1 the objectives are historical and archaeological in nature. In other words Phase 1 seeks to describe and illustrate the historical sequence of development of the built environment (or path and project in theoretical terms). Phase 2 has more explicitly analytical objectives in aiming to link present day and history through the division of the present day urban landscape into character polygons that not only reflect the pre-defined HLC categories (which are essentially based on broad land-use types), but in also analysing the impact of historical development of these polygons through assessment of the age of prominent land-use character, and the survival historical patterns in the present day landscape (or the end result of the project). The objectives of Phase 3 are in this study described as project specific. This refers to the flexibility purposefully built-in to this part of research. Phase 3 allows for the exploration of project specific research questions which Phases 1 and 2 contextualise (in other words Phase 3 analyses the impact of the path and project).

Summarising some of the essential points about the research approach adopted in the case- study; it is the aim this research to provide cumulative knowledge about the built environment (i.e. the physical reality) of the study area as the focus of the study moves into an increasingly detailed scale. The research approach developed in order to appropriately address this case- study advocates the triangulation of evidence and methods to provide a robust case for any analysis undertaken. Triangulation is achieved through the combined use of archaeological historical research and fieldwork to gather data; and through combination of analytical approaches to the development and change in the built environment. Further it is the aim of the case study to use a documented housing typology based on historical research and field-work. To maintain 'a chain of evidence' that justifies the construction of any such typology, information gathered about the typological features of the houses will be made available to the stakeholders of this research and selected representative sample of the visual data is used to illustrate the case study.

As a potential future direction of further research it is envisaged that this study could become a platform for linking different research projects. As discussed, the concept of

character could be used as a stimulating starting point to different research approaches to the built environment. It is the intention of the 'flexibility' built into the Phase 3 of this case study research methodology to provide a potential starting point to such research. By defining new research questions applicable to the transductive matrix that is the city, the research approach adopted in this case-study enables a fresh approach to the psychical, physical, technical and affective aspects of Newcastle's built environment.

Chapter 7

Case-Study

7.1 Introduction

7.1.1 Connecting the Theoretical Framework and the Case-Study

The challenge posed by the introduction of transductive matrix as the theoretical framework for this study is how to provide a description of the case-study area that is based on sound data and evidence, and to show this data to be relevant to the theoretical framework. It seemed that a research methodology using a combination of research tactics and multiple data sources would be required to adequately respond to this challenge. A three phased research methodology, addressing each of the three dimensions of the transductive matrix, was devised. This methodology is discussed in detail in the previous Chapter.

Based on the three phased research methodology the case-study undertaken addresses 1) the historical development of the case-study area, 2) analyses the physical results of this development, and 3) through synthesis of historical and spatial data analyses the physical layer of the experiential aspect of the case-study area. Thus, as discussed in the previous Chapter, in conducting the case-study research in the way described in the *Methodology* chapter this thesis addresses the chrolonological, spatial and reality dimension of the post-industrial city conceived in this study as a transductive matrix. However, it is acknowledged that in the phase 3 of the case-study which addresses the reality dimension of the matrix, the focus of the case-study is the 'physical' aspect of reality. Although the case-study gives some consideration to technical, psychical and affective aspects of reality, the collaborative nature of this research project suggested that the focus of the study should remain within the historic built environment of Heaton.

7.1.2 Newcastle during the 19th Century

At the beginning of the 19th century, the first census recorded Newcastle's population at 28294. By the 1851 census this had risen to 87784, and went on to leap to 215328 in 1901. Similar changes of scale took place in the physical size of the urban area. Many writers (e.g. Daunton 1983, 85) have commented upon how Newcastle was slow to develop outside its medieval walls, and how this forced the increasing population to live in very cramped conditions. However, from 1760s onwards large stretches of the old town wall were removed to accommodate the geographical growth of Newcastle. Thus the first 'suburbs', namely Summerhill and Shieldfield, grew immediately outside the old walls.

As with growth in population, the growth in urban area accelerated markedly in the second half of the 19th century, and by 1901 the development of extensive suburban areas had greatly expanded the built-up area, whilst communities once enjoying separate existence - Byker and Heaton in the east, Elswick, Benwell and Scotswood in the west, and Jesmond in the north - had effectively been swallowed up by the growing city.

The main cause of this remarkable growth within the space of a few generations was the unprecedented industrial and economic development of the region which Newcastle served. Newcastle's experience was, of course, only a small part of much greater story. The spectacular expansion of industry and commerce which marked the 'Victorian' period was much more than a north-eastern experience; the increase in the volume of international trade, from which the region benefited so much, was not only a British achievement. It is however, worth considering that in none of the regions major industries did the north-east hold anything like a monopoly, and the success of the region had to be won in competition with other regions of the UK, and elsewhere (McCord, 1981, 334).

The world famous manufacturing plants of Armstrong, and Stephens grew to be large, both physically, and in terms of people they employed. (Armstrong's Works at Elswick providing work for 20000.) While it is these large manufacturers that are still remembered, the story of industrial growth in Newcastle is much more complex than just being based on the success of a few large plants. The growth of Newcastle was based on much more varied enterprise than just engineering. Among the diverse elements making up the Newcastle industries were glass and pottery manufacturing, brewing, chemical industries, printing, and paper-making, and of course the mining and transportation of coal.

The economic development affected the town of Newcastle in several different ways. The town itself became a major industrial centre, and the Tyne harbour became one of the world's greatest ports. In addition, the development of productive capacity of the surrounding region added to the demand for a wide range of supporting services

for which Newcastle was the natural centre. These included commercial and financial activities, a complex supply and distribution network of foodstuffs, fuel, and a wide range of other goods, and much more extensive and complicated facilities in the fields of administration, education and recreation. This diversity of industries, as well as the concentration of administrative jobs associated with such manufacture has also served to shield Newcastle from fluctuations in the fortunes of individual industries. Overall, these developments created large numbers of jobs which were in comparison with the experience of earlier periods, well paid. Although not disputing that issues of poverty, over-crowding, unsanitary living conditions and the problems caused by seasonal or casual nature of some jobs, took a long time to dissipate for some parts of the society - this case-study is concerned with how this rising standard of earning translated into the rise in the 'quality' of the built environment, and how this might still be evidenced in the remaining 19th century built environment.

Relating the 19th century house-building boom to the present built environment of Newcastle, it appears that the worst early 19th century and earlier 'slums' that existed in the city have long since been cleared, and the extensive re-building of Elswick and Byker has removed a large number of the terraced Tyneside-flat development. This study argues that to a degree this has resulted in the removal of what Daunton (1983) and Hoppen (2000, 83) call 'the monotony of order' in terms of the design of the surviving houses and leaves us with housing stock that can be marketed as having 'period features'. The remaining 19th century housing stock may thus appear to be of better quality and of more mixed nature than the original average standard. (See similar discussion about the variety of terraced housing provision in Lancashire by Newman and Newman, 2008)

7.1.3 On the Built Environment and Housing

The expansion of Newcastle deserves a closer examination before embarking on the detailed study of one of the 'suburbs' developed during the industrial era, namely Heaton, to the east of Newcastle town centre. Newcastle's inner eastern suburbs, Byker and Heaton, have their origins as separate villages which existed at least during the medieval period. However they remained small and isolated from Newcastle itself by stretches of farm land well into the 19th century. The deep valley of the River Ouseburn effectively cut these eastern villages off from Newcastle, and it was natural that first suburban developments were in the Westgate and Elswick areas to the west of the town centre where the geography was more easily suited for the expansion of housing.

The remnants of some of the earliest 'suburban housing' of Newcastle are now pre-

served as the Summerhill conservation area (to the west of the city centre). During the early nineteenth century the expansion from Summerhill continued to now demolished area of Rye Hill, and to the east of town centre the Shieldfield area was being built up. Major road ways and the riverside also attracted both industry and housing during this time.

Nevertheless, coming to the era of mapped Ordnance Survey evidence, at the time of the first survey (1858) Newcastle was still a very 'compact' town with a high population density. Davies (1972, 13) provides some statistics to illustrate the situation: In 1853 the City had 9453 houses, of which 6900 were occupied by single families, leaving 2553 houses for the remaining 13100 families . In the old parish of All Saints, 60.4 per cent of all lettings were single room tenements.

In the West End of Newcastle the expansion of working-class areas seems to have led to waves of attempts to establish 'villa developments' for the wealthier aspects of society first between the Westgate Road and St. John's Cemetery, and then further west between Westgate Road and (roughly) Benwell Old Village. These schemes were executed only partially, but as a result the working-class housing in the west Newcastle was at least initially closely neighboured by accommodation presumably intended for their superiors in the factories and dock-side.

Villa developments were also proposed for and again, in a smaller scale than originally planned - occurred in Heaton. Some of these are now part of Jesmond Dene conservation area. Outside the conservation area in south Heaton over looking the Dene 'gorge' there are further semidetached cottages or villas. In fact more villas were planned in Heaton but it seems that tastes and times changed and the area originally mapped for villas by F.W. Rich in the late 19th century was eventually built up as semi-detached St. Gabriel's Housing Estate in the 1920s/ 30s. In fact analysis of the mapped evidence suggests that Byker and Walker were more uniformly 'working class' than the suburbs of the west - Elswick and Benwell might have been the 'company town' described by Robinson (2002) in the sense that most people living in the two were directly or indirectly gaining a living off the Armstrong works, but evidence from the built environment suggests that this did not mean that the West End of Newcastle (during the 19th and early 20th century) was exclusively working class. What has been remarked by previous studies of housing and urban development of Newcastle is that the more exclusively middle-class areas developed to the north of the city centre - in Gosforth and Jesmond, away from the noxious smells, smoke and noise of the heavy industry that was concentrated along the river Tyne.

The over-all increase in the demand for housing was created by rapidly expanding

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population. The demographic growth of Newcastle during the 19th century is explored in the following.

7.1.4 Newcastle Population Development

The expansion of administrative area of Newcastle (Middlebrook, 1954) - through the incorporation of Westgate, Elswick, Jesmond, Heaton and Byker in 1835; Walker, Benwell, Fenham and part of Kenton in 1904; and Newburn, Castle Ward and Longbenton in 1935 - partially explains the increased population. However, increased life expectancy, reduction in infant mortality and net gains in inward migration also played a significant role in Newcastle's population doubling between 1860 and 1880 from 100 000 to 200 000, and rising to 300 000 by 1910.
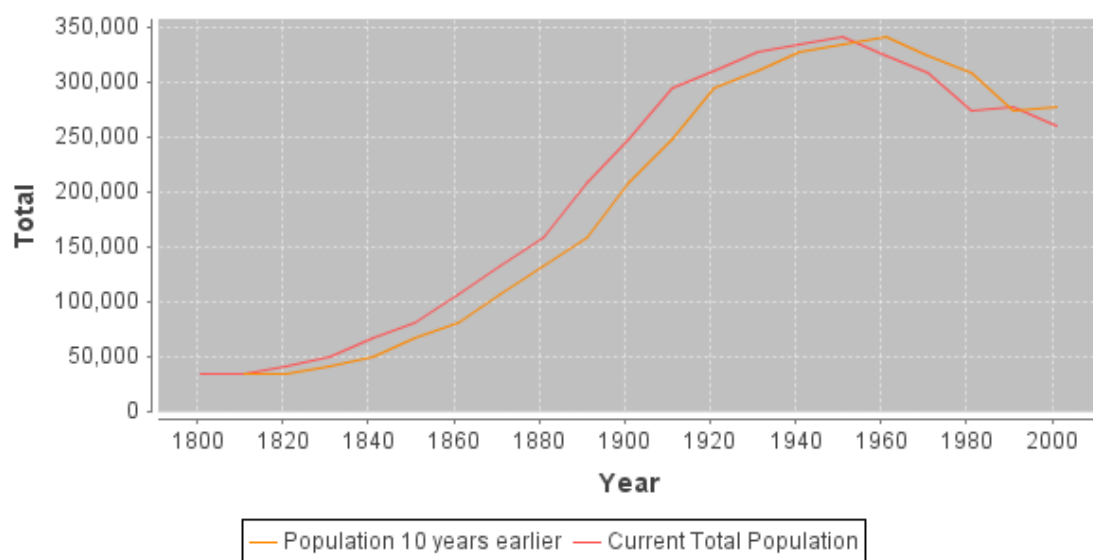
Figure 7.1: Total population of Newcastle 1800 to 2001

The following more detailed exploration of the population development in Newcastle is based on census data is from the 'Vision of Britain' web-site, Middlebrook's (1950) history of Newcastle and the 1855 *History, Topography and Directory of Northumberland* by William Whellan & Co.

Total population of Newcastle compared to the suburban population is illustrated in figure 7.2 (e.g. Westgate, Elswick, Jesmond, Heaton, Byker (includes All Saints / Shieldfield area), Walker (census data returned as part of Long Benton 1871-1891 which is why there is gap in the data), Benwell, and Fenham)
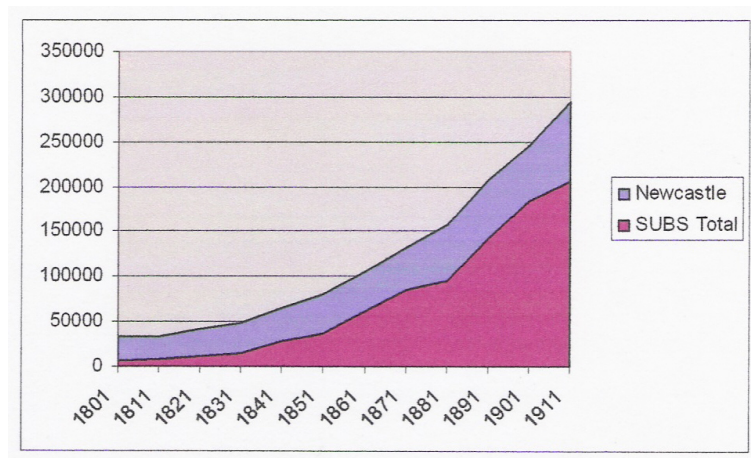
Figure 7.2: Proportion people living outside the medieval town 1801 to 1921

	1851	1861	1871	1881	1891	1901	1911
Westgate	16447	21272	24177	26823	30264	30116	27607
Elswick	3539	14345	27801	34642	51608	59165	58352
Jesmond	2089	2230	3068	6109	8442	15364	21367
Heaton	435	376	430	1466	8567	16007	21912
Byker	7040	7663	10704	21011	32332	45460	48709
Walker	3963	6473	-	-	-	13336	15786
Benwell	1272	1771	2591	4736	10354	18158	27049
Fenham	100	89	156	157	163	158	1049

Figure 7.3: Growth of Newcastle suburbs 1851 to 1911 numerically
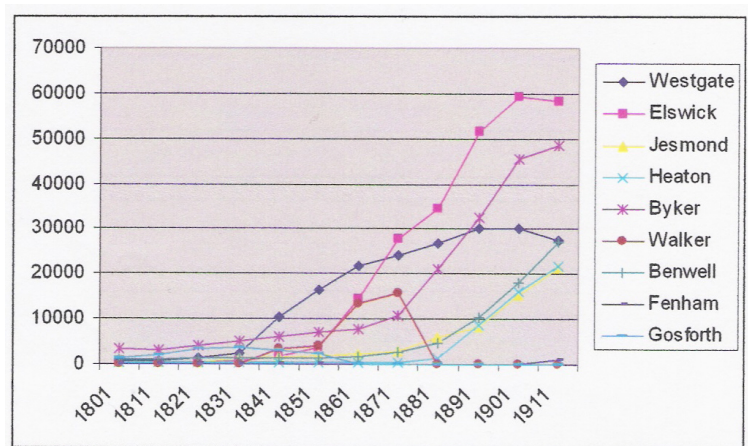
Figure 7.4: Growth of Newcastle suburbs 1811 to 1911 as a graph

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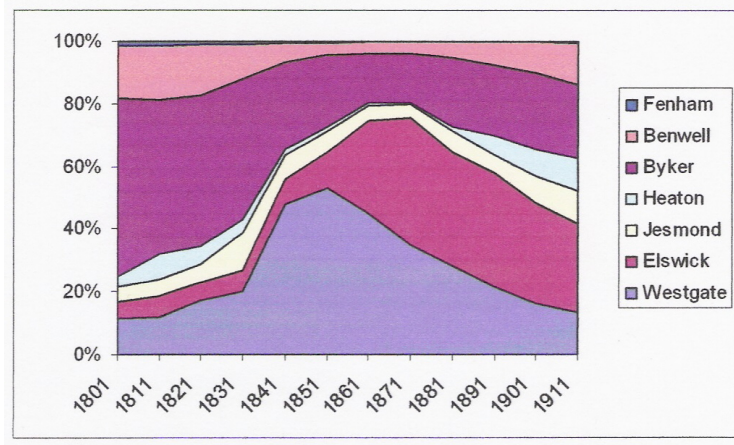
Figure 7.5: Portion of population living in each suburb as a percentage of the total suburban population.

The comparison of populations in the suburbs is more difficult after 1911 as by 1921 census the census administrative boundaries in Newcastle (and elsewhere in England) had changed considerably. Thus the population of Westgate in 1911 is not directly comparable to Westgate of 1921. Byker in figure 7.5 on page 163 includes the early densely populated All Saints / Shieldfield area of town. And Westgate includes Arthur's Hill development.

The rapid expansion of the urban population and the slower expansion of the urban built environment (not only in Newcastle, but in all industrial towns and cities of England) created undeniable social and health problems. Eventually these problems were addressed through the drafting of first planning regulations, and the creation of first building bye-laws in the latter half of the 19th century. These developments contributed to the 'creation' of 'bye-law housing' - however, the bye-laws were so loosely worded that a great variety of local interpretation gave rise to very different kinds of bye-law housing in different parts of the country. Of the houses built during the latter half of the 19th century the back-to-back houses are typical to West Yorkshire and Lancashire, court houses to Hull, tenements to Edinburgh, and in terms of detailing and the use of building materials, terraced rows in Liverpool look different from terraced rows in Birmingham. And in the case of Newcastle the Tyneside flat became the typical local house form. The development of the Heaton case-study area is analysed in the context of these the deliberate, 'legal' interventions, which are seen to form a part of the 'technical' layer of the transductive matrix of the city and its character.

7.1.5   Building Heaton

The building of Heaton began around 1880, after the opening of Byker Bridge (across the Ouseburn) in 1878 made the eastern side of Newcastle more accessible. In similarity with other current suburbs of what is now considered to be Newcastle, the urban development did not proceed into some untouched wilderness. The road still known as Shields Road had long been the major route to the coast, and there were farms on both sides of it before the road reached the village of Byker. Likewise there were small farming (and mining) settlements in Heaton.

The development of Heaton (and to a degree Byker as well) was controlled by powerful, local industrialists who had bought the township from the White-Ridley family in the course of the first half of the 19th century. The two men particularly associated with the development of Heaton are Addison Langhorne Potter and Lord Armstrong. Addison Langhorne Potter took the White-Ridley's old country seat Heaton Hall as his residence and owned the southern part of Heaton. Whilst Lord Armstrong, by acquisition of Jesmond Dene (house with lands) and donation through the will of his business partner Armour Donkin (of even more land) became the owner of North Heaton. Furthermore, Mr Potter and Lord Armstrong were not only business partners, but Mr. Potter was also married to Lord Armstrong's sister.

This study suggests that although no documentary evidence to the effect has been found, it is not outside the realms of very real possibility that between the two of them Potter and Armstrong controlled the release of building land in the area very carefully, so as not to flood the market and bring profits down. Both men also seem to have used a 'consultant architect' in devising the street layouts, and designing the sewer networks necessary for the setting-out of a new housing area. Both of these architects are at least of local reputation; Frank West Rich (and later also his sons) working for Mr. Armstrong (and his Estate), and J.W. Dyson for Mr. Potter. In the popular imagination it is Elswick in west Newcastle that has the reputation for being the 'company town' of Lord Armstrong's Works - but it would appear that he had personally little (if anything) to do with the housing development there. Instead we should be looking at the housing in Heaton for that.

Transcript of the letter 1 from F. W. Rich to Lord Armstrong; TWAS ref:
DF/A/1/41

26 Nov. 84

Dear Sir William,

Your Heaton Estate

I have just received the enclosed letter from Mr. Harrison, a builder at Heaton. There is no doubt a very good bit of land here, and would be of immense advantage to intending purchasers.

Land is very scarce now and difficult to get. There is at the present time, an indication of a demand for building-sites - Mr. Potter has sold about the whole of his land south of the Railway, and I am selling land in other parts of Newcastle, where none has been sold for many years, and I have had several enquiries for land here lately, and the opening of the South Pit here, either now or at an early date would I think be an inducement to Builders, as we should then have the Bricks, Stone and Sand on the estate.

If quite convenient to you, I shall be glad if you kindly give an interview, the next time you are in Newcastle, as there are several questions relating to the estate I would like to discuss with you.

I am / Yours faithfully / Frank West Rich

It appears that the 'South Pit' referred to is one of the locations highlighted on the maps in figure 7.20 on page 186. This data supports the suggestion that the houses in Heaton were built from very local resources.

Transcript of the letter 2 from F. W. Rich to Lord Armstrong; TWAS ref: DF/A/1/41

22 Dec. 84.

Dear Sir William,

I send you a sketch plan, showing how I intend relaying out the land, between Heaton Road and the Armstrong Park, into villa sites.

The original plan contained 13 sites, ranging from 2 acres to about 4 acres each. The present plan contains 41 sites, ranging from about 1 $\frac{1}{2}$ acres to 1/3 of an acre each. These are sites, which are in demand, for Suburban dwellings and if a man wishes to have a larger site, he may take two or three.

You will notice I have placed the largest sites, near the Bridge end and smaller towards Heaton where they abut on the Terrace houses. The central road is the only position, that can be contrived for easy gradients, and the sites marked X would be too long and give too much area, as one site, I have therefore divided them and given the lower strip of land forming with the main centre road. I shall be glad if you will kindly let me have your opinion on these matters, at your convenience, and also as to the following matter, viz.

Mr. Thomas Hood Henderson of Framlington Place, has, within this last few days, seen me about a Site marked A, and asks for an acre. The site shown on the plan contains about 1 1/2 acres - I ask him £600 an acre - he offers £500.

The plan I send you is drawn from the 25in Ordnance Scale, which equals about one square inch to a square acre.

I am/ Yours faithfully/ Frank W. Rich

This study suggests that the development of the 19th century suburbs in Newcastle and elsewhere would have probably been impossible without these parallel technical developments. And that the very least the result would have been very different in terms of its character, had been possible to carry out. Thus, before embarking on the case-study of Heaton itself, the following section considers some aspects of the development of the 'technical layer' of Newcastle more generally.

7.1.6 Constructing the 'technical' Newcastle

It appears appropriate here to briefly consider what constitutes the 'technical layer' in the transductive field of the city. This study suggests that at least the following aspects

of urban life should be considered to be part of the 'technical layer' of reality:

1. TRANSPORT, including roads and rails, trains, trams and buses and the journey to work (and leisure)

2. COMMUNICATIONS, including postal, telegrams, radio, TV, and telephone; publication of newspapers and books

3. 'PUBLIC' SERVICES, including water (both fresh and sewage), electricity, gas, rubbish collection and street cleaning

4. SUPPLY of 'essentials' such as coal, food and other commodities, including various leisure and entertainment

5. HEALTH and WELFARE such as Schools, Hospitals, Public Baths, Asylums, Churches and so forth.

Furthermore it should be considered how many more theoretical papers within e.g. geographical research talk about 'flows and networks' when addressing issues pertinent to the 'technical layer' of reality as conceptualised in this study.

This study considers the availability of plumbed water supply, electricity and public transport as essential to the expansion of the cities during the late 19th century. These elements of the technical aspect of reality have an important role in the creation of the 19th century built environment, yet their impact on the built environment is more ambiguous than for example the provision of local infrastructure in the form of e.g. schools and hospitals. Thus the following considerations demonstrate the kind of transductions that occur between the technical and physical layers of reality and in the process for their part create the city.

Water Supply and Sanitation

In terms of supplying fresh water for domestic use in Newcastle area wells and springs proved adequate until the seventeenth century when the formerly adequate supplies were interrupted by the sinking of many coal mines, and the authorities began to take an interest in water supply. In Gateshead, which was also suffering from water shortage, water was brought from springs on Gateshead Fell and Heworth 'in lead Pipe downe to a pant (well) to be built for the use of the Towne'. At this time, Newcastle also needed more water and this was supplied from Gateshead. Fortuitously the land on the south of the Tyne is higher than on the north, an important factor in the gravity distribution system,

which was the only method then available. In 1699 (GMBC, 1998, 108) William Yarnold obtained an act of Parliament to supply Newcastle with water from Heworth Fell. Water from here was carried partly in an open trench and partly in wooden pipes to two ponds near the junction of High Street and Sunderland Road. From here, the supply was taken round the east of Holy Trinity to Oakwellgate, over the Tyne Bridge in lead pipes and up into Newcastle. In Gateshead in 1845, the Whittle Dene Water Company was formed; and in 1863 it was superseded by the Newcastle and Gateshead Water Company; the same company supplying Gateshead today. Whittle Dene Water Company was the first commercial project of William George Armstrong - the famous North East industrialist who started off his career as a solicitor, and as we shall see among many other ventures had a part to play in the housing developments in Heaton.

From public health point of view adequate sewage removal would have been at least as important as clean drinking water. And although Lord Armstrong's consultant architect Frank West Rich is rightly known for his public buildings such as St. Gabriel's Church in Heaton - it should not be forgotten that every house in Heaton directly benefits from his less well known involvement in the construction of the main sewer that serves the area. Thanks to this development all houses in Heaton were, from the inception, built with e.g. flushing water-closets - as the following letter illustrates.

Letter dated 9.4.1878, referring to plans T186/V143 for 'Sewer in Jesmond Dene for *Messrs. Potter, Armstrong and Temple'. Plan (T186/V143) also by Frank W. Rich, dated 21.2.1876.*

9.4.1878

Gentlemen,

I beg to give you notice that I have completed the outfall sewer by the side of the Ouseburn from Benton Bank to Byker Bank and in all things complied with the plan approved by you on the 8th of March 1876, and have further carried out an extra depth of the sewer at the Benton Bank end, as requested by your Engineer, under whose immediate superintendence the work has been executed.

I therefore beg to hand over the work to you for your adoption, as our responsibilities must now cease, the sewer being in full use, for the town sewers in the neighbourhood [Heaton] are now connected with it.

I am, Gentlemen,

Yours Faithfully: Frank W. Rich

Electricity

The Newcastle upon Tyne Electric Supply Company was set up in 1889 by the industrialist John Theodore Merz (1840-1922). The Company built a series of coal-fired power stations in the Tyneside area, initially to provide power for the newly electrified railways. It went on to supply electricity to the whole of the section of the City East of Grainger Street whereas the Newcastle and District Electric Lighting Company supplied to the West. The company's headquarters were at Carliol House in Newcastle's city centre. The company later became the North Eastern Electric Supply Co (NESCo), which in turn merged into the North Eastern Electricity Board (NEEB) on the nationalisation of the industry in 1948. The Newcastle and District Electric Lighting Company (abbreviated to DISCo) was a pre-nationalisation, private electricity supply company, based in Newcastle upon Tyne in North East England. The company was set up in 1889 by Charles Algernon Parsons. The company built a number of small coal-fired power stations in the west end of Newcastle upon Tyne, initially to supply homes and streets with electric lighting. They also provided power for an electrified tram line in the western part of the city. DISCo was the first electric supply company in the world to generate electricity using turbo generators, thanks to Parsons' invention of the steam turbine. The company existed until the nationalisation of the UK's electrical supply industry in 1948.

Public Transport

Regular cheap public transport, which is taken for granted today would have had a quite significant effect on people at the time when it was introduced and developed. The advent of public transport would have opened up a wider area for people to socialise and find work and areas outside of the main urban areas could be developed into suburbs with new cleaner housing for people to live and allowing them to live away from the shadow of the work place. The average tram fare in the 1880's was 1 1/2d. This development of public transport would also include the development of the railways, which would help to spread families further apart. The first horse tramways in Newcastle started in 1879 run by The Newcastle and Gosforth Tramways and Carriage Company, in 1915 the company changed its name to Newcastle Corporation Transport and Electricity Undertaking. By 1893 tracks had been laid to Gosforth and there were 272 horses hauling trams on a tramway system of 17 miles averaging a speed of 5mph. The horse tram services stopped operating in 1901 and they were replaced by electric cars, which began operating later in the same year. The majority of main routes where completed by 1904 with later extensions added to Fenham in 1907, Shieldfield in 1912, and Throckley in 1915. After World War I

extensions were laid to the villages of Forest Hall, Westmoor, and the entrance to Gosforth Park in 1921 and Fenham to Westerhope in 1925. In 1923 tracks were opened over the River Tyne. By 1928 Newcastle had 300 trams running on 51 miles of track and had the largest tramway-system between Leeds and Edinburgh. With the growth of the city the tramways also grew to serve the new areas though there was competition to the east with the NER suburban lines to the coast. In reference to the case-study area in Heaton it should be noted that towards the beginning of the 20th century the area was served by both NER railways and the tram system which had tracks along Heaton and Shields Roads. With the introduction of the motor-car the tram and railways were later on further complemented by buses. Motor busses began operating in 1912 on a route which ran to Westerhope by 1925 there where five motor bus services running to Branch End, Belsay, Gosforth, Hexham, and Seaton Sluice. A trolley bus system began operating in 1935 and became the largest in the country. The development of the local transport network is significant for the expansion of the urban area as it enables for people to commute to e.g. work from further than 2 miles away which has been suggested (Barke, 1991) as the approximate limit that an industrial worker (already physically hard-pressed at work) would be prepared to walk twice daily. The evidence from case-study research suggests that many workers preferred accommodation much closer to their places of employment.

7.1.7 Summary

Increasing population created a huge demand for housing in Newcastle (and other English cities) during the 19th century. Over-crowding resulted public health problems, most infamous of which in Newcastle are the Cholera outbreaks of the 1830s. Eventually the concern for public health issues lead to creation of building bye-laws and other regulatory mechanisms in an effort to improve living conditions in cities. In the 19th century cities the various infrastructures that in effect enable the urban way of life were constructed in parallel with the terraced housing of the period. As discussed above this technical layer of the city is vitally important to the functioning of the city and in part creates the places it enables.

The following section outlines the historical development of the Heaton case-study area which this introduction has sought to contextualise.

7.2 Phase 1 - Analysis of the Development of the Historical Character

7.2.1 Introduction

Referring to the Methodology Section above, the development of the study area is illustrated using a progression of historic OS-maps (akin to an archaeological desk-based assessment). This data is supported by further illustrations and some archival data pertinent to the development taking place. Data from the Tyne and Wear Historic Environment Record is referred to when this is relevant.

7.2.2 Desk Based Assessment of the Heaton Study area

Geology of the Study Area

The geology of the region rests on Middle Coal Measures of the Carboniferous that are sealed by Quaternary deposits of the Devensian. Pleistocene glaciation in this period shaped the route of the Tyne and in its retreat left thick drift sediments. The depth of such deposits is generally in the region of 10 metres and in the main comprises plastic grey-brown to yellow-brown sandy boulder clay (BGS 1998).

Figure 7.6: Study Area On the First OS Map

Study Area Before 1800

Whilst part of the interest in Heaton as a place is to do with the notion that the there
is 'nothing special about the place', it has a fascination as an 'everyday place'. This
study suggests that F. W. Denby (1921, 33) was being quite unkind describing Heaton
as having 'little interest in its history'. Whilst the current built environment of Heaton
gives very few clues to the early history of the area, both the Tyne and Wear Historic
Environment Record and the Northumberland County History (XIII, 277-88) give an
insight into complex series events that from the medieval period through to the mid-19th
century eventually resulted in the residential development of the area.

In terms of documentary evidence the earliest reference to Heaton appears in the 1157
lay-subsidy roll as 'Hactona' and in 1279 as 'Hetan', from which the meaning of the name
has been inferred as haugh-ton, i.e. the village on the haugh of the Ouseburn. Likewise
the first documentary references to Heaton manor (HER 1420) date from 1157, showing

that Heaton village (HER 1406) had been established by the medieval period.

Recorded material evidence for the early history or archaeology of Heaton includes the pre-medieval find of pieces of Roman building stone (HER 1415) at Heaton flint mill in the early 20th century. Sites and features dating from the medieval period include King John's Palace (HER 116), also known as the Camera of Adam of Jesmond, built in the 13th century and probably in use until the early 17th century. There is also evidence for a chapel (HER 1398) which belongs to this period and it was long thought that King John's Well (HER 1394) was also of medieval origin, although recent work has suggested much more recent origins. Archaeological evidence from the post-medieval period includes the remains of an early 18th century windmill (HER 4140), used to grind corn and flour which can be seen in Heaton Park close to King John's Palace.

The following time line from the Northumberland County History (Vol. 13) illustrates the early development of Heaton:

Barony of Ellingham 1157 Henry II confirmed Wm de Vesci the guardianship of the heir of Ralph de Gaugy and his 'townships of ... and Heaton.' (moiety of barony of Ellingham)

1168 Ralph de Gaugy II became of age and so entered into his estate

c.1200 Division of Barony between Ralph II and Adam his brother, Heaton being assigned to Adam

Pre 1267 Adam de Gaugy's heir, Adam of Jesmond, built a tower in Heaton, of which ruins still stand (known also as King John's Palace)

Pre 1274 Lordship of Heaton sold to Wm. Middleton who sold it to brother Gilbert, but without licence. Gilbert given temporary licence to hold lordship 'From this time forward, the heirs of Adam of Jesmond are said to hold in chief of the crown.'

1256 Robert de Clifford, (prob. Son of Mabel de Gaugy who married Robt. De Clifford) granted manor of Heaton to son Walter in return for a sparrow hawk.

1279 Maud, widow of Reyner, recovered dower in Heaton. Robert of Fauludon and Susan recovered from heirs of Adam of Jesmond 1 $\frac{1}{2}$ messuages and two oxgangs, which has been leased to Adam of Jesmond, Walter still held Heaton in this year.

1296 Lay Subsidy Roll: 5 tenants

1298 Robert of Ryal held manor of Heaton from Margery of Trewick by service of a root of ginger; also held land by service of one pound of cumin.

1300 Robert of Ryal held manor of Heaton from Wm. Trewick by service of a rose. Also two oxgangs from Wm. Stickley by service of a rose.

1421 Capital messuage; orchard; small garden; 100 a demesne; 3 a. demesne meadow, 30 a. of wood; 6 husband lands, 2 waste husband lands; 2 closes

1454 Capital messuage; 100 a. demesne; 7 husband lands; 7 cottages; 30 a . wood

1482 Divided among Musgrave heirs : into Mitford and Fenwick moieties

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Mitford Moiety: Post 1640 Settled upon Mary, widow of Robt. Mitford, and Grey, husband

1671 Sold Heaton property to Humphrey Pybus

1679 Robt. Mitford bought property from Pybus

1692 Sold to Nicholas Ridley

1713 Heaton Hall built by Richard Ridley, who married Matthew White's daughter, Margaret

Fenwick Moiety: 1540 Sold to Christopher Mitford, son of the owner of the other moiety

1596/7 In possession of Sir Ralph Lawson of Cramlington and wife

1613 Sold to Henry Babington; the interest in the coal mines was divided among daughters of Henry's grandson. One daughter also acquired surface rights. She sold her moiety to Matthew White.

1755 White left his moiety to his sister Eliz., wife of Matthew Ridley, owner of the other half of Heaton.

1841 Sir Matthew White-Ridley sold Heaton Hall to Mr. Addison Potter and the northern part of township to Armour Donkin. Later Armour Donkin died childless and left his share of Heaton to Lord Armstrong.

1868 William Armstrong buys the remainder of the township; Subsequently gives western part to corporation of Newcastle as public park. Northern part sold as building sites.

Study Area 1800 to 1870

The White-Ridley family kept a residence at Heaton Hall through the 18th and early 19th century, with the surrounding land used mainly for agriculture. During the 18th and 19th centuries, Heaton was also involved in coal mining. Heaton Colliery (HER 4152) along with associated pits including Heaton High Pit (HER 4031) and Middle Pit were in use until the end of the 19th century. Accidents at the pits were common: Seventy five miners starved to death when they were trapped at Heaton Colliery after it flooded in 1815, and at the High Pit an accident occurred in 1850 which resulted in many miners being trapped underground. The mound known as The Spinney in Heaton Park (in North Heaton, outside the boundary of the case-study area) supposedly marks where the bodies lie.

Until the end of the 19th century settlement at Heaton remained highly dispersed, centred on the presumed medieval core Heaton Mill and Busy Cottage Mill continued to operate until the later 19th century on the Heaton side of the Ouseburn, along with other small-scale industries such as lime-burning and quarrying. In 1851 Shields Road was a

country lane running through fields between the village of Heaton with 435 inhabitants to the north and the township of Byker with 7040 to the south. The low level of dispersed population living in small outlying settlements at farms such as Low and High Heaton and the coal pit sites, meant that Heaton, unlike all other parts of Newcastle, survived the 1832 Cholera Epidemic without a single casualty.
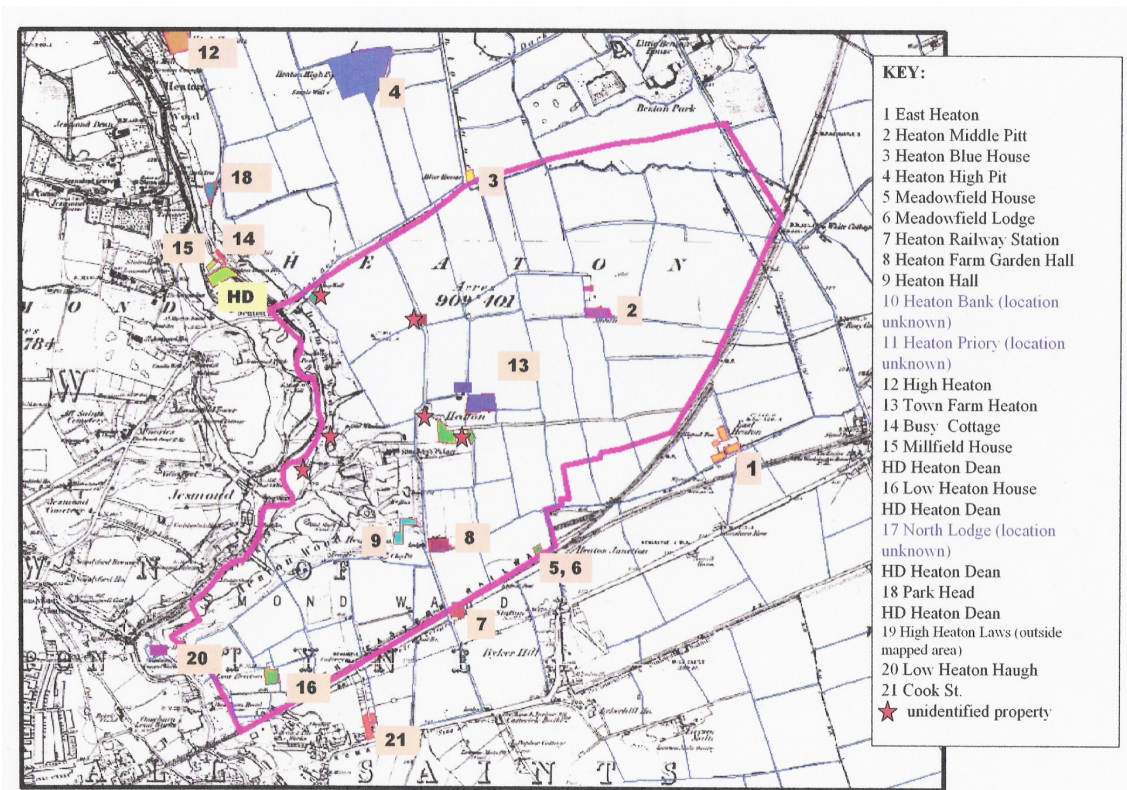
Figure 7.7: Properties listed in Heaton in the 1871 Census

The 1871 Census, as the last glimpse to Heaton with no streets, lists the following residences and residents in Heaton, giving the total population of 448.

1	East Heaton	14	households	
2	Heaton Middle Pitt	11	households	
3	Heaton Blue House	24	Hood, J.	
4	Heaton High Pit	25	Black, J.	Ag. Lab.
		25	Hogarth, J.	Ag. Lab.
5	Meadowfield House	26	Hunter, C.	Manufacturer Gran. Copperas

6	Meadowfield Lodge	27	Tait, R.	Coachman (domestic servant)
7	Heaton Railway Station	28	Pearson, G.	Station master
8	Heaton Farm Garden Hall	5	households	
9	Heaton Hall	34	Potter, A. L.	Magistrate; Lieut. Col. Artillery Volunteers, Landowner, Senior Partner in Stella Coal Comp. Employing 400 men and boys. Fine and Common Brick Manuf. Employing 100 men and boys. Cement 25, Brewer & malster employing 14
10	Heaton Bank	4	households	
11	Heaton Priory	39	Paley, T. N.	Commission Agent
		40	Glover, J.	Chemical Manufacturer employing 170 men
12	High Heaton	41	Mains, A.	Ag. Lab.
		42	Hails, G.	gutta percha merchant
		43	Brown, J. J.	Railway Porter
13	Town Farm Heaton	44	Cairns, G.	Retired farmer
		45	Brewis (?), J.	Plough Engine Driver
		46	Edgar, E.	farmer, 26 acres
14	Busy Cottage	47	Frah, I.	Domestic servant
		48	Sunderland, F.	wid.
		49	Healey, W.	Police Constable
15	Millfield House	50	Hoare, R. F.	Banker
HD	Heaton Dean	51	Lace (?), M.	School Mistress
		52	Tempory (?), W.	Retired farmer
		53	Fairbairn, S.	Farmer; 129 acres, employing 4 men
16	Low Heaton House	6	households	
HD	Heaton Dean	60	Noble, D.	no occupation given; another largish household; 14 altogether (7 servants)

17	North Lodge	61	Elliott, T.	Shepperd
		62	Cheesman (?), T.	Ag. Lab.
		63	Shield, T.	Coachman, domestic servant
HD	Heaton Dean	64	Jeffrey, A.	Ag. Lab.
		65	Pallon, R.	Coachman, domestic servant
		66	Fraser, A.	no occupation given
18	Park Head	67	Atkinson, R.	Hosier
HD	Heaton Dean	68	McClary, S.	gardener
19	High Heaton Laws	6	persons	
20	Low Heaton Haugh	75	Brown, J. H.	Merchant, coal , coal export
21	Cook St.	6	households	

The following illustrations evidence the locations of some of the earlier buildings within the case-study area.
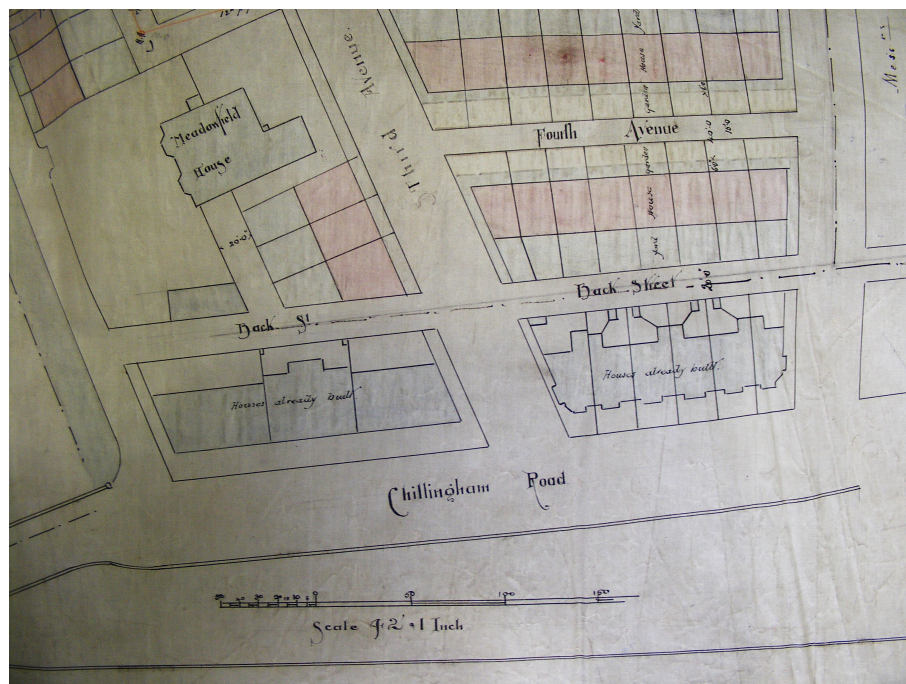
Figure 7.8: Meadowfield House (Vendor's Plan T186-V285, from 1886)
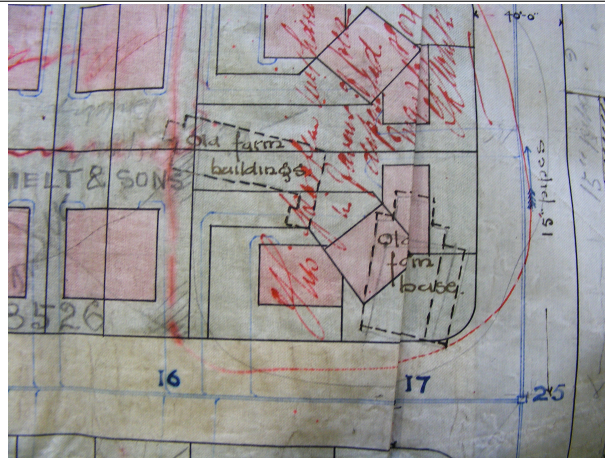
Figure 7.9: Plans of buildings of 'Heaton Town Farm', north side of Simonside terrace; Vendor's Plan T186-V228 from 1881.

Figure 7.10: Plan of Heaton Hall; Vendor's Plan T186-V137 from 1876.

Figure 7.11: Heaton Hall in plan T186-V124 (from 1875 to 1884)
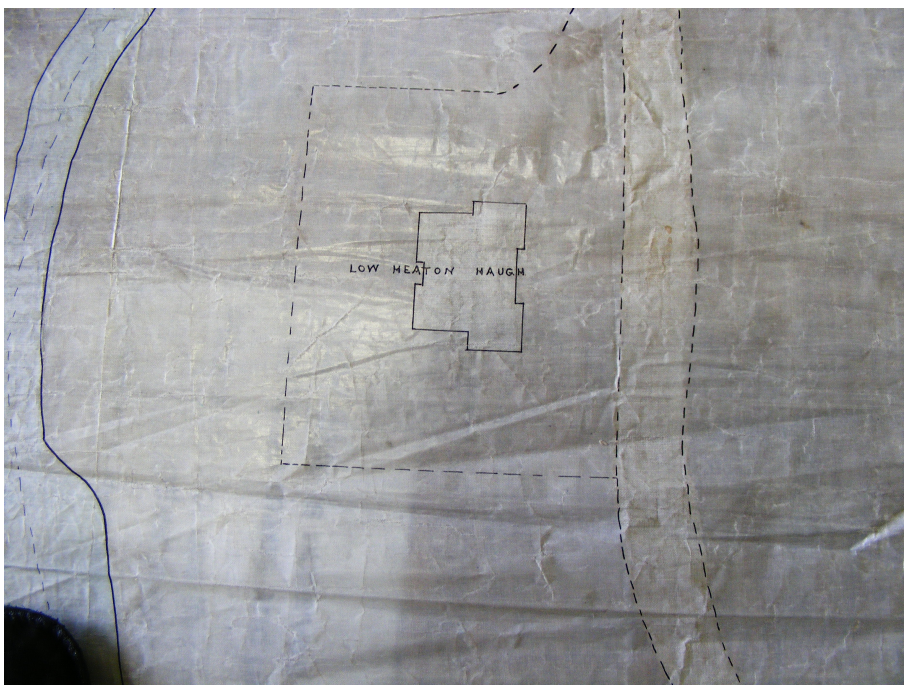
Figure 7.12: Low Heaton Haugh (or Low Heaton Farm) from T186-V145 building plan
(from 1876 to 1879)
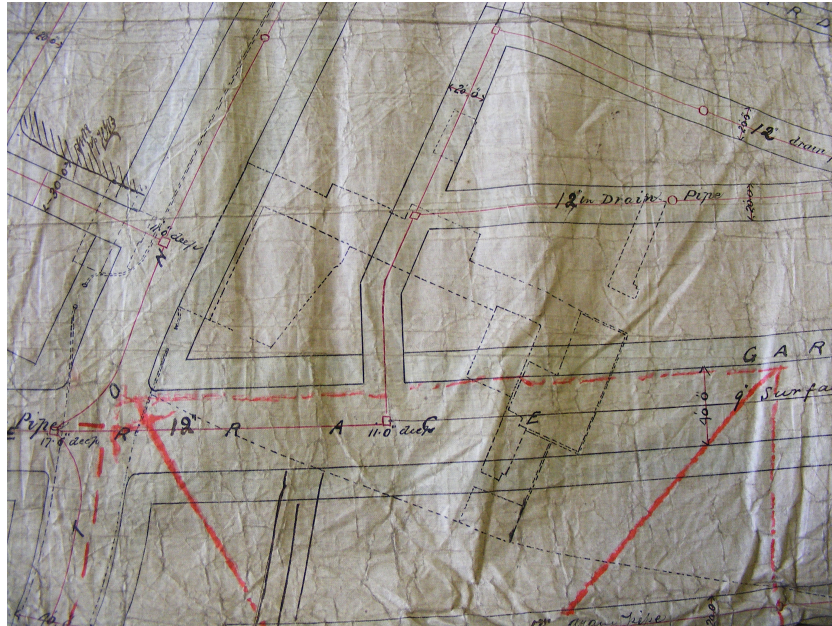
Figure 7.13: Location of old farm buildings opposite Heaton Hall from T186-V124 (from 1875 to 1884)

Figure 7.14: Lodge at the entrance to Heaton Park from Heaton Park Road - later (and currently) the site of Heaton Victoria Library; Vendor's Plan T186-V285, from 1886
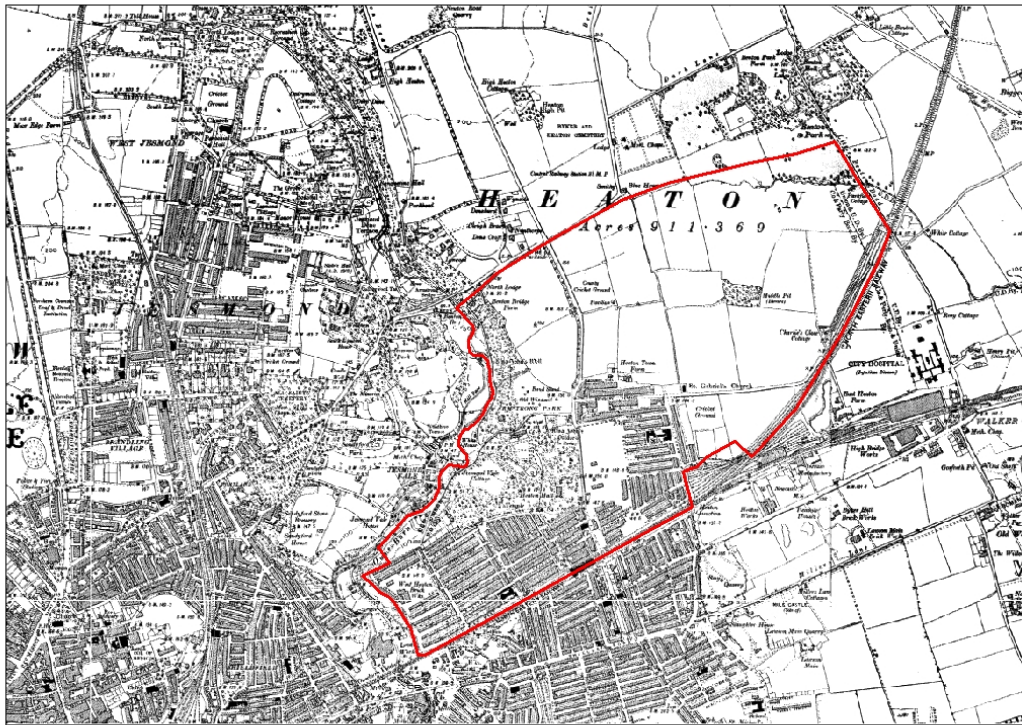
Figure 7.15: Heaton Study Area on OS 2 Map

Heaton After 1870

The building of houses in Heaton necessitated the building of better access to the area to and from the city centre. The building of two bridges across the Ouseburn in the form of Byker Bridge (HER 1945) (opened in 1878 by a private company), and in the same year the opening of Armstrong Bridge (HER 5005) in north Heaton meant that the development of the eastern suburbs could start in earnest. Work on Armstrong Bridge had started in 1876. Much of the bridge was made at Sir William's Armstrong's armaments factory in Elswick. On the 30th April 1878 the bridge opened. It stands 65 feet above Jesmond Dene and is 552 feet long. The bridge was still being used by road traffic to cross the Ouseburn until 1963. Currently the bridge is open to light (i.e. walking and Cycling) traffic.

In regards to the houses themselves - the 1881 census shows only South View West, Malcolm Street, and Bolingbroke Street having occupied houses on them. The building of houses continued throughout 1880s and the decade also saw the building of the Schools on Heaton Park Road and Chillingham Road. According to Middlebrook (1968, 266) the eastern suburbs of Byker from about 1870 and Heaton from 1880 made '...almost the prodigious progress as Elswick to the west of the town centre'. In 1878, to give easier access to these eastern suburbs from the centre of the town, a private company opened Byker Bridge as a toll over the broad Ouseburn valley. By 1887 the built up area from Shields Road southwards up Raby Street into Byker as far as Norfolk Road and northwards up Heaton Road as far as Heaton Station, though the streets were marked out up to Meldon Terrace, with a farm and Heaton Hall standing in open countryside beyond.

By 1900 the corporation had bought Byker Bridge and made it toll free; new streets branched off from Heaton Road as far as Simonside Terrace; while Raby Street, street line on both sides, now ran through to St. Peter's. By 1911 the population of Heaton was 21912 and Heaton Road had been built up to the far end. Byker, on the other hand, with a population that had swollen to 48709 merged indistinguishably into Walker as Elswick did into Benwell.

Documentary evidence suggests that the houses in the area were built (with the exception of roofing slate and timber) from local materials. This documentary evidence is supported by mapped data which shows two brick works within the case-study area (West Heaton (HER 4336) and Iris Brick Works) as well as sites for quarrying sand.
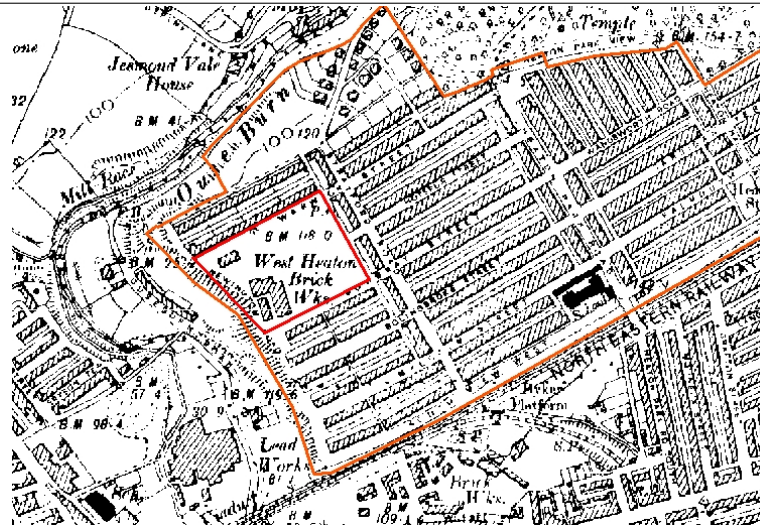
Figure 7.16: West Heaton Brick Works (HER 4336) high lighted in red on the OS2 map.

Eventually towards the end of the 1890s West Heaton Brick Works (which must have been vital to the initial development of the area) were demolished and more Tyneside flats built on the site of the former brick works.

The late 19th century and early 20th century also saw the creation of pleasure grounds such as Heaton Park (HER 5005) within the case-study area which was based upon the gardens of Heaton Hall (HER 1401), a grand residence built c.1713 and demolished in the mid 20th century, and extended from a little south of the Hall to King John's Palace in the north. Heaton Park (HER 5005) was formed after Newcastle City Council purchased part of the Heaton Hall (HER 1401) estate in 1887. The same year Sir William Armstrong donated a large area of adjacent land, which became Armstrong Park. In 1883 Armstrong offered Jesmond Dene, the landscaped grounds to his house, to Newcastle City and this was incorporated with Armstrong Park. The illustration 7.17 on page 7.17 shows a scene from the Park during the 19th century.

In addition to the development of substantial numbers of housing, the formation of the suburban 'infrastructure' of e.g. shops and churches, and the creation of public amenity spaces through Corporation and private initiative, the 19th century also saw the development of the transport infrastructure of Newcastle. Public transport system within the case-study area included the Heaton Railway Station Station (HER 4159) which was opened as part of the North Eastern Railway. The station was moved further east and was later replaced by West Heaton Station (HER 4345) (now the Chillingham Road Metro station).

Figure 7.17: View towards the Ouseburn Viaduct c.a. 1840

Figure 7.18: Building of the Ouseburn culvert

The other remarkable civil-engineering undertaking of the period before the World War I was the tunnelling of the lowest section of the Ouseburn River.

The picture above shows the building of the Ouseburn Culvert between 1907 and 1911. In the background is the Ouseburn Viaduct which takes the railway across the Ouseburn Valley. This picture illustrates well how deep the valley is and why the culvert was built. The culvert is 650 meters long. Once the culvert was finished the valley was in-filled with industrial waste, causing the ground level to rise. The filling of the Ouseburn valley helped to create new land for housing and roads. The 'city stadium' was eventually built on this area of land. During World War II the culvert tunnel was used as an air raid shelter for the local residents. It could seat up to 3,000 people.
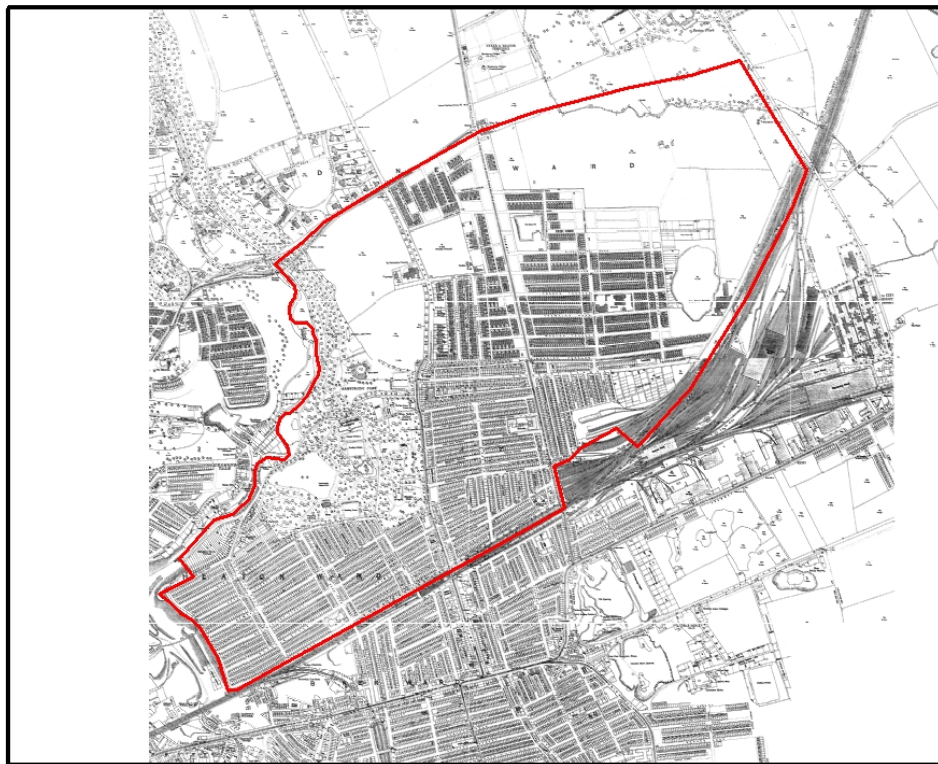
Figure 7.19: Study area on the OS 3 map.

Heaton after 1914

The third edition OS map shows the 'terraced' part of Heaton laid out. After the interruption of the WWI building of houses continued, but this time largely in the new semi-detached style. For example the plans for the St. Gabriel's Estate referred to by F.W. Rich in his second letter to Lord Armstrong, were completely redrawn in the 1920s. The large villas envisaged before the war gave way to more modest semi-detached houses. St. Gabriel's Church (from which the housing estate takes its name) was built before the war though, and remains one of the most famous examples of F. W. Rich's work.

Figure 7.20: Iris Brick Works and a sand-pit along Chillingham Road

The maps in figure 7.20 on page 186 outline the location of the Iris Brick Works towards the eastern edge of the case-study area, and the location of the sand quarry along Chillingham Road.

The present housing estates, their associated public buildings and infrastructure of roads and services were built in response to the demand for improved housing from an increasingly mobile population, mainly in the first half of the 20th century following the closure of the mines and other smaller scale industrial concerns in the area.

Heaton after 1940

Along with the building of St. Gabriel's Estate the period after WWI also saw the demolition of Heaton Hall and the building of the housing estate on the site. On the north eastern corner of the study area, the work on the last part of the study area to be completed, the Newton Park Estate, started in the 1930s and was completed after WWII.
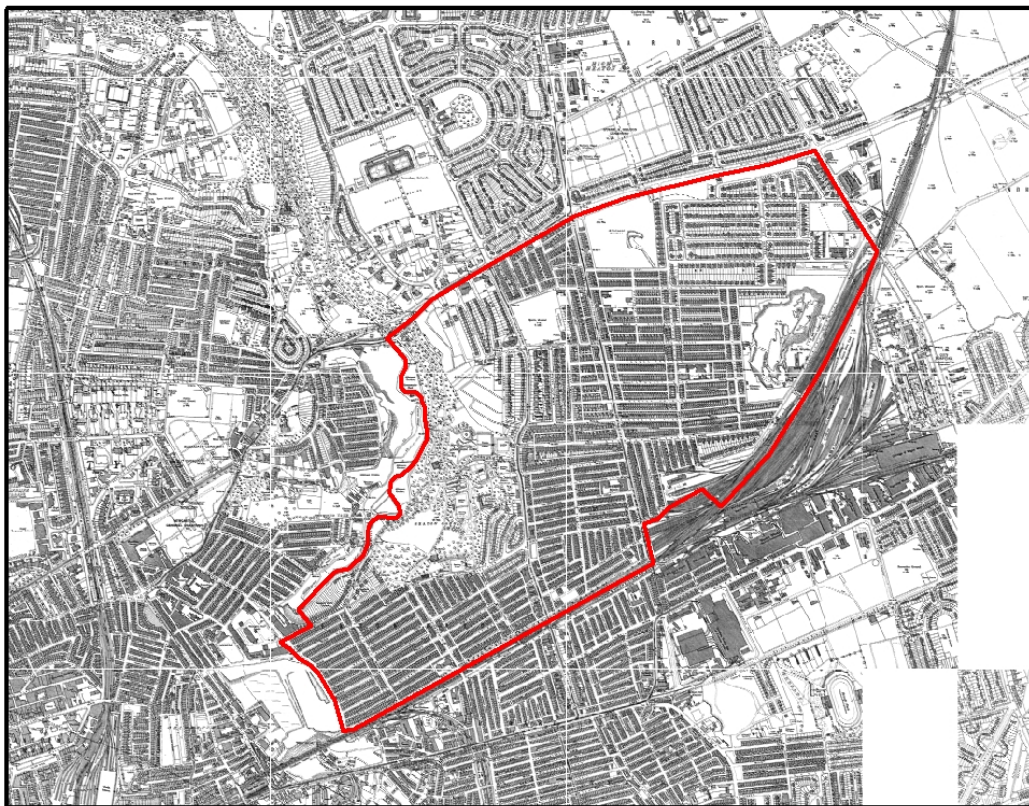
Figure 7.21: Study area on the OS 4 map
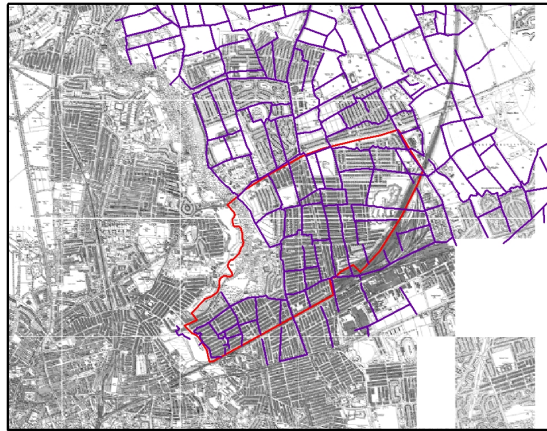
Figure 7.22: Heaton Study area (OS 4 map) with field boundaries from the first OS Map shown in purple.

Some field boundaries persist in the landscape to the present day. However, it would seem that as Heaton was, at the time when the residential development begun, largely owned by W.G. Armstrong and his brother-in-law Addison Potter, the development of the area was not dependent upon small parcels of land from different owners becoming available. This might have contributed to a more 'holistic' approach to development, and to a street pattern that does not needlessly reflect old field boundaries.

Heaton after 1960

As a result of the revised City Development Plan (1963) that saw so much change impacted on the built environment of Newcastle, the houses at the western end of South View, Malcolm Street and Bolingbroke Street were demolished. Hotspur Primary School (which replaces the demolished Victorian Board School located on the corner of Heaton Park Road and Malcolm Street) has subsequently been built on the site. Elsewhere in the study area small scale demolition of terraced housing also took place. These demolitions have been replaced by later housing (as e.g. in 1 to 8 Alison Court, on the corner of Falmouth and Heaton Roads), however, in some instances (e.g. Hotspur Street) the plots of the demolished houses have been turned into small scale public spaces. The increase of vehicular traffic has resulted in the restriction of traffic, this includes blocking of through traffic in several streets within the study area and various traffic calming measures, e.g. the planting of trees.

Figure 7.23: New development on Chillingham Road and Pedestrianised Fifth Avenue facing south

The ambitious scale of post-war planning in Newcastle in well documented (Development Plans of 1954 and Revision of 1963, see also e.g. Davies, 1972, and Pendlebury, 2001), and as discussed earlier the impact of the large scale housing clearances is one of the still tangible legacies of this era. Despite the intended wide-scale improvement or demolition and re-building outlined in the 1963 Development Plan, the actual impact of these policies on the Heaton study area appears to have resulted in relative continuity rather than change.

7.2.3 Summary

This examination of the Heaton study area mainly through cartographic data has brought this study from the medieval times to the present day. As outlined in the preceeding *Methodology* Chapter this study, through the three phases of the case-study moves from a broader spatial scale into a smaller one as the level of analysis becomes more focused. The ultimate aim of this case-study section is an in-depth examination of a part of the over-all case-study area. In the following the Phase 2 of the case-study, the case-study area discussed in Phase 1 divided into smaller 'Character Areas' (or polygons). This is an approach broadly comparable to that employed in the Historic Landscape Characterisation research programme.

In reference to the transductive matrix, this first phase of case-study research has analysed the chronological dimension of the matrix. Moving into analysing the present day landscape that is a continuosly evolving 'result' of this historical development this study addresses the spatial dimension of the matrix.

7.3   Phase 2 - Study area divided into 'Character Areas'

7.3.1   Introduction

Based on the HLC research approach reviewed in Chapter 3, the second phase of this case-study research analyses the spatial results of the historical development of the study area described in the preceding section. However, in contrast to the map based analysis of HLC, the polygons created in the second Phase of the case-study research are based mainly on documentary evidence from the Tyne and Wear Archive service. The character of each polygon is further documented and analysed through photographs gathered during fieldwork.

The vendor's plans deposited in the Tyne and Wear Archive have been particularly useful in the drawing up of these polygons. Some of the 'Character Areas' are a combination of a number of vendor's plans (e.g. Detailed Study Area, and St. Gabriel's Estate) and some are based on a single plan (e.g. NER Railway Terraces). The use of documentary evidence in conjunction with fieldwork analysing the present day landscape enables the definition of character areas that reflect the form and pattern of housing development through time, rather than what was built during a specific period of time. In other words this approach reveals areas of later in-fill rather than characterising these areas as separate from the main body of development.
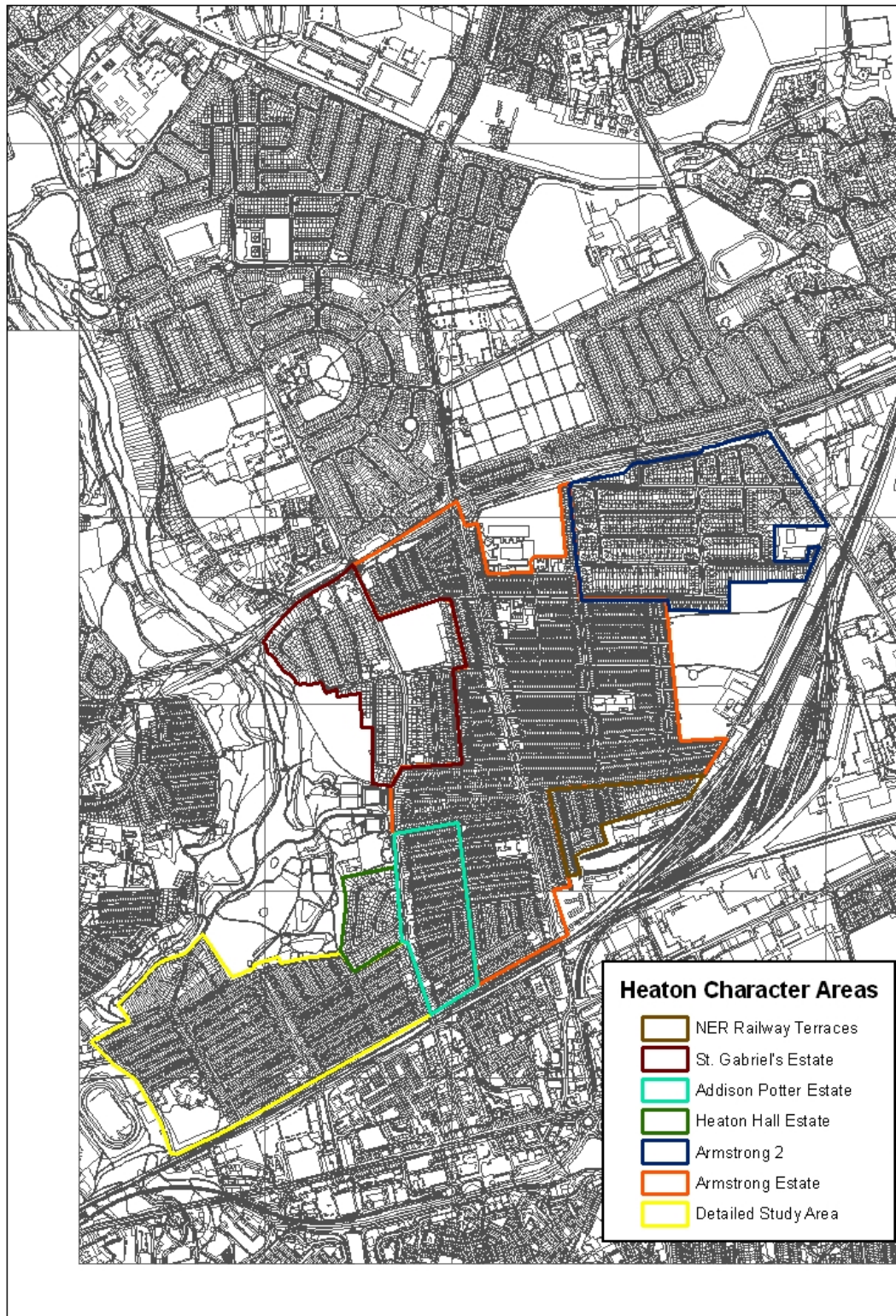
Figure 7.24: Heaton Study Area divided into character areas (on current Master Map)

The attributes recorded for each polygon are based on the attributes recorded for residential polygons in the South Yorkshire Historic Urban Landscape Characterisation project (Anon. 2007d and SYAS, 2009). The approach of using 'character areas' (or polygons) to analyse the urban environment is an approach familiar from the Historic Landscape Characterisation programme (reviewed in Chapter 3). How well the reliance on polygons as the only GIS feature class actually reflects the real character of the complex urban environment is however debatable. This is why Phase 1 of the case-study has introduced some 'point based' features of the study area and the following illustration covers some of the 'linear' features that were associated with the Heaton case-study area in the early 20th century.
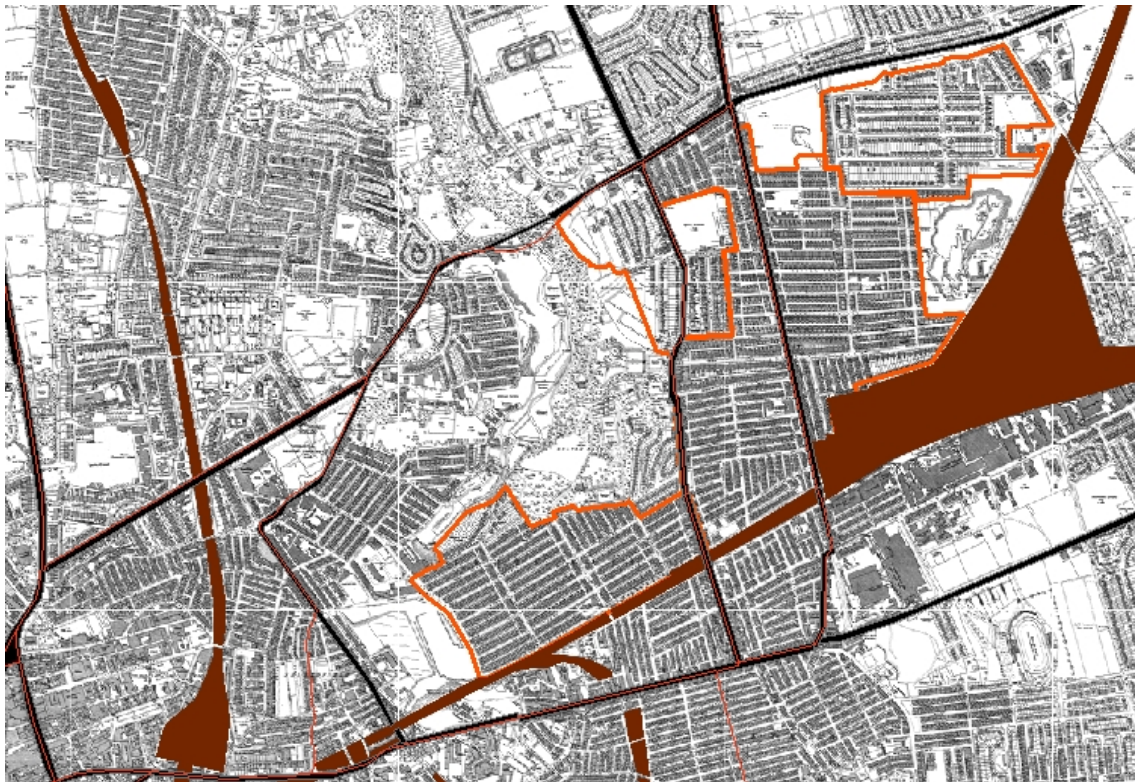
Figure 7.25: Some early / mid 20th century line based features: main roads (black), train line (brown), tram lines (red)

As one of the arguments of this study is that linear and points based features contribute to 'character' of the urban landscape. Thus it is important to highlight the existence of these line and point based features, both historically and in the current landscape. The networks, some of which were discussed in the introduction to this chapter, include transport and distribution, fresh water and sewage, gas and electricity and communications.

These networks are important to all aspects of urban life, including journeys to work and leisure, public health and well-being and the ways in which people understand and relate to the wider world. In the context of the HLC approach, some of these networks present themselves as linear features, such as those illustrated in figure 7.25. Figure 7.26 lists the residential character areas identified within the wider Heaton study area.

Area	V- or A-plan Basis	Description / attributes
1) South Heaton (the Pilot Study Area)	V145, 197, 225, 257, 264, 273, 298	1875 - 1910 terraced houses
2) Armstrong Estate	V14, 137, 197, 307	1875 - 1910 terraced houses
3) Armstrong 2	A 3531, 3469, 3451, 3623, 3592, 3848	1930s to 1950s semi-detached houses and bungalows
4) St. Gabriel's Estate	v228, V307	1930s to 1950s semi-detached houses
5) Heaton Hall Estate	no plans found	1930s semi-detached houses (cottage flats)
6) NER Railway Terraces	V308	1875 - 1910 Terraced houses, both flats and houses; also 1930s semi-detached houses (cottages flats), and later in-fill developments
7) Addison Potter Estate	V264	1875 - 1910 terraced houses, both flats and houses

Figure 7.26: Short Details of Character Areas

In the following these seven Character Areas identified in figure 7.24 on page 191 are described in further detail.

7.3.2   Description of Residential Character Areas

Character Area 1 - South Heaton

This area is bounded by the Jesmond Dene and Heaton Park as well as Heaton Park View in the north, Newcastle to North Shields Railway in the south, Newington Road to the west and Heaton Road to the east.

Chrolonologically South Heaton Character Area is where the development of Heaton as a residential neighbourhood started and the main phase of construction occurred between 1876 and 1896. The area is characterised by a mix of 19th and early 20th century row-housing, and both Tyneside flats and a range of terraced properties can be found within the area.

Secondary shopping facilities are found on Stratford and Heaton Park Road. The connection to Heaton Road, and to Byker (and Shields Road) along Heaton Park Road would have been important for this area. The existing street pattern is largely intact. Traffic calming measures have however, changed the possible vehicular movement patterns within the area.

Figure 7.27: Character Area 1 - South Heaton

Character Area 2 - Armstrong Estate

The relevant vendor's plans demonstrate several phases of development within Armstrong Estate Character Area. The area bound by Second Avenue / Seventh Avenue / Spencer Street / Simonside Terrace was constructed from 1875 to 1890; the area north of Rothbury Terrace to Cartington Terrace c.a. 1890 to 1900 and the area north to Coast Road between 1900 and 1927.

The largest and perhaps most complex of the character areas identified in Heaton, this area consists of three main phases of development; the first phase of development is dominated by late 19th and early 20th century terraced housing and flats. The second phase of development consists of larger Edwardian terraced housing built around the turn of the of the century and up to the beginning of WWI. After the break in construction caused by the WWI the third phase was developed more along the lines of semi-detached development typical of the inter-war period. The existence of the predefined regular street grid (typical of the earlier terraced housing schemes) in much of the area however means that the street pattern of the later development is similar to the 19th century street pattern. This is in marked contrast to the other semi-detached housing developments in Heaton where the typical, more sinuous street pattern coincides with the semi-detached houses.

Figure 7.28: Character Area 2 - Armstrong Estate

Character Area 3 - Armstrong 2

This Character Area is also known as the North Heaton or Newton Park Estate. It is described in the relevant vendors plans as consisting of a 'Private housing development for Wilkinson Bros and others'. The northern boundary of the area runs along the Coast Road. In the west the areas is bounded by Benfield Road, in the east by Addycombe Terrace and in the south by Sackville Road. The streets within the area include Sackville Gardens, Debdon Gardens, Addycombe Terrace, Charminster Gardens, Craythorne Gardens, Huntcliffe Gardens, Danby Gardens, Redcar Road, Bosworth Gardens, St. Alban's Crescent, Cleveland Gardens, Jenifer Grove, Cannock Drive, Mitcham Crescent, Patterdale Gardens, Whittan Place, Conway Drive and Dovedale Gardens.

Chronologically this is the last Character Area within the Heaton study area to be built. The housing stock of the area consists predominantly of bungalows, both semi-detached and detached varieties. There are also some very recent developments of individual properties within the existing plot structure.

Figure 7.29: Character Area 3 - Armstrong 2

Character Area 4 - St. Gabriel's Estate

St. Gabriel's Estate Character Area consists of sites between Heaton Road and Armstrong Road in the area north from Simonside Terrace to Benton Bridge. The area was constructed from 1881 onwards, and also includes sites on Heaton Rd / Coquet Terrace / Lesbury Road and Cartington Terrace built between 1898 and 1904. Amendments and additions to initial plan were carried out up to c. 1935. The area over looks Heaton Park and the steep slope to the Ouseburn.

Based on cartographic and field work evidence it appears that this is the housing area that F. W. Rich was referring to in his letter to Lord Armstrong, regarding the villa sites, that he had now abandoned in favour of greater density of smaller houses. The initial plans for the area involved a handful of large villas. However, these plans never materialised and after some considerable delay the area was eventually developed as a predominantly inter-war semi-detached housing area. There are nevertheless some larger villa properties in the area. A further local land-mark and listed building is the St. Gabriel's Church (designed by Frank W. Rich) on the corner of St. Gabriel's Avenue and Heaton Road.

Figure 7.30: Character Area 4 - St. Gabriel's Estate

Character Area 5 - Heaton Hall Estate

The Heaton Hall Estate Character Area dates from the 1930s, but has nevertheless much older origins as the present day housing development was built over the site and grounds of Heaton Hall. Originally Heaton Hall was the seat of the prominent White-Ridley family, the hall and grounds were however, in 1840 purchased by Newcastle industrialist Mr. Addison L. Potter. Having been the home of Addison-Potters while this locally prominent industrial family was, among other things, involved in the residential development of Heaton - the house had fallen into disrepair after the WWI and it was demolished in 1933 to make way for more housing.

The present day housing stock consists of 1930s semi-detached houses providing accommodation in cottage flats. In other words a semi-detached house provides four flats, each with their own entrance; two flats on the ground floor and two on the first floor. Customarily the front garden of the house is divided between the ground floor flats and the back garden between the flats on the first floor.

Figure 7.31: Character Area 5 - Heaton Hall Estate

Character Area 6 - NER Railway Terraces

The relevant vendor's plans describe the NER Railway Terraces Character Area as consisting of '...Building ground for NER Railway Company ... of houses on Spencer Street / Rothbury Terrace and Ebor Street, constructed between 1894 and 1899'. Commissioned by a single client and apparently designed as a single entity, this area contains a distinctive group of locally listed terraced properties originally built for the North Eastern Railway. NER Company's railway yard (behind Heaton Railway Station, now the Chillingham Road Metro) borders this Character area to the south. Due to the nature of the work some employees of the NER were required to live close to their location of work. This made the 'Avenues' (discussed further in Character Area 7) a popular choice for railway workers, and made building of 'company housing' advantageous to the railway firm.

The original 19th century terraces remain largely unaltered, and the area has been added to in the 1930s in the form of semi-detached houses providing accommodation in cottage flats (i.e. four flats in a semi-detached house) on Rothbury Terrace and Marleen Street (1932-1933) and more recently in the form of low rise-flats in Marleen Court.

Figure 7.32: Character Area 6 - NER Railway Terraces

Character Area 7 - Addison Potter Estate

Boundaries of Addison Potter Estate Character Area are defined as: Heaton Road, NER Railway, Simonside Terrace and Second Avenue. In chronological terms Character Area 7 (together with Character area 6) follows and partially parallels the development of the South Heaton Character Area. Together with parts of Character Area 2 these four character areas contain most of the surviving 19th century housing stock in Heaton.

This Character Area consists largely of 19th century terraced housing with small amount of clearance and re-development. An integral part of the area are the 'Avenues' numbered from 1 to 9, which contain exclusively Tyneside Flats and are the central location in Jack Common's (1951) book 'Kiddar's Luck' which vividly describes the working class life in Heaton during the 1910s. Within the 'Avenues' is also the locally listed Chillingham Road Primary School which originates from the Victorian 'Board School' era. Outside the 'Avenues' the housing consists predominantly of terraced houses, with larger properties (three storied) along Simonside Terrace.

In addition to the residential properties, this Character Area currently contains a range of shops and restaurants, especially along the arterial Heaton and Chillingham Roads. There are also 'secondary' shopping facilities along the Second Avenue. The remaining 19th century pubs are located on Chillingham Road. The former Heaton Railway station now functions as Chillingham Road Metro station and connects the area to the Tyne&Wear Metro network.

Although the street pattern of the area remains physically unaltered the pedestrianisation of some of the Avenues and frequent bollarding of vehicular access both within the area and into the Heaton and Chillingham Roads has resulted in alteration of possible vehicular movement patterns within the area.

Figure 7.33: Character Area 7 - Addison Potter Estate

7.3.3 Summary

In terms of historic urban landscape character this second Phase of case-study research has divided the case-study area into seven residential Character Areas. The main data source in this second Phase of enquiry have been the Vendor's Plans deposited in the Tyne and Wear Archives Service (TWAS). The judgements made about the Character Areas are supported by data gathered during field work, and relevant mapped data from various dates.

Four of the residential character areas are described as preserving significant 19th century HL characteristics, whereas further three present later building patterns, Heaton Hall and St. Gabriel's Estate are fairly typical inter-war semi-detached housing and Armstrong 2 Character Area is characterised by low-rise bungalow development. All seven areas have some degree of later alteration and some replacement of built fabric. By-and-large though, the physical characteristics of the polygons have not altered significantly since construction. This is particularly true regarding the road layouts and the block and plot structures in the study area.

In reference to the transductive matrix which forms the theoretical framework for this study, this second phase of case-study research analyses the spatial dimension of the matrix and in describing the spatial results of the historical development outlined in phase one, demonstrates an immediate connection between the chronological dimension of the matrix with the experiential (or reality) dimension discussed in the following section. In order to address the experiential dimension of the matrix through focusing on the physical environment the following third Phase of the case-study studies the 'South Heaton' Character Area in detail.

7.4 Phase 3 - Focus on a Single 'Character Area'

The purpose of this third phase of the case-study research is to addresses the experiential or reality dimension of the transductive matrix. As outlined in Chapter 5 this aspect of the transductive matrix is conceptualised as consisting of physical, technical, psychical and affective layers. Based on detailed archival research and field work data this section presents an in-depth study of the built environment of the 'South Heaton Character Area'.

The data analysed in this phase consist of the both historical and current data and are used to analyse the details of the character of the South Heaton Character Area. In order to allow for the assessment of continuity and change (which have been identified as key characteristics of the post-industrial city in Chapter 2) this section begins by establishing a typology of housing that allows for the assessment of both historical and current features of this Character Area.

7.4.1 Typology of Housing

As outlined in Phase 2 of the case-study (see figure: 7.24, on page 191) boundaries of the South Heaton Character Area are Jesmond Dene / Heaton Park and Heaton Park View in the north, NER railway in the south, Newington Road to the west and Heaton Road to the east. This area was chosen for the detailed study as this was where the residential development of Heaton began. Furthermore on the basis of the initial research carried out during the pilot study this area seemed to contain many interesting features typical of developments also tentatively identified in other character areas during Phases 1 and 2 of this case-study.

As outlined in the *Methodology* Chapter, the typological approach is useful for the comparison of data when gathering visual data (i.e. photographs and drawings) to document perceived characteristics of an area of housing. The typology outlined in this section has been devised based on both historical research and present day fieldwork. In taking a look at the external embellishment of the houses in conjunction with the main plan form, together with historical research into the rateable values and rents realised, this section builds a varied and telling picture of the lived built environment of Heaton residential area in the late 19th or early 20th century. This section analyses the main plan typologies and the variations within the study area concentrating on the ways in which the front door and main front-window (often a bay-window) are embellished. The relationship between the house and the plot of land appears another important element that influences the amount of external decoration which often appears to be related to the

amount of private space (i.e. front yard or garden) available to each individual property.

The case-study database combines the addresses of all the houses within the detailed study area with information about the typology of housing (i.e. terrace, flat or cottage), and data about the owner, value and main occupant of the house. These data provide a robust evidential basis for this typology. The types of houses identified in the area are detailed in figure 7.34 on page 211. The typology has been devised using both archival research and contemporary field work. The types of evidence considered in the construction of this typology have been 1) mapped evidence (OS 1st, 2nd and 3rd edition, and maps in the HER), 2) 1871 / 1881 / 1891 Censuses, 3) Ward's 1855 and 1890 Directory, 4) vendor's and building plans (referenced: T186) in the Tyne and Wear Archive Service, and 5) field work and photography.

As outlined in figure 7.34 (on page 211) there is a great (but quite subtle) variety of houses within the detailed study area. Stylistically the houses in the study area are typical of the Victorian / Edwardian terraced housing. The building height is almost universally confined to two-stories with a pitched roof. There are a few three storied dwellings in the south-eastern corner of the study area, as well as three storied commercial properties along the Heaton Road. The majority of housing in the area is terraced; either houses or Tyneside flats. The terraced houses range from the earliest, very small terraced houses on Malcolm Street, to the large three storied terraces (built with a small stable in the back yard) on Heaton Grove. There is also variation in the size and appearance of Tyneside flats; from the earliest very small and externally austere flats on South View West to the later Tyneside flats with two-storied bay windows on e.g. Warwick Street. In terms of internal layout the smaller type of Tyneside flat where the downstairs flat has two rooms (no specific 'bedroom' indicated on plans) and upstairs has three (small bedroom included); and the larger and usually later type where the downstairs flat has three rooms (one small bedroom) and the upstairs has four (two small bedrooms) - are both present in the study area. (Eg. Type 1: T186/8652, South View West, Type 2: T186/11735, Hotspur Street)

Furthermore, there are a number of semi-detached cottages and some individual houses on the northern fringe of the study area. Two of the pairs of cottages on Burnville have subsequently (1960s / 70s) been replaced, but although different in architectural style these later houses are similar to the earlier cottages in their size and siting on the plots. The houses and cottages at this northern fringe of the study area also differ from the rest of the study area because of the topography of this sub-area. The houses are 'perched' on the steep bank of the Ouseburn and over look the Jesmond Dene. This

Basic Type	Detailed Type; description	
Later Developments	High-Rise Towerblock	x
	Low-Rise Flats	x
	'Barratt estate'	
Terrace	Georgian	
	Pre Bye-law terraced housing	
	3 Storey terraced house with stable e.g. on Heaton Grove	x
	Narrow terraces with long front gardens, e.g. Stratford Grove	x
	Large Terraces on e.g. Stratford Grove Way	x
	Other terraces on Heaton Grove and Stannington Ave.	x
	Large end of terrace properties with front gardens, e.g. Kingsley place	x
	Large houses facing Heaton Park Road	x
	Terraces of Warwick Street	x
	White Terraces (1) e.g. on Falmouth and Cardigan Terraces	x
	White Terraces (2) e.g. on Falmouth and Cardigan Terraces	x
	'central' terraces; e.g. Bolingbroke Street	x
	'central' terraces; e.g. Hotspur Street	x
	Small terraces on e.g. Malcolm Street	x
	Terraces on e.g. Farndale Road that resemble semi-detached houses	
Tyneside	Pre Bye-Law Tyneside flat	
	Tynesides over shops	x
	Tynesides with two storey bay-window	x
	Tynesides with one storey bay-window	x
	Tynesides without a bay window	x
	Tynesides with a two storey 2nd floor flat	
House / Cottage / Villa	h	x
	Detached villa	x
	semi-detached villa	x
	Semi-detached house (four flats)	
	Semi-detached house (4 or more together)	

Figure 7.34: Typology of Housing - based on case-study fieldwork by the researcher
Types marked with an 'x' are present within the South Heaton Case-Study Area

creates unusual plot layouts, terracing of the individual plots, creates a necessity for re-taining walls, and generally provides the area with views and a certain element of drama and surprise. In contrast the rest of the study area is fairly level, with the land rising slowly (from the river Tyne) towards north.

The 'suburban infrastructure' (referring to the locally available, non-residential facilities) of the study area consisted originally mainly of small 'corner' shops. The shops are concentrated to the ground floors of houses on the roads running north to south, whilst on the roads running east to west the character of the area is almost exclusively residential. There was also a Victorian Board School at the corner of Heaton Park Road and Malcolm Street and an Anglican Church on Heaton Road which survives to this day.

Both the archival evidence, and the field assessment of the study area indicate that the majority of houses in the area originate from between 1879 and 1914; with a large majority dating from 1881 to 1900. The Victorian School has been demolished and replaced by a 13 storey high-rise block. A new school has been built at Hotspur Primary School which in turn was built in the South West corner of the study area after the demolition of number of houses (terraces of Tyneside flats) at the western end of South View, Malcolm Street and one half of Mowbray Street.

It is possible to analyse the expansion of the urban area, and the distribution of types of properties based data about the resident and their occupations, as well as the rateable (i.e. taxable) value of the houses. These data form the basis of the case-study data-base where the historical data used in this section is derived from. It appears from the Census and Building Plan evidence that this part of Heaton was built as a fairly mixed area, with residents (and residences) ranging from well to do middle-class households with one or two resident domestic servants, to lower-middle class and working class households.
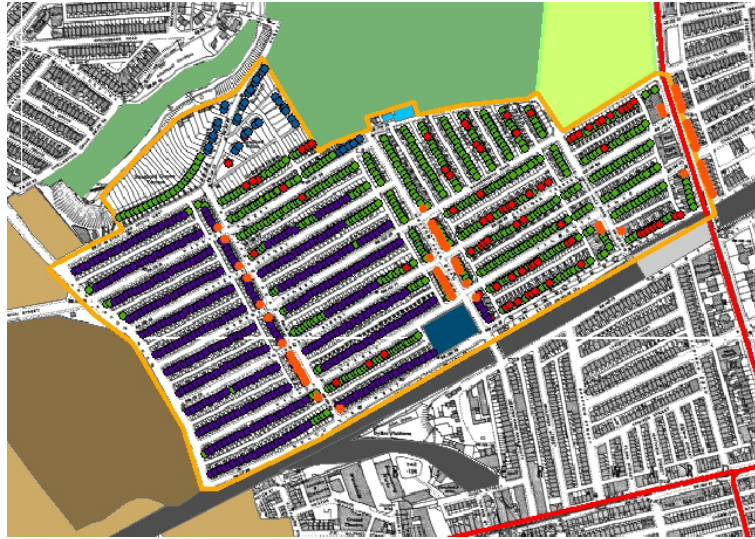
Figure 7.35: Map of historical house-type data
In the above map the terraced houses are marked in green, Tyneside flats in purple, cottages in blue.
Red marks the houses employing live in servants, and the orange denotes the locations of shops.
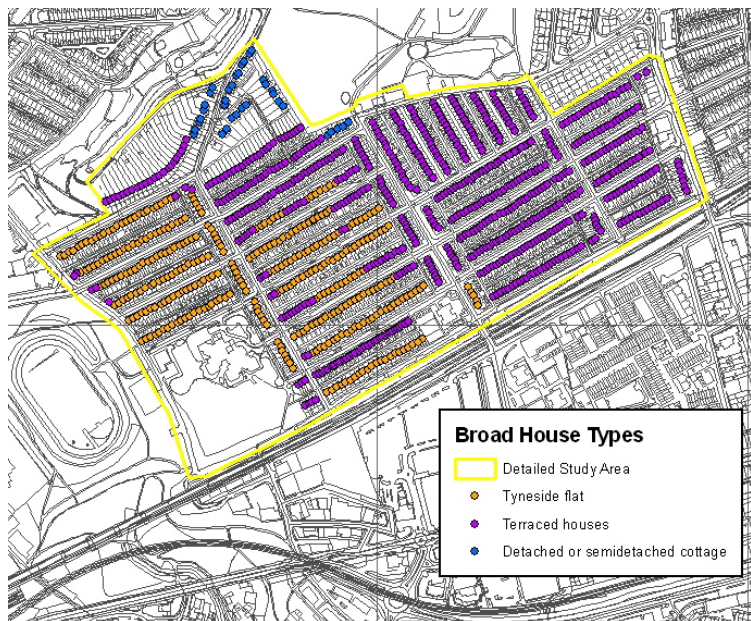
Figure 7.36: Map of current housetype data

As illustrated in figure 7.35 on page 213 it appears that the well to do middle-classes seem to have lived in the houses to the east of Heaton Park Road, and the working classes to the west of Stratford Road - with the middle ground in between occupied by

households whose income fell somewhere in between these two. The exception are the semi-detached cottages and houses on Stratford Grove West Terrace and Stratford Grove, which also housed more affluent households. All the households with domestic servants have also been noted (in red) on the map in figure 7.35 on page 213. The information regarding domestic servants is from the 1891 Census. This helps to illustrate the social demographic of the area at the end of the 19th century. The same social demographic seems to also relate to rented or owner occupied property. The present character of the study area appears to remain fairly mixed - with crowded student households perhaps replacing the crowded working class ones.

In comparison figure 7.36 on page 213 shows the change that has occurred within the South Heaton Character Area during the last 100 years in terms of the house type. These changes will be elaborated further in the following sections and are also discussed further in Chapters 9 and 10. The following firstly analyses some historical data pertinent to the South Heaton Character Area in order to demonstrate the 'starting point' from which the current built environment has developed from; and secondly analyses the current built environment further in order to gain a fuller understanding of the character of this area.

7.4.2 Detailed historical analysis

This section analyses the data gathered in the case-study database with regards to the diversity of houses which has emerged as an important characteristic of the study area. This diversity is illustrated through 1) the broad house type, 2) the rateable values of houses, 3) the proportion of owner occupation, and 4) whether the household employed live-in servants (as listed in the 1891 Census, which is seen as an indicator of class distinction between working and middle-classes), data on how many households within the study area employed day servants is not available.

Broad House types - further typological analysis

Item	Numerical Value
Total number of occupied households in the area in 1891	948
Terraced Houses	514 (54.2%)
Tyneside Flats	370 (39%)
Semi-detached Cottages and Detached Houses	26 (2.7%)
Shop and Flats above Shops	38 (4%)

1) Terraced Houses

The formal analysis of house typologies within the study area was developed largely from the fieldwork data gathered. During data gathering it became evident that the basic building materials of all the 19th century housing in the study area are the same, i.e. brick built houses with stone lintels above doors and windows and slate used for roofing. As these elements are common to all the properties in the detailed study area, these considerations would not be suitable for typological consideration.

Instead the formal typological classification can be drawn from elements that differentiate the buildings, including: 1) the colour of brick used in the front of the building (possible colours identified as: red, brown or white), 2) the height of the building (i.e. two or three storeys), 3) type of doorway (i.e. un-decorated, plain doorway, doorway with wooden decoration, or doorway with stone decoration), 4) height of the bay-window (options: no bay-window at all, one-storey bay-window, two-storey bay-window), 5) type of private outdoor space available to each household (options: none; none at front - yard at back; yard at front - yard at back; garden at front - yard at back; yard at front - garden at back; garden front and back) and 6) size of the property (Small: width less than 15 feet, max height two storeys; Medium: width over 15 feet, max height two storeys; Large (height three storeys or over). The consideration of the size of the property is based on the observations drawn from the examination of building plans for the area. From the plans it became apparent that a facade width of 15 feet is customary for the inclusion of the bay-window into the design of a terraced house or flat. And the larger properties in the detailed study area are defined by the inclusion of the third storey rather than significantly wider facade.

However, upon formal analysis of the fieldwork data it became evident that the total possible combinations from this typology would be 972 different house types. (Calculated as: 3 x 2 x 3 x 3 x 6 x 3 = 972).

As the number of different types of doorways within the study area cannot be accurately represented by the division into the three groups proposed in figure 7.37 (there is in fact a much greater variety of types of porch and other decorative elements within the area) - this typological consideration was removed from the detailed typological analysis. The amount of variables was further reduced by ruling out 'impossible' combinations, i.e. three storey terraced houses, built of brown brick, without bay-windows and front and back yards, do not exist within the study area. The typological features actually present within the study area are high-lighted in figure 7.37 on page 216.

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Basic Type	Typological Feature	Sub-Type
Terraced House	1) Colour of brick	**Red**
		White
		Brown
	2) Number of Storeys	**2**
		3
	3) Type of Door	Plain
		Wooden Porch
		Stone columns or Porch
	4) Type of Bay Window	none
		One Storey
		Two Storey
	5) Private Outdoor Space	none
		none at front / Back Yard
		Front Yard / Back Yard
		Front Yard / Back Garden
		Front Garden / Back Yard
		Garden Front and Back
	6) Size	**Small** (width less than 15 feet; max height two storeys)
		Medium (width over 15 feet; max height two storeys)
		Large (height three storeys or over)

Figure 7.37: Terraced House types

House Type	Detailed Type	Bricks	Stories	Bay window	Outdoor space	Size
Terrace	3 Storey terraced house with stable e.g. on Heaton Grove	white	3	2 storey	Front Garden - back yard	large
	slim terraces with long front gardens, e.g. Stratford Grove	red	3	2 storey	Front Garden - back yard	large
	Large Terraces on e.g. Stratford Grove Way	red	3	1 storey	Garden front and back	large
	Other terraces on Heaton Grove and Stannington Ave.	red	3	1 storey	Front garden - back yard	large
	Large end of terrace properties with front gardens, e.g. Kingsley place	red	2	1 storey	Front garden - back yard	large
	big houses facing Heaton Park Road	red	3	2 storey	Front yard - back yard	large
	Terraces of Warwick Street	red	2	2 storey	Front yard - back yard	large
	White Terraces (1) e.g. on Falmouth and Cardigan Terraces	white	2	2 storey	Front garden - back yard	medium
	White Terraces (2) e.g. on Falmouth and Cardigan Terraces	white	2	1 storey	Front yard - back yard	medium
	'central' terraces; e.g. Bolingbroke Street	red	2	2 storey	Front yard- back yard	large
	'central' terraces; e.g. Hotspur Street	red	2	1 storey	Front yard - back yard	large
	tiny terraces on e.g. Malcolm Street	red	2	none	Front yard - back yard	large

Figure 7.38: Typological Features of each terraced house-type

However, even just with the highlighted possible options (in figure 7.37) 72 combinations are possible (2 x 2 x 2 x 3 x 3 = 72). However, field work, and formal analysis of the field work demonstrates that in fact 12 typological variations of the terraced house type are present within the study area. These types have already been descriptively identified in figure 7.34 on page 211. Figure 7.38 on page 217 demonstrates the formation of these types. As part of the case-study process an illustrative appendix detailing these types has been compiled. These data are presented in APPENDIX G of this study.

2) Tyneside Flats

Using the same basic variables as with terraced houses (in other words, leaving the consideration of the doorway decoration outside of this analysis) it becomes apparent that although the potential number of Tyneside flat types in the area is 432 (Calculated as: 3 x 2 x 4 x 6 x 3 = 432). However, only 4 types are actually probable and in fact all these four types are found within the study area.

All the Tyneside flats found within the study area are of medium size, are two storeys high, built of red brick and have front and back yards. The main variation comes from whether the flats have been furnished with a bay-window. It appears that this was less common in the earlier built properties, but the two storey bay-window, just as found on other (i.e. non-flatted) terraced properties of the era became the norm after 1890 and during 1900s. The central third of the South Heaton Character Area (i.e. the area between Heaton Park Road and Stratford Road) is characterised by the mix of accommodation consisting of terraced houses and Tyneside flats with none, one or two-storey bay-windows. A sub-type specific to Tyneside flats is the provision of flats above shops. These properties are characterised by lack of private open space in the front of the property, as access to the shop front took priority in these cases. This sub-type is analysed and illustrated further in the following chapter. These data are also illustrated further in APPENDIX J of this study.

3) Villas, Houses and Cottages

Although small in number the cottages and villas present within the study area do in effect constitute an almost separate sub-character area, as they are concentrated to the northern edge of the study area. The urban design and townscape analyses carried out in the following section highlights how these cottages and villas have been built on a topographically challenging slope that gives the area a particularly interesting aspect.

Basic Type	Typological Feature	Sub-Type
Tyneside flat	1) Colour of brick	**Red**
		White
		Brown
	2) Number of Storeys	**2**
		3
	3) Type of Door	Plain
		Wooden Porch
		Stone columns or Porch
	4) Type of Bay Window	**none**
		One Storey
		Two Storey
		Shop Front
	5) Private Outdoor Space	none
		none at front / Back Yard
		Front Yard / Back Yard
		Front Yard / Back Garden
		Front Garden / Back Yard
		Garden Front and Back
	6) Size	Small (width less than 15 feet; max height two storeys)
		Medium (width over 15 feet; max height two storeys)
		Large (height three storeys or over)

Figure 7.39: Possible typological features of Tyneside Flats

House Type	Detailed Type	Bricks	Stories	Bay window	Outdoor space	Size
Tyneside	Tynesides over shops	red	2	Shop front	None at front - back yard	medium
	Tynesides with one-storey bay-window	red	2	1 storey	Front yard - back yard	medium
	Tynesides with no bay-window	red	2	none	Front yard - back yard	medium
	Tynesides with two-storey bay-window	red	2	2 storey	Front yard - back yard	medium

Figure 7.40: Actual typological features of Tyneside Flats

Houses or Cottages	Detached property	red	2	n/a	Garden front and back	large
	Semi-detached property	red	2	n/a	Garden front and back	large

Figure 7.41: Typological features of Houses, Villas and Cottages

4) Further Historical Features

This sub-section of the case-study considers the character of the detailed study area through typological analysis of housing, and also discusses the rateable value of houses found within the area, and explores the relationship between these two considerations and the available data about rates of owner occupation and employment of live-in servants. These two further considerations are seen as indicators of wealth and status within the population that lived within the study area c.a. 1890. This study suggests that the variety of data provided by the assessment of rateable values of houses, owner occupation and presence of live-in servants within the area supports the variety of residents within the area that one would expect on the basis of variety of accommodation identified through the typological analysis of the housing in the area.

4a) Rateable values of houses in 1890

A further key consideration that helps to highlight the variety of housing within the South Heaton Character Area is the rateable value of houses. Based on material held at the Tyne and Wear Archives (REF: Poor rates, Heaton, 183/618-622), the ratings refer to the level of local taxation payable on the individual property, and is therefore similar to the current banding of Council Tax according to the value of the house. As illustrated in figure 7.42 on page 221 in terms of rates paid, 19 different types of terraced property can be identified within the Area at this time.

Similar consideration of flatted developments in 1890 reveals 3 valuation categories of Tyneside flats (illustrated in figure 7.43 on page 221). In this case each pair of flats is considered as one entity as the house typology developed in the beginning of the chapter excludes the consideration of the internal floor plan as part of the typology. The differentiation between the two flats in each pair (a value of £1 pound) is attributable to the fact that the upstairs flat has one bedroom more than the downstairs one.

As discussed in the previous sections, 19 physical types of house were identified within the detailed study area, and this closely corresponds with the 22 types of rateable house values found within the area in 1890. However, the relationship between the two features is complex, and cannot be described as a direct correlation. It would appear that the

Terraced Properties		
Rate	No. of properties	Total estim. annual from this type
£9	1	£9
£10	11	£110
£12	14	£196
£14	8	£112
£15	61	£915
£16	127	£2032
£17	181	£3077
£18	32	£576
£19	14	£266
£20	12	£240
£21	10	£210
£22	10	£220
£23	5	£115
£24	1	£24
£25	8	£200
£27	21	£567
£30	5	£150
£31	15	£465
£40	2	£80

Figure 7.42: Rateable Values of Terraced Properties in 1890

Tyneside Properties			
Rate	No. of properties	Total estim. annual from this type	total for the pair
£10	11	£110	
£11	11	£121	£231
£11	164	£1804	
£12	164	£1969	£3772
£12	10	£120	
£13	10	£130	£250

Figure 7.43: Rateable Values of Tyneside Properties in 1890

Item	Numerical Value
Total number of occupied properties in the area in 1890	907
Owner Occupied Properties	131 (14.4%)
Building Society Ownership	5 (0.6%)
Thus : Private Rental	771 (85%)

Figure 7.44: Owner Occupied Properties in 1890

Item	Numerical Value
Total number of occupied households in the area in 1891	948
Households with 1 live-in servant	104 (11%)
Households with 2 live-in servants	5 (0.5%)

Figure 7.45: Household Employing Live-In Servants in 1890

valuations for tax were not only concerned with the physical size and features of the individual house, but probably also considered the house's location in relation to the rest of the neighbourhood so that houses nearer to Heaton Road would be considered more valuable than a similar house further away.

4b) Owner occupation in 1890

Further analysis of historical data shows that the prevalent type of housing tenure in 1890 in the South Heaton Character Area was renting from a private landlord, which applied to 85% of households. (See Figure 7.44 on page 221.)

4c) Household servants in 1891

The physical location of households employing live-in servants (data from the 1891 Census) is illustrated in the figure 7.35 on page 213. These data shows that 11.5% households had live in servants in 1891. These households occupy almost exclusively terraced or villa housing.

The historically mixed nature of the study area demonstrated above is also evident in the exterior of the houses within the South Heaton Character Area, and is illustrated further in APPENDIX H of this study. The various forms of external decoration relating to the front door of the house, and the arrangement of the main (bay) window are far from uniform or monotonous. The treatment of the 'front garden' space also varies a great deal, from a plain stone slab step with no front wall to separate the front yard from street, to various railings and stone details on top of the front wall to demarcate the transition from street to the more private realm of the front garden. A number of interesting themes appear to emerge from this detailed historical analysis, but in order to develop these themes the following section moves from the historical analysis of the built environment of the South Heaton Character area to the analysis of the current environment. This discussion is then followed by a synthesis of these two strands of enquiry.

7.4.3 Analysis of Current Character

In the context of the transductive matrix this part of third Phase of the case-study continues to addresses the physical layer of reality. This section begins with the assessment of the current character of the detailed study area using Urban Design Analysis based on the features and definitions of good urban form developed by CABE (2000; for practical application see e.g. Doncaster Metropolitan Borough Council, 2004). The urban design considerations outlined by CABE are critically discussed in Chapter 6 and as discussed in Chapter 7 are used in this study in an analytical (and not normative) capacity. Thus the aim of this section is to describe the characteristics of the detailed study without making judgements about the desirability of the perceived characteristics. This section also further addresses the current character of the detailed study area through Townscape Analysis.

Figure 7.46: The whole of Heaton on an aerial photograph

Figure 7.47: South Heaton Character Area on an aerial photograph
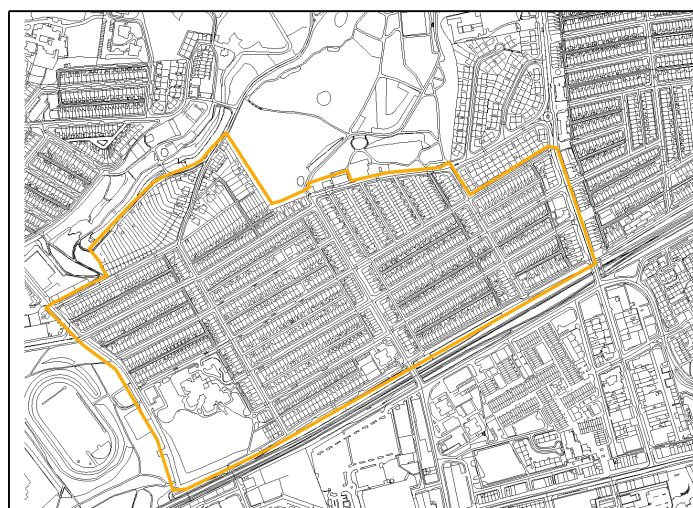
Figure 7.48: South Heaton Character Area on the current map

7.4.4   Urban Design Analysis

Urban design analysis of the detailed study area seeks to address the issues of character, ease of movement, continuity and enclosure, quality of the public realm, legibility and diversity in the built environment. These issues have been defined as central considerations in the analysis of the urban environments by CABE (2000) as discussed in Chapter 7. These central urban design considerations address the following questions:

- Character - Is the study area a place with its own identity?

- Ease of movement - Is the study area a place that is easy to get to and move through?;

- Continuity and enclosure - Is the study area a place where public and private spaces are clearly distinguished?;

- Quality of the public realm - Is the study area a place with attractive and successful outdoor areas?;

- Legibility - Is the study area a place that has a clear image and is easy to understand?

- Diversity - Is the study area a place with variety and choice?

The following section analyses these features and illustrates the results of the analysis through maps.

Character

In terms of Urban Design Analysis (CABE, 2000) 'Character' is defined as 'a place with its own identity'. This study identifies 10 sub-character areas of housing within the detailed study area. Referring to the map in figure 7.49 on page 228; **Area 1** is characterised by the steeply sloping topography on which the terraced houses on long-narrow plots are built. These plots are nevertheless large enough to be described as gardens. There is also a small number of semi-detached and detached cottages also with their private gardens. Two pairs of original cottages on Stratford Grove have been replaced by later three-storied housing. **Area 2** consists of late 1890s - early 1900s terraced housing on Stratford Grove West and uniform, terraced Tyneside flats with two storey bay-windows in the rest of the area. **Areas 3, 6** and **10** are characterised by the presence of shops at the street level of these houses. In comparison to the other areas where the streets run roughly in the west to east direction, these shopping streets run north - south. In

terms of residential accommodation **Area 4** offers the most diverse range of housing. This area consists of a variety of terraced housing and flats, ranging from very small terraced houses to Tyneside fats with varying amounts of external decoration, and to larger terraced properties of Warwick Street. **Area 5** consists of the high-rise tower block, Heaton Park Court which was built on the site of the Victorian Board School during the 1960s. **Area 7** includes some of the largest terraced properties within the detailed study area. The ends of terraces on these streets which run north - south are also notable for their individual detailing. Another unusual feature of this sub-area are the pedestrianised front streets, illustrated on page 239.

Areas 8 and **9** feature a mixture of different types of terraced houses with a variety of external decoration around the front door and different types of arrangements for the bay-windows. Some properties on Falmouth Street and Cardigan Terrace have facades faced with white bricks, which was fashionable for a better class of terraced housing in the late 19th century. Some of the different door and window detailing found within the detailed study area are illustrated in APPENDIX H, covering the door and window typologies.

Ease of Movement

Referring to the figure 7.50 on page 228 the areas where vehicular traffic cannot pass have been highlighted in red on this map. Pedestrian access across these junctions is still possible, but it is not possible to drive a car through. This restriction of passing traffic (together with demolition of houses and the construction of the new school) has had a significant impact on the character of Stratford Road, and appears to co-incide with the reduction in the number of local shops along the street. In other aspects the area is easy to move through, the grid-layout of the streets means that even a more complicated journey through the area is unlikely to require turning more than three corners.

Continuity and Enclosure

The traditional street and building plot lay-out which has been preserved within the detailed study area means that by-and-large the public and private areas are clearly defined. This is illustrated in figure 7.51 on page 229. The main exceptions to the clear definition of public and private areas relate to the later developments within the area, for example the 'grounds' of Heaton Park Court tower block, and the 'public spaces' created in between existing houses through demolitions (illustrated in figure 7.60 on page 236), are perhaps more ambiguous in nature than the earlier developments. These 'in-between spaces' and the traditional street-layout of front and back-street also raise questions about how analytically effective the division of space into either public or private generally is.

As with so many other issues about the built environment the reality appears to be more complex than such binary divisions would indicate.

Legibility

The preservation of the original street-layout and much of the built fabric of the detailed study area means that the area is still visually identifiable as a 19th century residential area, familiar to most casual visitors and residents of Newcastle alike.

Diversity

As a residential environment the detailed study area has a variety of different sized 19th century terraced houses and flats on offer. Later housing developments mean that there is also some provision of more modern flats, either in a low-rise flatted development of Stratford Grove, or high-rise in Heaton Park Court on Heaton Park Road. The area is also mixture of housing association, private rental and owner occupied property. The private rental market is currently dominated by student housing as the proximity of both Northumberland and Newcastle Universities makes the area a popular choice for students.

Quality of the Public Realm

The detailed study area is by definition a 'residential area' where housing dominates the character of the landscape. The HLC analysis done in phase 2 of this study extended to the whole of the surrounding landscape allowing the identification of the recreational park land bordering the study area to the north and west. Access to these areas, the City Stadium area towards Newcastle city centre, and Heaton Park and the Ouseburn river to the north of the study area are a valuable asset to all surrounding housing areas, the detailed study area included. The detailed study area also includes some smaller public areas that have been created as a result of housing demolition. These vacant plots have been landscaped into informal public areas (illustrated in figure 7.60 on page 236).

The following section on townscape analysis of the detailed study area analyses the changes to the public realm of the area in more detail.
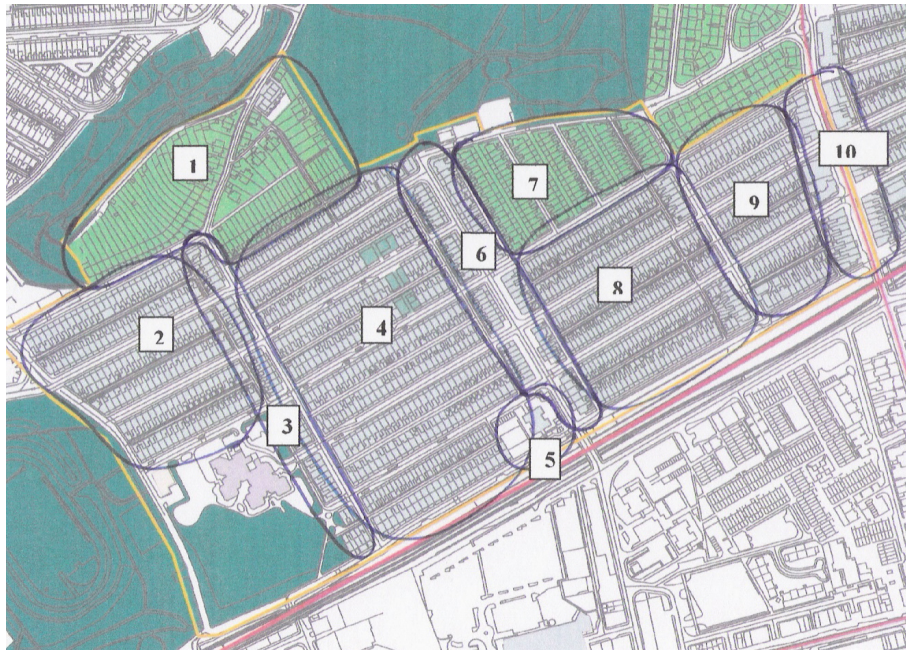
Figure 7.49: South Heaton Character Area - Sub-character Areas
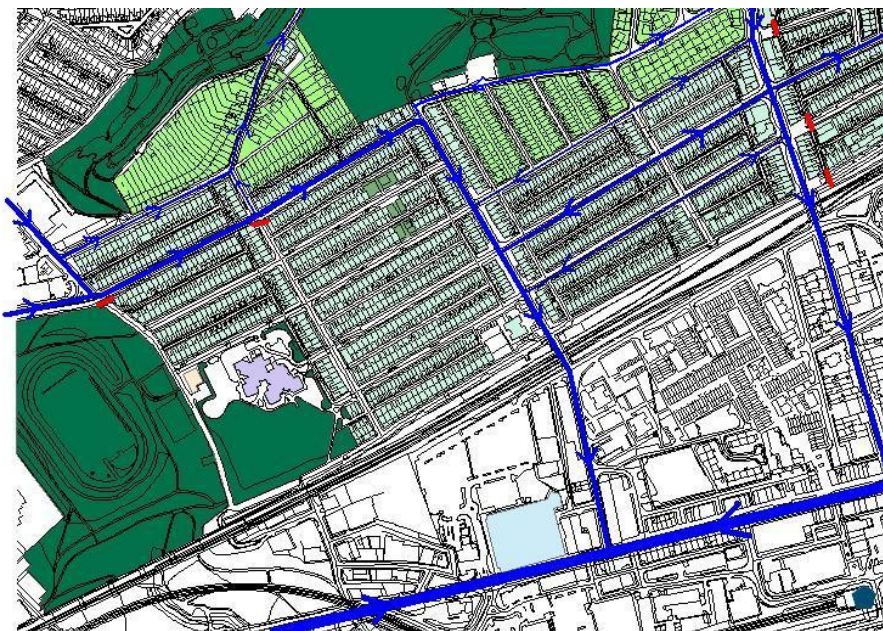
Figure 7.50: South Heaton Character Area - Ease of Movement
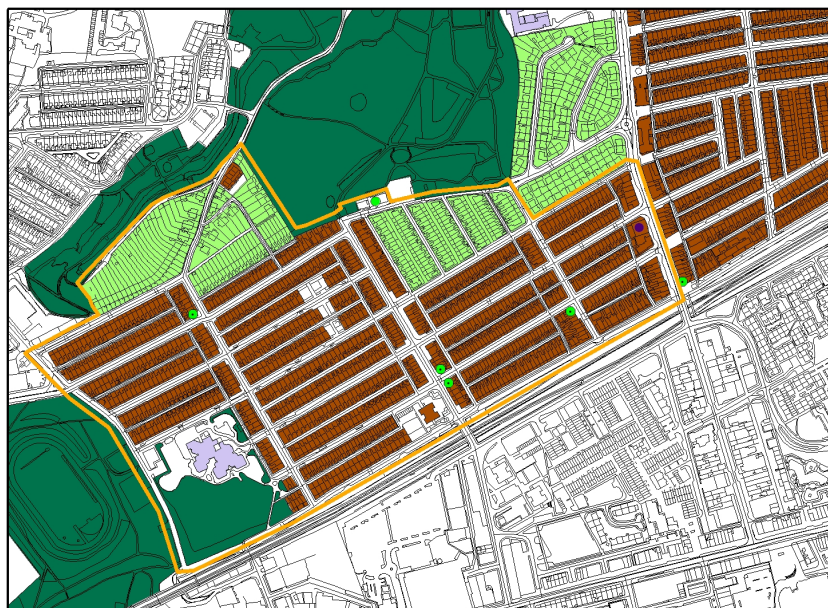
Figure 7.51: South Heaton Character Area - Continuity and Enclosure

7.4.5   Townscape Analysis

As outlined in the preceding *Methodology* Chapter, this part of the case-study considers the townscape of the detailed study area through issues that were identified during the literature review and the Pilot Study as typical elements of the townscapes of surviving 19th century residential areas. In summary these features are:

1. Significant local buildings (i.e. Listed Buildings and other notable local landmarks)

2. Large scale alterations, which refers to mass demolition (and possible replacement) of housing.

3. Changes to the public realm, which includes changes to the floorscape, green infrastructure, views of the area, facades of the buildings and the provision of local shops

4. Effects of the gradual small scale adaptation of individual properties

As change and continuity have been identifies as significant features of the post-industrial urban landscape, the aim of this section is to address these concerns through analysis of the present day townscape. The following sections address each of these issues in turn. These features of the townscape have been identified as pertinent to the concerns of this study as 'significant local buildings' can represent an area of relative continuity and act as focal points of both experiences and perceptions of an area. Furthermore as this study seeks to address the process of change that has created the present day landscape (seen as indicative of the industrial to post-industrial transition) the different scales of change identified above emerge as significant features of the present townscape.

1) Significant local buildings (listed or local list)

There are no conservation areas in the whole of the case-study area. The Ouseburn Valley industrial conservation area, however, is within walking distance of the study area.

Figure 7.52: The Co-operative Building on Heaton Road

There are two listed buildings in the wider Heaton Study Area. These are the ruins of 'King John's Palace' also known as the Camera of Adam of Jesmond (dates from the 12th century) and St. Gabriel's Church (designed by F. W. Rich in the 1920s). Locally listed buildings within the whole of study area are the

Cattle run in Armstrong Park, Chillingham Road Primary School, Cragdside Primary School, Crosslings on Coast Road, the Gates, piers and Walls of Heaton Park, Heaton Baptist Church, Heaton Adult Education Centre and Heaton Community Centre on Warton / Tosson Terrace, Heaton Methodist Church and Church Hall, King John's Well in Armstrong Park, Railway Terraces on Ebor, Cleghorn and Richardson Streets, the Shoe Tree in Armstrong Park, St. Theresa's RC Church, The People's Theatre on Benton Bank, the Victoria Library on Heaton Park Road, and the Co-operative Society Building on Heaton Road.

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Figure 7.53: The Victoria Library

The Co-operative Society Building on Heaton Road (illustrated in figure 7.52 on page 231) and the Victoria Library on Heaton Park Road are the locally listed buildings within the South Heaton Character Area. The Victoria Library is architecturally a typical example of a Victorian Library building in an attractive setting at the northern end of Heaton Park Road and next to an entrance to Heaton Park. Victoria Library was designed by John William Dyson (who also designed the Stephenson Library in Elswick) and opened in 1898.
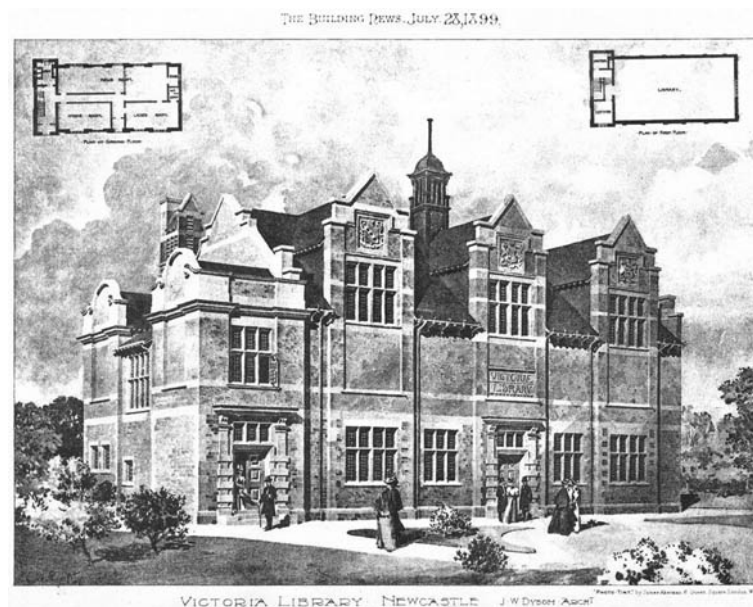
Figure 7.54: The Victoria Library, Heaton illustrated in the Builder magazine, July 1899

2) Notable large scale alterations to the area

When compared to neighbouring district of Byker which was subject to whole scale re-development in the 1960s to 70s, Heaton's 'historic built environment' is fairly intact. Some redevelopment has nevertheless occurred, and small scale change (unaffected by the planning regulations) and adaptation is widespread.

Heaton Park Court built in the 1960s, seen in figure 7.55 on page 233 facing east along the back Malcolm Street, is the only major post-1950, or in fact post-1915, alteration to the built fabric of the study area. Built on the site of the Victorian board school at the corner of South View West and Heaton Park Road it towers over the much smaller 19th century townscape.

Elsewhere the post-1950s changes include the demolition of houses at the south western corner of the study area, giving way to the site of the new Primary School. The Hotspur Primary School built on the site of the demolished houses is a low rise structure, almost hidden among the trees and the wider City Stadium parkland setting.

Figure 7.55: Heaton Park Court

Figure 7.56: Hotspur Primary School

3) Changes to the Public Realm of the Area

The features of the public realm of the detailed study area addressed in this section include: a) floorscape, b) green infrastructure, c) views of the area, d) facades of the terraces and e) the suburban infrastructure in the form of local shops.

In addition to the issues discussed in the following other changes of the public realm relate to the increased prevalence of the motorcar and as discussed above (see figure 7.50 on page 228) this has resulted in changes to possible movement patterns through the study area, and visually - changes to the street furniture of the area and the continuous presence of parked cars as part of the townscape (see figure 7.62, on page 238).

a) Floorscape

Cobbles were the original flooring material used to pave the streets and pavements of the detailed study area. Increased traffic and changing preferences however have resulted in the large scale disappearance of this original street surface. Now only a small cobbled section on Parkville is visible.

Figure 7.57: A small section of original floorscape on Parkville.

Elsewhere asphalt and concrete have replaced the original cobbles.

Figure 7.58: Different street surfaces outside the entrance to Heaton Park Court

The use of different flooring materials from different dates disrupts the unity of the floorscape.

b) Green spaces

Mature trees and gardens are mainly associated with the large terraced houses on Stratford Grove, and Stratford Grove West, and the villa sites on Parkville and Burnville. Even for houses with no substantial garden space the large trees in Heaton Park provide a green backdrop.

Figure 7.59: Cottages with private gardens on Stratford Grove

Since the 1950s more urban trees and other green features have been planted Heaton. Typical sites include areas where small scale house demolition has occurred in the 1960s and 70s.

Figure 7.60: Examples of small scale demolition of terraced houses within the area

Trees have also been planted into road narrowing devices, serving to act as a traffic calming measure, and providing softer landscape into what originally was a very 'hard' environment.

c) Views of the Area

The views from the area over looking the Ouseburn valley, Heaton Park and towards Jesmond Dene from e.g. Parkville and Stratford Road as illustrated in figure 7.61, are characteristic of the dramatic topography of the northern edge of the detailed study are. The views from Stratford Road facing towards Newcastle town centre (e.g. in figure 7.62, page 238, along Bolingbroke Street leading to the City Stadium) also connect the study area to the surrounding green spaces.

One of the more monotonous visual characteristics of the grid-layout of 19th century terraced housing in Newcastle are the back-lanes that were built to ensure that all terraced houses (including the upper floors of Tyneside flats) had private access to the street both from the front and back of the house. Within the detailed study area this feature is still preserved and this creates the typical long stretches of back lanes, without 'active' frontage (see figure **??** on page 238). In some cases the access to the back of the house from the lane has allowed for people to build garages or car-ports.

Figure 7.61: Views towards Sandyford and Jesmond

Figure 7.62: View towards City Centre along Bolingbroke Street

Figure 7.63: View along Back Heaton Park Road facing south

d) Facades, active and un-active

The dual nature of main streets and back streets that dominates the townscape of 19th and early 20th century Newcastle gives rise to often very marked difference between the 'public façade' to the front of the house, and the often much more sparse and utilitarian 'back-of-the-house' appearance of the back lanes. Illustrated below, the front facade of Kingsley Place with only pedestrian access to the front of the house, and atypical front gardens, as originally designed in the 1890s, is contrasted with the back lane between Kingsley Place and Heaton Park Road.

Figure 7.64: View along Kingsley Place

Figure 7.65: The back lane between Kingsley Place and Heaton Park Road facing south

e) Shops in the area

This study considers shops as part of the suburban infrastructure of non-residential facilities that were originally created as an integral part the 19th century urban landscapes. Other building types of this suburban infrastructure include the provision of schools, hospitals, sporting facilities, libraries, religious institutions and so forth. As the larger public buildings that survive as part of the 19th century townscape of the study area have already been mentioned in the section discussing *Significant Local Buildings* above, this study identifies the network of local shops as a key characteristic of the surviving 19th century residential areas that could benefit from further study. A gazetteer of all the shop premises within the South Heaton character Area has been compiled in APPENDIX J of this study.

Figure 7.66: Changes to shop premises within the study area

These shops (illustrated in figure 7.66 on page 7.66; one former and the other still in business) in the junction of Warwick Street and Stratford Road also illustrate the kinds of accumulative changes that have occurred throughout the detailed study area over the last 100 or so years.

4) Effects of gradual, small scale adaptation of individual properties

The gradual, small scale alteration and adaptation of individual properties is one of the most typical features of the detailed study area. The Building of extensions, loft conversions, combination of two flats into a terraced house and alterations to doorways and windows are just some examples of the most frequent types of change within the study area. Whilst these changes can seen as indicators of positive economic activity in the area, the impact on the uniformity of the townscape (which is often regarded as an important part of good quality 'character and appearance' of an area) might not always be so positive. However, good design and use of appropriate materials in alterations to existing properties can result in positive change in the context of surviving 19th century residential areas.

Figure 7.67: Terraced houses on Warwick Street

As figure 7.67 on page 241 illustrates, changes to individual terraced properties can have an un-unifying impact on the wider townscape.

Figure 7.68: Examples of extensions to existing properties

Many of the issues about gradual, small scale changes to residential properties apply equally to the shop premises discussed above, and the two types become mixed as redundant shop premises have been converted into residential use. This development is illustrated above in figure 7.68 in the photographs on the left and the right. Both of these houses on Stratford Road originally had a shop on the ground-floor. The analysis of the shop premises is developed further in the next Chapter.

The purpose of this third phase of the case-study research has been to addresses the experiential or reality dimension of the transductive matrix. As outlined in Chapter 5 this aspect of the transductive matrix is conceptualised consisting of physical, technical, psychical and affective layers. Based on detailed archival research and field work data an in-depth study of the built environment of the South Heaton Character Area has highlighted a number of issues that can be analysed further in the context of the transductive matrix. The focus of this phase of the case-study research has been on the physical layer of reality. The preceding discussion is developed further in the following section.

7.5 Analysis of the Case-study

This section synthesises some of the data gathered during phase 3 of case-study research. Combining the results of the detailed historical and typological analysis with the assessment of the current townscape allows for the analysis of the changes that characterise the current built environment of the detailed study area. From these two strands of research a short synthesis addresses the prevalent (historical) features of the detailed study area and identifies areas of further analysis to be undertaken in the following chapters.

7.5.1 Synthesis of historical research, townscape and urban analysis

Although the detailed study area is recognisable as a '19th century residential area', a more detailed analysis, such as that undertaken above, reveals that such basic characterisation does not give full account of the present or the historical character of the area. Based on this case-study - the character of South Heaton Character Area, and other surviving residential areas of similar date, begins to emerge as a complex network of continuities and changes.

The open space / built space diagrams (figure 7.69 on page 244) from two different dates illustrate the main areas of appreciable physical change within the detailed study are. The way in which the spatial layout of the area has remained largely unaltered appears support the initial visual identity of South Heaton Character Area as a '19th century residential area'.
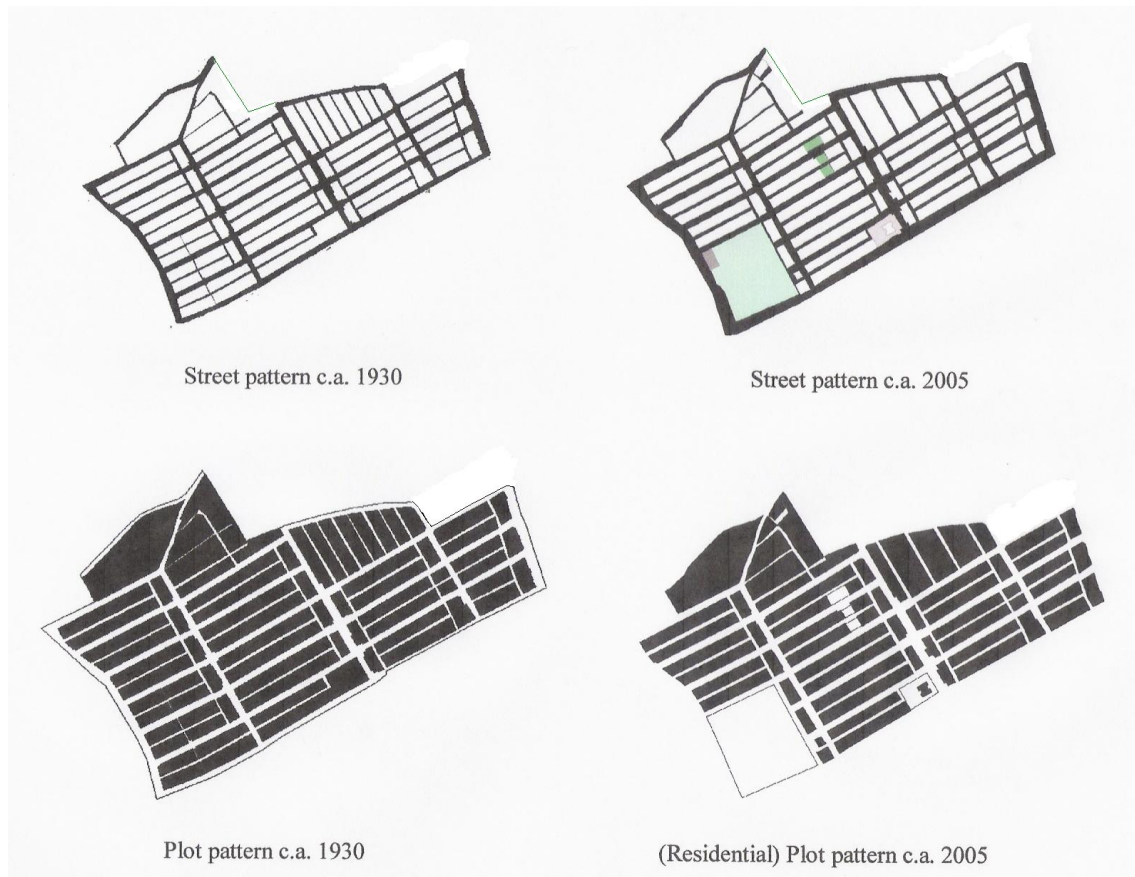
Figure 7.69: Built Space vs. Open Space diagrams

The following section outlines some of the areas of changes and continuity as elements of further analysis to be addressed through this case-study.

7.5.2 Prevalent changes and continuities and the persistence of variety

In the broader consideration of post-industrial cities and 19th century residential areas in them - the dramatic housing clearances and re-building of modernist tower blocks is contrasted by the relative permanence of the remaining 19th century townscapes that are gradually being altered by the residents of individual properties. This study suggests that this small scale change instigated by the residents themselves is the defining feature of residential areas such as Heaton. In summary these areas have by and large been 'left alone' between the large scale demolition and renewal of planning interventions, and the statutory protection through the designation of conservation areas.

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This study further suggests that comparison of data from the urban design and towns-cape analysis, with the information gathered during the desk-based assessment of the whole of the study area highlights several areas of small scale change. These small scale changes also reflect some of the cultural and societal changes that have taken place over the last 100 or so years. Consideration of the nature of these small scale changes reveals that different rates, intensities and scales of change operate simultaneously (over time). The kinds of changes identified within the wider study area range from changes through specific planning policy interventions, small scale changes instigated by residents them-selves, to cultural, societal and economic changes that have had an impact on people's movement and networking behaviours (e.g. shopping habits, cars, communication net-works etc.). The types of changes identified within the South Heaton Character Area include:

- traffic related changes; there are numerous 'traffic calming measures' limiting vehicle access

- small incremental change typical of owner occupation e.g. change of doors, windows, drainpipes, fencing etc.

- small scale 'built change'; e.g. extensions, garages, conservatories, loft conversions etc. and removal of back yard lavatories where these were originally built.

- conversion of two Tyneside flats into one dwelling.

- small scale demolition (of 19th C. housing), either combined with re-building or resulting in the creation of small 'public spaces' on the vacated plots

- change of use of buildings, mainly conversion of small shops into dwellings

- The loss of local 'facilities'; number of shops has declined and what they sell has changed; the library has closed

- Landscaping of the 'City Stadium' area has improved the environment to the west of the detailed study area

Despite these changes the South Heaton Character Area is still recognisable as ori-ginating from the 19th century and this suggests that despite the small scale changes a certain amount of continuity is also present within the study area.

A further interesting consideration is how the differing treatment of the fronts and backs of the houses affects the character of the area. The more decorative, cosmetic

changes tend to occur in the front of the houses. The larger scale built changes, namely extensions, are located to the back of the houses. These built changes often relate to kitchen and bathroom extensions and are an example of how changing technical expectations (in everyday language referred to as 'all mod-cons') have an impact on the physical form of houses. Thus in areas like Heaton the fronts of the houses tend to retain more of their original visual appearance. Everyday activities and passing traffic in Heaton are concentrated on the front streets meaning that the backs of the houses are seen less often. The focus of activities on the front streets emphasises the perceived historical character of areas such as Heaton, as the more substantial changes may not be immediately obvious to a casual, passing observer.

Combining data from urban design and townscape analysis with the information gathered in the case-study database, high-lights the persistence of 'variety' within the physical reality of the detailed case-study area as one of the key characteristics of the South Heaton Character Area. The physical structure of the area, both in terms of plot structure, building use and the buildings themselves retains much of the original 19th century characteristics. The amount of private open space attached to properties remains largely unchanged and despite the blocking of streets for through traffic of cars, pedestrian access within (and to and from) the area remains largely unaltered. The physical proximity of Heaton and Armstrong Parks remains a characteristic feature of the area.

7.6 Conclusions of the Case-Study Chapter

This chapter has outlined the body of research undertaken to better understand the character of 19th century residential areas in post-industrial cities. The gathered data relate specifically to the Heaton residential area in Newcastle, but can also be analysed in the wider context of post-industrial development in the UK and elsewhere. The following chapters explore the themes emerging from the case-study research in Heaton, in this wider context.

Description and analysis of the physical results of the development of the study area, undertaken in Phase 2 of the case-study research, addresses the spatial dimension of the transductive matrix. In considering this aspect of the transductive matrix of the case-study area, Phase 2 answers the research question: 'What is the physical result of this development in terms of urban historic landscape character ?' In summary the HLC type analysis of the wider Heaton study area identified 7 residential character polygons. Four of these were identified as predominantly 19th century in character and based on

field-work undertaken, share many of the more detailed characteristics identified in the detailed study area. The housing in remaining three character areas dates mainly from the 1920s to the 1940s. In these three areas of later housing the semi-detached house type is prevalent in two areas, whereas in one area the bungalow, either detached or semi-detached, is the dominant house type. Of the semi-detached character areas the 'Heaton Hall Estate'-polygon is notable for having been built on the site and grounds of Heaton Hall, the original country-house of the Ridley-White family, and latterly inhabited by the industrialist Mr. Addison-Potter, who played a significant part in the development of Heaton as a residential area.

Analysis of the historical development and the context of the study area which were the focus of Phase 1 of this case-study research, addresses the chronological dimension of the transductive matrix. Phase 1 of the case-study answers the question 'How has the physical character of the study area developed through history?' In summary the historical development of Heaton from a medieval manorial holding into a 19th (and 20th) century residential area is fairly typical in the context of English urban development. Similar development patterns can certainly be observed in the case of other 19th century residential areas in Newcastle. The development of e.g. Fenham, Benwell, Scotswood, Elswick, Jesmond and Byker, from small medieval settlements surrounded by agricultural land, in some cases into small scale industrial production (mainly mining of coal), and then eventually during the 19th century to being incorporated into ever expanding urban Newcastle, follows a pattern familiar from the assessment of Heaton.

As outlined in the *Methodology* Chapter the two following chapters analyse firstly; the case-study data in the context of 19th century residential areas, and secondly; develop analysis of the more abstract characteristics of these areas within post-industrial cities. Explaining complex causal links in the (historical) development of the area, analysing the impact of planning policy interventions and analysing the reasons for the survival of Heaton these chapters address the items of further analysis raised at the end of the *Methodology* Chapter. In other words the following chapters of further analysis move from the geographically specific analysis relating to the study area to relating the findings to the broader contexts of 19th century terraced housing in England, and the post-industrial developments in England and elsewhere. These characteristics are challenged or added to on the basis of the results of this case-study. The characteristics of 19th century residential areas that the data from Heaton is contrasted with in Chapter 9 include the terraced building type, the description of these residential areas according to their initial

construction date (i.e. 19th century), and their perceived 'residential' nature.

Specifically Chapter 9 discusses the emergence of Tyneside flat as the locally typical example of terraced house form; the impact of planning policy interventions within the detailed study area (and for 19th century residential areas in general), and the effect of change on the built environment of the area impacted through the reduction in the number of local facilities, specifically shops. The issues of continuity and change discussed above are elaborated further in Chapter 10, and this discussion is linked back to the consideration of cultural values first introduced in Chapter 2. Having analysed the chronological, spatial and experiential dimensions of the matrix in the case-study research described above, the transductive matrix provides a theoretical framework that allows for a consideration of these emerging themes of change and continuity in relation to the character of the study area in a new way.

Chapter 8

Character of 19th Century Residential Areas

8.1 Introduction

The area based (Menuge and Taylor 2004; Kelleher 2008) case-study detailed above uses a three phased research methodology as a vehicle of enquiry. In order to gain a fuller understanding of the continuities and changes that characterise 19th century residential areas within the post-industrial city, the case-study methodology adopted addresses the development of the urban landscape at three different spatial scales. As outlined at the end of the previous chapter this first chapter of analysis outlines three characteristics of 19th century residential areas that emerge from the reviewed literature, research methods and the case-study undertaken. These relate to a) the house-type, i.e. the terraced house form, b) the age of the development and c) the perception of these areas as residential.

Firstly, this study explores a specific typology of housing, namely the terraced house. The terraced house type is recognised as a key feature of 19th century residential areas across urban England. There is, however, great regional variation in the specific typological details this house form adopts. In the following the development of the Tyne & Wear version of this house-type, the 'Tyneside Flat', will be analysed in the context of the research undertaken.

Secondly, this study considers how this locally distinctive house type was built during specific period of time, from around 1850 to 1915. As such Tyneside Flats are a response or a solution to a specific set of circumstances and requirements for housing. These considerations give residential areas such as Heaton their distinctive 19th century character. Age of origin is one of the critical features of many architectural studies and

assessments of value or significance when for example listing criteria is discussed. Age is also one of the defining attributes of HLC assessment when determining and describing the character of a HLC polygon. However, a further age related feature of 19th century residential areas relates to the subsequent, gradual individualisation of surviving 19t century housing over the last 100 or so years. These developments might mean that '19th century' is not necessarily the best description for the character of such a HLC polygon or character area. This study suggests that concentrating on the age of origin as an approach can serve to hide the impact and nature of the developments that have in the case of terraced housing occurred over the last 100 to 150 years.

Thirdly, the 19th century residential areas have a predominant function as 'housing'. Further analysis below addresses the current perception of these areas of housing as residential - this study proposes that these areas were originally built with a different mindset and were for 'living-in' not necessarily just for homes. Differentiation of the different spheres of life during the 19th century has been identified as one of the characteristics of 19th century urban development. Authors such as Daunton (1983b) and Davidoff and Hall (1983) have written about the physical separation of domains for work, domesticity and leisure, yet, the 19th century residential environment was a major centre activity through the domestic labour of women, without whose contribution life in neighborhoods like Heaton would not have been possible. The conceptualisation of these environments as 'residential' is perhaps attributable to later thinking around 'zoning' of activities in planning policy. This study challenges the perceived residentiality through an analysis of provision of shopping and other non-residential facilities within 19th century residential areas. The changing nature of paid employment, domestic work and local provision of e.g. shopping facilities are considered as part of the transition process from an industrial to post-industrial city.

In summary, this chapter seeks to add to the existing understanding of these three characteristics through further analysis. In context of the transductive matrix developed as the theoretical framework for this study, these further analysis address the transductions between the physical and technical layers of reality. This is done, firstly, through the analysis of emergence of Tyneside flat, based on comparisons of existing literature with data this study has gathered; secondly, through an analysis of the impact of planning policy interventions within the detailed study area (and for 19th century residential areas in general), and thirdly, through an assessment of change in the built environment through a case-study focusing on local shops.

8.2 Characteristic 1 - Tyneside Flat as the Locally Distinctive Form of Terraced House

8.2.1 Introduction

The historical research engaged in during the case-study research has brought up some data relevant to a consideration that has been discussed by scholars such as Tarn (1971), Sutcliffe (1974), Muthesius, (1982) Daunton (1983a), and Pearce (1994). All these scholars have sought to explain how and why the house form consisting of two flats within what from the outside looks like an ordinary terraced house has developed in the North East of England. This house type is known as the 'Tyneside Flat' and Daunton (1983a) has identified it as the prominent house type along the narrow band of urban development along the river Tyne. Even Pevsner's *Architectural Guide to Northumberland* (Pevsner and Richardson, 2002) devotes a section to this distinctive house form, made all the more unusual in England, a country where living in flatted developments even in densely populated urban areas is not the norm.

8.2.2 Existing Explanations for the Emergence of Tyneside Flats

According to Pearce (1994, 39) the origin of the Tyneside flat has long puzzled the historians of English housing. It is commonly accepted that living in flats might be common on the European continent but that in England it is an exception rather than a norm. The 1911 census of England and Wales shows that only 2.9% of the population lived in flats. However, in Northumberland and County Durham that percentage was 25.4% and 14.6% respectively. And in Newcastle the figure was 55.67%, in Gateshead 62.5% and in South Shields 63.1%. Pearce (1994) proceeds to discuss the various explanations given for the prevalence of Tyneside flats in the North East. Sutcliffe (1974, 8) suggests that restrictions of land-use (town walls, inability to expand on to the Town Moor or cross the 'burns') resulted in the building of flats in Newcastle. Muthesius (1982, 130) favours an 'evolution' of flats from 18th century forerunners, such as 1796 miner's homes built in Heddon-on-the-Wall, 'Sunderland cottages' (Long 1996) and both Sutcliffe and Muthesius suggest that the Scottish tenements may have influenced the Tyneside flat. Furthermore, Tyneside Flats may be re-dated by model housing built in 1846 in London (slightly earlier than any examples of Tyneside flats this research project has been able to find in Newcastle), and described by Tarn (1971, 6) as 'cottage flats'. Mess (1928) notes that there are terraced flats very similar to the 'four door' version of Tyneside flat

in Canning Town in London.

Daunton (1983) develops Muthesius' work on the origins of Tyneside flat through consideration of the role that the local 19th century bye-law regulations (Gibson, 1881; Gaskell, 1983) had in allowing Tyneside flats to become the dominant working-class house type. Daunton claims the bye-laws institutionalised an earlier form of housing which had developed as a pragmatic response to the division of property in the old, densely populated central area of Newcastle in the mid-nineteenth century. However, according to Pearce (1994, 58) Daunton's work merely explains why tenements did not become the prevalent house-type in Newcastle - not why Tyneside flats became prevalent, since the bye-laws (Gibson, 1881) clearly did not positively require the erection of flats, as Daunton admits. Showing that consideration of economic and social factors is required for a fuller explanation Pearce (1994, 58) examines the impact of land value and land tenure (as well as pattern of building) to the building type. Pearce's consideration of the impact of land value and tenure, as well as the pattern of building, is a comprehensive exploration of the economic factors that may influence the choices encountered when deciding which type of buildings to construct. Finally Pearce (1994, 69) suggests that the Tyneside flat - and all forms of housing - should be seen as the concrete expression of prevalent cultural values.

8.2.3 Querying the Existing Explanations

The discussion above introduces the published explanations for the emergence of Tyneside Flats. The issue is clearly complex and the data gathered during the case-study research allow for refining and clarifying existing knowledge. The case-study research has brought to light new information about the economic as well as social and cultural factors that appear pertinent to the development of the Tyneside Flat. These considerations allow a deeper understanding of the design and evolution of the Tyneside Flat.

Economic Factors

The analysis of the 1890 Heaton Ratebook [1] sheds further light on the 'economic factors' which most probably had at least as much influence as those considered by Pearce, Daunton and others. It is clear from the Ratebook that as constructing a similarly proportioned terraced house or a pair of 'Tyneside Flats' must have required a similar outlay of capital (as the amount of building materials required is almost the same etc.), yet the combined yearly rentals from the pair of flats would be about 30% more than the income

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[1]TWAS reference: T186/183

that could be realised from a similarly proportioned terraced house. (Although the rateable value of such flatted development would also be 30% higher.) Newcastle's working class population created a huge demand for just about affordable housing to which the Tyneside flats catered for. And even if the landlords ideally would have preferred to build large villas for middle and upper-class accommodation the economies of scale meant that more money could be made from small flats.

The Gradual Evolution of Tyneside Flats

Pearce (1994, 76) asserts that the house form itself can be a valuable historical source when used correctly, and describes 25.2.1862 as the date of earliest building plan for a Tyneside flat found during his research. Muthesius (1982, 130) favours an 'evolution' of flats from 18th century forerunners, but produces little evidence to support his theory. During this research project earlier building plans for flatted developments were found at the Tyne and Wear Archives Service. Design projects featuring Tyneside Flats are featured from the very beginning of the collection in 1855. This study suggests that these early, pre-1866 Bye-Law, building plans (see figures 8.1 to 8.8) shed new light to the development of the Tyneside Flat as a building type we recognise today.
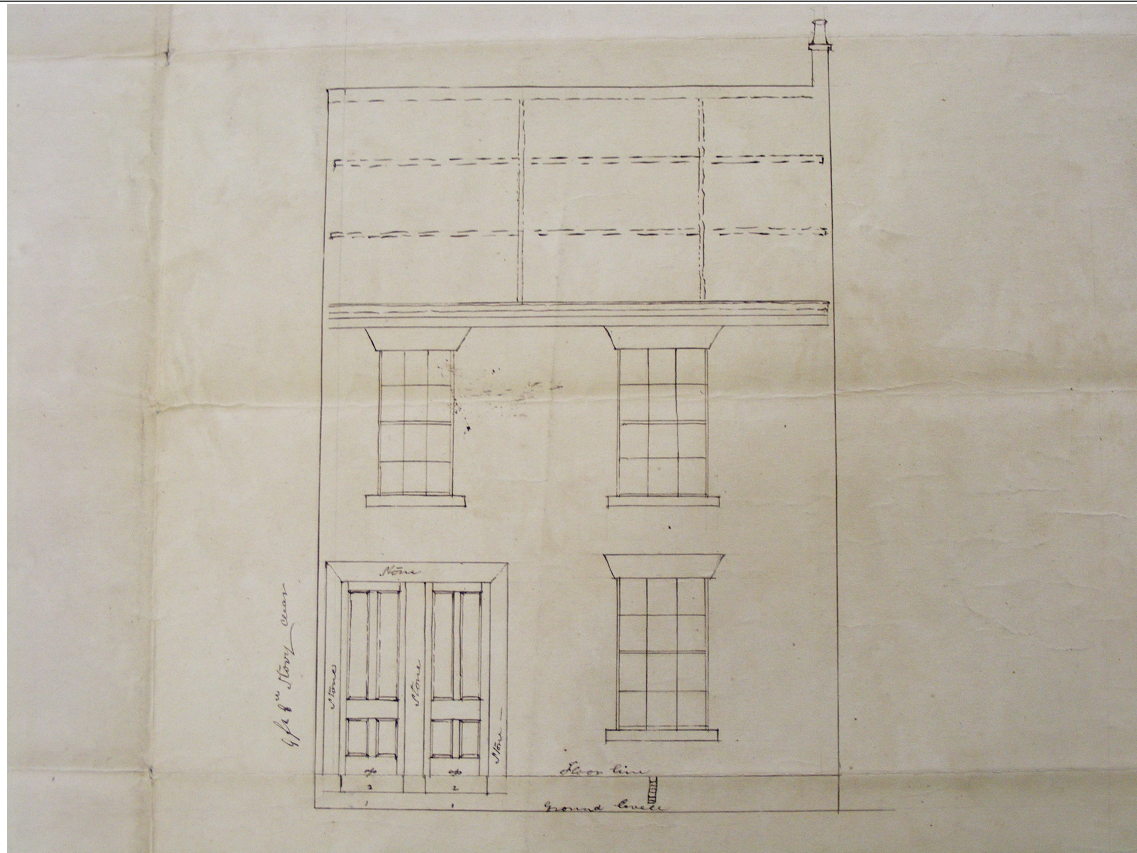
Figure 8.1: 1855, Scotswood Road, (T186/30)

This is the earliest Building Control Plan (T186/30) found in the Tyne and Wear Archives. It dates from 1855 (from the year the collection starts) and is for houses built by William Hare on Scotswood Road. Despite slightly 'unorthodox' arrangements of the back yard and perhaps the internal staircase this seems quite 'mature' example of a Tyneside-flat, with stone dressing specified around the door frame, and three rooms allocated for the downstairs flat, four for the one above. The width of back-lane is specified at 30' and Scotswood Road at 60'.
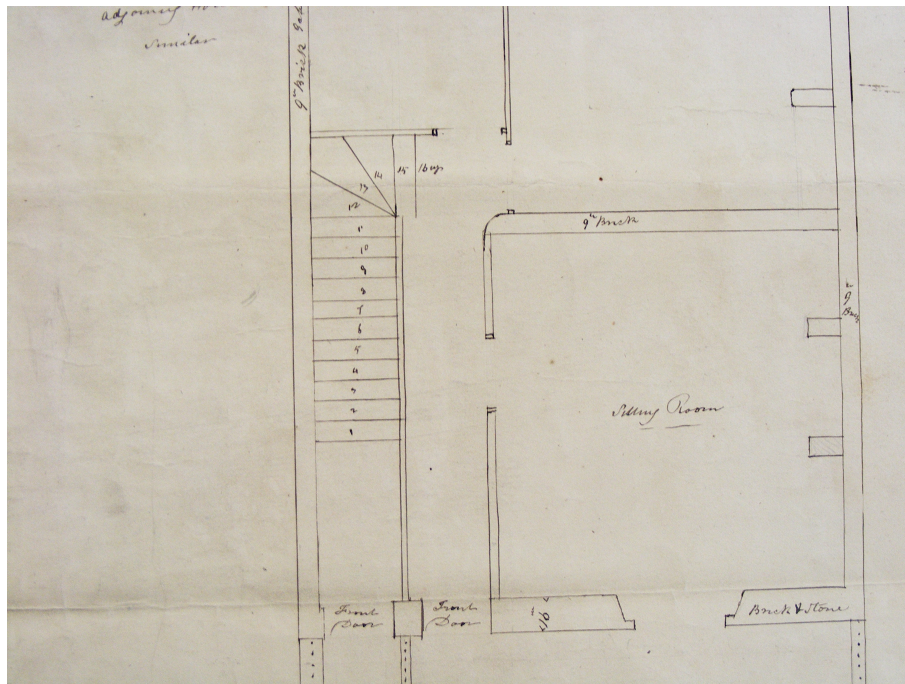
Figure 8.2: Internal Detail, (T186/30)
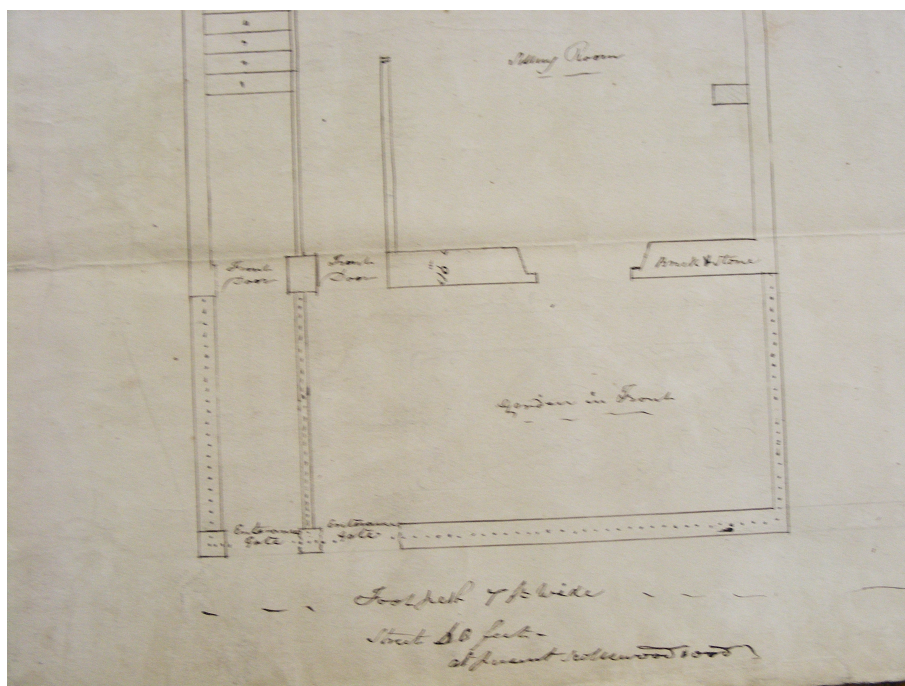
Figure 8.3: Details of Internal Plan, Scotswood Road, (T186/30)
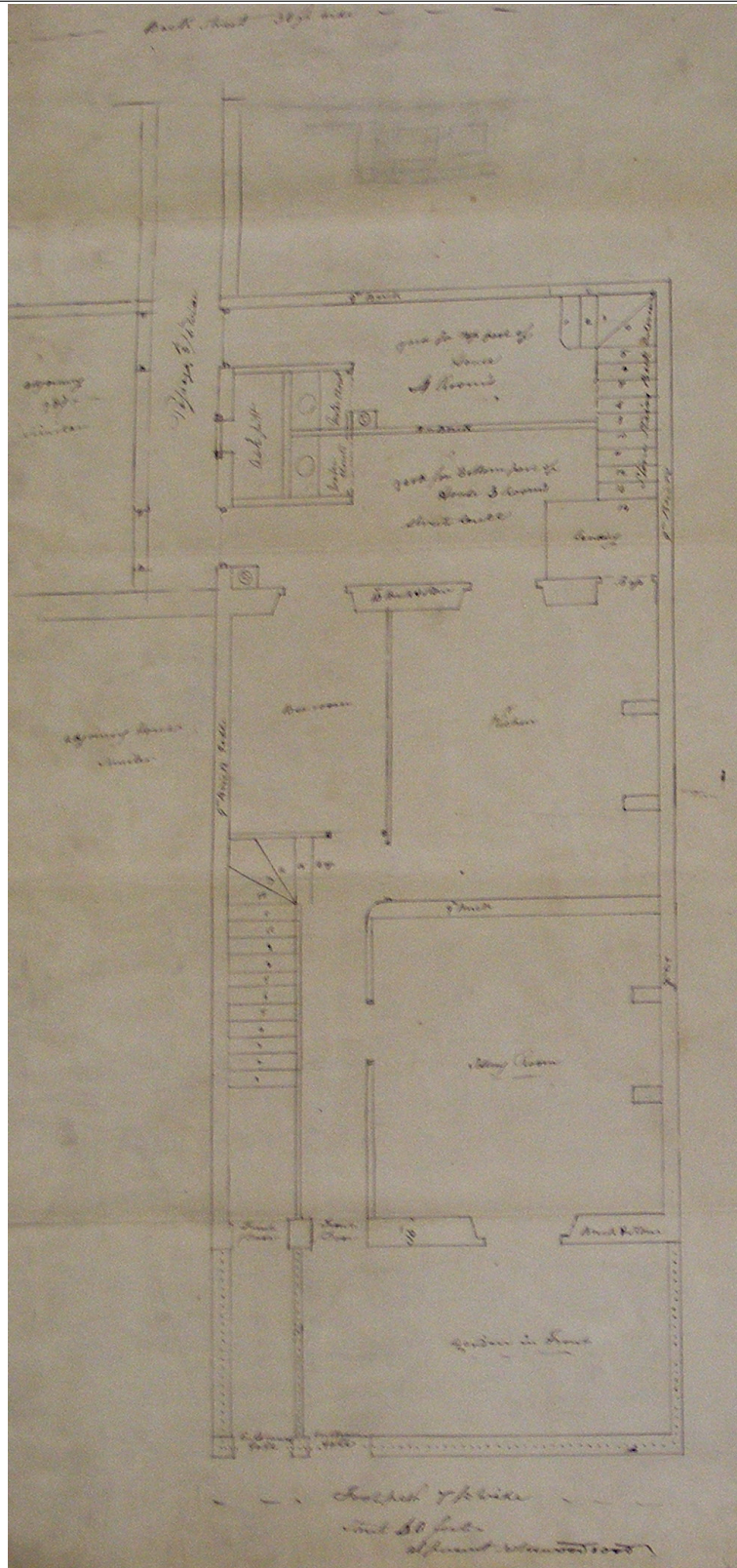
Figure 8.4: 1855, Scotswood Road, ground floor, internal plan (T186/30)

The plans shown in figure 8.5 on page 258 are for houses built for Mr. John Robson at St. Peter's in Byker and date from 5.6.1864. There is no elevation drawing, but external appearance would be of a 'plain' (no bay-window) Tyneside flat - however both of the upper floor staircases are completely inside the building, squeezing space out of the lower flat. Thus both the front and the back door of the upper flat would be at the ground level.

These plans pre-date the 1866 bye-laws, the standard wall thickness is 9", and the room height 9'6". (The walls were specified thicker at 14" in the 1866 bye-laws.)

The plans for Clumber Street (see figures 8.6 to 8.8, on pages 258 to 259) date from 28.6.1867, and were built by John Graham (T186/2178). Despite having the appearance of an ordinary Tyneside flat, the upper part contains two flats consisting of kitchen and one bedroom each. The upper flats in this case share a single internal staircase which leads to a passage from where there is access to the shared (between all three flats) back yard containing three coal houses, communal washhouse and privy. This demonstrates that the introduction of the 1866 bye-laws didn't immediately 'eradicate' the variety of flatted developments that existed in Newcastle during the early and middle parts of the 19th century. The type of flatted development that became prevalent is the more spacious flat with three rooms in the downstairs flat, and four rooms upstairs; that is nowadays recognised as 'the' Tyneside Flat. The prevalence of this arrangement is perhaps explicable by the fact that it is better equipped to accommodate families, which is where the main demand for housing would have been. The older and thus potentially more varied flatted developments seem to have been predominantly built in Shieldfield, Elswick, and parts of Byker, and have thus since been demolished.

A significant number of building plans for Tyneside-flat dating from 1855 to 1900 are archived at the Tyne and Wear Archives Service. The number of surviving plans necessitated an exploratory examination of a selection of the building plans for flats, concentrating on the earlier plans, and shows this to be an area that could benefit from further detailed study. However, the existing findings clearly demonstrate that what is now known as 'The Tyneside Flat' did not arrive to Tyneside as a ready made, existing house type, but that several 'variations of the theme' were tried and used before the intro-duction of local bye-laws in 1866 served to codify the existing best-fit building practice. The experience of Newcastle is not unique in as much the local bye-laws combined with drive to keep the building costs down, whilst offering maximum amount of space to flats in both floors, and in most cases providing the landlord with maximum rental income. Similar factors that resulted in the characteristically 'Victorian' residential areas in most
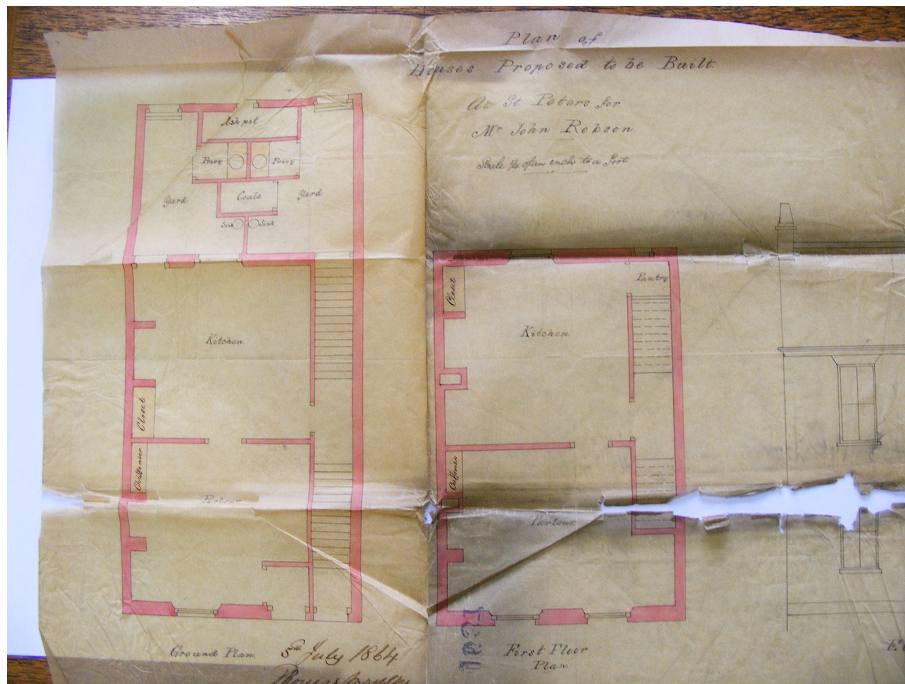
Figure 8.5: St.Peter's, Byker, 1864

Figure 8.6: Clumber Street (T186/2178), 1867

Figure 8.7: Further plans of flats on Clumber Street 1.
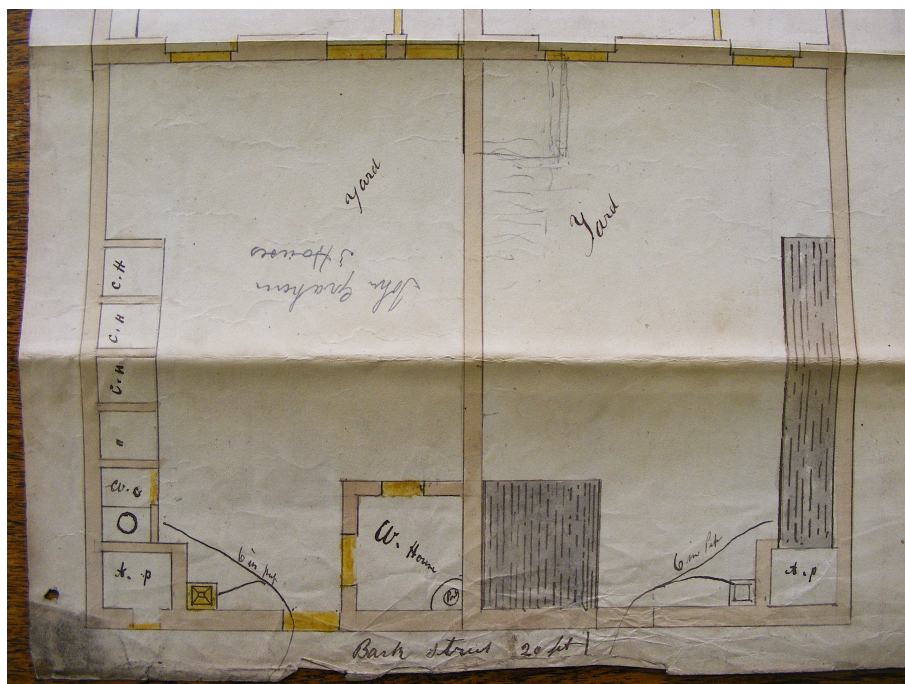
Figure 8.8: Further plans of flats on Clumber Street 2.
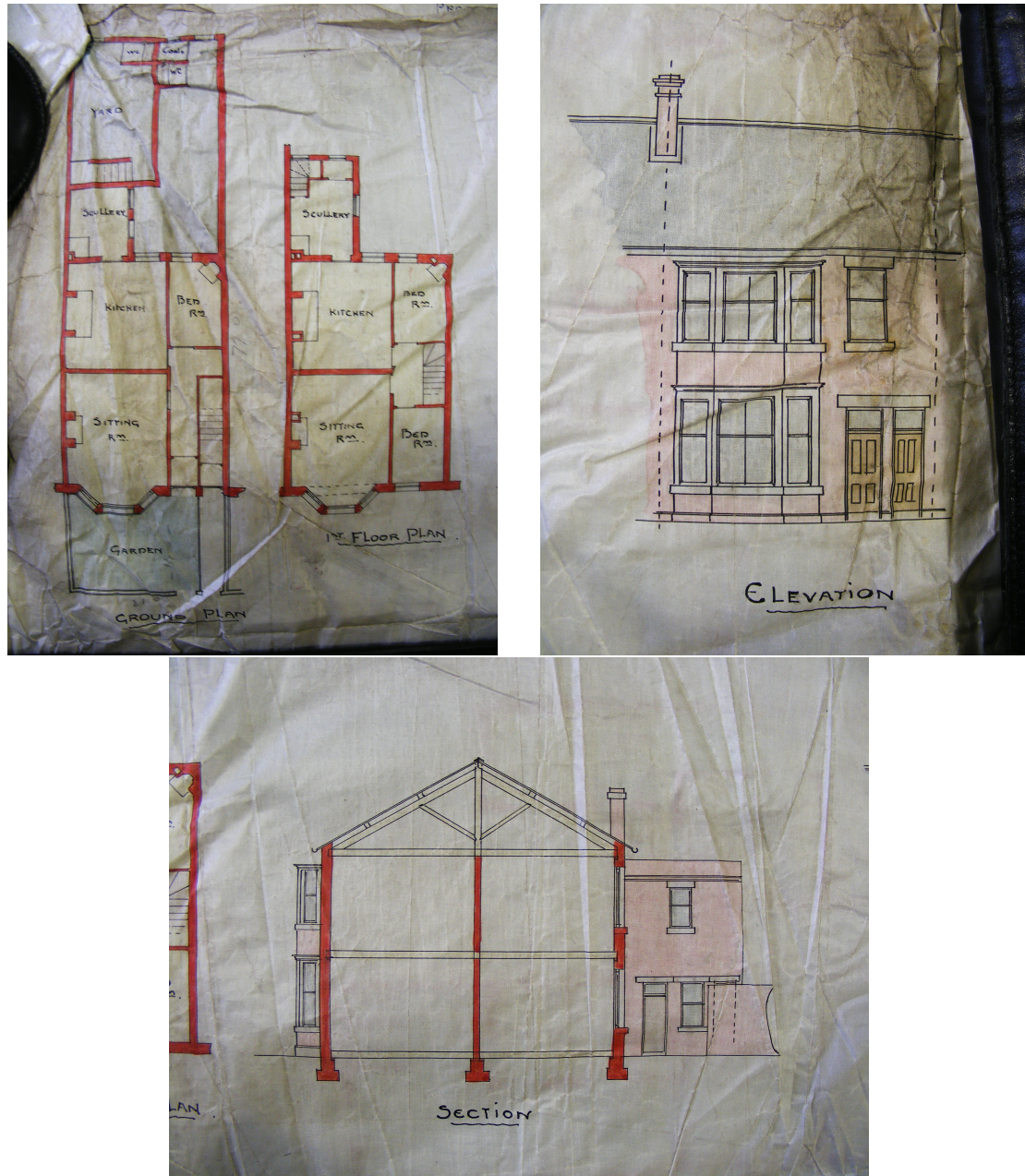
Figure 8.9: Typical layout of a pair of Tyneside Flats
To facilitate comparisons between the pre and post 1866 bye-law Tyneside flats the above figure shows
a typical lay-out of a bye-law era Tyneside flat.

English cities.

Similarly the arrangement of rows of Tyneside flats into neat grid squares of back-streets and front-streets with shorter 'end blocks' ensuring the maximum usage of active street frontage (as for example in the detailed study area in Heaton), did not arrive as a ready made solution. Mapped evidence from 1878 (map by A. Reid from the Borough Engineer's Survey) shows variants of courtyard-type housing blocks, back-lanes that are in effect cul-de-sacs, as well as rows of terraces (and mixtures of all three). It thus appears that the traditional Tyneside-block layout was a result of a similar adaptation process as the plan of the flat itself. To a degree these developments also relate the increased privatisation of family life that many writers have commented upon, as well as separation of different spheres of life; work, home, leisure, and consumption were all to have their own quite distinct places (e.g. Tosh, 2007).

The emergence of Tyneside flat is therefore explained as a complex result of cultural, social and economic factors channelled into physical results in a framework provided by the local building bye-laws of 1866. This study has sought to add to these analyses by suggesting firstly that for private landlords building and letting many small flats was more profitable than building and letting of similarly proportioned houses. Secondly, based on a review of some pre-1866 building plans for flatted developments at the Tyne and Wear Archives (selectively illustrated above) that the evolutionary process leading to the development of the Tyneside flat as building type is not adequately understood. However, relating to this evolutionary process, there are, a few additional considerations that this study seeks to highlight here. These relate to the role of the perceived middle-class hegemony in the creation of 19th century residential areas, and the role of architects in the design of terraced housing during the latter half of the 19th century.

Middle-Class Values and the Segregation of Work, Home and Leisure

Pearce(1994, 73) asserts that

> ... the design of Tyneside flats represented a compromise between middle class terraced housing and working class tenements. We can now see them as a concrete expression of the cultural hegemony of the dominant middle classes. This hegemony was expressed in other ways apart from the façade of the Tyneside flat. We noted earlier that the terraced form permitted an 'encapsulated' private domain and an open, regulated public domain. In other words greater privacy was not only a means to improve sanitation but it also promoted middle class values like privacy

and single family occupation.

This argument rests on the assumption that there existed a clear distinction between the working-class and the middle-class. This study is not alone in challenging this long-standing assumption. The assumption that 'middle-class hegemony' was imposed on the unruly working-class that needed civilisation, is also simplistic. In the 1880s George Laws (Newcastle's Town Surveyor) told the Royal Commission that even two-roomed Tyneside Flats were 'too good for working men', but suitable for artisans (Pearce, 1994, 70). This demonstrates that the two-fold class division (i.e. middle-class vs. working-class) masks a greater variety of incomes and life-styles. The detailed analysis undertaken in Phase 3 of the case-study supports this assertion. In terms of physical typology there were 19 different types of accommodation available within Heaton detailed study area in c.a. 1900 and in 1890 the existing houses in the area (which was still partially under construction) were rented for anything between £11 and £35 per annum. In total there were 22 different rent categories. This supports the existing argument that the economic boundary of the 'middle-class' was not clear (Loftus 2001). During the 19th century some members of the middle-class used their wealth to buy land and stately homes, becoming as rich, if not richer than the aristocracy. At the same time, many members of the skilled working class could earn as much if not more than some members of the lower middle-class. Within the detailed study area in Heaton some households had a servant (which many studies suggest is the 'sign' of belonging to the middle-class) - yet by the beginning of the 20th century the most prevalent house type in the area was the Tyneside Flat and as illustrated in figure 7.35 on page 213, and supported by the typological analysis of the housing in the area, the character of the area appears quite mixed.

Architectural Influences in the Creation of the Tyneside Flat

Another consideration which has not been discussed in the existing literatures on the emergence of the Tyneside flat appears to be the role of the architects who designed these buildings. This is probably because the Tyneside Flat as a building type has mainly been of interest to researchers working in economic, social and labour history. However, the selective review of building plans (conducted so that various types of houses throughout the detailed study area were included) reveals that far from appearing randomly as the products of what builders were used to constructing, the terraced houses in Heaton were (at least in the name) designed by some of the leading architectural practitioners working in the North East during the latter part of the 19th century. Names of many of the archi-

tects involved in Heaton are known at least locally from their involvement in the design of the sort of buildings architects usually are associated with, i.e. public buildings such as churches, hospital, theatres and libraries. Through their training (often in established local architectural partnerships), daily business and social and professional gatherings such as those instigated by the Northern Architectural Association, local architects would have been aware of each others work and existing building patterns and forms. Analysis of biographical details of the architects involved in the analysed building plans from Heaton demonstrates intimate connections between established architects, their pupils, and their pupils' pupils, in many cases these bonds of influence and connection were reinforced by the practice for familial partnerships. In other words sons of architects also became architects, surveyors and structural engineers. APPENDIX I of this study demonstrates some of these connections and lists some of the known landmark buildings designed by architects whose work can also be seen in Heaton.

Another significant factor in the dissemination of design ideas during the 19th century were various architectural design and pattern books, as discussed by Long (2002). The increase in numbers of trained architects coincides with the increasing professionalization of the town and building planning processes and the urban growth associated with the 19th century industrialisation. This study proposes that understanding the development of the locally distinctive building types benefits from consideration from this point of view, and would lend itself to further study.

8.2.4 Summary

The emergence of the Tyneside Flat as a housing type is explained as a complex result of cultural, social and economic factors channelled into physical results in a framework provided by the local building by-laws of 1866. Based on a review of some pre-1866 building plans for flatted developments at the Tyne and Wear Archives (selectively illustrated above) there are, however, a few additional considerations this study seeks to high-light. These relate to the way the Tyneside Flat gradually evolved into the building type we recognise today, and the role of architects in the design of terraced housing during the latter half of the 19th century. Further, fieldwork data and existing literature suggest that the perceived middle-class hegemony in the creation (and population of some) of 19th century residential areas may not be accurate.

The following section analyses the role of 1866 Building Bye-Laws and the subsequent Planning Policies in the creation of the current character of the Heaton detailed study area, and seeks to demonstrate how these developments are part of wider trends occurring

in English cities over the last 100 or so years.

8.3 Characteristic 2 - Age of the Development

8.3.1 Introduction

As suggested in the Introduction to this Chapter one of three characteristics of 19th century residential areas this Chapter seeks to address is the role of Victorian Building Regulations in creating the built environment, and the subsequent role of Master Planning in changing it. As discussed above the role of local and national building regulations was instrumental in the formation of the 19th century built environment in Newcastle as well as most other English cities after the mid-19th century. The subsequent planning interventions (over the last 100 or so years) have also played a significant role in the formation of current character of the 19th century residential areas. This section analyses the differing fates of 19th century residential areas in Newcastle in the light of data gathered during the case-study research, and relates the findings to a broader context of developments in English post-industrial cities.

Like many other cities in England at the time (see e.g. Sheffield City Architect, 1962 and MCC - Manchester City Council, 1961) Newcastle had far reaching and very ambitious plans regarding the built environment formulated in the aftermath of WWII and carried out during the 1960s and after. The complete re-building of Byker is an example of the kind of project carried out as part of these plans. However, as also happened elsewhere, many of the initial proposals were abandoned (see e.g. Cooper, 1974). Analysing the case-study data in the context of deliberate interventions, as manifested in the various planning policies allows understanding the typical evolution of the area throughout its history. This analysis also allows for the making of clear distinctions between those elements that illustrate wider national and regional trends, and those which are locally distinctive or genuinely unusual. The Building Bye-Laws of 1866 have already been introduced in the *Case-Study* Chapter and Phase 1 of the case-study is essentially a detailed narrative of the development of Heaton in the context of the Planning Regulations. The townscape analysis undertaken in Phase 3 of the case-study outlines the results, in the present day, of the subsequent planning interventions.

Therefore it is possible viewing the existing built environment of Heaton as a physical demonstration (or archaeology) of the past 100 years of planning interventions. However, as Cherry (1996, 17) points out town planning, both in its origins and its subsequent development, remains inexplicable outside the socio-political context of its time. In the

context of the transductive matrix the 'technical' layer of the city consists of not only the physical networks of 'infrastructures' but also of networks and flows of people, communications etc. As Schott (2004, 524) suggests regulations such as town and country planning acts are part the software aspects of the technical layer of reality. It is possible to analyse the impact of planning interventions on 19th century residential areas such as Heaton in this context too. Thus this study sees the 20th century planning and management policies of the 19th century residential areas as part of the technical layer of reality, and an interesting area of transduction between the physical and technical layers, which in turn have an impact on the affective and psychical layers as well.

8.3.2 Planning Interventions in Heaton over the Last 100 Years

The key events in the development of Heaton as a residential neighbourhood have already been outlined in Chapter 8 in the section describing Phase 1 of the case-study research. In summary, the initial housing development of Heaton took place from 1875 onwards and was a response to industrial era population expansion as well as an effort to improve urban living conditions. Developments such as Heaton are characterised by the 'bye-law terraces' of this period and reflect the increasing state intervention in planning and other civic roles with the aims of preventing disease, and improving public health and education.

Bye-Laws of 1866

The 1866 Newcastle bye-laws outline, among many other regulations, the parameters for the construction of new buildings. For houses of two storeys in height they stipulate considerations such as the minimum width of new streets, the level of basement floors of houses, the thickness of walls, the structure of walls, floors, and so forth, the treatment of joists or woodwork, and the construction materials and techniques for roofs, gutters, and dormers. The bye-laws also address the open space about buildings, and outline how a certain proportion of the buildings plot was not to be built upon. The bye-laws also consider the need for ventilation of building, and the need for adequate lighting through the provision of sufficient Number of Windows.

I. Width of New Streets

- Width of front streets at least 30 feet and a width of twenty feet of footway or footways for every front street, the buildings to be erected in which, or any of them, are on either side of the street, to exceed to storeys in height.

- Width of back street no less width than twenty feet, with such additional width (if any) not exceeding six feet for footways, as the council shall see fit.

- Court housing banned:

"Every new street shall have an entrance at each end, of the full width of the road and footway, open from the ground upwards."

IV. Level of Basement Floor of Houses

- The level of the basement floor of houses, to be erected in any new street, shall be six inches at least above the level of the street.

VII. Thickness of Walls

- The external walls of every building hereafter to be erected, other than out-offices attached to any building, shall, if of brick, be of the following minimum thickness, namely:
-

- Of every such building of two storeys in height, fourteen inches.

- Of every basement of every building, two inches greater than thickness than the wall immediately above such basement.

- All external walls of out-offices and yard boundary walls, hereafter erected, shall, whether of brick or stone, be at least nine inches thick.

- All party walls of buildings hereafter erected, and all division or internal walls of such buildings, to support joisting or other timbers, shall be at least nine inches thick.

VIII. Structure of Walls, Floors &c.

The external and party or side walls of every building hereafter erected shall be constructed of brick or stone, or other hard and incombustible substance.

IX. Joists or Woodwork.

No joists or other woodwork, except beams or bressumers and storey posts under the same, shall be brought nearer than four inches to the external face of such party wall.

X. The Roofs, Gutters, and Dormers.

The roof or flat of every building hereafter erected, to be formed of, or externally covered with incombustible materials, except in special cases allowed by the council.

XI. Space about Buildings.

private open space belonging to dwelling house to be at least one-fourth of the area of the foot-print of the house

"Every building hereafter erected, intended to be used, or used as a dwelling-house, shall have, in the rear or at the side thereof, an open space, exclusively belonging thereto; such open space shall be equal in area to at least one-fourth of so much of the entire area of the ground occupied by, and belonging to, such building and its out offices, as shall extend from the front wall of the building to the outer back and side boundary of the premises."

XII. Space about Buildings not to be built upon.

buildings can't be extended to reduce the amount of private open space available to each dwelling *"It shall not be lawful at any time to build upon any open space belonging to any building, hereafter to be erected , left in compliance with the provisions of the preceding bye-law, so as to render such open space of less extent than is required by that bye-law."*

XIII. Ventilation of Buildings.

Height of rooms: All habitable rooms, except attics, to be at least nine feet in height from floor to ceiling

Height of attics: All attics to be at least six feet nine inches in height, and to have so much of the ceiling horizontal as shall be equal at least to one-fourth of the area of the attic, and to have perpendicular walls of at least four feet in height (on every side).

XIV. Number of Windows.

Every room (used for habitation) to have at least one window, the total area of window or windows, clear of the Sash-frame, to be at least one-tenth of the area of every such room; the top of one at least of such windows, where the room is not less than nine feet in height, shall not be less than seven feet six inches above the floor, and in other cases not less than six feet nine inches the upper half at least of all windows shall be made to open the full width.

In dictating the minimum building standards the Bye-Laws helped to raise living standards, and created for their part the 19th century residential environment. By banning cellar and court housing bye-laws removed the most unsanitary dwelling types from the construction agenda. By ensuring certain material requirements had to be met, the bye-laws created dwellings that had to be lit by day light, were possible to ventilate and were accessible from both the front and the back of the property. By insisting that the private yard of the house was at least one fourth of the foot print of the house the by-laws might have also encouraged building of flats as this one fourth a back-yard could be divided

into two one eights in the case of flatted developments.

Subsequent Planning Policy Intervention

The South Heaton Character Area (as well as other 19th century housing within the wider Heaton study area) was maintained through the Edwardian and inter-war years; whilst the rest of Heaton was built up with semi-detached houses and bungalows. The building applications made for existing dwellings within the study area concern largely the construction of garages for motorbikes and cars as well as extensions and alterations to the bathroom, kitchen and scullery arrangements as people's expectations of what counted for modern convenience changed.

Post WWII planning all over UK sought to address the perceived problems of 19th century 'slums' and a significant anount of housing from the period was cleared. According to Holmans (1987, 124) between 1955 and 1975 1.3 million homes were demolished in the UK under various 'slum-clearance' schemes. Holmans equates this to 30% of houses built before 1890.

During the post-war years conurbations drew up various, ambitious re-development plans (see e.g. MCC - Manchester City Council, 1961; Sheffield City Architect, 1962). Many of these plans were however, only partially realised (Larkham, 1997) and the success of the social high-rise housing developments typical of the re-redevelopment schemes has subsequently been called into question (Glendenning and Muthesius, 1994). The formulation of re-development plans and the creation of New Towns (Alexander, 2009) co-incided with the continuing loss of manufacturing jobs and the decline of heavy industries in the UK. In the context of this study these changes are indicative of the post-industrial transformation of cities and the society at large. In the specific case of Newcastle the intensification of de-industrialisation of the Tyne and Wear area led to a significant decrease in population and some of the 'slum clearances' of this time are in response to declining demand for housing. The 19th century residential area of Heaton was, in the 1963 Newcastle Re-development Plan, scheduled for short-term revitalisation which gave the area a life span of further 30 years, before total demolition. In comparison a residential area of comparable date such as Byker, was wholescale demolished and re-built during the 1960s to 80s.

The 1963 Newcastle Development Plan Review:

The 1963 Development Plan Review (NCC, 1963, 52) found that taking the provision of bath, piped water, water closet, kitchen sink and cooking stove as five basic housing

facilities, it was found that only 59% of all households in the City were in possession of all five. (data from 1951 census).

 The Review also designated the existing housing stock into four groups. (NCC, 1963, 52)

1. The first is the area proposed to be cleared; this is partly slum clearance and partly clearance for other redevelopment projects such as industrial estates or the resiting of the Green Market. The total clearance from mid-1962 amounts to 9400 dwellings and at the time it was expected to be finished by the end of the 1967.

2. The second type of area is the Revitalisation Area, which consists of properties which are not yet slums but which will deteriorate if steps are not taken to prevent this. At one end of the scale are properties that need to be put into decent order to last another 5/10 years; at the other end of the scale are properties and areas which can be improved to the extent that they will continue to provide reasonable housing conditions for another 30 or 40 years. The total number of houses in this category is about 2700 and of these something like 1200 are likely to be suitable for long-term revitalisation; the remainder being grouped into periods for progressive demolition and short term improvement and repairs.

3. The third type of area is Conservation Area. This covers properties which are excellently built in most respects (though some may need modernising) and where it becomes important to pursue a positive policy of conservation for the area. This means that not only should one pursue proposals for modernising and improvement where these are necessary, but also indicate publicly that these areas are to be conserved so that public opinion may be behind the work and premature redevelopment proposals may be avoided.

4. The remaining areas in the City consists mainly houses built after 1920 and where few general problems arise. These are the areas of preservation and infilling, as appropriate, and the older Council owner properties in them are brought up to date.

Figure 8.10: Wording of 1963 Development Plan Review (NCC, 1963, 52)

Since the 1963 *Development Plan Review* the approach to 19th century row-housing however, has undergone considerable change and Heaton (like parts of Fenham, Benwell, Sandyford and Jesmond) has avoided the proposed large scale demolitions, although in the case of South Heaton Character Area 132 properties (two terraced houses and 260 Tyneside flats) were removed during the 1980s when the new Hotspur Primary School was built. The current planning policy seeks to preserve the fabric and character of the area; however the law on permitted development rights makes it difficult to control small scale change that does not require planning permission. The other undercurrent throughout this post-World War II period is the change in the rate of owner occupation and currently

the presence of significant numbers of students.

8.3.3 Summary

The residential environment of Heaton detailed study area developed from 1875 to about 1910. Its building was governed by the 1866 Newcastle bye-laws which helped to create a recognisable terraced housing area typical of that date. Having survived the designation as revitalisation areas in the 1960s Heaton (and some other residential areas like it in Newcastle) are part of the existing building fabric that the current UDP aims to preserve.

In the following the detailed historical and fieldwork analyses are developed further through a case-study of shops within the detailed study area. This focus on a specific building type typical within 19th century residential areas will again apply to the case of Heaton specifically but is also illustrative of wider urban developments in England.

8.4 Characteristic 3 - Perceived Residential Character

8.4.1 Introduction

Synthesis of some of the findings from both historical, typological and townscape analysis discussed above emphasises how an important aspect of the study area is the presence of non-residential buildings and functions within the mainly residential building fabric. Originally, Stratford Road and Heaton Park Road in effect functioned as secondary high-streets for the residents of the detailed study area and included several properties designed to have a shop at the ground level and accommodation in a separate flat above. Kelleher (2008, 30) demonstrates a similar pattern of commercial properties within 19th century residential areas of Anfield and Breckfield in Liverpool.

This study observes that the changing fortunes of the 'local' or 'corner' shop is an indicator of some of changes that have occurred during the transition from an industrial to a post-industrial city. These changes include the way in which:
- people travel further to work in their cars, and there is no need to live within walking distance of the place of employment
- on the other hand it is possible to work from home and 'be connected to the wider world' through the internet
- locations for shopping and leisure likewise no longer need to be 'local'

- domestic chores are aided by various technologies

The changes characteristic of a industrial to post-industrial transition, which originate from the technical layer of reality, have had an impact in the built environment of the 19th century residential areas and how these areas now function within the wider city. As Rossi (1984, 41) suggests the basic (typological) forms of houses may not have changed considerably for a long time, but this does not mean that way of life they accommodate hasn't altered.

In the context of the transductive matrix this demonstrates how the technical and physical layers of reality are connected. Combined with the changes in the built environment have served to alter this aspect of 19th century residential areas more than is perhaps at first glance easy to appreciate. In the case of the Heaton detailed study area the major changes in the built environment occurred where a number of houses were demolished along Stratford Road and a school was built on the site. Furthermore Stratford Road has been closed for vehicular through traffic. This, combined with changes in people's consumption habits, has resulted in the disappearance of almost all of the shops originally built along this road. Many of the former shop premises have been converted into housing. These changes, both in number and type of shop show are part of the change in how Heaton functions as part of the wider city of Newcastle. In parity with other post-industrial cities the sites for shopping, employment and leisure can now be further away from home as people are increasingly mobile.

Figure 8.11: Drawings for Shops on the corner of Warwick Street and Stratford Road

8.4.2   Shops in Heaton detailed Study Area

The analysis of shops within the detailed study area is based on listings in the 1910 Ward's Directory of Newcastle and the potential commercial properties identified during the

Figure 8.12: 67 to 69 Stratford Road and 31 to 41 Stratford Road

fieldwork. Where necessary supporting cartographic data was also consulted. Detailed analysis of data from 1910 Newcastle Directory reveals the range a retail opportunities existed within the detailed study area in Heaton. The presence of these shops would have had (and to a degree still does) an impact on the physical, as well as technical (and emotional and affective) character of the detailed study area. A gazetteer of all retail premises identified in the case-study has been compiled. This visual guide is included as APPENDIX J in this study. The table 8.13 on page 272 details the types and numbers of businesses operating within the detailed study in 1910.
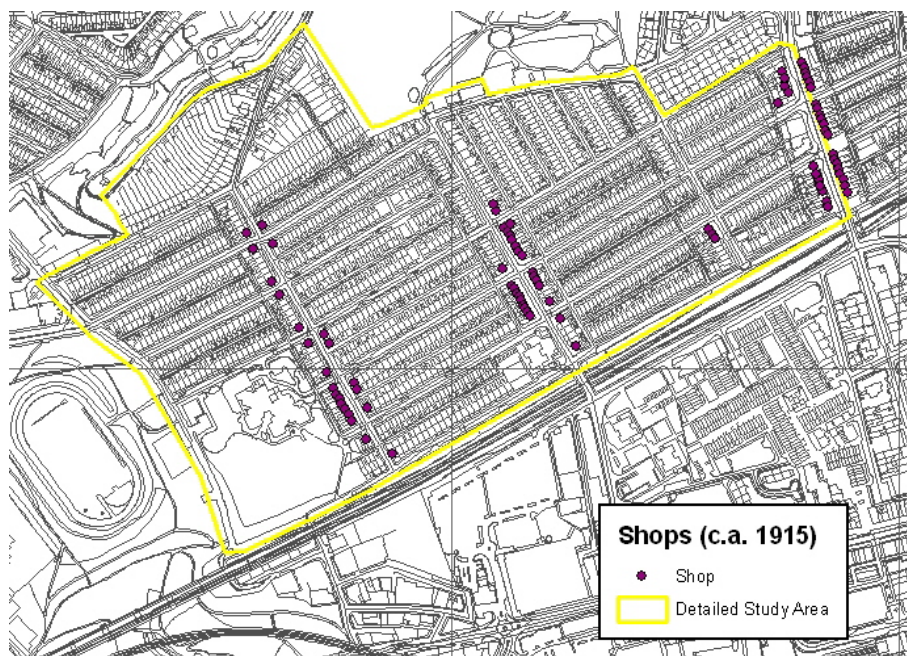
Figure 8.13: Shops within the detailed study c.a. 1915

In addition it is worth noting that one grocery shop on Stratford Road, and one

Figure 8.14: Shops within the detailed study area in 2009

newsagent on Heaton Park Road also doubled as a post and telegraph office. Today the post-office on Heaton Park Road is still operational, the one on Stratford Road has been converted to residential use.

Calculation of various food retailers within the detailed study area :
Fish-monger (1) + Fried Fish Dealer (2) + Dairy (3) + Butcher (5) + Fruiter (6) + Confectioner (10) + Grocer (11) = 38 shops altogether to do with food. 38 / 58 = 65.5%
In other words in 1910 almost 66% of the retail premises operating within the study area were concerned with the supply of food. Furthermore the kinds of shops in the area appear to have been almost exclusively for the custom of the people within the immediate vicinity. A more detailed analysis for example reveals that of the two fried-fish dealers, laundries and newsagents, in each case one was located on Stratford Road and the other on Heaton Park Road. Likewise, the butchers, bakers and grocery retailers can be found on both streets, thus reducing the distance to nearest shops even further, regardless of which part of the detailed study area you would have lived in. In addition to the retail premises physically identifiable as shops it appears on the basis of census analysis that for example some of the boot, slipper and dressmakers listed within the detailed study area may have used their dwellings for a combination of work, retail and domestic purposes.

The table 8.16 lists the types of retailers present in the study area in early 2009. Comparison of data from the two dates demonstrates that (25/58 = 43%; and 100%-43%=57%) there has been a 57 % drop in the number of retail premises. However,

TYPE OF SHOP in the year 1910	Number of shops found within the study area
Grocer	11
Confectioner	10
Fruiter	6
Butcher	5
Draper / Tailor	4
Dairy	3
- unused / empty	3
Fried Fish Dealer	2
Newsagent	2
Laundry	2
Pharmacist / Drug-store	2
Hardware Dealer	1
Hairdresser	1
Tobacconist	1
Fish-monger	1
Wine and Spirit Merchant	1
Wardrobe Dealer	1
Office (for a firm of dyer's)	1
Co-operative Society	1
TOTAL	58 retail premises altogether

Figure 8.15: Types of shop in 1910

what has changed even more dramatically is the type of shop operating in the area. It is particularly noticeable that originally there would have been a large number of shops within the study area that would have provided residents with fresh food within walking distance from their homes. Today, apart from sandwich shops and take-aways the opportunities to purchase fresh food within the study area are minimal. Comparing the number of shops to do with food, even if the coffee shop and the two corner shops that have a limited amount of food on offer are included, the reduction from 38 food shops in 1910 to 7 in 2009 (7/38 = 18.4 %) represents a fall of nearly 82 % in the number of grocery or cooked food shops within the study area. In practice the availability of fresh cooking ingredients within the study area is closer to zero.

Considering retail opportunities generally, Stratford Road shops have fared particularly poorly, with a total fall of 23 shops in 1910 to just 2 in 2009. Throughout the detailed study area the losses have occurred mainly through conversion into residential use, although some old shop frontages remain, as if waiting for something to happen. (See

TYPE OF SHOP in the year 2009	Number of shops found within the study area
Sandwich shops and take-aways	4
Hairdressers and barbers	3
Used furniture dealers	3
'corner shop'	2
Post-Office	1
Housing Association Office	1
Estate Agent	1
Coffee Shop	1
Electrical Store	1
Catering Equipment Store	1
Number Plate Shop	1
Tattooist and Piercing	1
Counseling and Advice Service	1
Garage *	1
Day-Nursery *	1
New Age Therapy Centre *	1
TOTAL	25

Figure 8.16: Types of shop in 2007

* The three premises marked with an asterisk were not shops in 1910, i.e. they function out of premises previously regarded as residential. It is also worth considering that some of the existing shops take up two 'shops units' that would have been listed as two separate shops in 1910.

APPENDIX J for the Illustrated Gazetteer of all the shop premises within the Heaton Detailed Study Area.) Furthermore, not only has the number of retail premises changed, the kind of shop within the study area has also changed. Four shops (three barber and hairdressers and a tattooist), as compared to none in 1910, appear to suggest that personal grooming is something that people are increasingly willing to spend money on. The estate agent, take-aways and three used furniture dealers cater in the main for the transient student population of Heaton, and the shops selling personalised number plates or offering alternative therapies aim to attract customers not from just Newcastle, but the wider Tyne and Wear region.

The prevalent use of cars and the availability of refridgerated storage at almost every home has changed most people's shopping habits over the last 50 or so years. The weekly trip to the large out of town or edge of town supermarket has replaced the frequent visits to the local butchers and bakers. This type of development is inconvenient for anyone

who does not own a car, especially if they are also unable to utilise public transport. Furthermore in terms of the built environment the conversion of shops in to residential use means that the street scene along these secondary high-streets becomes more quiet and they now lack the vitality of street life that must have been characteristic in the late 19th and early 20th century. However, all the changes discussed in the above demonstrate how Heaton as a neighbourhood, is now more integrated to the wider city of Newcastle.

8.4.3   Summary

The decline the English high-street as a centre of shopping and local life is no longer news. The exploration of data emerging from the case-study research in Heaton shows at a more local scale the same trends that were in 2004 identified in the 'alternative census' project. The Yellow Pages Alternative Census [2], the first ever study of business growth and decline within key Yellow Pages business classifications over ten years (1992 - 2002), published in 2004 revealed that eight out of ten of the sharpest declines were in industries associated with the high street or the countryside. By contrast, seven of the ten classifications registering the highest increases came from professions catering for beauty and body image, or alternative therapy and stress relief. The Yellow Pages Alternative Census showed that Greengrocers suffered the greatest percentage decrease of classification listings during the ten years studied, down by 59%, followed by Butchers (-40%), Hardware Retailers (-34%), Farmers (-29%),Gamekeepers (-21%), Bakers (-20%) and Carpenters & Joiners (-16%).

The decline in local shopping facilities and the impact this has on the surrounding neighborhoods has been identified as an area of concern (Jones and Oliphant, 1976) and there is a growing body of research into the history of retailing (Blackman 1967) and the development of the shops as a physically distinct entity has been published (Morrison 2003). Shops are locations where the physical surroundings, the supply of goods and services, the possibly artificially induced desire for new things, and the personal experience mix with one-another. In other words - in terms of the theoretical framework of this study - physical, technical, affective and psychical realities combine in a unique way when the shopping experience and shops are considered.

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[2]Accessible   at   http://www.yellgroup.com/english/media-pressreleases-2004-anationofshopkeepersnolonger, Retrieved 23.3.2009

8.5 Conclusions

In summary this Chapter has challenged some of the presumptions about the uniformity, conformity and stability of the usually appreciable characteristics on 19th century residential areas. This section has explored and analysed some key characteristics of 19th century residential areas relating to the definition of these areas through chronological age and prescribed 'residential' character. In addition to these two factors, many 19th century residential areas in England were originally (and are still) defined by the prolific terraced house-type. The influences affecting the emergence of locally distinctive terraced house-form, the Tyneside Flat, in Newcastle were also discussed. In doing so this Chapter has addressed the 'character' of 19th century residential areas as an operationalised concept, which is how it is often used in the environmental management discourse and policy.

The case-study specific analysis undertaken in this Chapter suggests further, more abstract characteristics that are typical for surviving 19th century residential areas in the context of the post-industrial city. Assessing the results of this analysis in more general terms it appears that with each of the three characteristics analysed in the preceding, certain continuities and changes are present within the case-study area. In the *Introduction* Chapter these changes and continuities were identified as key characteristics of the post-industrial city. When addressing the 'character' of 19th century residential areas in the post-industrial city within the context of the theoretical framework (the transductive matrix) consideration should also be given to questions concerning the areas of change and continuity that may be evident in a specific 19th century residential area (e.g. the South Heaton Character Area). Within the context of the theoretical framework of this study these questions relate to the paths and projects that weave their way through the matrix. The processes of change and continuity identified through the case-study operate on different rates, intensities and scales and are taking place simultaneously over time. As discussed above (in the concluding part of Chapter 8), the kinds of changes that this study sees as characteristic to 19th century residential areas include: change through specific planning policy interventions, small scale change instigated by residents themselves, and cultural, societal and economic changes that have had an impact on people's behaviours, for example: shopping habits, cars, and communication networks.

This study suggests that the complex network of continuities and changes essentially characterises the post-industrial city. The relationship between social change, economic development and the built environment is not necessarily straightforward or conflict free. In fact the demands for change and continuity originating from various sources often

'materialise' in the debates about the change within the built environment, or in other words, within the physical layer of reality. Furthermore, this study proposes that the kinds of values attached to the (heritage) environments can be used to argue for either change or continuity. The following Chapter explores some of the choices between change and continuity and the role of cultural values in the management of the historic built environment. These more abstract aspects of character of 19th century residential areas in the post-industrial city are an important consideration in the management of surviving 19th century residential areas.

Chapter 9

Continuity and Change in the Post-Industrial City

9.1 Introduction

This second part of the analysis moves from the geographically specific analysis focusing on the Heaton case-study area to relating the findings of the case-study to the broader case of 19th century residential areas in England, and the post-industrial developments in England and elsewhere. This chapter considers the case-study data in a context that is both geographically and conceptually broader than the analysis undertaken in the previous chapter. This chapter develops the analysis of 'character' of the physical layer of the case-study area by moving beyond the geographical boundaries of the Heaton case-study area and extending the conceptual findings of the preceding chapters. This chapter defines common elements of character and analyses some of the common aspect of change within 19th century residential areas in the post-industrial city.

The purpose of this Chapter is to discuss the Heaton case-study area and to analyse the continuities and changes identified in this area in the broader context of surviving residential areas originating from the 19th century for understanding the industrial to post-industrial transition in English cities. This Chapter also identifies connections between the processes of continuity and change identified through the Heaton case-study with the concepts of evolution and erosion as outcomes of environmental management decisions. Finally this study relates the outcomes of (historic built) environment management decisions to the values attached to the environment. These values influence and govern management decisions. Thus this Chapter explores how values in the management of the (historic built) environment are relative and also connected to the objectives

of environmental policies, and how this relates to the evolution or erosion of residential areas originating from the 19th century.

9.2   19th Century Residential Areas in Post-Industrial Cities

The case-study specific analysis in Chapters 8 and 9 identifies a complex 'network' of continuities and changes as a key characteristic of the Heaton residential area. Within the built environment these two elements exert a strong influence on the way people experience current urban settings and buildings. Especially in the context of the residential areas originating from the 19th century there is, on one hand, an appreciation of the status quo, combined with the sense of security endowed by the past. On the other hand it is impossible to ignore the force of change, which brings feelings of anticipation, surprise and hope (as discussed by e.g. Casey, 1995; Sparks, Girling, and Loader, 2001). In the past few decades, digitisation, globalisation, commercialisation, individualisation and mass migration, amongst others, have ushered in an era of unprecedented social and cultural dynamism accompanied by a huge desire for all things 'new'. Although profound societal changes and e.g. consumer culture were already features of the industrial era, the increased speed at which the changes are perceived to occur in the post-industrial world sets these two periods apart. The rapidly occurring change in the post-industrial society appears to have created an urgent need for anchors, a movement to safeguard the (built) environment against the perceived erosive elements of change (e.g. Stanton, 2006). These post-industrial concerns are reflected in the debates about the sense of place and character of the environment. In the context of the built environment, the dynamics of change and the need for continuity can create conflict and it is a challenge for the various built environment professionals to try and balance this duality of change and continuity for example within the planning process.

The following sections consider how the analysis of the processes of change and continuity are evident in the Heaton case-study area and how these processes of change and continyity may relate to the broader case of surviving 19th century residential areas. Nikula's (2005) Vulnerable Buildings Classification allows for exploration of some of the reasons for the survival of 19th century residential areas such as Heaton. Finally, using eight value considerations based on Pereira-Roders (2007) the following considers how the kinds of values attached to the (heritage) environments can be used to argue for either change or continuity. Value considerations of any kind are specific to time, place and

society. Cultural values influence judgements made about the management and conservation of the environment, and as such assessment of associated values can high-light the objectives of e.g. conservation of the historic built environment.

9.2.1   Changes in Heaton in the Context of 19th Century Residential Areas

Referring to the Typology of Post-Industrial Building Types (Gospodini, 2006) discussed in the *Introduction* Chapter, the new post-industrial building types can be seen as indicative of the changes occurring within the built environment. However, the *Introduction* Chapter also suggests that between the 'poles of post-industrial developments' concentrating either in the inner-city or out-of-town there are 'everyday' residential areas, many of which originate from the 19th century. These residential areas form an area of comparative continuity within an ever changing post-industrial world.

The third phase of the case-study analysed the historical and typological features, and the current townscape of the South Heaton Character Area. The combination of these analysis identifies changes in the public realm and the small scale changes initiated by the residents themselves on individual properties as key features of the surviving 19th century residential areas in the transition from the industrial to the post-industrial city. The kinds of changes outlined in the Analysis section of the *Case-Study* Chapter can be divided into these two broad groups. In Heaton the changes in the public realm include:

- Traffic related changes; general societal increase in traffic, resulting in numerous 'traffic calming measures' limiting vehicle access and also including changes to surfacing of the roads where cobbles and granite flags have been replaced by concrete paving and asphalt

- Change of use of commercial buildings, mainly conversion of small shops into dwellings

- The loss of local 'facilities'; number of shops has declined and what they sell has changed; the library has closed

- Landscaping of the 'City Stadium' area to the west of the detailed study area

And the features of the gradual, small scale adaptation of the residential housing stock include:

- small incremental change typical of owner occupation e.g. change of doors, windows, drainpipes, fencing etc.

- small scale 'built change'; e.g. extensions, garages, conservatories, loft conversions etc.

- changes to the backs of properties tend to occur in a more systematic fashion, and usually involves larger scale physical change than changes to the fronts of properties. Especially in the case of Tyneside flats extending the scullery/kitchen and lavatory/bathroom provision by extending the 'back-wing' of the flats is common. The combined effect of this change to individual properties (on the visual character of the area) remains, however, fairly limited as the backs of the houses are rarely scrutinised.

- also removal of features such as the back yard lavatories where these were originally built, and the disappearance of garden walls and fences, especially cast iron-railings which used to be common in the fronts of properties in the area

- conversion of two Tyneside flats into one dwelling.

- small scale demolition (of 19th C. housing), either combined with re-building or resulting in the creation of small 'public spaces' on the vacated plots

The kinds of changes identified in the Heaton case-study area appear typical of many of the surviving 19th century residential areas. However, as not many area based studies with the level of detailed analysis presented in this study have been published, finding comparable data to illustrate wider trends in the management of this type of residential area in England is challenging. One source of potentially corroborative data is the recently published *Conservation Areas at Risk* Report (EH, 2008c). This publication details some of the features or changes the built environment professionals managing conservation areas find problematic. The report lists 10 most common causes of concern in terms of threats to the character of conservation areas as: 1) Plastic windows and doors (83% of conservation areas affected), 2) Poorly maintained roads and pavements (60%), 3) Street clutter (45%), 4) Loss of garden walls, fences and hedges (43%), 5) Unsightly satellite dishes (38%), 6) Effects of traffic calming or traffic management (36%), 7) Alterations to the fronts, roofs and chimneys of buildings (34%), 8) Unsympathetic extensions (31%), 9) Impact of advertisements (23%) and 10) Neglected greenspaces (18%). Although the conservation areas surveyed are not exclusively 19th century, or even residential in

character, this study shows that the kinds of changes identified through the case-study in Heaton as indicative of the industrial to post-industrial transition can be found in virtually any built environment context, and therefore the data presented in *Conservation Areas at Risk* is relevant in this context.

Most of these perceived 'threats' are present within the Heaton case-study area. However, one of the main features of the surviving 19th century residential areas, identified through the case-study in Heaton, is the cumulative impact of small-scale changes into individual properties within these areas. Therefore, many of the features listed above are an integral part of the character of surviving '19th century residential areas', and strictly normative judgements based on ideas of uniformity and historically correct architectural detailing may not be helpful in the management of sustainable change in these settings.

In the context of the transductive matrix, many of the changes identified within Heaton study area originate from the technical layer. The continuous flow of technical changes is the defining feature of the industrial to post-industrial transition. The *Conservation Areas at Risk* report (EH, 2008c) identifies 'unsympathetic extensions' (often constructed from new, visually different materials), use of 'plastic windows and doors', and the visually incongruous 'satellite' dishes as threats to the character and appearance of the built environment. This suggests that the dominant heritage narrative regards features demonstrably from a different 'technical' age (as contrasted to the 'original features' of a building) as affecting the character of the existing buildings in a negative way.

However, in order for the physical layer of reality to continue functioning in the face of continuous technical change, changes in the physical layer are inevitable and may even be desirable. Outside major planning interventions change in the physical layer has its own gradual pace and it is influenced by many factors - some of which may be modified by guidance and regulation. Deciding how change matters, requires an understanding of how values and the nature of the change interact in each case. According to *Measuring Change in Conservation Areas* (The Conservation Studio, 2004) there is a case for further research and guidance on the causes of change and how they might be managed. In the context of this case-study, how can the existing 19th century housing areas be managed better so they can fullfill their roles as 21st century housing areas, without losing their distinctive character? It appears that residential areas (such as Heaton) originating from the 19th century have some sustainable qualities, yet the complexity and variety of the case-study area in Heaton appears to suggest that conservation area-like 'preserve and enhance' approach which is often based on visual unity of an area, would not be applicable in this context. Encouraging positive, sustainable changes should mean these residential areas

have a use for a long time to come - retaining some of their 19th century characteristics but essentially accommodating 21st century life.

The following section seeks to explore these sustainable or permanent qualities of the Heaton case-study area, and of 19th century residential areas in general. This is followed by a discussion of values attached to the historic environment.

9.2.2 Vulnerable Buildings in Post-Industrial Cities

This section analyses the survival of the 19th century residential areas in the context of 'vulnerable buildings within post-industrial cities' classification suggested by Nikula (2005). Nikula's classification is not limited to the consideration of the residential building types, but instead considers all manner of buildings present in post-industrial cities. Furthermore, the way this classification is used here does not relate to the typologies of forms and functions as suggested in architectural typologies by e.g. Rossi (1984) or to the typologies of nominal and quantitative attributes as suggested in archaeological context by e.g. Spaulding (1953) and Adams and Adams (1991). Instead this classification identifies vulnerable building types potentially threatened by the industrial to post-industrial transformation as; 1) Ineffectively built dwellings in expanding cities, 2) Humble apartment blocks and 3) Buildings that were built for a specific (industrial) purpose which has since become obsolete. Nikula's classification addresses buildings (as structures) in the context of the post-industrial transformation, and suggests the following reasons for buildings to become obsolete; a) material degradation, due to the age of building, poor construction standards, or combination of these, b) functional degradation, when buildings can no longer house the functions they were built for, or are no longer required to fill their original purpose, and c) 'social or cultural degradation', introducing the idea that public tastes and fashion can also play a key role in the success or failure of buildings.

1) Ineffectively built dwelling areas in expanding cities

Housing stock in the Heaton detailed case-study area is slightly later than Victorian housing in Elswick, Byker and Shieldfield (in these areas the 'slums' have now been replaced with 1960s/ 1970s estates). Thus the building standards within the detailed study area were safe guarded by local bye-laws (e.g. 1866) which set out the minimum standards for building. The houses were from the start connected to a plumbing networking (even if the toilets were outside), further ensuring fitness for purpose in the future.

2) Humble apartment blocks

The West End of Newcastle has been described as Armstrong's 'company town' (Robinson, 2002). The residents in Elswick, Benwell and Scotswood were heavily reliant

on this single employer within walking distance of their homes. When employers such as Vickers-Armstrong were forced to reduce their production significantly, this contributed to large scale unemployment among the working-classes. The resultant migration of residents away from west Newcastle created a problem of numbers of terraced houses standing empty especially in West Newcastle. Subsequent planning interventions have tried to balance the supply and demand of appropriate kind of housing in the West End. Nevertheless the initial reduction in demand partially contributed to the large scale demolition of housing in the West End of Newcastle.

As illustrated and analysed in Chapter 8, in comparison to the West End of Newcastle, in Heaton a mixture of flats, houses and cottages or villas, and a mixture of owner occupation and rented housing was created from the outset. Lower middle class and middle class residents as well as working class people lived in Heaton during the late 19th and early 20th centuries (and the working class appears to be largely skilled). Residents of Heaton were not reliant on a single large employer, and this has played a significant part in the sustainability of this neighbourhood. The mixture of residents was fostered by the mix of houses built within the detailed study area, and in comparative terms it appears that housing in Heaton was not of the cheapest or humblest kind. The combination of these factors is the probable main reason for the survival of Heaton as a residential neighborhood.

3) Buildings that were built for specific (industrial) purpose which has since become obsolete

This category is probably more applicable to industrial buildings rather than residential settings. However, in the context of this case-study and Heaton, it relates to residential areas in as much as if industrial work disappears it is likely that the need for housing for industrial workers decreases also. The introductory part of the *Case-Study* Chapter illustrates how population fluctuation has affected Newcastle over the last 200 years. The mix of houses and the availability of reasonable transport links have meant that historically Heaton was never occupied by people relying on just one or two companies for their livelihoods. Thus the closure of large manufacturers such as Vickers-Armstrong and Swan Dockyard did not affect Heaton as badly as it did for housing of similar age in Elswick, Benwell, Byker, and Walker.

9.2.3   Summary

Consideration of the case-study data gathered in Heaton indicates that many different processes of change appear to be occurring simultaneously within the built environment.

In the context of the transductive matrix these changes are occurring in and impacting on all the four layers of reality. In the broader context of 19th century residential areas these changes have also been identified in other locations (Claessens, 2005; Malfroy, 1998; Moudon, 1994) and occur at differing speeds, rates, intensities and scales. Inferring from the case-study data the prevalent types of change impacting the physical built environment within the post-industrial cities include:

- small scale change instigated by residents themselves either outside planning control through permitted development rights or within planning control through alterations that require planning permission,

- change through specific planning policy interventions, and

- cultural, societal and economic changes that have an impact on people's behaviours.

Consideration of the Heaton case-study area in the context of the vulnerable buildings classification has demonstrated that Heaton has a robust physical and social form, in other words the adaptability of the terraced house form and the unchanged basic nature of human needs for shelter in the form of houses means the Heaton study area is currently not materially, functionally or socially endangered. However, the kinds of small scale changes identified as typical of the developments of the last 100 years in Heaton, shows that the character of the surviving 19th century residential areas has undergone some adaptation and alteration. Therefore, although the HLC analysis of the area in Phase 2 of the case-study research might suggest that description of the Heaton case-study area as a '19th century residential area' is an apt one - the detailed analysis of historical and current data (Phase 3) as well as the evolving historical narrative emerging from Phase 1 suggest that describing the current HL-character of the South Heaton Character Area (or any similar neighbourhood) as a 19th century one only partially accounts for the character of Heaton. Thus, despite the 'physical' durability of Heaton, it does not necessarily follow that the 'character' of Heaton or any similar residential area should be described as a 19th century one.

As already suggested in *Conceptualsing Character* Chapter, and now supported by the analysis of the case-study data, some of the earlier debates regarding the management of conservation areas appear pertinent to the management of areas such as Heaton (Larkham, 1990; 1996; Whitfield, 1995). Larkham (1996, 23-24) discusses the debate about the role of UK conservation areas where the issue of the definition of character and its practical repercussions is, according to him, of intense significance and asks if we should '. . . aim for uniformity or diversity in enhancement schemes, new buildings and alterations

to existing structures?'. According to Larkham many planning policies explicitly press for unity, and he points to this approach also being the philosophy underlying many academic approaches to urban landscape, such as M.R.G. Conzen's morphogenetic approach to townscape management (Larkham, 1990a; Whitfield, 1995). These considerations appear to make the objectives of the current mainstream conservation policy incompatible with more diverse areas such as Heaton. On the other hand 'diversity' is considered a feature of successful places in current guidance on Urban Design. In this context it appears that debates about 'character' and whether policy and practice should aim for unity or diversity apply to the management of all surviving 19th century residential areas, and in fact to all analysis of the built environment.

In the context of 19th century residential areas their diversity as a type of neighbourhood can complicate the understanding of the effects of change and the values associated with these areas. Based on the evaluation of the data from the Heaton case-study area, the following section considers evolution and erosion of the built environment as the possible outcomes of the continuities and changes taking place within post-industrial cities like Newcastle.

9.3 Continuity and Change - Evolution or Erosion ?

As part of the industrial to post-industrial transition the way we live has changed and so has our environment. In many areas, change appears an inevitable part of a natural evolution that tends to be accepted until the outcomes of change conflict with other values attached to the environment. The perception of change as potentially erosive gives rise to concern for the character and the sense of place and raises questions about the management of changes and continuities within the built environment. The layering of history evident in areas such Heaton brings with it the need to distinguish between evolution and erosion. In relation to heritage values, and heritage environments English Heritage (2008, 67) describe how:

> The historic environment is constantly changing, but each significant part of it represents a finite resource. If it is not sustained, not only are its heritage values eroded or lost, but so is its potential to give distinctiveness, meaning and quality to the places in which people live, and provide people with a sense of continuity and a source of identity. The historic environment is a social and economic asset and a cultural resource for learning and enjoyment.

The considerations about the erosion of distinctiveness, values and character, apply to all surviving 19th century residential areas regardless of their statutory designation. The concern for the character and the sense of place, which has been identified as one of the key characteristics of the post-industrial society in the *Introduction* Chapter should also be seen in this context.

In the context of the transductive matrix the changes originating from the other layers of reality impact upon the physical layer. Alterations to the physical layer in turn impact on the other three layers of reality. Fully understanding the causes of change in the historic environment is a complex task and as suggested by the conceptualisation of the transductive matrix requires accessing several domains of knowledge. This study proposes that some of the driving forces impacting change upon the built environment include *technical or technological factors* such as: availability of new technologies and the influence of planning policies and interventions; *economic factors*, the increased affluence or poverty of an area and its residents, and ; *social and cultural factors* such as: housing tenure, fashions and marketing, and social aspiration. In the context of the case-study in Heaton, the technical factors appear to relate to the larger scale changes in the area, as well as some of the material changes such as PvC-windows. Economic and social and cultural factors have influenced the smaller scale changes in Heaton, and have resulted e.g. in the increased number of cars, and the small scale built alterations to individual properties.

9.3.1   Erosion

The concept of erosion in the context of the built environment (or character of the built environment) is relatively modern. It tends to be assumed that, in the past, modernisation was experienced as a natural part of a gradual but inevitable evolution. Over the last 150 years, however, there has clearly been a perceptual shift in response to the accelerating pace of change. This has seen an increasing consciousness of environmental and sustainability issues and includes the historic environment. Concern for these environmental issues resulted in a set of values being accorded to e.g. the historic environment. Erosion is said to occur when these values are adversely affected by change (EH, 2008, 43). To understand erosion, therefore, it is necessary first to understand the values in play in each circumstance. According to English Heritage (2006) the relevant values may be implicitly outlined in a designation, such as a 'conservation area'. They may also be more specifically set out in the analysis provided by an appraisal or conservation plan, or they may be expressed by the resident community as much as by professionals. In any

case, these values should be assessed before any attempt is made to implement change. Despite the concerns about how character and sense of place have been used in the promotion of e.g. the HLC research programme, it appears that when used with awareness of the potential pitfalls of these concepts, they could function as useful starting points or meeting places when assessing and trying to understand the values different stakeholders attach to places.

The nature of change should also be considered. Some changes can be described as benign - the restoration of missing features, for instance. Others may be considered damaging, but how badly? Again the values attached to types of change may make the same intervention appear positive (evolutionary) for some people and negative (erosive) to others. According to the *Measuring Change in Conservation Areas* report (The Conservation Studio, 2004) within the historic environment management there are questions of:

- *Sensitivity* - A replacement window that differs only in a few minor but crucial respects may be devastating to a precious listed building but tolerable elsewhere

- *Relativity* - Some changes matter more than others.

- *Magnitude* - A replacement window that required the removal of masonry to alter the proportions would almost certainly be far worse than one that fitted the existing opening .

- *Accumulation* - Small-scale changes that are inoffensive in a single iteration may have an erosive effect through repetition

- *Speed* - The rate of change, which can be measured by successive surveys, may itself be a cause for alarm

- *Extent* - An alteration may be so endemic that it is regarded as neutral rather than bad: television aerials, for instance, are rarely expressed as a major issue

- *Survival* - Some changes that would have been considered negative have survived the test of time to become cherished rarities. An example of this could be an art deco shop-front on a Victorian building.

These considerations about the nature of change that has occurred (or is occurring) are an important issue in the management of the (historic built) environment. The duality of continuity and change, and the perception of these developments as evolution or erosion,

leads to another characteristic of post-industrial cities - that is the 'conflicts of values' associated with the increasingly complex world we live in. Many different value sets can collide when debating e.g. the management of the (historic built) environment. The following discussion considers the kinds of cultural values that are used in the making of management decisions about the (historic built) environment, with particular reference to the contribution 'character' might make in this context.

The following section also outlines how the different value considerations in combination may have resulted in the evolutionary adaptation of 19th century residential areas such as Heaton.

9.3.2 Conflicts of Values

In accordance with Castells (2000a, 89) this study argues that the perception of cities that have undergone the post-industrial transformation either as good or bad (or indifferent) places, is based upon the value judgements of the residents and the wider society. Surviving 19th century residential areas are a significant feature of relative permanence and continuity within post-industrial cities, and thus an essential part of England's cultural heritage. This section addresses the conflicting values that affect decisions about the management of this aspect of the historic built environment. The conflicts of values are seen as a key characteristic of 19th century residential areas in post-industrial cities and this consideration connects the case-study of Heaton residential area to the broader issues about the management of historic built environment, and the reviews of literature and research methods detailed in Chapters 3, 4 and 6. In making a connection between the abstract character considered in the *Conceptual Development* Chapter and the 'operationalised' character of the policy discourse, this discussion is an essential element of this study connecting the theoretical framework, the case-study and the potential practical implications of this collaborative research project.

'Understanding' emerges as an essential part of management of all built environment, not just for 'heritage' conservation projects (see figure 9.2 on page 293). As discussed above in the *Introduction* and *HLC Review* chapters the current sustainable development agenda and the on-going heritage protection legislation review indicate a change in how 'heritage' is defined (Smith, 2006), or rather the sensitive management of the whole of the environment is promoted over the protection of selected monuments. From this view point the considerations in the conservation of 'heritage' begin to have applicability in the management of the whole of the environment. It is here that the concept of 'character' and the attempts to retain or enhance it, are seen as indicative of the current cultural

values. The attempt to value the whole of the environment and the over-all idea of places through HLC should also be seen in this context.

Thus these are important considerations for the management of residential areas such as Heaton. This research has essentially been concerned with a culturally significant, yet prevalent house-type and residential area. Thus any proposal as to what to do with, or how to manage, 19th century residential areas in a way that does not seek to turn every neighbourhood into a conservation area, but instead encourages continued sustainable evolution of these areas in order for them to accommodate 21st century life for years to come, is very much dependent on the values we attach to such places. The importance of character and sense of place is part of the wider Sustainable Development discourse identified in the *HLC Review* Chapter. Thus a consideration of how heritage value is constructed is important to the understanding of the 19th century residential areas in the context of the post-industrial city.

The following considers the Heaton detailed study area in the context of a set of value considerations identified by Pereira Roders (2007). The eight value indicators (social - identity; economic - worthy; political - symbolic; historic - authenticity; aesthetic - origi- nality, scientific - rarity; age - patina, and ecological - continuity) are complemented by the ninth category - 'other cultural values' identified as a meeting place for people from different specialisms. Pereira Roders' review of over 30 Cultural Heritage Charters from agencies such as ICOMOS and UNESCO, and covering the period of over 50 years, ap- pears to provide a robust basis for any assessment of heritage or cultural values significant in the management of the (historic built) environment.

The value indicators of Pereira Roders (2007) are based partly on work by Mason (2002) and Bax and Trum (1993) and have significant parity with the 'ten versions of the same scene' discussed by Meinig (1976) - as outlined in Chapter 4. The value indicators (outlined in figure 9.1 on page 292) are used to discuss the kinds of judgements that may allow either 'erosion', 'evolution' or 'preservation' to take place. The consideration of these values (and how they are assessed) relates back to the earlier consideration of the nature of character and sense of place, and the review of research methods according to whose 'judgements' (i.e. values) should be used when addressing change within the built environment.

The conflicting demands placed upon the management of the (historic built) envi- ronment are evident in the research methods used to address the historic environment. Referring to the *HLC Review* Chapter, the HLC research methodology is promoted as being capable of addressing a wide range of possible values associated with the historic

Ecological 'continuity'	Social 'identity'	Economic 'worthy'
Age 'patina'	**CHARACTER** **As cultural value**	Political 'symbolic'
Scientific 'rarity'	Aesthetic 'originality'	Historic 'authenticity'

Figure 9.1: Character as a cultural value, based on Pereira Roders (2007, 142)

environment. Critical analysis of the method however suggests that the inclusive nature of HLC has been over-stated and in reality (or in practice) the HLC approach considers a much more limited range of values. Similarly from the *Review of Methods* Chapter it can be inferred that many most familiar built environment research methods are based on individual judgements made by an expert, i.e. the 'professional' person conducting the study.

9.3.3   Cultural Values and Conservation of the Built Environment

Illustrated in figure 9.2, in the consultation document *Conservation Principles* (EH, 2006, 3) the perceived connections between 'understanding', 'valuing', 'caring for' and 'enjoying' the historic environment, or cultural heritage even more widely, areconceived of as a 'heritage cycle'.
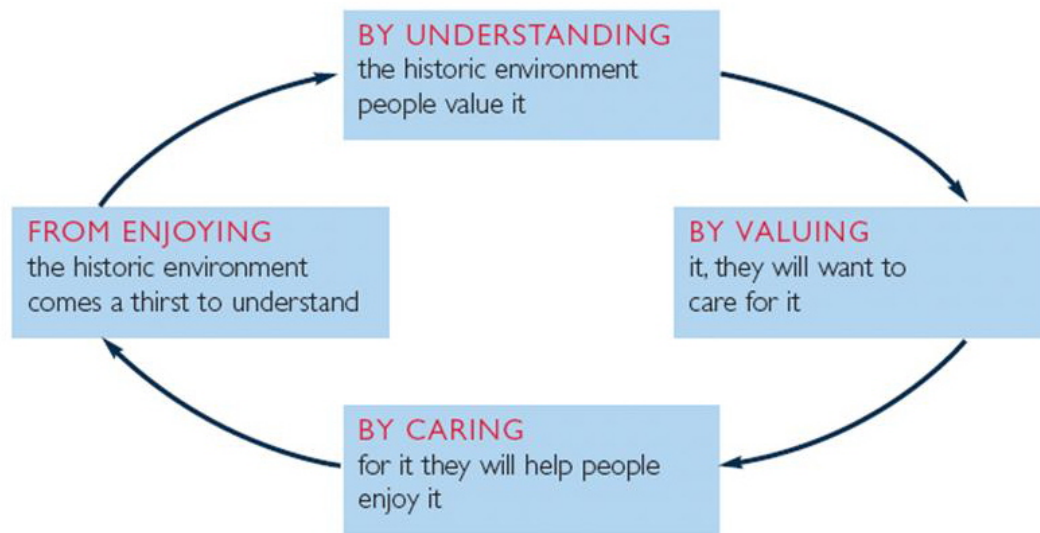
Figure 9.2: Heritage cycle from EH (2006, 3) *Conservation Principles*

The same English Heritage consultation document (2006, 22) (quoted in figure 9.3 on page 294) emphasises the need to understand values attached to a place. Developed from this consultation document (EH, 2006) the resultant *Conservation Principles* (English Heritage, 2008) identifies evidential, historical, aesthetic and communal values as considerations that should be born in mind in the conservation of the historic environment. This study is however still concerned that such a narrow interpretation of 'values' would result in a limited understanding of the issue. And although the quote in figure 9.3 implies that different people will have different values about the same locality (or any other heritage), how these differences are (or should be) addressed is not explained. Similar criticism has been elaborated for HLC (by e.g. Finch, 2007; Austin, 2007; Williamson, 2007 and Newman, 2009) and has been discussed in more detail in Chapter 3.

If surviving 19th century residential areas should be managed as 21st century residential settings the 'conservation' considerations outlined above might seem incompatible. However, based on the case-study of the Heaton residential area understanding the values attached to any residential setting appears as vital to good management as it is to good and informed conservation. The following section expands on these values in the context of managing residential areas originating from the 19th century.

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4 Understanding the values of places is vital

4.1 The significance of a place embraces all the interdependent cultural and natural heritage values that people associate with it, or which prompt them to respond to it. To identify and appreciate those values, it is essential first to understand the structure and ecology of the place how and why that has changed over time, and its present character.

4.2 Judgements about values are necessarily specific to the time they are made. As understanding develops, and as people's perceptions evolve and places change, so assessments of significance will alter, and tend to grow more complex.

4.3 To articulate the significance of a place, it is necessary to answer five questions :

1) In what ways is a place or any part of it valued, and by whom?

2) How do particular parts and phases of a place contribute - negatively as well as positively - to those identified values?

3) Are the values of the place enhanced or diminished by its contexts, or are they independent of them?

4) What is the relative contribution of each identified value to the overall significance of the place?

5) How clearly are those values exhibited at the place, compared to other places?

Figure 9.3: *Understanding the values of places* from Conservation Principles (2006, 22)

9.3.4 Evolution and Cultural Values

Based on Pereira-Roders (2007) this study proposes a set of eight value considerations associated with cultural heritage in general (and in this case applied specifically to the historic built environment, particular 19th century housing). The eight value considerations are specific to the given time, place and society. These values are the basis for judgements made about the management and conservation of the environment, and as such assessment of associated values can high-light the objectives and motivations of e.g. conservation of the historic built environment.

The values suggested by Pereira-Roders (2007) can be divided into two groups. The ecological, economic, scientific and age related criteria appear as more straight forward to address, as in the main quantifiable numerical evidence can be used to base value judgements upon. These 'objective' data can be presented as 'evidence' to others as reasoning for any choices or judgements that are made. The historical, aesthetic, political and social values are less easy to measure and thus perhaps appear more contestable, causing possible conflicts. Again, as assessed in the *Review of Methods* Chapter and suggested by Clarke (2004, 26), in practice based research it is often most expedient to judge these more qualitative values too based upon the opinions of the built environment professionals.

In order to discuss the relevance of these value considerations in relation to the management of surviving 19th century residential areas such as Heaton the following section uses three potential outcomes for each value consideration. Here the three categories of 'erosion', 'evolution' and 'preservation' are identified as the potential outcomes of management decisions. The idea of evolution encompasses the balancing of the processes of change and continuity. The following considers some of the possible scenarios where different interpretations of the eight cultural values outlined above, could result in either 'erosion' (and replacement) of the existing structure or building, in 'evolution' through adaptive (re-)use of the structure or building, or the 'preservation' of the existing structure or building. The following section considers how the cultural values identified above apply to the Heaton case-study area.

Heaton and Other Similar Areas in This Context

In terms of *ecological* (or 'continuity') values, areas such as Heaton survive partly because preservation of the existing structure is, at least for the time being, more sustainable than building a new one. However, adaptations to existing structures are very common, and some of these adaptations take place to make the existing houses more ecologically viable, for example through improved insulation or double glazing. It appears though that the ecological concerns are closely linked to the *economic* (or 'worthy') values that people (especially owner occupiers) attach to their homes. Existing structures are preserved as replacement would not be economically viable, and evolution (or even erosion) occurs as small modifications and maintenance (or extending) can add value to the existing structure. For developments involving non-designated buildings (such as the housing in areas like Heaton) values relating to *age* (or 'patina') still play a role. 19th century period properties are often marketed by estate agents as 'Retaining period features' (as a positive consideration) and many people find 19th century residential areas, such as Jesmond and Heaton in Newcastle attractive to live in. These cultural or social preferences for period properties also relate to the *historic* (or 'authenticity') and *aesthetic* (or 'originality') values attached to the built environment. In the context of non-designated buildings these considerations mean that, whilst the existing structure maybe recognisable as being part of a period of history or a style of architecture, changes to the existing structure are possible within the permitted development rights. These changes lead to evolution (and possibly even erosion) within the existing 19th century residential areas.

The prevalence of residential areas originating from the 19th century means that they are not all protected by designation as a class of building. This consideration relates to

the *scientific* (or 'rarity') values that are attached to the built environment. Where a rare survival of a type of building may merit preservation, 19th century residential areas, such as Heaton, are often perceived as existing structures that can be modified, renovated and up-dated. The perceived prevalence of the type can lead to this typology being seen as totally common place, mundane or everyday, and thus not worth of preservation. This valuation may easily lead to erosion of the distinctive character of 19th century residential areas. Through planning policy the current *political* (or 'symbolic') values however, are (at least in some instances) trying to prevent this erosion of character. As discussed above in the *HLC Review* Chapter the connection between the importance of the character of built environment and the sense of place of sustainable communities is part of the current sustainable development discourse, and thus part of the current political values attached to the built environment. To this end the current UDP in Newcastle aims to preserve the existing 19th century residential areas. Other current planning policy interventions such as the Pathfinder Housing Market Renewal schemes can be seen as endemic of the current political ideals. This also relates to the recent emphasis on the economic values attached to houses. This has resulted in homes being viewed increasingly as economic assets.

The increased social mobility and appreciation of homes as assets have for their part contributed to the change in how *social* (or 'identity') values are attached to residential buildings individually, and as settings in the neighbourhood context. The issues about whose values count as social values makes this perhaps the most contested category of the 8 values identified by Pereira-Roders (2007). Definition of social values and criteria for their assessment are complex issues. The debates surrounding the conflicting social values of stakeholders involved in the HMR Pathfinder projects across England is a current example of the kind value conflict that can arise and also relates to the political value considerations.[1] For example May (1996) discusses the different social values people living within the same residential area attach to their environment. It appears that some social groups are better equipped to make their voices heard, or are supported by existing policies and politics - at the expense of more disadvantaged groups. As discussed in the *Review of Methods* Chapter, Townend and Whittaker (2007) highlight the problems of trying to assess social values of a place inclusively. Nevertheless social values are included as a consideration in the current environmental policies and being identified as central to (community) identity may aid in a building's preservation.

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[1]See http://www.fightforourhomes.com/ for an alternative view on the benefits and political motivations of the Pathfinder Scheme. Fight For Our Homes' is a campaign against all Pathfinder projects which the web-site describes as 'UK Government's ... mass demolition programme.' Accessed 6.6.2009.

Finally *character* itself is used as a complex nexus of often unarticulated cultural values in the environmental management discourses. It appears that character in this operationalised context can encompass meanings of many of the other value considerations without these considerations being explicitly articulated. This open endedness may suggest that 'character' as a cultural value can act as the meeting place for different stakeholders as Pereira Roders (2007) suggests. On the other hand there is a danger that implicit use of character can lead to the manipulation of this concept to suit whatever motivation without adequate consideration of the actual cultural values at play. The fragmented nature of post-industrial society, in effect containing different parallel cultures, may mean that disputes about 'character' will form into an arena for more conflict. RICS (2007, 1) propose that the purpose of the protection of the historic environment, like other planning legislations, is the regulation of private rights for the greater public good. While communities have rightful interest in the places they value, decisions affecting the historic environment must be based on sound knowledge and a rational decision-making process.

Achieving the 'sound knowledge' on which 'informed' management of the (historic built) environment is to be based, is often acquired through what appears a 'rational decision-making' process. However, this rationality might be quite illusory, and bias towards different values about the environment can lead to quite different assessments of the 'character' of an area. The broad framework of cultural values that we as a society and as individuals hold essentially defines the more specific values detailed by Pereira Roders (2007). The way character, as an operationalised concept, is currently used within the historic environment management is a by-word for a complex nexus of cultural values. The ambiguity of the character concept makes it appear inclusive. Yet because of the ambiguity of the concept and the way it implicitly potentially encompasses different meanings and values to different people, there is a danger that if character is portrayed as something measurable and objective it can be manipulated to suit a specific management outcome. Evaluation of the results of the case-study and the prevalent uses of character in a normative capacity in the management of the historic environment reveals how 'character' and its preservation, enhancement or improvement can be deployed to argue for either preservation, evolution or even erosion of any given built structure. Unless articulated more explicitly character can remain ambiguous and the use of this seemingly neutral term may conflict with the interests of some stakeholders within the management process.

9.4 Conclusions

Analysing the characteristics of 19th century residential areas in the context of post-industrial cities, this Chapter has identified - through the case-study of the Heaton residential area - processes of change, continuity and the resulting conflicts of values as key characteristics of the evolution of 19th century residential areas, paralleled by the evolution of cities and societies from industrial to post-industrial (Harvey, 1990; Lefebvre, 1991; Castells, 2000a, 89). These characteristics of change and continuity are reflected in the post-industrial concern for sense of place discussed in the *Introduction* and *Conceptualising Character* Chapters. It appears that the open articulation of values governing the decision making processes about the whole of the environment is becoming more and more important. The rapidly changing post-industrial world is facing difficult environmental and social challenges and the importance of ecological values in the management of the environment (over any other concerns; see figure 9.4 below) may become the paramount issue before long. This study has shown that the same values or concerns regarding the (historic built) environment interpreted from different view points or perceptions can be used to advocate replacement, preservation or adaptation of existing structures.

Figure 9.4: Advertisement for a 'carbon neutral' student let (in a 19th century terraced house) in South Heaton Character Area

The apparent sustainable qualities of areas such as Heaton, show some lessons about ecological or sustainable neighborhoods. Their survival to this date certainly points to them having sustainable qualities in terms of construction materials and standards, adaptable functional qualities, and safe streetscapes. Areas such as Heaton could offer, within the existing physical set-up, opportunities to encourage mixed residential structure

and maintenance of locally important facilities such as shops and other small businesses as well as community facilities.

The exploration of definitions of character concepts has emphasised how quite ephemeral and undefined ideas about good environment are addressed through character without clear articulation of either the concept of character or the values associated with it. The explicit articulation of character as an abstract concept contextualised through adoption of the transductive matrix as the theoretical framework alleviates these concerns. The challenge for this abstract understanding however is to show that regarding character in this way is compatible with the demands of practice based or policy relevant research. Through the case-study undertaken this study demonstrates that appreciation of how character can work both as an abstract and as an operationalised concept allows for defining of a context of value considerations used in the environmental management decision making processes, and critical assessment of character as an indicator of implicit cultural values.

Discussion of the ambiguous nature of 'character' as a concept has highlighted its use as a by-word for 'good' in the context of the built environment. In defining a new understanding of character through the conceptualisation of the city as a transductive matrix, and in combining this understanding with the case-study undertaken - this study demonstrates how character at the operationalised level has been used as a nexus of complex cultural values, and at the more abstract level proposes a new ontological understanding of character. In the light of these developments this study brings to the fore the need to articulate, describe and discuss the values on which the approach to the management of the (historic built) environment are based upon, in a much more open way.

Chapter 10

Concluding Discussion

10.1   Reprise

In this study the understanding of the 'character' of 19th century residential areas within the post-industrial city is based on the work of Latham and McCormack (2004) who propose an abstract reading of what constitutes the 'city' and its character. The previous two chapters have discussed the findings of the case-study in the context of the cultural values that influence management of the historic environment (based on Pereira Roders, 2007) and the classification of vulnerable buildings based on Nikula (2005). This study identifies the concern for 'character' of the built environment as indicative of the current cultural values.

   The purpose of this chapter is to offer a condensed summary of the argument presented in the previous chapters, to evaluate the research method used and the achieved results, to offer some practical recommendations for the collaborative partner for the management of 19th century residential areas, and to suggests future directions of further research in the light of the case-study undertaken.

10.1.1   Developing the Intellectual Premise for This Case-Study

Issues with HLC

The review of research methods in this study provides a sound basis for the development of a research methodology that corresponds to the theoretical developments undertaken. In specific reference to the review of HLC research method carried out in chapter 3 - this study aims to answer the call for a 'next generation of analysis' by Austin (2007, 104).

   This study utilises a HLC-approach as a 'base line' of enquiry and combines it with

other research methods which look at the urban landscape at different scales and from different view points. From the combination of approaches a more nuanced research methodology emerges and some of the perceived problems of HLC are resolved, resulting in a better understanding of the character of surviving industrial era residential areas as part of the historic urban landscape of post-industrial cities. The applicability of this kind of approach to HLC is now echoed by e.g. Mitchell and Lunn (2009) in their discussion of new and further uses of Urban Historical Landscape Characterisation.

In the context of the 'post-industrial city' the existing HLC methodology is part of the technological tool used to deal with the various demands placed upon the management of the environment. To 'characterise' means to find the 'generic notion or the overall idea of place'; and HLC method can be used to produce quantifiable evidence for the design, planning and management processes. However, formulation of more specific research questions is necessary to 'elevate' characterisation into a research method that might contribute to the understanding of the post-industrial city in a more informative way.

The additional research approaches adopted in this study were chosen on the basis that they have 'the physical layer of reality', i.e. housing or the (built) environment, as their main focus of enquiry, and that the approaches are area based and have proven validity in researching 19th century residential areas. This relates to both the *Conceptual Development*, and the specific research approach developed in the Chapter on *Methodology*. The review suggested that in the context of assessing change over time in the physical layer of the transductive matrix, approaches based on the expert judgement of the professional assessor such as townscape assessment can be the most comprehensive way of providing data that complements the HLC approach and can address the different aspects of reality.

Issues with Existing Definitions of 'Character'

The existing character conceptualisations evaluated through the review of selected existing literature appeared to offer limited new insight to the understanding of character of historic urban landscape in its complexity and multiplicity. To try and define the focus of the case-study research undertaken in this study and to provide a theoretical framework for the methodological approach, it was necessary to develop an understanding of character of the city or urban landscape that allows for the inclusion of all the perceived constituents of character without privileging any one of these over the others.

The *Conceptual Development* Chapter outlines how this study conceptualises character as functioning at two different levels. At the operationalised level (Patterson and

Williams, 2005) 'character' is a by-word for a complex nexus of ideas referring to various cultural values attached to the (historic built) environment. At the more abstract level identified in this study the concept of 'character' is articulated around four main concerns. In this context 1) Character is more than the 'physical appearance', land-use type and lay-out of a place, 2) Character does not function purely at the level of personal emotion and 3) Thus character refers to something that exists collectively, beyond purely personal experience. 4) This study also sees the 'technical infrastructure' as part of the character of a place.

Transductive Matrix as a Theoretical Framework

In order to address the four main concerns with existing conceptualisations of 'character' outlined in the *Conceptual Development* Chapter, the theoretical framework for this study defines an abstract, inclusive understanding of aspects of city (as a place or landscape) and character. For the purposes of this study MacKenzie's (2002) model of 'corporeal materiality' is adapted to enable a new consideration of the 'city' and the proposed case-study on 19th century residential areas. The idea of city's 'corporeal materiality' as a transductive field proposed by MacKenzie (2002) and discussed further by Latham and McCormack (2004) describes '...the city (and its character, this study posits) as a transductive field where physical, technical, psychical and affective realities precipitate'.

The *Conceptual Development* chapter further adapted the idea of transductive field for the purposes of this research by four added considerations. These include

1. 'time depth' , i.e. time as a third dimension of this conceptualisation,

2. the role 'path' and 'project' play in construction of character, and how these notions from structuration theory might help in addressing the difficult consideration of change over time,

3. that certain 'monuments' (as tangible heritage) or 'customs' (as intangible heritage) persist over time, as constants in an ever-changing world; and how this may help addressing the continuities present in the post-industrial landscape

4. consideration of the role of human experience of reality represented in this way.

Together these considerations result in understanding of the 'corporeal materiality' of the city, not as a field, but as a three dimensional matrix. The three dimensional transductive matrix (constituting of space, time and reality) created is understood, not as an a-historical time-slice, but as a window in time.

To reiterate, this study understands the sense of place concepts (place attachment, sense of place, character and genius loci), in the context of the developed theoretical framework, as part of either the psychical or affective layers of reality. As outlined in the *Conceptual Development* Chapter the specific definition of each these concepts varies between authors and academic disciplines. Therefore, depending on the definition, each of these concepts could be located in either (or both) of these layers. However, this study proposes that in the main 'genius loci', and 'sense of place' are after-the-effect (or more accurately after-the-affect) descriptions of the affectual response to a certain place or environment. 'Place attachment' appears to refer more directly to the emotional connection people can form with a place, and 'character' is seen as the naming of the cause for an affectual response to place.

In contrast to *sense of place* and *genius loci*, *character* is more all-encompassing. *Character*, in this research, is understood to include elements from all the layers of reality, whether people experience, or 'witness' (Dewsbury, 2003), these layers consciously or not. Character is not about the physical attributes of a place alone, it is also about the technical layer of reality, in as much as how different 'hardware and software' networks enable and structure life. Character is also about the more personal, emotional involvement with places as addressed by the psychical layer of reality, and it is about the more ephemeral affective layer of reality.

About the Case-Study Methodology

Based on the preceding chapters the case-study research methodology for this area based case-study addresses the historical development (time dimension of the matrix), the spatial form (the spatial dimension of the matrix) and the experiential qualities (the reality dimension of the matrix) of the case-study area. A three phased approach, each phase using a different research approach is a logical development to achieve this.

As the research approach developed for this case-study is a new and un-tested one, many of the issues raised in the case-study were exploratory and emergent in nature. However, now in conclusion it is possible to see that focused attention on specifics of change and continuity in the built environment can be accommodated by this approach. Further detailed historical analysis of data about previous residents, typological analysis of existing historical features (whether quantitative or qualitative) and thematic analysis of different classes of buildings (e.g. shops in the residential setting) can be addressed using this approach. The strength of this research approach is in its theoretical framework that enables the demonstration of the connection between a new and unfamiliar way of

conceptualising the city and character and the case-study that has been conducted using a new combination of existing research methods.

10.1.2 Analysing the Case-Study Data

The analysis of the case-study data considers the case-study specific results of the historical and current research undertaken. The issues identified in this process relate to the more universal characteristics of change and continuity in the post-industrial city. Furthermore, through the conceptualisation of character at two levels of abstraction it is possible to link the case-study data and results to the use of 'character' as an indicator of cultural value in the (historic built) environment discourse.

Within the Case-Study Chapter

The detailed analysis conducted in Phase 3 of the case-study assesses the urban design and townscape elements of the area, and analyses the typology of housing with specific reference to the external embellishment of superficially 'monotonous' terraced row-housing. This analysis highlights the original, and existing variety of housing provision within the detailed study area and suggests likely influences in the area's survival to the present day. This case-study research on the built environment in Heaton develops the following four considerations. Firstly, to describe how the physical character of the study area has developed through history, Phase 1 of the case-study describes the historical development and the context of the study area addressing the chronological dimension of the transductive matrix. Secondly, in order to analyse the physical result of this development in terms of urban historic landscape character, Phase 2 of the case-study describes and analyses the physical results of the development of the study area and thus addresses the spatial dimension of the transductive matrix. Thirdly, in Phase 3 detailed historical analysis and fieldwork analysing the townscape and urban design aspects of the present day landscape is carried out. Thus Phase 3 of the case-study research analyses some of the detailed elements of the historical background and the physical make up of the detailed study area and in doing so addresses the four layered reality (or experiential) dimension of the transductive matrix, and enables a critical assessment of what characterises the detailed study area. Finally, the analysis of the case-study data, begun in the concluding part of chapter 8 and developed further in Chapters 9 and 10 allows for exploration of the outcomes of for example planning policy interventions, and the societal changes that have affected the case-study area. These changes can be addressed in a new way in the context of the transductive matrix.

Based on the foregoing three phases the analysis of the case-study data in the *Case-study* Chapter and afterwards in Chapters 9 and 10, identifies complex causal links in the (historical) development of the area, highlights areas of change and continuity within the detailed study area, and analyses the impact of 'interventions' within the detailed study area. Consideration of cultural values that guide the management of 19th century residential areas emerges as a significant factor in both the understanding and management of residential areas originating from the 19th century.

As the main focus of this case-study is the 'physical' reality of the case-study area in Heaton, Newcastle, the main body of the case-study chapter addresses various aspects of the built environment. Thus the research undertaken constitutes a 'descriptive' case-study (Yin, 1993). However, as the conceptual framework established for this descriptive case-study calls for consideration of the case-study area as part of a city that is understood as a transductive matrix, the case-study also has theory forming and inductive qualities. The theory forming qualities of this case-study research are apparent in the new ontology of character that emerges from the *Conceptual Development*, *Case-Study* and the following analysis Chapters. The inductive qualities of this study allow for the identification of three characteristics of 19th century residential areas 1) Terraced House Type, 2) Age of development and 3) Residential nature, and from these three characteristics development of further characteristics of 19th century residential areas in post-industrial cities identified as change and continuity and conflicts of values.

Character of 19th Century Residential Areas Chapter

Based on the data presented in the *Case-Study* Chapter, the *Character of 19th Century Residential Areas* Chapter develops further the geographically specific analysis that relates to the detailed case-study. In doing so the *Analysis* chapter shows connections between findings of the detailed case-study and broader characteristics and contexts of the 19th century terraced housing in England. The topics for this wider assessment include

1) The terraced house type and the emergence of Tyneside flat. This analysis is done through comparison of existing literature and data this study has gathered.

2) The age of the development and the impact of planning policy interventions of the last 100 or so years within the detailed study area (and for 19th century residential areas in general). Analysing the case-study data in the context of deliberate interventions, as manifested in the various planning policies, means that this kind of area based study shows what is typical of the area throughout its history, and also make clear distinctions between those elements that illustrate wider national and regional trends, and those which

are locally distinctive or genuinely unusual.

And 3) The residential nature of the area and the impact of change in the built environ-
ment of 19th century residential areas, through changes in the 'suburban infrastructure',
specifically local shops. The analysis of shops highlights the connections between the
physical and technical layers of reality - and how changes in these two are transduced
to the psychical and affective layers of reality. In other words, as both the place itself
(as a physical entity) changes, the way we experience an area will have changed in the
process. From the analysis of these three key characteristics of the detailed case-study
area the *Continuity and Change in the Post-Industrial City* Chapter develops into a
consideration of the more abstract characteristics of 19th century residential areas within
post-industrial cities.

Continuity and Change in the Post-Industrial City Chapter

The second chapter of analysis discusses change, continuity and the conflict of values
that affect the management of the (historic built) environment as defining characteris-
tics of 19th century residential areas within post-industrial cities. These considerations
bring the discussion back to issues pertinent to historic environment management, and
thus link the case-study and the theoretical framework to the practical concerns of this
collaborative research project. Sensitive management of change and continuity should
result in evolution of an area, which this study considers as a desirable outcome for the
management of the historic environment.

The *Continuity and Change in the Post-Industrial City* Chapter connects the abstract
understanding of character addressed in the case-study and the operationalised character
used in the environmental management discourse and decision making processes. Discus-
sing how 'character' is used in the operationalised context as a by-word for the complex
nexus of cultural values (as discussed in Chapter 4) Chapter 10 also suggests that a
detailed study of the character of 19th century residential areas, undertaken using the
methodology outlined in this study, can result in a more informed, considered and explicit
articulation and use of 'character' as a cultural value at the operationalised level.

10.2   Evaluation of This Study

As discussed in the *Introduction* and the *Conceptualising Character* chapters, places and
landscapes, and hence this study and the research approach it adopts, could be of interest
to most stakeholders involved with the study, management and 'use' of the (historic built)

environment. Specifically in the context of this study, it has been the intention from the conception of this Collaborative Research Project that the Historic Environment Section of the Newcastle City Council, and the Tyne and Wear Specialist Conservation Team would benefit from the information presented in this study and that the research approach adopted here could perhaps be adopted more widely. As the proposed Tyne and Wear HLC project (one of the last areas in England yet to begin this research programme) is about to commence it remains to be seen what common ground this research and the forth-coming HLC analysis may occupy.

10.2.1 Importance and Limitations

Consideration of the limitations of this study firstly highlights the concerns that are inherent in any research where 'the educated judgement' of the researcher is called for, and thus where personal bias might affect the research outcomes. Further critical appraisal of the research methodology utilised in this study suggests that the perceived limitations inherent in this case-study are those identified for case-study research in general by Groat and Wang (2002, 360). According to Groat and Wang (2002) many of the strengths of the case-study research design flow naturally from the defining characteristics of the method (see Figure 10.1 on page 309). However, these same characteristics also give rise to potential weaknesses. For instance, the embeddedness of the case-study in its context can lead to such an expansion of scope that the study becomes unwieldy. This challenge is particularly relevant in this case-study. The all encompassing nature of the transductive matrix as the essential conceptualisation of the theoretical framework means stringent selection of which and how data are collected, analysed and explained is paramount in achieving a coherent end result. And while the case-study can uncover and explain causal links, the causality it describes is likely to be more variegated and multifaceted than that identified by experimental research design. Likewise, while the incorporation of multiple data sources can help confirm findings, it makes it more challenging to establish the coherence of the study. Not least, although its potential for generalising to theory represents an important strength of the case-study, the theory remains tentative until potentially confirmed by other case-studies.

The potential limitations of interpretive-historical case-study also include the fact the object of research (e.g. Heaton in the year 1890) will never be available for direct observation. In this case-study consideration of the historical narrative from the points of view of physical, technical, psychical and affective 'layers' of reality, and the incorporation of data from both historical sources and the present day built environment, is seen - at

Strengths	Weaknesses
1. Focus on the embeddedness of the case in its context	1. Potential for over-complication
2. Capacity to explain causal links	2. 'Causality' likely to be multi-faceted and complex
3. Richness of multiple data sources	3. Challenge of integrating many data sources in coherent way.
4. Ability to generalise to theory	4. Replication required in other cases
5. Compelling and convincing when done well.	5. Difficult to do well; fewer established rules and procedures than other research designs.

Figure 10.1: Strengths and weaknesses of the case-study methodology, based on Groat and Wang (2002)

least in part - to alleviate this concern.

As outlined above Heaton is seen as 'having fallen into the gap' between world famous landmark projects such as Byker, on-going and long recognised problem areas such as West End of Newcastle, and the 'beautiful suburbs' of Gosforth or Jesmond. Heaton might have been described as having little interest in its history (Denby, 1920), yet it emerges from this case-study as an ordinary, but perhaps surprisingly resilient and adaptable area. Thus this study has made a new contribution to the understanding of urban residential areas using a combination of research methods. By high-lighting the adaptability of 19th century residential environment this study has not only shown that understanding the historical development of an area is important, but also that proactive management of sustainable change appears preferable to reactive preservation of 19th century residential 'character and appearance' which might actually be quite an illusory characteristic. This study also highlights the need for transparent expression of values that guide management decisions about all aspects of the environment.

10.2.2   Assessment of the Methodological Appropriateness of the Research Approach

This study suggests that characterisation as used and defined in the HLC process does not address either the abstract character identified in this study, or the character as a nexus of cultural values. However, HLC does address some spatial analytical elements and can be used to store and analyse data about some characteristics of e.g. the urban landscape (or city), including historical development over time and land-use characteristics. For the

purposes of this study however, HLC appeared insufficient for describing the character of surviving 19th century residential areas. Thus this study develops a definition of character as the nexus of cultural values that can be adapted as a management tool. A more abstract understanding of character as outlined in the theoretical matrix works as an academic analytical tool.

This study proposes that the theoretical framework of transductive matrix provides a way of understanding the material, functional, social and cultural factors in the degradation (or survival) of 19th century residential settings. Understanding the character of the city or the urban landscape as a combination of physical, technical, psychical and affective elements, provides a structured methodology for connecting information and data of different nature and type. In reference to the consideration of values in the management of the historic environment as outlined in the *Introduction* Chapter, 'character' is seen as an indicator of current cultural values.

For Phase 1 of case-study research the objectives are historical and archaeological in nature. In other words Phase 1 seeks to describe and illustrate the historical sequence of development of the built environment; Phase 2 has more explicitly analytical objectives in aiming to link present day and history through the division of the present day urban landscape into character polygons that not only reflect the pre-defined HLC categories (which are essentially based on broad land-use types), but in also analysing the impact of historical development of these polygons through assessment of the age of prominent land-use character, and the survival historical patterns in the present day landscape; the objectives of Phase 3 are in this study described as project specific. This refers to the flexibility purposefully built in to this part of research. Phase 3 allows for the exploration of project specific research questions which Phases 1 and 2 contextualise.

10.2.3 Recommendations for the Collaborative Partner

For collaborative partners this study provides some suggestions for issues that the management of the historic environment could address. Based on the experiences of conducting the case-study (i.e. the application of the research methodology) and the further analytical work undertaken, the following areas of interest appear potentially useful considerations:

- Once residential 'character areas' have been identified within the urban landscape, grouping planning applications together for each character area (through e.g. GIS applications) would enable the assessment of the compound effect of separate applications for the whole of the character area - and again for the wider character

neighbourhood. This process of logging planning applications could also be back dated to analyse past development patterns.

- Periodical assessment of change in conservation areas as well as other residential character areas through e.g. townscape assessment would highlight areas of rapid change in a timely manner.

- Encouraging and promoting good quality design, construction and materials etc. for all material alterations of individual properties and the public realm in all residential setting could foster sustainable, good new development and alterations to the existing structures, and thus preserve and enhance the 'character' of an area.

- Encouraging and promoting new uses of neighbourhood shops and promoting appropriate mixed use within residential contexts (e.g. artist's workshops / live-work situations for craftsmen / artist / community groups etc.) would ensure that the mixed and varied character of surviving 19th century residential areas, which this study has identified as one their key strengths, would continue to the future.

Identification and initial assessment undertaken in Phases 1 and 2 of the case-study research methodology used in this study should be just a beginning. Further assessments of different aspects of character (using any methodology deemed appropriate within the context of the transductive matrix) as undertaken in Phase 3 can then be undertaken to address issues pertinent to the individual character area (or areas) as necessary.

Character areas could be used as a geographical context to which assessments of residents and other stake-holders values and sense of place are linked. The transductive matrix as a theoretical framework allows for collaborative multi-disciplinary research that is inclusive of different perspectives, and is therefore a tool that can be adopted for the study of different facets of residential environments.

10.2.4 Envisaged Future Developments

It is now apparent that the case-study undertaken has allowed the discovery of some new information. Having come to light during the investigation, these considerations hadn't been perceived central to this study during research design. These issues include:

- New insight into the role of Frank W. Rich (architect) and Lord Armstrong in the development of housing in Heaton, and the previously unexplored role of Rich as a town-planner.

- The same consideration applies to other architect's engaged in work in Heaton. Architect's who designed terraced houses in Heaton are also known for many public buildings in the North East. In addition

- This study has brought to light an interesting type of semi-detached house form built into the plot structure intended for terraced houses. This housetype is present in the later built parts of Benwell study area which was researched during the Pilot Study, and also in parts of Gateshead.

- Archival research has provided more accurate information about the locations of farm buildings that existed in Heaton during the early part of the 19th century, and thus potentially indicate where the 'medieval settlement' of Heaton was situated.

- The presence and role of shops within 19th century residential areas have been identified as an area of interest and potential further research.

The multi-disciplinary approach adopted in the case-study provides an understanding of the historical origins and development of the study area, and an understanding of influence of history on the current built environment. It also highlights the continuous relationship between the built environment in structuring people's lives, and vice versa. In keeping with the partly archaeological origins of this study the case-study also acts as a 'record' of the study area in 2008-9.

Moving on from the practical considerations outlined in the preceeding, the following discusses the perceived new understanding of the research topic that emerges from this study. In doing so concluding sections of this chapter evaluate the contribution to knowledge this study accomplishes, and the theoretical understanding of character this thesis offers.

10.3 Transductions in the Post-Industrial City

This study identifies 'character' as a concept that can function as complex nexus of ideas, potentially encompassing aspects from many other unarticulated and implicit cultural values. Through a critical evaluation of an existing research approach (HLC) which claims to address the character of the landscape, and existing character conceptualisations (spirit of place, genius loci, sense of place and character) this study identifies a number of theoretical and methodological issues with the existing theoretical approaches and practice based research. In order to address these concerns the *Review of Research Methods*

undertaken in Chapter 6 leads to the development of the case-study methodology in Chapter 7, and the actual case-study in Chapter 8. The data gathered in the case-study is then analysed in Chapter 9 and discussed further, in relation to the frames of reference (identified in the beginning of this thesis) in Chapter 10. This concluding chapter has above summarised and evaluated the work undertaken and the applicability of the research method used. Therefore the remaining purpose of this *Concluding Discussion* Chapter is to offer a discussion of the theoretical context of this study, and to reiterate how the transductive matrix contributes to the understanding of the character of post-industrial cities.

10.3.1   Case-Study and the Transductive Matrix

From the initial conceptualisation of the transductive matrix and understanding the city as a combination of technical, physical, psychical and affective aspects of reality it became clear that this study would engage closely with some of the very recent developments in post-structuralist theory. An pertinent example of these developments is Bouzarovski (2009) who quotes Philip Pullman (2007, 247) to illustrate how 'buildings interact with the social fabric of everyday life' (2009, 840)

> She felt the hairs begin to stir on the back of her neck, and she became of the whole of the building surrounding her, the corridors dark, the machines idling, various experiments running automatically, computers monitoring tests and recording the results, the air-conditioning sampling and adjusting the humidity of the temperature, all the ducts and paperwork and cabling that were the arteries and the nerves of the building awake and alert ... almost conscious, in fact.

In the context of this study the above quote is also an apt description of what the human encounter with the transductive matrix can be like. According to Bouzarovski (2009, 841) recent years have seen a significant body of work on the performed and practiced aspects of architecture, which draws in part, from insights borrowed from non-representational theory. However, he argues that 'a conceptual framework that would connect everyday life with the materialisation of power in the built environment has yet to be developed'. Whilst Bouzarovski's own study seeks answer to the challenge he formulates, this study suggests that the contribution this thesis makes relates to a similar concern. In this study however, the conceptual framework developed seeks to connect the everyday built environments of the surviving 19th century residential areas and the formation of 'character'. Figure 10.3.1 on page 314 re-iterates the transductive

layers of reality as perceived in this study and considers the abstract and operationalised dimensions of each layer.

IDEAS	CONCRETES
abstract	operation
technical layer	technical solutions to perceived problems
physical layer	the built environment
psychical layer	emotional reactions, imagined scenarios, memories
affective layer	experiences; 'character' as a description of the nature of a place as experienced in the preconscious 'affective' moment

Figure 10.2: Layers of Reality Re-visited

In reference to the figure 10.3.1 the technical layer encompasses the development of the 19th century residential areas in English Cities, the industrial era housing as specific responses to the national push for bye-law regulation, and the raising of living standards. These broad ideas and the resultant technical solutions, resulted in a remarkable variety of locally adapted response. In terms of the 'physical layer' - in Newcastle the physical form of Heaton is good example of local response to the 19th century building regulations, and other technical developments that made the industrial era expansion of cities possible. Furthermore, in considering the later developments within the case-study area both the development of the more private environment characterised by semi-detached housing of the inter-war years, and the continuous modification of the 19th century urban landscape, are indicative of the transductions especially between the technical and the physical layer.

In the context of the transductions between the physical and technical layers of reality, this study concludes that what at the beginning of this research project was described as 'the 19th century residential environment' was not built as residential per se. Although much has been written about the gradual separation of public and private spheres, and the work, leisure and residential environments during the 19th century, the 'suburban infrastructure' of local shops and other amenities, as well as the presence of women 'at work at home', ensured that the 19th century residential environment encompassed a variety of functions that subsequent definitions of 'residential' do not necessarily acknowledge.

This study has identified and analysed three characteristics of the physical layer of 19th century residential areas within post-industrial cities. In summary these are: the locally typical form of terraced housing, chronological age of c.a. 150 to 100 years which implies the areas have been altered over the years, and the presence of shops and other

non-residential facilities within these areas.

All these three considerations challenge 'The monotony of order' (of 19th century terraced housing) referred to by Daunton (1983a). The monotony of order may have been accurate when describing the full extent of 19th century housing, especially in the case of Newcastle with row upon row of terraced Tyneside flats in Byker, Elswick, Benwell and Scotswood. However, this study has demonstrated that the provision of terraced housing varied considerably, even as it was originally built. Furthermore with the passing of time (in the specific case of Newcastle) the persistence of variety is identified as an emerging characteristic of the surviving 19th century areas. This perceived (and observed) variety results firstly from the demolition of a substantial amount of terraced housing - and it has been the smallest and cheapest Tyneside type that has mostly gone - that what the city is left with is (at least a little) more up-market, and also slightly later and more varied housing which was built e.g. in Heaton to house a variety of people; secondly from the modification and adaptation of existing individual properties; and thirdly from the presence of non-residential buildings in the 19th century residential context.

10.3.2 Small Scale Changes - 19th Century Residential Areas Now

Despite the small scale changes highlighted in the case-study the physical environment of Heaton that accommodated the people of the Industrial Newcastle is still identifiable as originating from the late 19th and early 20th centuries. The small scale changes instigated by the residents of Heaton in personalising and altering their properties during the course of the last 100 years allow the area retaining its historic physical identity, yet accommodating people of the post-industrial Newcastle. In this sense what has changed more than the physical environment, is what people (choose to) do within this residential setting. This changing appropriation of the residential areas originating from the 19th century characterises the glocalising post-industrial city. Developments in communication technology, tv, radio, and various other technological advances mean that an environment where people seemed to live half their lives inter-acting on the streets has transformed into an environment largely populated by a transient population of University students (and less transient young, professional families) - but where nevertheless it is possible for life to revolve almost entirely around your home address, as new ways of working and engaging with other people and different (leisure) activities are increasingly possible in the domestic setting.

Referring to the theoretical framework of city as a transductive matrix this study

suggests that it is the changes in the technical layer of the city that characterise the post-industrial city, and drive the appreciable changes in the physical layer, as described in the case-study chapter. The increasing complexity and speed of movement within the various technical networks both supports and creates the world around us. The fresh and dirty water networks, the networks of electricity, gas, communications and so forth converge in the home. Distribution networks of food, drink and petrol, as well as transport networks of cars, buses, trams, train and planes define how cities now function, in global context. The way in which Heaton and other 19th century residential neighborhoods now relate to and function within the wider city region and even nationally or globally has changed dramatically. Still, it is the physical or the built environment that contributes hugely to the affective and emotional aspects of the city.

In addition to the changes identified in the *Case-Study* chapter the contents of houses, and the way houses are lived-in and perceived reflect the changes that have happened over the last 100 years. As an example - the change in the role and work of women is evidenced fairly little in the existing 19th century houses (or even in the houses built much later). It is perhaps the contents of these houses that show the role of 'technology' in doing the traditional domestic tasks that used to occupy the working week of women. The contents of houses would also evidence the rise in living standards thanks to women earning a wage. These changes mean that houses within 19th century residential areas are better lit, warmer etc. than in the past, and full of things that we can now not do without. In the context of the theoretical framework of this study homes are important because they facilitate the convergence or transduction of different aspects of reality.

A typical often cited 'small scale adaptation' of the built environment that occurs outside the planning controls is the installation of satellite dishes outside residential properties. As an example, the unease that the transduction of changes between the layers of reality may instigate culminates in seeing satellite dishes as 'problematic' in the context of the historic built environment. This study suggests that although they are usually described as visually incongruous and therefore not in keeping with the physical appearance of the individual building, the wider townscape or the character of the area - the real issue here is that the satellite dishes are a visual reminder of the on-going technical change that appears to be difficult to deal with. Most people after all like watching satellite tv, so why aren't satellite dishes celebrated as signs of technological advancement or economic buying power ?

Placing these considerations in the context of recent theoretical developments - actor-network theory (e.g. Law and Hassard, 1999 and more recently writers such as Bouza-

rovski (2009) and Evert and Jackson (2009)) address the role of technology and various networks as part of a) the process of change in the built environment, b) the way built environment structures social interactions and vice versa the built environment is re-structured.

10.3.3 Conservation, Transduction and 19th Century Housing

In reference to the practical context of this case-study (applied to the conservation and management of the built environment) theoretical consideration into the ontology of conservation asks what constitutes the 'built environment' and enquires if this should be the object of conservation (Tait and While, 2009).

This consideration relates to the question raised in this study whether a management strategy that is based on chronological date of origin can produce end results that satisfactorily accommodate 21st Century life in the 19th Century setting. Assessment of historical value and the consideration character might be helpful starting points in the understanding of 19th century residential areas. However, the traditional conservation and heritage considerations of historical value and character as something static and unchanging appears contradictory to the continuously evolving character of residential areas such as Heaton that emerges from this study.

The surviving 19th century residential areas are culturally important, but are often perceived to be commonplace. This perceived familiarity should be countered by the new ontological understanding of what constitutes character in these contexts offered by this study. Re-evaluating the role and character of 19th century residential areas highlights the need to manage sustainable change in these areas so that they can evolve, not erode, and continue providing an area of relative continuity in the ever changing world. In reference to the satellite dishes discussed above this requires a consideration of a broader range values (other than just historical) as outlined in *Continuity and Change in the Post-Industrial City* Chapter.

The detailed analysis of Heaton case-study area leads to a conclusion that the physical make-up of the area evidences that the strict class division between working-class - middle-class that has been prevalent in the understanding of the late 19th century society is perhaps misleading. The case-study data shows that both social-groups contain a variety of occupations, life styles, family types and monetary wealth. It is this richness and variety that is manifested in the surviving housing. The variety of provision characterises the surviving 19th century housing in Heaton, and within wider Newcastle. And it is this variety that makes for an adaptable and thus sustainable environment. It is in

these realisations that this study proposes the contributions of Heaton can be - detailed, both historical and current understanding of the built environment high-lights potential strengths of an area. These strengths can then be promoted and valued to safeguard the positive aspects of especially older residential areas that have become 'the familiar and cherished local scene' in many post-industrial cities in England and elsewhere.

In the context of the theoretical framework developed for this study, character of an area has often in practice been equated to the age and visual appearance of the physical layer of reality. The profound changes that have occurred over the last 100 years in the other layers of reality (i.e. technical, affective and psychical) as well as the constant modification of the physical layer through various interventions discussed above now means that the understanding of character adopted in this study suggests that Heaton is in fact a 21st century residential area with some 19th century built fabric or physical influence. This interpretation has implications for the management of residential areas such as Heaton, and would appear to suggest that a more pro-active, area-based approach could be suited to encourage and direct appropriate change and development of these residential areas, not as 'nearly conservation areas' but as adaptable 21st century locales.

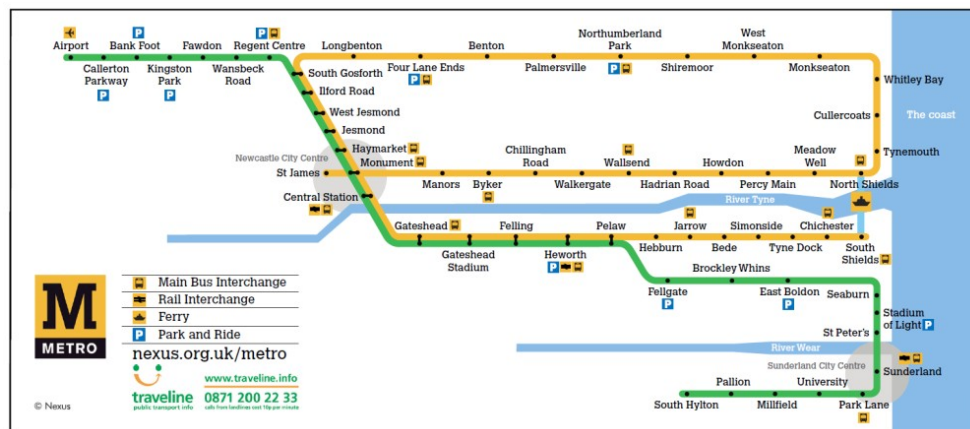### 10.3.4 Beyond the Physical - Transductions in the Post-Industrial City

Figure 10.3: An alternative view of Newcastle; Transport network - here represented by the TyneWear Metro Map, is an integral part of the 'technical' layer of reality, and vital to the functioning of the city.

In the past writers have likened cities for example to 'a stage' (Jones, 2005; Borden,

2005), 'a process' (Castells, 2000a) or 'an organism' (Davison, 1983), thus emphasising different aspects of the processual, emergent nature of cities. This study proposes that in the context of the transductive matrix these processual elements emerge as transductions that occur between the different layers of reality. Thus the transductive matrix contributes to the understanding of 'character' of places by allowing the exploration and structuring of data about the different layers of reality in a new way. Further work utilising the transductive matrix as a theoretical framework that 'holds together' the data concerning the different layers of reality should allow for better understanding of the tranductive processes occurring between these layers. In otherwords 'character' understood in this way allows for combination seemingly disparate data about the city in a meaningful way.

The introduction of the *Case-Study* Chapter (chapter 7) considers some aspects of the technical layer of reality in relations to how these technical developements have contributed to the character of the case-study area. The focus of the *Case-Study* Chapter is nevertheless the physical layer of the transductive matrix, and appendices G, H, and J further illustrate the built environment and this aspect of character of Heaton. Thus to explore further the implications of 'transductive matrix' to the understanding and analysis of 'character' this section seeks to consider how the affective and psychical aspects of post-industrial cities could be addressed. In more recent research more experimental approaches have been taken in order to address the affective qualities of the environment. As many existing published accounts of affective aspects of human encounters with their environments are quite experimental in nature (e.g. Sidaway, 2009; Wynn, 2007; Edensor, 2005), there might have been a number of ways in which to address the affective and psychical layers of the transductive matrix and thus to elucidate the potential of considering all the four aspects of reality and all the three dimensions of the transductive matrix.

In summary this study proposes that data collection relating to these aspects of the tranductive matrix may be conducted using one or a combination of the following three approaches. Firstly, surveys of e.g. residents or other stakeholders involved with the area under scrutiny. Some of the possible approaches relevant to this category were introduced previously in the *Review of Methods* Chapter. Secondly, fieldwork conducted by the researcher personally. This approach is often described as 'thick description'. As thick descripton refers to the detailed account of field experiences in which the researcher makes explicit the patterns of cultural and social relationships and puts them in context, this approach appears particularly relevant in relation to research about 'character' of the

built environment(Holloway, 1997). Lincoln and Guba (1985) describe thick description as a way of achieving a type of external validity in qualittaive research. By describing a phenomenon in sufficient detail one can begin to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people. The term thick descriptions was first used by Ryle (1949) and later by Geertz (1973) who applied it in ethnography. Detailed descriptive notes about experiencing e.g. the Heaton case-study area would contribute to the understanding of affective and psychical aspects of 'character'. And thirdly, analysis of existing literary and other cultural sources such as published books, music or songs could be used to evidence affective and psychical aspects of a place. From a North of England perspective books such the comparative study of Manchester and Sheffield by Evans, Fraser and Taylor (1996), or TV dramatisations such as *Our Friends Up North* (first broadcast in 1997), the older 'When the Boat Comes In' TV series or Richard T. Kelly's (2008) book *Crusaders* could provide context for the analysis of affective aspects of post-industrial cities.

In the following, in order to high-light what the fully fledged tranductive matrix may contribute to the understanding of charter some data from material gathered during the whole of the research process is analysed. Some of these finds may, at the time of discovery, only have had a seemingly tenuous or instinctive relevance to the actual case-study in Heaton. However, when considered in the context of the transductive matrix they now further elucidate the 'character' of Heaton case-study area, and Newcastle and other post-industrial cities in general. So what can be learnt about the 'affective' and 'psychical' layers of post-industrial cities by considering the tranductive matrix from view points presented to us by two men whose experiences of their home cities have had a profound impact on their outlooks on life as a whole? The following introduces published work (written and sung) by Ewan McColl and Jack Common. The analysis of the case-study data and a reflective evaluation of all the previous chapters now suggests that through the combined consideration of this additional information and the case-study itself, the multifarious, diverse, dynamic and ever-changing character of 19th century residential areas, and wider post-industrial cities emerges.

Ewan McColl

In his autobiography (McColl, 1996, 180) musician Ewan McColl (b. 1915 - d. 1989) describes his hometown in the following way:

> Sometimes from the vantage point of the Peel Park reading room I would gaze
> out over [Salford] with its endless streets of identical houses, its rampart church

spires and its innumerable factory chimneys pointing accusing fingers at the sky. Even from a distance it looked moribund, a 'place much decayed', and yet I was stirred by it, filled with a disturbing kind of enthusiasm. In the shabby wilderness, with its mean streets and silent cotton mills looking like abandoned fortresses, in those geometrically arranged warrens and occasional clusters of bug-infested dwellings built in the reign of daft George for 'the better class of artisan', in that wasteland of rotten timbers and rusting iron, of a fouled river and an abandoned canal, a quarter of a million people are born, live and die. It is my Paris.

So much did this 'place much decayed' move McColl that he wrote a song about the place and named it 'Dirty Old Town'. McColl's ode to his 'Paris' was originaly composed in 1946, for a documentary play called 'Landscape with Chimneys' - thus espite common misconceptions associating the song with cities such as Dublin, the resulting song does in fact describes McColl's hometown of Salford[1]. For the purposes of this study however, the song appears as a powerful description of a generic (post) industrial city, equally valid in Greater Manchester as for Tyne and Wear region, Middlesborough, or the industrial cities of West Yorkshire or the Midlands.

Dirty Old Town

I met my love by the gas works wall

Dreamed a dream by the old canal

Kissed a girl by the factory wall

Dirty old town

Dirty old town

Clouds a drifting across the moon

Cats a prowling on their beat

Spring's a girl in the street at night

Dirty old town

Dirty old town

Heard a siren from the docks

Saw a train set the night on fire

Smelled the spring on the smoky wind

Dirty old town

Dirty old town

---

[1]The best known recording of 'Dirty Old Town' however, is by the Irish rock band The Pogues, which probably explains the association of the song with the Irish capital.

> I'm going to make me a good sharp axe
>
> Shining steel tempered in the fire
>
> Will chop you down like an old dead tree
>
> Dirty old town
>
> Dirty old town
>
> I met my love by the gas works wall
>
> Dreamed a dream by the old canal
>
> Kissed a girl by the factory wall
>
> Dirty old town
>
> Dirty old town

In addition to the evocative lyrics McColl (1990, 180) has described his feelings towards his hometown and motivations for writing the song. These comments further elucidate the profound way his experiences of Salford still impact on his life.

> [...] What is it I feel for this place? Hatred? Yes, most of the time, but not all the time. Not all the time.

> [...] Sometimes lying in bed at night I am overcome with the awful fear that I will never escape from this place, that I am trapped and destined to live out my life in this awful ratpit.

> [...] Of course I hate it, I loathe it, I am scared of being devoured by it; and yet, though I live to be a hundred, it is unlikely that I will ever come to know any place as well as I know this one. That smoke-encrusted brick was among the first things I ever saw. I have absorbed this place through the palms of my hands; the soles of my feet have walked, run, slid, hopped, jumped and skipped along its flagstones and cobbles, through its roads and alley-ways, its detours and short cuts, its dumps, cinder-crofts and parks.

And moving from listing of the features of his 'much decayed' city and description of his own loathing towards his bithplace, McColl begins to remember with his nose.

> My nose is equally familiar with the place. If I were to walk blindfold through this labyrinth of odours, my nose would guide me like a well-trained bloodhound.

> [...] There's smells and smells, of course. On the whole, the smells of winter are bearable; half the time we don't even notice them. After all, you've had them in

your nostrils since the day you were born. In the summertime they are less easy to put up with because then, in addition to the smell of this or that factory or industrial process, there is the stink of sewers and - even worse - the stench that issues from the few houses in the street where the struggle against dirt and squalor has been abandoned. It isn't easy to live in a constant state of siege, with dirt as the enemy.

MacColl's words high-light the multi-sensory nature of cities, and bear witness to Thrift's (2004) description of cities a 'rolling maelstoms of affect'. He hates his city and wants to cut it down like an old dead tree, yet he smells the spring in its air and dreams as he passes through relics of its industrial past.

Jack Common

The work of writer Jack Common (b.1903 - d.1968) is a literary source of material that relates to Newcastle, and the Heaton case-study area more specifically. Based on his own childhood experiences Common (1951) describes life and the built environment in Heaton in the 1910s. His father was a railway worker based at Heaton NER railway yard and the family lived in a Tyneside flat on Second Avenue. Common's first book *Kiddar's Luck* contains vivid descriptions of the family house, and the Heaton street scene. However, in this concluding part of this study it appears more pertinent to draw from the aspects of Common's text that link more directly to the consideration of affect and emotion in the case of industrial and post-industrial cities.

Common (1951, 129) begins by asserting his case for Newcastle as a location for exploration:

...Newcastle being a fine town to roam in, especially after dark. Its natural features are excellent, that's why, since it is all hills, vales, bridges and one view succeeds another every hundred paces in a manner which fascinates anyone with an eye for composition in a landscape. True, for two centuries or more the main endeavour of the city fathers has been to destroy this balance, and the muck of unrefined capitalism of all periods is pretty thick on all quarters. Still , there is a natural obduracy in the configuration of the place ehich resists all the erosions excrescenses which otherwise must have made a Hull or Birmingham of it.

Common is undoubtedly proud of his hometown, he does not exude loathing towards the place like McColl above does. In the spirit of exploration, his first route from Heaton to Newcastle city centre takes him part way to Byker and then to the Quayside, which in

the beginning of the 20th century was still a working port, not the refined post-industrial waterfront location it has become today.

> Often I went a bit out of my way in order to give some quality of exploration to the trip. I might make for for the heights of St. Peters first, up the sordid and happy Headlam Street where they took my mother the day they ran her in. From St. Peters you looked down down a hillside of staggered roofs and cobbled streets to where the river slid like new boiled pitch under ships and quays until it took the glitter of the lights of several bridges, high and low, or writhed with reflected flame as a train passed over. That was the basic scene, but as you descended, its angles and emphasis shifted. Bridges moved their relation to one another; quays and the shipping flattened out, losing the river behind them; and the centre of town begun to rise up. Then on the river-side itself, when you were near enough to smell its dankness and the touch of salt that blew up from it and to see its scum of corks and contraceptives and half-wrecked crates washing under the sterns of foreign ships, the bridges were now high overhead. You saw, too, that it was a fortress-city you were making for. There was a climb ahead of you before you got to into the inner gaiety of crowds. Either you toiled up Dean Street, which was a sort of glazier of asphalt and cobble-stones coming down steeply and ponderously by a cliff of office buildings and through a black railway arch before it could spread itself out on an easier gradient; or you could try your wind and leg-muscles on the Dog Leap Stairs, in which latter case you emerged just where the old keep of the original 'new' castle sits in its brest-high mesh of railway lines.

Common's second route to Newcastle contrasts this 'new' way with the previous route, by describing it as clean and elevated over the tree tops, giving an entirely different vantage point of the Jesmond Vale below.

> That was probably the oldest path to town. Other nights I took the newest, through the clean air of parks and crossing the Ouseburn by Armstrong Bridge, that is over the tops of cherry-trees and a cackling of geese at a farmhouse below.

The final route refers to the quiet Jesmond Vale and the Ouseburn-river which separate Heaton from Shieldfield, and this route still today affords a comparatively 'secretive' approach to Newcastle from Heaton.

> Or to avoid people altogether, I dipped down into the darkness of the Vale, over the bridge so small and low it bent to the muttering intimacy of little waters.

Common describes three routes from Heaton to the Newcastle towncentre that demonstrate not only an intimate knowledge of the city, but also a considered understanding the 'character' of the place, and how this character shifts and changes as a wanderer passes through the streets, or as the time day changes. Furthermore Common's description illustrates how the city is experienced through all the senses, sights, sounds, smells and all, and how the city is three dimensional experience, not just a plan on a map.

Dying relatively young, and having only published two books Common left behind a large amount of unpublished material and other papers which are held in an archive at the Newcastle University Library. His literary work has also recently been a subject to a PhD by Keith Armstrong at Durham University. Furthermore Armstrong's thesis is the basis for a recent book on Common (Armstrong, 2009). This material is a potential area of future exploration in addressing psychical and affective aspects of Heaton - although with a historic emphasis, as opposed to present experience.

<div align="center">x x x</div>

This short discussion highlights firstly the multi-sensory nature of character, and while the visual aspects of the city may be easy to document with a few choice photographs, and the spatial layout can be mapped out on a piece of paper, these are only aspects of the whole of the experience of the city and its character. Secondly the above emphasises the 'processual' nature of 'character', what happens in the city and how you happen to the city or the city happens to you as you walk, run, cycle or drive through it; or as you rememeber the city or see it in your minds eye, free to imagine and guess what might be, are equally important aspects of the city. Mapping, acknowledging or taking into account of these aspects of character could be an insurmountable challenge to everyday management processes associated for example with the 19th century residential areas. However, this is not to suggest that these aspects are not important or valid and the new ontological understanding of 'character' suggested in this study allows for consideration of the many faces of post-industrial cities.

10.4   'Character' as an Affective Encounter

This study suggests that human-beings continuously characterise their surroundings. Attaching 'attributes' to the environment, continuously comparing the encountered environment with other places and times, both real and imagined, is how humans orient themselves in the world. In this way people also apply values to their surroundings, and

different people hold different values. It may appear almost inevitable that in the context of the built environment some people will view change as erosive whereas others will see the same changes more positively as evolution. Among others Massey (e.g. 1993) and May (1996) have written about how residential environments can be variously experienced, interpreted and constructed by different people.

In reference to the discussion about the initial premise and background to this study in Chapter 1, in giving this study its initial title 'Characterising Industrial Era Housing in the Post-Industrial City' - the city was already 'characterised'. The city of Newcastle is described as 'post-industrial', implying that change of some kind has occurred; the origin date of the case-study housing areas was focussed on the 19th century, and this implies that the housing of this date has some discernible qualities that can be identified. 'Housing' implies that the use of a building also affects its character, and the consideration of 'areas' suggests that this class or type of cultural monument is not about the impact of the single house as a monument but rather about the combined character of all of the structures and their inter-relations within an area.

The case-study undertaken challenges these perceived characteristics of 19th century residential areas and highlights the gradual, but continuous process of small scale adaptation of these residential areas as one of their most significant features. A broader consideration of the role of 19th century residential areas in the post-industrial city suggests the features of continuity and change and resulting conflict of values as a significant characteristics of these areas. Post-industrial society that occupies these 'relicts' from the industrial period leads a very different life in settings that previously accommodated their Victorian and Edwardian predecessors. As with the discussion about Gospodini's (2006) New Post-Industrial Buildings typology, which concluded that many of the building types are in fact not new, but rather new (post-industrial) uses for old buildings (that mostly date from the industrial period) - this study concludes that a post-industrial residential use is 'new' in as much as it differs considerably from industrial era residential use.

These considerations highlight that although the transductions between the technical and the physical layers discussed in the previous section may be easier to appreciate, observe, study or even measure, the continuous process of change (in this study referred to as the industrial to post-industrial transformation) has had a profound impact on the psychical and affective layers of reality as well. This study suggests that the post-industrial concern for the sense of place, identified as key post-industrial 'issue', stems from the unease the transduction of changes between the four layers of reality potentially creates. In the context of Gospodini's (2006) new buildings typology, 19th century

residential areas can be seen to provide a certain 'constant' in a changing world.

This study concludes the intimate connection with the past that these residential settings provide has helped to make them the popular residential choice they are today. Understanding the city as a transductive matrix described in Chapter 4 results in a new ontological understanding of character. In the increasingly complex post-industrial world this new ontology of character, understood as the naming of the cause of people's affective response to their environments, allows for an inclusive study of the post-industrial city. Character, understood in this way, addresses a place as it is, not how it should be. This is the difference between character as an abstract, inclusive and explicit concept and character as an operationalised management construct. In this study, focusing on the character of surviving 19th century residential areas, the new ontological understanding of character acknowledges the chronological, spatial and experiential aspects of the post-industrial city, and offers a new reading of character as the naming of the experience created in the preconscious 'affective' moment when encountering a place.

Chapter 11

Bibliography

Adams, W. Y. and E. W. Adams (1991) *Archaeological Typology and Practical Reality.* Cambridge, Cambridge University Press

ADS - Archaeological Data Service (2005) *Extensive Urban Surveys.* Retrieved 18.4.2007 from
`http://ads.ahds.ac.uk/collections.cfm`

Agnew, J. (1987) *United States in the World Economy.* Cambridge, Cambridge University Press

Aldred, O. and G. Fairclough (2003) *Historic Landscape Characterisation Taking Stock of the Method.* London, English Heritage and Somerset County Council

Alexander, C. (1977) *A Pattern Language.* New York, Oxford University Press

Alexander, C. (1979) *The Timeless Way of Building.* New York, Oxford University Press

Alexander, A. (2009) *Britain's New Towns: Garden Cities to Sustainable Communities.* London, Routledge

Altman, I. and S. Low, (eds) (1992) *Place Attachment; Human Behaviour and Environments.* New York, Plenum Press

ALGAO (1997) *Analysis and Recording for the Conservation and Control of Works to Historic Buildings.* ALGAO

Anon. (ed) (1997) *Proceedings of the 1st International Space Syntax Symposium.* London, UCL.

Anon. (ed.) (1999) *Proceedings of the 2nd International Space Syntax Symposium.* London, UCL.

Anon. (2005) *Lancashire Historic Towns Survey.* Retrieved 18.4.2007, from
`http://www.lancashire.gov.uk/environment/archaeologyandheritage/historictowns/`

`index.asp`.

Anon. (2007a) *Black Country Historic Landscape Characterisation.* Retrieved 18.4.2007, from

`http://www.wolverhampton.gov.uk/environment/land_premises/conservation/archaeology/hlc.htm`

Anon. (2007b) *Cornwall and Scilly Urban Survey.* Retrieved 18.4.2007, from `http://www.historic-cornwall.org.uk/towns.htm`.

Anon. (2007c) *Merseyside Historic Characterisation Project.* Retrieved 18.4.2007, from `http://www.liverpoolmuseums.org.uk/mol/archaeology/mas/merseysidehistoriccharacterisa` `asp`.

Anon. (2007d) *South Yorkshire Historic Environment Characterisation.* Retrieved 18.4.2007, from `http://www.sheffield.gov.uk/?pgid=32282&fs=s`

Aravot, I. (2002) *Back to Phenomenological Placemaking.* Journal of Urban Design 7(2): 201-212

Armstrong, K. (2009) *Common Words and A Wandering Star.* Sunderland, University of Sunderland Press

Austin, D. (2007) Character or Caricature? Concluding Discussion. *Landscapes* 8(2): 92-105

Bachelard, G. (1969) *The Poetics of Space.* New York, Orion

Baker, A. R. H. (1992) Introduction: on Ideology and Landscape. in *Ideology and Landscape in Historical Perspective.* A. R. H. Baker and G. Biger (eds). Cambridge, Cambridge University Press: 1-14

Barke, M. (1991) The Middle-Class Journey to Work in Newcastle-upon-Tyne, 1850-1913. *Journal of Transport History* 12(2): 107-134

Barke, M. and R. J. Buswell (1992) *Newcastle's Changing Map.* Newcastle, Newcastle-upon-Tyne City Libraries and Arts

Barnes McGuire, J. (1997) The Reliability and Validity of a Questionnaire Describing Neighborhood Characteristics Relevant to Families and Young Children Living in Urban Areas. *Journal of Community Psychology* 25(6): 551-566.

Barrett, H. (1993) Investigating Townscape Change and Management in Urban Conservation Areas: The Importance of Detailed Monitoring of Planned Alterations. *Town Planning Review* 64(4): 435-456

Bax, M. F. T. and H. M. G. J. Trum (1993) A Taxonomy of Concepts in Architecture. in *Advanced Technologies.* M. R. Behesti and K. Zeik (eds). Amsterdam, Elsevier Science Publishers: 53-64

Benwell Community Project(1979) *From Blacksmiths to White Elephants - Benwell's Changing Shops.* Newcastle-upon-Tyne, Benwell Community Project

Bell, D. (1974) *The Coming of Post-Industrial Society: A Venture in Social Forecasting.* London, Heinemann

Bell, D. (2007) Fade to Grey: Some Reflections on Policy and Mundanity. *Environment and Planning A* 39: 541-554

Bell, M. M. (1997) The Ghosts of Place. *Theory and Society* 26: 813-815

BGS (1969a and b) *British Geological Survey*

BGS (1998) *British Geological Survey*

Billig, M. (2005) Sense of Place in the Neighborhood, in Locations of Urban Revitalization. *GeoJournal* 64: 117-130

Birkhamshaw, A. J. (2006) Linking Urban Landscape Characterization and Urban Morphology. *Urban Morphology* 10(1): 76-77

Blackman, J. (1967) The Development of the Retail Grocery Trade in the Nineteenth Century. *Business History* 9(2): 110-117

Borden, I (2005) Performing the City, in *Subcultures Reader* (ed) Gelder, K. Abniodon, Routledge : 256-270

Bouzarovski, S. (2009) Building Events in Inner-City Gdansk, Poland: Exploring the Socio-spatial Construction of Agency in Built Form, *Environment and Planning D*, 27: 840-858

Braham, W. (2000) After Typology: The Suffering of Diagrams. *Architectural Design; Contemporary Processes in Architecture* 70(3): 9-11

Bricker, K. and Kerstetter (2000) Level of Specialization and Place Attachment: An Exploratory Study of Whitewater Recreationists. *Leisure Sciences* 22: 233-257

Bridging NewcastleGateshead(2006) *Bridging NewcastleGateshead.* Retrieved 30.6.2007, from `http://www.bridgingng.org.uk/site/`

Brockelman, T. (2003) Lost in Place? On the Virtues and Vices of Edward Casey's Anti-Modernism, *Humanitas* 26(1): 36-55

Brook, I. (2000) Can 'Spirit of Place' Be Guide to Ethical Building ? in *Ethics and the Built Environment.* Fox, W. (ed). London and New York, Routledge: 139-152

Burholt, V.(2006) 'Adref': Theoretical Contexts of Attachment to Place for Mature and Older People in Rural North Wales. *Environment and Planning A* 38: 1095-1114

Burnley Borough Council (2004) *Burnley Wood Heritage Appraisal.* Burnley Borough Council and Elevate East Lancashire, Burnley. Retrieved 3.10.2007, from `http://www.burnley.gov.uk/downloads/BWood_App.pdf`

Burton, E. (2002) Measuring Urban Compactness in UK Towns and Cities. *Environment and Planning B: Planning and Design* 29: 219-250

Burton, E. (2003) Housing for Urban Renaissance: Implications for Social Equity. *Housing Studies* 18(4): 537-562

Burton, E., S. Weich, et al. (2005) Measuring Physical Characteristics of Housing: the Built Environment Site Survey Checklist. *Environment and Planning B: Planning and Design* 32: 265-280

Buttimer, A. (1980) Home, Reach and Sense of Place. in *The Human Experience of Space.* A. Buttimer and D. London (eds). Croom Helm, London : 166-187

Butz, B. and B. Eyles (1997) Reconceptualising Senses of Place: Social Relations, Ideology and Ecology. *Geografiska Annaler* (79B): 1-25

CABE (2000) *By Design.* London, CABE.

CABE (2003) *Building Sustainable Communities: Actions for Housing Market Renewal.* London, CABE.

CABE (2008) *Commission for Architecture and the Built Environment.* Retrieved 21.4.2008, from `http://www.cabe.org.uk/default.aspx?contentitemid=149`

Canter, D. V. (1977) *Psychology of Place.* London, Palgrave McMillan

Carmona, M. and S. Tiesdell (2006) *Urban Design Reader.* Oxford, Architectural Press

Casey, C. (1995) *Work, Self and Society After Industrialism.* London and New York, Routledge

Casey, E. S. (1993) *Getting Back into Place.* Bloomington & Indianapolis, Indiana University Press

Casey, E. S. (1997) *The Fate of Place - A Philosophical History.* Berkeley, Los Angeles and London, University of California Press

Castells, M. (2000a) *The Rise of Network Society.* Malden, Oxford and Carlton, Blackwell Publishing.

Castells, M. (2000b) Materials for an Exploratory Theory of the Network Society. *British Journal of Sociology* 51 (1): 5-24

Caughy, M. O., P. O'Camp, J., et al. (2001) A Brief Observational Measure for Urban Neighborhoods. *Health and Place* 7(2): 225-236

Charlesworthy, S. J. (2000) *A Phenomenology of Working Class Experience.* Cambridge University Press, Cambridge

Cherry, G. E. (1996) *Town Planning in Britain since 1900: The Rise and Fall of the Planning Ideal.* Oxford, Blackwell Publishers.

Claessens, F. (2005) Mapping Urban and Social Space: Towards a Socio-Cultural Understanding of the Built Environment, in Conference *'Doing, thinking, feeling home: the mental geography of residential environments'*, Delft, The Netherlands, October 14-15 2005; available electronically from: `http://www2.warwick.ac.uk/fac/arts/history/res_rec/socialsites/newsevents/elsewhere/delft.pdf` `http://www.tudelft.nl/live/binaries/2e2a5b07-3f77-4d71-b1d1-33a897e794aa/doc/Conference%20paper%20Claessens.pdf`

Clark, J., J. Darlington, et al. (eds) (2003) *Pathways to Europe's Landscape*, EPCL

Clark, J., J. Darlington, et al. (2004) *Using Historic Landscape Characterisation.* London, English Heritage and Lancashire County Council.

Clark, K. (1962) *Gothic Revival.* Harmondsworth, Penguin.

Clark, K. (2003) *Informed Conservation - Understanding Historic Buildings and Their Landscapes for Conservation.* London, English Heritage

Cohen, D. (2008) *Three Lectures on Post-Industrial Society.* MIT Press, Cambridge, Massachusetts and London

Common, J. (1951) *Kiddar's Luck.* London, Turnstile Press

Conzen, M. (ed) (1999) *Making of the American Landscape.* Boston, Unwin Hyman

Conzen, M. R. G. (1962) The Plan Analysis of an English City Centre. in *Proceedings of the IGU symposium in Urban Geography*, Lund 1960. K. Norborg (ed). Lund, IGU: 383-414.

Conzen, M. R. G. (1969) *Alnwick, Northumberland : A Study in Town-plan Analysis.* London, Institute of British Geographers.

Conzen, M. R. G. (1981) The Morphology of Towns in Britain During the Industrial Era. in *The Urban Landscape: Development and Management.* J. W. R. Whitehand (ed). London, Academic Press: 88-126

Conzen, M. R. G. and J. W. R. Whitehand (1981) *The Urban Landscape : Historical Development and Management.* London New York, Academic Press.

Cooper, M. (1974) *Motorways and Transport Planning in Newcastle.* Newcastle, SOCEM. Retrieved 14.1.2009 from `http://www.cbrd.co.uk/motorway/a167m/motorway_planning_in_newcastle_upon_tyne.pdf`

Cooper, Y. (2007) *Statement about Housing Supply.* Retrieved 28.1.2008, from `http://www.communities.gov.uk/statements/corporate/statement-housing-supply`

Cornwall County Council(1996) *Cornwall Landscape Assessment 1994.* Truro, Cornwall County Council

Council of Europe (2000) *European Landscape Convention.* Retrieved 5.6.2007 from

`http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm`

Countryside Agency (2007) *Countryside Agency - Landscape Policy and Character.* Retrieved 17.1.2007, from `http://www.countryside.gov.uk/LAR/Landscape/CC/index.asp`

Cresswell, T. (2004) *Place - A Short Introduction.* Oxford, Blackwell Publishing.

Cullen, G. (1961) *Townscape.* London, Architectural Press.

Curl, J. S. (2002) *Victorian Architecture: Diversity and Innovation.* Newton Abbott, David & Charles.

Daunton, M. J. (1983a) *House and Home in the Victorian City.* London, Edward Arnold.

Daunton, M. J. (1983b) Private Space and Public Place: The Working Class Household and the Victorian City. in *The Pursuit of Urban History*, D.Fraser and A. Stutcliffe (eds). London, Edward Arnold : 212-233

Davenport, M. A. and D. H. Anderson (2005) Getting From Sense of Place to Place-Based Management: An Interpretive Investigation of Place Meanings and Perceptions of Landscape Change. *Society and Natural Resources* 18: 625-641

Davidoff, L. and C. Hall (1983) The Architecture of Public and Private Life; English Middle Class Society in a Provincial Town. in *The Pursuit of Urban History*, D.Fraser and A. Sutcliffe (eds). London, Edward Arnold : 326-346

Davidson, J. and L. Bondi (2004) Spatialising Affect; Affecting Space: An Introduction. *Gender, Place and Culture* 11(3): 373-374

Davidson, J., L. Bondi, et al. (eds). (2005) *Emotional Geographies.* Aldershot, Ashgate.

Davies, J. G. (1972) *Evangelist Bureaucrat: A Study in Planning Excercise.* London, Tavistock Publications

Davison, G. (1983) The City as a natural System, in Fraser, D. and Sutcliffe, A. (eds) *The Pursuit of Urban History*, London, Edward Arnold

Davoudi, S. (2006) Evidence-Based Planning: Rhetoric and Reality. *DiSP* 162(2): 14-24

DCMS (2001) *The Historic Environment: Force for Our Future.* London, DCMS.

DCMS (2004) *Culture at the Heart of Regeneration.* London, DCMS.

DCMS (2007) *Heritage Protection for the 21st Century.* London, HMSO.

DCMS (2008) *Draft Heritage Protection Bill.* London, HMSO.

De Certeau, M. (1988) *The Practice of Everyday Life.* Berkeley, University of California Press.

Deleuze, G. (1988) *Foucault.* Minneapolis, University of Minnasota Press.

Dendy, F. W. (1921) *Without the City Wall. Old Newcastle, Its Suburbs, and Gilds.* Newcastle-upon-Tyne, Northumberland Press.

Denzin, N. (1984) *The Research Act.* Englwood Cliffs, NJ, Prentice Hall.

Dewsbury, J.D. (2003) Witnessing Space: Knowledge without Contemplation. *Environment and Planning A* 35 : 1907-1932

Dilthey, W. (1981) *Der Aufbau der geshichtlichen Welt in den Geisteswissenschaften.* Frankfurt am Main, Suhrkamp

Dixon, R. and S. Muthesius (1978) *Victorian Architecture.* London, Thames & Hudson.

Dobson, S. (forth-coming) *HLC as a Multi-Stakeholder Decision-Making Tool.* Sheffield, University of Sheffield.

Dodds, M. H. (ed). (1930) *Northumberland County History* (Vol. 13) (The Parishes of Heddon-on-the-Wall, Newburn, Longbenton, Wallsend, the Chapelries of Gosforth and Cramlington, the Townships of Benwell, Elswick, Heaton, Byker, Fenham, & Jesmond [in Newcastle-upon-Tyne]). Newcastle, NCH.

DoE and DoNH (1994) *Planning Policy Guidance Note (PPG) 15 - Planning and the Historic Environment.* London, HMSO.

Doncaster Metropolitan Borough Council (2004) *Master Plan for Denaby - Woodlands Way Estate, Denaby* Retrieved 10.3.2008, from
`http://www.doncaster.gov.uk/Living_in_Doncaster/Homes_and_Housing/HMR_pathfinder/`
`consibrough_denaby/Woodlands_Way-_Denaby_Masterplan.asp`

Dorling, D. and M. Shaw (2002) Geographies on the Agenda: Public Policy, the Discipline and its (Re)turns. *Progress in Human Geography* 26: 629-646

Douglas, L., T. Brennan, et al. (2004) *A Welcome Home: A Sense of Place for a New Thames Gateway.* London, English Heritage

Dunstan, F., N. Weaver, et al. (2005) An Observational Tool to Assist with the Assessment of Urban Residential Environments. *Journal of Environmental Psychology* 25: 293-305

Ede, J. and J. Darlington (2002) *Lancashire; Historic Landscape Characterisation Programme.* Preston, Lancashire County Council with English Heritage

Edensor, T The Ghosts of Industrial Ruins: Ordering and Disordering Memory in Excessive Spaces. *Environment and Planning D.* 23, 829-849

EH (2000) *Belonging; The historic environment: public involvement and access - Discussion Paper 2.* London, English Heritage.

EH (2000) *Power of Place - The Future of the Historic Environment.* London, English Heritage.

EH (2003) *Heritage Counts Report, 2003.* London, English Heritage. Available at: `http://www.english-heritage.org.uk/heritagecounts/newpdfs/SUMMARY.pdf`

EH (2004) *Conservation Bulletin* (special issue on 'Characterisation'). London, English Heritage.

EH (2006a) *Characterisation and Sustainable Communities.* Retrieved 18.4.2007, from `http://www.english-heritage.org.uk/server/show/nav.1300`

EH (2006) *Conservation Principles - Consultation Document - 1st Stage.* London, English Heritage.

EH (2006) *Guidance on Conservation Area Appraisals.* London, English Heritage.

EH (2006) *Guidance on the Management of Conservation Areas.* London, English Heritage.

EH (2007) *Historic Town & City Surveys* Retrieved 15.2.2007, from `http://www.english-heritage.org.uk/server/show/nav.1294`

EH (2008a) *English Heritage.* Retrieved 21.4.2008, from `http://www.english-heritage.org.uk/server/show/conWebDoc.166`

EH (2008b) *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment.* London, English Heritage.

EH (2008c) *Conservation Areas at Risk.* London, English Heritage

EH (2008) *Promoting Characterisation.* Retrieved 12.1.2008, from `http://www.english-heritage.org.uk/server/show/nav.1293`

Emamy, N. (2003) *A GIS Based Examination of Residential Dwellings in Newcastle upon Tyne: Comparison of the 1991 Census and the Local Authority Housing Data.* PhD Thesis : Supervisor Dr M. Barke (Northumbria University)

Evans, J. and P. Jones (2008) Rethinking Sustainable Urban Regeneration: Ambiguity, Creativity, and the Shared Territory. *Environment and Planning A* 40: 1416-1434

Evans, K., P. Fraser and I. Taylor (1996) A Tale of Two Cities: Global Change, Local Feeling, and Everyday Life in the North of England: A Study in Manchester and Sheffield. London, Routledge

Everts, J. and P. Jackson (2009) Modernisation and the Practices of Contemporary Food Shopping. *Environment and Planning D* 27: 917-935

Faircough, G. (2002) Archaeologists and the European Landscape Convention, in *Europe's Cultural Landscape: Archaeologists and the Management of Change.* in Fairclough, G. and S. Rippon (eds), Brussels, Europae Archaeologiae Consilium and English Heri-

tage. 25-35 Also available at `http://www.pcl-eu.de/project/virt_lib/eea_graham_022.pdf?PHPSESSID=83a513a01485bbe2caf615fc88e5b02f;Retrived10.12.2009`

Fairclough, G. (2003) Cultural Landscape, Sustainability and Living with Change? in *Managing Change: Sustainable Approaches to the Conservation of the Built Environment.* Teutonico, J amd F. Matero (eds), Los Angeles, Getty Conservation Institute, 23-46

Fairclough, G., G. Lambrick, et al. (2003) *Historic Landscape Characterisation in England and a Hampshire Case Study.* Retrieved 4.6.2007 from `http://www.english-heritage.org.uk/upload/pdf/HampshireHLC.pdf?1256660507`

Fairclough, G., G. Lambrick, et al. (1999) *Yesterday's World, Tomorrow's Landscape: The English Heritage Historic Landscape Project 1992-94.* London, English Heritage

Feagin, J., A. Orum, et al. (eds) (1991) *A Case for Case-Study.* Chapel Hill, NC, University of North Carolina Press

Feilden, B. M. (2003) *Conservation of Historic Buildings.* London, Architectural Press.

Finch, J. (2007) 'What more were the pastures of Leicester to me?' Hunting, Landscape Character, and the Politics of Place. *International Journal of Cultural Property* 14: 361-383

Fines, K. D. (1968) Landscape Evaluation: a Research Project in East Sussex. *Regional Studies* 2(1): 41-55

Fisher-Gewirtzman, D. and I. A. Wagner (2003) Spatial Openness as a Practical Metric for Evaluating Built-Up Environments. *Environment and Planning B: Planning and Design* 30: 37-49

Foucault, M. (1986) Of Other Spaces, *Diacritics* 16: 22

Frampton, K. (2001) *Studies in Tectonic Culture: The Poetics of Construction in 19th and 20th Century Architecture.* Cambridge, Massachusetts and London, The MIT Press

Gaiman, N. (1993) *The Sandman*, vol. 6. New York, DC Comics

Gaskell, S. M. (1983) *Building Control: National Legislation and the Introduction of Local Bye-Laws in Victorian England.* London, Bedford Square Press

Geertz, C. (1973) *The Interpretation of Cultures.* New York, Basic Books.

Gershuny, J. (2003) *Changing Times, Work and Leisure in Post-Industrial Society.* Oxford, Oxford University Press

Gibson, J. F. (1881) *Newcastle-upon-Tyne Improvement Acts and Bye-Laws 1837 to 1877.* Newcastle, Andrew Reid

Gieryn, T. F. (2000) A Space for Place in Sociology. *Annual Review of Sociology* 26: 463-496

Giuliani, M. V. and R. Feldman (1993) Place Attachment in a Developmental and Cultural Context. *Journal of Environmental Psychology* 13: 267-274

Glendenning, M. and S. Muthesius (1994) *Tower Block: Modern Public Housing in England, Scotland, Wales, and Northern Ireland.* New York, Yale University Press

GMBC (1998) *Short History of Gateshead,* Gateshead Corporation, Gateshead

Gospodini, A. (2006) Portraying, Classifying and Understanding the Emerging Landscapes in the Post-Industrial City. *Cities* 23(5): 311-330

Green, R. (1995) Community Perception of Town Character: A Case Study in Byron Bay, New South Wales. *People and Physical Environment Research* 47: 20-33

Green, R. (1999) Meaning and Form in Community Perception of Town Character. *Journal of Environmental Psychology* 19: 311-329

Gregory, I. (2002) *A Place in History: A Guide to Using GIS in Historical Research.* York, Arts and Humanities Data Service

Gregory, I. and P. S. Ell (2007) *Historical GIS: Techniques, Methodologies and Scholarship.* Cambridge, Cambridge University Press

Gregory, I. and R. G. Healey (2007) Historical GIS: Structuring, Mapping and Analysing Geographies of the Past. *Progress in Human Geography* 31: 638-653

Griffiths, S., L. Vaughan, et al. (2008) The Sustainable Suburban High street: A Review of Themes and Approaches. *Geography Compass* 2(4): 1155-1188

Griffiths, S., C. E. Jones et al. (2010 forthcoming) The persistence of suburban centres in Greater London: Combining Conzenian and Space Syntax Approaches. *Urban Morphology*

Groat, L. and D. Wang (2002) *Architectural Research Methods.* New York, John Wiley & Sons

Groth, P. (1997) Frameworks for Cultural Landscape Study. in *Understanding Ordinary Landscapes.* P. Groth and T. W. Bressi (eds). New Haven and London, Yale University Press: 1-24

Hanson, J. (2000) Urban Transformations: A History of Design Ideas. *Urban Design International* 5: 97-122

Hanson, J. (ed) (2003) *Procedings of the 4th International Space Syntax Symposium 4th International Space Syntax Symposium.* London, UCL

Harrington, A. (2001) Dilthey, Empathy and Verstehen. *European Journal of Social Theory* 4(3): 311-329

Harrison, C. M. and M. Haklay (2002) The Potential for Public Participation GIS in UK Environmental Planning: Appraisals by Active Publics. *International Journal of*

Environmental Planning and Management 45(6): 841-863

Harvey, D. (1990) *Condition of Post-Modernity.* Blackwell Publishing, Malden, London and Victoria

Hay, B. (1998) Sense of Place in Developmental Context. *Journal of Environmental Psychology* 18: 5-29

Hayden, D. (1995) The Power of Place, Urban Landscapes as Public History. The MIT Press, Cambridge, Massachusetts and London

Hayden, D. (1997) Urban Landscape History. in *Understanding Ordinary Landscapes.* P. Groath and T. W. Bressi (eds). Yale University Press, New Haven and London : 111-133

Heartfield, J. (2006) *Let's Build ! Why Britain Needs 5 Million New Homes in the Next Ten Years.* London, Audacity

Herring, P. (1998) *Cornwall's Historic Landscape: Presenting a Method of Historic Landscape Character Assessment.* Truro, Cornwall Archaeological Unit

Herring, P. (1999) Cornwall: How the Historic Landscape Characterisation Methodology Was Developed, in *Historic Landscape Characterisation: 'The State of the Art'.* G. Fairclough (ed). London, English Heritage: 15-32

Hidalgo, M. C. and B. Hernandez (2001) Place Attachment: Conceptual and Empirical Questions. *Journal of Environmental Psychology* 21(3): 273-281

Hietala, M. (1987) *Services and Urbanization at the Turn of the Century; The Diffusion of Innovations.* Suomen Historiallinen Seura, Helsinki

Hillier, B. and J. Hansen (1984) *Social Logic of Space.* Cambridge University Press, Cambridge

HM Government (1990) *This Common Inheritance: Britain's Environmental Strategy.* London, HMSO

HM Government (2005) *Securing the Future - Delivering the UK Sustainable Developement Strategy.* London, HMSO

Holl, S. (1996) *Intertwining: Selected Projects 1989-1995.* New York, Princeton Architectural Press

Holloway, I. (1997) *Basic Concepts for Qualitative Research.* London, Blackwell Science

Holmans, A. E. (1987) *Housing Policy in Britain : A History.* London, Croom Helm

Hoppen, K.T (2000) *The Mid-Victorian Generation.* Oxford, Oxford University Press

Howard, P. (2009) Historic Landscapes and the Recent Past - Whose History ? in *Valuing Historic Environments.* Gibson, L. and J. Pendlebury (eds) Aldershot, Ashgate

Hummon, D. (1992) Community Attachment: Local Sentiment and Sense of Place. in

Place Attachment. Altman, I. and S. Low (eds) New York, Plenum Press

Hunt, J. D. and P. Willis, (eds) (1988) *The Genius of the Place: English Landscape Garden, 1620-1820.* Cambridge, Massachusetts and London, MIT Press

IFA (2001) *Standard and Guidance for Archaeological Desk-based Assessment.* IFA, Reading

Also available at: `http://www.archaeologists.net/modules/icontent/inPages/docs/codes/dba2.pdf`

Innes, J. E. and D. E. Booher (2000) Public Participation in Planning: New Strategies for the 21st Century. *Annual Conference of the Association of Collegiate Schools of Planning*: 1-39

ISUF (n.k). *International Seminar on Urban Form.* from

`http://odur.let.rug.nl/ekoster/isuf2/index.html`

Jackson, P. (1989) *Maps of Meaning.* London and New York, Routledge

Jacobs, J. (1961) *The Death and Life of Great American Cities.* New York, Vintage

Jakle, J. A. (1987) *The Visual Elements of Landscape.* Amherst, University of Massachusetts Press

Janz, B. (2004) Coming to Place. *Environmental and Architectural Phenomenology Newsletter.* Retrieved 2.4.2007 from `http://www.arch.ksu.edu/seamon/janz.html`

Jeffries, S. (2008) Spirit of the North. *The Guardian.* 14. February, 2008. Also available at: `http://www.guardian.co.uk/uk/2008/feb/14/regeneration`

Jessop, B., N. Brenner, et al. (2008) Theorizing Sociospatial Relations. *Environment and Planning D* 389-401

Johansson, R. (2000) Ett Bra Fall ar ett Steg Framat. Om Fallstudier, Historiska Studier och Historiska Fallstudier. *Nordisk Arkitekturforskning* [Nordic Journal of Architectural Research] 13(1-2): 65-71

Johansson, R. (2007) On Case-Study Methodology. *Open House International*(3)

Johnsen, H. and B. Olsen (2000) Hermeneutics and Archaeology - On the Philosophy of Contextual Archaeology. in *Interpretive Archaeology: A Reader.* J. Thomas (ed). London and New York, Leicester University Press: 97-117

Jones, P. (2005) A Body and Bicycle Take on Birmingham, UK, *Social and Cultural Geography*, 6, 6, 813 - 830

Jones, P. and R. Oliphant (eds) (1976) *Local Shops: Problems and Prospects.* Reading, The Unit for Retail Planning Limited

Jorgensen, B. S. and R. C. Stedman (2001) Sense of Place as an Attitude: Lakeshore Owners Attitudes Toward Their Properties. *Journal of Environmental Psychology* 21(3):

233-248.

Jorgensen, B. S. and R. C. Stedman (2006) A Comparative Analysis of Predictors of Sense of Place Dimensions: Attachement to, Dependence on, and Identification with Lakeshore Properties. *Journal of Environmental Management* 79: 316-327

Kaltenborn, B. P. (1998) Effects of sense of place on responses to environmental impacts: a study among residents in Svalbard in the Norwegian High Arctic. *Applied Geography* 18(2): 169-189

Kelleher, S. (ed) (2008) *Ordinary Landcsapes, Special Places - Anfield, Breckfield and the Growth of Liverpool's Suburbs.* Swindon, English Heritage

Kelly, R. T. (2008) *Crusaders.* London, Faber

Knigge, L. and M. Cope (2006) Grounded Visualization: Integrating the Analysis of Qualitative and Quantitative Data Through Grounded Theory and Visualization. *Environment and Planning A* 38(11): 2021-2037

Knowles, A. K. (2002) *Past Time, Past Place: GIS for Historians.* Edinburgh, ESRI Press

Knowles, A. K. (2008) *Placing History: How GIS is Chaging Historical Scholarship.* Redlands CA, ESRI Press

Koster, E. (2004) *Re-exploring Alnwick: How Digitisation of Data Can Give New Insight on Methodology.* [Paper presented at the AHC-UK conference and the Royal Historical Society Gerald Aylmer Seminar titled "Recasting the Past: Digital Histories", November 27th, 2004, the National Archives, Kew, London]: Also available at:

http://www.let.rug.nl/ekoster/hgis/alnwick2004.html

Krier, R. (1979) *Urban Space.* New York, Rizzoli

Krier, R. (1983) *Elements of Architecture.* London, Architectural Design

Lalli, M. (1992) Urban-related identity: Theory, Measurement, and Empirical Findings. *Journal of Environmental Psychology* 12(4): 285-303

Larice, M. and E. McDonald (2006) *Urban Design Reader.* London, Routledge

Larkham, P. J. (1994) Conservation Areas and Plan-Led Planning: How Far Can We Go. *Journal of Planning and Environmental Law* 8(1): 8-12

Larkham, P. J. (1994) The Issues Facing Conservation Areas. in *Conservation Areas: Issues and Management.* P. J. Larkham (ed). Birmingham, University of Central England: 55-64

Larkham, P. J. (1996) *Conservation and the City.* London and New York, Routledge

Larkham, P. J. (1997) Remaking Cities: Images, Control, and Postwar Replanning in the United Kingdom. *Environment and Planning B: Planning and Design*, 24(5): 741 –

759

Larkham, P. J. and A. N. Jones (1993) The Character of Conservation Areas in Great Britain. *Town Planning Review* 64(4): 395-414

Latham, A. and D. P. McCormack (2004) Moving Cities: Rethinking the Materialities of Urban Geography. *Progress in Human Geography* 28(6): 701-724

Law, J. and J. Hassard (eds)(1999) *Actor Network Theory and After*, Blackwell, Oxford

Lawrence, D.H. (1991) *Studies in Classic American Literature*, London and New York, Penguin

also available at: `http://xroads.virginia.edu/~Hyper/LAWRENCE/dhltoc.htm`

Lawrence, R. J. and C. Despres (2004) Introduction - Futures of Transdisciplinarity. *Futures* 36: 397-405

Lawson, B. (2001) *Language of Space.* Oxford, Architectural Press

LCC (2001) *Lancashire Joint Structure Plan* Retrieved 25.1.2008, from

`http://www.lancashire.gov.uk/corporate/web/view.asp?siteid=3654&pageid=11649&e=e`

Leatherbarrow, D. (1993) *The Roots of Architectural Invention.* Cambridge University Press, Cambridge and New York

Lefebvre, H. (1991) *Production of Space.* Blackwell Publishing, Malden, Oxford and Victoria

Light, A. and J. M. Smith (eds) (1997) *Philosophy and Geography 1 :Space, Place, and Environmental Ethics.* Lanham, Boulder, New York and London, Rowman and Littlefield Publishers, Inc

Light, A. and J. M. Smith (eds) (1998) *Philosophy and Geography III: Philosophies of Place. Philosophy and Geography.* Lanham, Boulder, New York and Oxford, Rowman and Littlefield Publishers, Inc

Lilley, K. D. (2000) Mapping the Medieval City: Plan Analysis and Urbam History. *Urban History* 27: 5-30

Lilley, K. D. (2001) Urban Planning and the Design of Towns in the Middle Ages: The Earls of Devon and Their 'New Towns'. *Planning Perspectives* 16: 1-24

Lilley, K. D., C. Lloyd, et al. (2005) Mapping Medieval Urban Landscape Using GIS and GPS. *Urban Morphology* 9.

Lincoln, Y. S. E. G. Guba (1985) *Naturalistic Inquiry.* Newbury Park, CA, Sage Publications

Loftus, D. (2001) *The Rise of the Victorian Middle Class.* Retrieved 12.6.2009, from

http://www.bbc.co.uk/history/british/victorians/middle_classes_01.shtml

Long, A. (1996) The Sunderland Cottage. in *Northumbrian Panorama*. T. E. Faulkner (ed). London, Octavian Press: 97-122

Long, H. (1993) *The Edwardian House.* Manchester, University of Manchester Press

Long, H. (2002) *Victorian Houses and Their Details: Role of Publications in Their Building and Decoration.* Oxford, Architectural Press

Low, S. (1992) Symbolic Ties That Bind: Place Attachment on the Plaza. in *Place Attachment.* Altman, I. and S. Low. (eds) New York, Plenum: 165-185

Lynch, K. (1960) *Image of the City.* Cambridge, MA, MIT Press

Lynch, K. (1981) *Theory of Good City Form.* Cambridge, MA, MIT Press.

McColl, E. (1990) *Journeyman: An Autobiography.* London, Sidgwick and Jackson

MacKenzie, A. (2002) *Transductions: Bodies and Machines at Speed.* London and New York, Continuum

Malfroy, S. (1998) Urban Tissue and the Idea of Urban Morphogenesis. in *Typological Process and Design Theory.* Petruccioli, A.(ed). Cambridge, Massachusetts: Aga Khan Program for Islamic Architecture

Malpas, J. (1998) Finding Place: Spatiality, Locality, and Subjectivity. in *Philosophy and Geography III: Philosophies of Place*, Light, A. and J. M. Smith (eds) Lanham, Boulder, New York and Oxford, Rowman & Littlefield Publishers, Inc: 21-45

Malpas, J. (2008) Disclosing the Depths of Heidegger's Topology: A Response to Relph. *Environmental and Architectural Phenomenology Newsletter*: 9-12

Manzo, L. C. (2003) Beyond House and Haven: Toward a Revisioning of Emotional Relationships with Places. *Journal of Environmental Psychology* 23(1): 47-61

Marcus, L. (2007) Social Housing and Segregation in Sweden - from Residential Segregation to Social Integration in Public Space. *Progress in Planning* 67(3): 251-263

Mason, R. (2002) Assessing Values in Cultural Heritage: Methodological Issues and Choices. in *Assessing Values in Cultural Heritage.* M. Torre (ed). Los Angeles, Getty Conservation Institute: 5-30

Massumi, B. (2002) *Parables for the Virtual: Movement, Affect, Sensation.* Durham, NC, Duke University Press

May, J. (1996) Globalization and Politics of Place: Place and Identity in an Inner London Neighborhood. *Transactions of the Institute of the British Geographers* 21 (1) : 194-215

MCC - Manchester City Council (1961) *Manchester Development Plan.* Manchester, Planning Department

MCC - Manchester City Council (2007) *Guide to the Development of Manchester; Supplementary Planning Guidance.* Manchester, Manchester City Council

McCormack, D. (2003) An Event of Geographical Ethics in Spaces of Affect. *Transactions of the Institute of British Geographers* 28(4): 488-507

McFarlane, C and J. Rutherford (2008) Political Infrastuctures: Governing and Experiencing the Fabric of the City. *International Journal of Urban and Regional Research* 32, 2 : 363-374

Meinig, D. (1979) The Beholding Eye: Ten Versions of the Same Scene. *Landscape Architecture* 66: 47-54,

also available at: `http://www.larch.umd.edu/CLASSES/LARC/L160/READINGS/Meinig_Beholding_Eye.pdf`

Melosi, M. V. (2001) *Effluent America. Cities, Industry, Energy and the Environment.* Pittsburgh, University of Pittsburgh Press

Menuge, A. and S. Taylor (2004) *Anfield and Breckfield (Liverpool): A Rapid Area Assessment of the Built Environment*, York, English Heritage (un-published report)

Mess, H. A. (1928) *Industrial Tyneside: A Social Survey Made for the Bureau of Social Research for Tyneside.* London, E. Benn Ltd

Mitchell, L. and K. Lunn (2009) Managing Urban Landscapes – the Greater Manchester HLC Project. in *From Historic Landscapes to Future Landscapes, Landscape Character Network Workshop*, 18.3.2009, Manchester : 15-16. Also available at: `http://landscapecharacter.org.uk/files/u1/pdfs/LCN-Workshop-090318.pdf`

Morrison, K. (2003) *English Shops and Shopping.* London, Yale University Press

Morriss, R. K. (2000) *The Archaeology of Buildings.* Stroud, Tempus Publishing Ltd

Morton, D. M. and R. W. Suddards (1991) The Character of Conservation Areas. *Journal of Planning and Environmental Law* 5(11): 1011-1013

Moudon, A. V. (1994) Getting to Know the Built Landscape : Typomorphology. in *Ordering Space: Types in Architecture and Design.* Frank, K. and L. Schneekloth (eds). New York, Van Nostrand Reinhold: 289-311

Muthesius, S. (1982) *The English Terraced House.* New Haven, Yale University Press

Nanzer, B. (2004) Measuring Sense of Place: A Scale for Michigan. *Administrative Theory and Praxis* 26(3): 362-382

NCC (1963) *Newcastle Development Plan Review.* City Planning Department, Newcastle

NCC (2005) *Gosforth Conservation Area Character Statement.* Historic Environment Section, Newcastle City Council

NCC (2007) *South Jesmond Conservation Area Character Statement.* Historic Environ-

ment Section, Newcastle City Council

Newman, C. (2009) Historic Landscape Characterisation - More than a Management Tool?, *in Crossing Paths or Sharing Tracks ?* Horning, A. and M. Palmer (eds) London, Boydell Press

Newman, C. and R. Newman (2008) Housing the Workforce in the 19th-century East Lancashire: Past Processes, Enduring Perceptions and Contemporary Meanings. *Post-Medieval Archaeology*, 42 (1): 181-200

Nikula, R. (2005) Common Past in Present Urban Environments. in *Report of the 2nd Baltic Sea Region Cultural Heritage Forum.* Helsinki, National Board of Antiquities, Finland: 21-26

Norberg-Schulz, C. (1980) *Genius Loci: Towards a Phenomenology of Architecture.* New York, Rizzoli

NYCC (2007) *North Yorkshire Historic Landscape Characterisation Project Newsletter* (Autumn/Winter) Retrieved 15.4.2008, from

`http://www.northyorks.gov.uk/CHttpHandler.ashx?id=1809&p=0`

NYCC (2008) *North Yorkshire County Council.* Retrieved 12.4.2008, from

`http://www.northyorks.gov.uk/index.aspx?articleid=3086`

O'Donnell, P. (2008) Introduction to Urban Cultural Landscapes & the Spirit of Place. *ICOMOS, 18th General Assembly and Scientific Symposium*, Quebec 2008.

Also available at: `http://www.international.icomos.org/quebec2008/cd/toindex/77_pdf/77-hFCw-13.pdf`

ODPM (2007) *Place Matters.* Wetherby, Department of Communities and Local Government

One North East (2008) *One North East.* Retrieved 20.4.2008, from

`http://www.onenortheast.gov.uk/page/onene/index.cfm`

Pallasmaa, J. (2005) *Eyes of the Skin; Architecture and the Senses.* New York, John Wiley & Sons

Palmer, J. F. (2000) Reliability of Rating Visible Landscape Qualities. *Landscape Journal* 19: 166-178

Park, R. and E. W. Burgess (1925) *The City; Suggestions for the Study of Human Nature in the Urban Environment.* Chicago, University of Chicago Press

Patterson, M. E. and D. R. Williams (2005) Maintaining Research Traditions on Place: Diversity of Thought and Scientific Progress. *Journal of Environmental Psychology* 25(4): 361-380

Pavlovskaya, M. (2002) Mapping Urban Change and Changing GIS: Other Views of

Economic Restructuring. *Gender, Place and Culture* 9(3): 281-289

Pavlovskaya, M. (2006) Theorizing with GIS: A Tool for Critical Geographies. *Environment and Planning A* 38: 2003-2020

Pearce, K. (1994) Newcastle's Tyneside Flats 1850-1900 By-Law Housing or Cultural Phenomenon ? in *Working Class Housing on Tyneside, 1850-1939*, Lancaster, B. (ed). Whitley Bay, Bewick Press: 39-85

Pendlebury, J. (2001) Alas Smith and Burns? Conservation in Newcastle-upon-Tyne City Centre 1959-68. *Planning Perspectives* 16 (2): 115–141

Pendlebury, J. R., T. Townshend, et al. (2006) Social Housing as Cultural Landscape: A Case Study of Byker. *UNESCO: University and Heritage, 10th International Seminar: "Cultural Landscapes in the 21st Century".* Newcastle upon Tyne, Newcastle University.

Penning-Rowsell, E. C. (1975) Constraints on the Application of Landscape Evaluations. *Transactions of the Institute of British Geographers* 66: 149-155

Penning-Rowsell, E. C. and D. I. Hardy (1973) Landscape Evaluation and Planning Policy: A Comparative Survey in the Wye Valley Area of Outstanding Natural Beauty. *Regional Studies* 7(2): 153-160

Peponis, J., J. Wineman, et al. (eds) (2001) *Proceedings of the Space Syntax 3rd International Symposium.* Space Syntax 3rd International Symposium. Atlanta, A. Alfred Taubman College of Architecture and Urban Planning, University of Michigan

Pereira-Roders, A. (2007) *RE-ARCHITECTURE: Lifespan Rehabilitation of Built Heritage.* Eindhoven, Bouwstenen Publication

Pertruccioli, A. (ed) (1998) *Typological Process and Design Theory.* Cambridge, Massachusetts, AKPIA

Petts, D. and C. Gerrard (2006) *Shared Visions: The North East Regional Research Framework for the Historic Environment*

Pevsner, N and I. Richardson (2002) *Northumberland.* New Haven and London, Yale University Press

Pickles, J. (1995) *Ground Truth: The Social Implications of Geographic Information Systems.* New York, Guilford Press

Pickles, J. (2004) *History of Spaces: Cartographic Reason, Mapping and the Geo-Coded World.* London and New York Routledge

Pile, S. (2005) *Real Cities.* London, Sage Publications

Pred, A. (1984) Place as Historically Contingent Process. *Annals of the Association of American Geographers* 74(2): 279-297

Proshansky, H. M. (1978) The City and Self-Identity. *Environment and Behavior* 10: 147-169

Proshansky, H. M., A. K. Fabian, et al. (1983) Place-Identity: Physical World Socialization of the Self. *Journal of Environmental Psychology* 3: 57-83

Rasmussen, S. E. (1964) *Experiencing Architecture.* Boston, MIT Press

Ratti, C. and P. Richens (2004) Raster Analysis of Urban Form. *Environment and Planning B: Planning and Design* 31: 297-309

Reeve, A., B. Goodey, et al. (2007) Townscape Assessment: The Development of a Practical Tool for Monitoring and Assessing Visual Quality in the Built Environment. *Urban Morphology* 11(1): 25-44

Relph, E. (1976) *Place and Placelessness.* London, Pion

Relph, E. (2008) Disclosing the Ontological Depth of Place; Heidegger's Topology by Malpas. *Environmental and Architectural Phenomenology Newsletter*: 5-8

RICS (2007) *Sustainable Management of the Historic Environment* (Response to the Draft 'Conservation Principles' document, 6.9.2007), Royal Insitutute of Chartered Surveyors, London. Retrieved 20.7.2009 from `http://www.rics.org/site/download_feed.aspx?fileID=91&fileExtension`

Ritzer, G. (2007) *The Globalization of Nothing.* New York, McGraw-Hill

Rossi, A. (1982) *Architecture of the City.* Cambridge, MA, MIT Press

Rowe, C. and F. Koetter (1978) *Collage City.* Cambridge, MA, MIT Press

Ryle, G. (1949) *The Concept of Mind.* London, Hutchinson

Samuels, I. and J. Clark (2008) *Character and Identity; Townscape and Heritage Appraisals in Housing Market Renewal Areas.* London, CABE and English Heritage

Sarbin, T. R. (1983) Place Identity as a Component of Self: An Addendum. *Journal of Environmental Psychology* 3: 337-342

Schott, D. (2004) Urban Environmental History: What Lessons Are There to be Learnt. *Boreal Environment Research* 9: 519-528

Seamon, D. (1987) Phenomenology and Environment-Behavior Research. *Advances in Environment, Behavior and Design* 1

Seamon, D. (1994) The Life of the Place: a Phenomenological Commentary on Bill Hiller's Theory of Space Syntax. *Nordisk Arkitekturforskning* [Nordic Jornal of Architectural Research] 7(1): 35-48

Shamai, S. (1991) *S*ense of Place: An Empirical Measurement. *Geoforum* 22(3): 347-358

Sharpe, T. (1968) *Town and Townscape.* London, John Murray

Sheffield City Architect (1962) *Ten Years of Housing in Sheffield, 1953-1963.* Sheffield, Housing Development Committee of the Corporation of Sheffield.

Sidaway, J. D. (2009) Shadows on the Path: Negotiating Geopolitics on an Urban Section of Britain's Soith west Coastal Path. *Environment and Planning D* 27, 1091-1116

Siebert, L. (2000) Using GIS to Document, Visualize, and Interpret Tokyo's Spatial History. *Social Science History* 24(3): 537-74

Sime, J. D. (1986) Creating Places or Designing Spaces? *Journal of Environmental Psychology* 6(1): 49-63

Slater, T. R. (ed) (1990) *The Built Form of Western Cities.* Leicester and London, Leicester University Press

Smith, L. (2006) *The Uses of Heritage.* London and New York, Routledge

Solomon, R. J. (1966) Procedures in Townscape Analysis. *Annals of the Association of American Geographers* 56(2): 254-268

Sparks, R., Girling, E. and I. Loader (2001) Fear and Everyday Urban Lives. *Urban Studies* 38, (5/6) : 885-898.

Spaulding, A. C. (1953) Statistical Techniques for the Discovery of Artifact Types. *American Aniquity* 18 : 305–314.

Stahle, A., L. Marcus, and A. Karlström (2002) *Place Syntax - Geographical Accessibility with Axial Lines in GIS.*
Retrived 16.2.2007 from: `http://www.arch.kth.se/sad/publications/papers_published/as_lm_prc_isss5_placesyntax.pdf`

Stake, R. (1995) *The Art of Case Research.* Newbury Park, CA, Sage Publications

Stanton, C. (2006) *The Lowell Experiment: Public History in a Postindustrial City.* Amherst, University of Massachusetts Press

Stedman, R. C. (2002) Toward a Social Psychology of Place: Predicting Behavior from Place-Based Cognitions, Attitude, and Identity. *Environment and Behavior* 34(5): 561-581

Stedman, R. C. (2003) Is It Really Just a Social Construction?: The Contribution of the Physical Environment to Sense of Place. *Society and Natural Resources* 16: 671-685

Steele, F. (1981) *The Sense of Place.* Boston, CBI Publishing Company, Inc

Stewart, D. and A. Mukunas (1990) *Exploring Phenomenology: A Guide to the Field and Its Literature.* Athens, Ohio, Ohio University Press

Stokols, D. and S. A. Schumaker (1981) People in Places: A Transactional View of Settings. in *Cognition, Social Behaviour and the Environment.* Harvey, J.H. (ed), Hillside, New Jersey, Lawrence Erblaum Associates : 441-488

Sutcliffe, A. (ed) (1974) *Multi-Storey Living*. London and New York, Croom Helm, Barnes and Noble.

Swanwick, C. (2002) *Landscape Character Assessment - Guidance for England and Scotland*. Cheltenham and Edinburgh, The Countryside Agency and Scottish Natural Heritage

Swanwick, C. (2003) *Topic Paper 1 : Recent Practice and the Evolution of Landscape Character Assessment*. Scottish Natural Heritage and The Countryside Agency

Swanwick, C. (2007) Remember Landscape Evaluation ? *Landscape Character Network News*(25): 7.

Swenarton, M. (1981) *Homes Fit For Heroes : The Politics and Architecture of Early State Housing in Britain*. London, Heinemann Educational Books

SYAS (2009) *South Yorkshire Historic Environment Characterisation* on-line. Retrieved 2.8.2009 `http://www.sytimescapes.org.uk/`

Tait, M. and A. While(2009) Ontology and the Conservation of Built Heritage. *Environment and Planning D* 27: 721-737

Tarn, J. N. (1971) *Working Class Housing in the 19th Century Britain*. London, Lund Humphries for the Architectural Association

Tarr, J. A. (1996) *The Search for the Ultimate Sink. Urban Pollution in Historical Perspective*. Akron, Ohio, University of Akron Press.

Tarr, J. A. (2001) *Urban History and Environmental History in the United States: Complementary and Overlapping Fields*. Environmental problems in European Cities in the 19th and 20th Centuries. C. Bernhardt. Munster, New York, Waxmann

Tarr, J. A. and G. Dupuy (eds) (1988) *Technology and the Rise of the Networked City in Europe and America*. Philadelphia, Temple University Press

Tellis, W. (1997) Application of a Case-Study Methodology. *The Qualitative Report* 3(4)

The Consevation Studio (2004) *Measuring Change in Conservation Areas: A Research Report for English Heritage*. Cirencester, English Heritage.

Thompson, I. (2003) What Use Is The Genius Loci ? in *Constructing Place - Mind and Matter*. Menin, S. (ed). London and New York, Routledge: 66-76

Thrift, N. (2004) Intensities of Feeling: Towards a Spatial Politics of Affect. *Geografiska Annaler* 86B: 57-78

Thrift, N. (2007) *Non-Representational Theory - Space, Politics, Affect*. London and New York, Routledge

Thrift, N. and J.-D. Dewsbury(2000) Dead Geographies - and How to Make Them

Live. *Environment and Planning D* 18(3): 411-432

Tiesdell, S. and P. Allmendinger (2001) Neighborhood Regeneration and New Labour's Thrird Way. *Environment and Planning C* 19: 903-926

Tilley, C. (2006) Introduction - Identity, Place, Landscape and Heritage. *Journal of Material Culture* 11(1/2): 7-32

Tolia-Kelly, D. P. (2006) Affect - An Ethnocentric Encounter ? Exploring the 'Universalist' Imperative of Emotional /Affectual Geographies. *Area* 38(2): 213-217

Tosh, J. (2007) *Man's Place: Masculinity and the Middle-Class Home in Victorian England.* London and New Haven, Yale University Press

Townend, S. and K. Whittaker (2008) Being Accounted For: Qualitative Data Analysis in the Assessment of 'Place' and 'Value'. *The Institute of Field Archaeology Annual Conference.* University of Swansea, IFA

Townsend, A. R. and J. Tully (2004) *Public Participation in the Revised Planning System.* Stockton-on-Tees, University of Durham

Tuan, Y. F. (1974) *Topophilia.* Englewood Cliffs, New Jersey, Prentice-Hall

Tuan, Y. F. (1977) *Space and Place: The Perspective of Experience.* Minnesota, University of Minnesota Press

Tuan, Y. F. (1980) Rootedness versus Sense of Place. *Landscape* 24: 3-8

Tucker, C., M. J. Oswald, et al. (2005) A Method for the Visual Analysis of the Streetscape. *5th International Space Syntax Symposium.* Delft, Teche Press

Tugnutt, A. and M. Robertson (1987) *Making Townscape, A Contextual Approach to Building in an Urban Setting.* Mitchell Publishing Co. Ltd., London

Turner, J. R. (1975) Applications of Landscape Evaluation: A Planner's View. *Transactions of the Institute of British Geographers* 66: 156-161

Turner, S. (2006) Historic Landscape Characterisation: A Landscape Archaeology for Research, Management and Planning. *Landscape Research* 31(4): 385-398

Turner, S. and G. Fairclough (2009) Common Culture: Time Depth and Landscape Character in European Archaeology. in *Envisioning Landscape - Situations and Standpoints in Archaeology and Heritage.* Hicks, D. (ed). Los Angeles, Leftcoast Press

Turner, S. C. (2005) *Devon Historic Landscape Characterisation.* Devon County Council and English Heritage

Twigger-Ross, C. L. and D. L. Uzzell (1996) Place and Identity Processes. *Journal of Environmental Psychology* 16(3): 205-220

UNESCO (2005) *World Heritage and the Management of Contemporaray Architecture. Managing the Historic Urban Landscape.* Paris, UNESCO. Accesible at http:

//whc.unesco.org/document/5965

van Nes, A. (ed) (2005) *Proceedings of the 5th International Space Syntax Symposium.* Amsterdam, Teche Press

van Oers, R. (2007) Towards New International Guidelines for the Conservation of Historic Urban Landscapes. *City and Time* 3 (3): 1-9

Vaughan, L. and Geddes, I. (2009) Urban Form and Deprivation: A Contemporary Proxy for Charles Booth's Analysis of Poverty. *Radical Statistics* 98

Vaughan, L. (2006) Making Connections: The Case of Borehamwood. *Built Environment* 32(3): 281-297

Vaughan, L., D. L. Chatford Clark, et al.(2005) Space and Exclusion: Does Urban Morphology Play a Part in Social Deprivation. *Area* 37(4): 402-412

Walsh, D. (2007) *Lincoln Townscape Assessment.* Retrieved 10.12.2007, from

Walter, E. V. (1998) *Placeways: A Theory of Human Environment.* Chapel Hill, NC, University of North Carolina Press

Ward, K. (2005) Geography and Public Policy: A Recent History of 'Policy Relevance'. *Progress in Human Geography* 29: 310-319

Ward, K. (2006) Geography and Public Policy: Towards Public Geographies. *Progress in Human Geography* 20: 495-503

Ward, K. (2007) Geography and Public Policy: Activist, Participatory, and Policy Geographies. *Progress in Human Geography* 31: 695-705

Watson, P. (2009) 'All Landscapes Matter' but Do We Have the Methods to Deal with All Landscapes ? *Landscape Character Network News* (31): 6

Weich, S., M. Blanchard, et al. (2002) Mental Health and the Built Environment: Cross-Sectional Survey of Individual and Contextual Risk Factors for Depression. *British Journal of Psychiatry* (180): 428-433

Weich, S., E. Burton, et al. (2001) Measuring the Built Environment: Validity of a Site Survey Instrument for use in Urban Settings. *Health and Place* 7(4): 283-292

Whitehand, J. W. R. (1987) *The Changing Face of Cities : A Study of Development Cycles and Urban Form.* Oxford, UK ; New York, NY, B. Blackwell

Whitehand, J. W. R. (1992) *The Making of the Urban Landscape.* Oxford; Cambridge, Massachusetts, B. Blackwell

Whitehand, J. W. R. and C. M. H. Carr (1999) *The Changing Fabrics of Ordinary Residential Areas.* Urban Studies 36(10): 1661-1677

Whitehand, J. W. R. and C. M. H. Carr (2001) *Twentieth-Century Suburbs : A Morphological Approach.* New York, Routledge

Whitehand, J. W. R. and P. J. Larkham (eds) (1992) *Urban Landscapes: International Perspectives.* London and New York, Routledge

Williams, D. R. and B. P. Kaltenborn (1999) Leisure Places and Modernity: The Use and Meaning of Recreational Cottages in Norway and the USA. *Leisure Practices and Geographic Knowledge*: 214-230

Williams, D. R., M. E. Patterson, et al. (1992) Beyond the Commodity Metaphor: Examining Emotional and Symbolic Attachment to Place. *Leisure Sciences* 14(1): 29-46

Williamson, T. (2007) Historic Landscape Charcaterisation: Some Queries. *Landscapes* 8(2): 64-71

Wills, J. (1999) Cotswolds AONB: Characterisation, Classification and GIS. in *Historic Landscape Characterisation: 'The State of the Art'.* Fairclough, G. (ed): 33-39. London, English Heritage

Wlodarczyk, D. (2005) Structural Analysis of Urban Space in Residential Areas. in *Methodologies in Housing Research.* Vestbro, D.U. , Y. Hurol and N. Wilkinson (eds), Gateshead, The Urban International Press : 173-187

Wood, D.(1992) *The Power of Maps.* New York and London, The Guilford Press

Worskett, R. (1969) *The Character of Towns.* London, Architectural Press

Wynn, J. R. (2007) Haunting Orpheus: Problems of Space and Time in the Desert. in *Affective Turn.* Ticineto Clough, P. and J. Halley (eds): 209-203, Durham, NC and London, Duke University Press

Yin, R. (1984) *Case Study Research; Design and Methods.* Beverly Hills, CA, Sage Publishing

Yin, R. (1993) *Applications of Case-Study Research.* Newbury Park, CA, Sage Publishing

Yin, R. (1994) *Case-Study Research: Design and Methods* (2nd Edition). Thousand Oaks, CA, Sage Publishing

Young, M. and P. Willmott (1957 / 2007) *Family and Kinship in East London.* London, Penguin Classic

Young, T. (2001) Place Matters. *Annals of the Association of American Geographers* 91(4): 681-682

Appendix A

English Heritage Forms

CHECK LIST FOR HOUSING CLEARANCE AREA ASSESSMENT

Note: assessment relates to the <u>clearance</u> areas rather than to the HMR areas as a whole

Key: shaded box indicates significance value: number on scale 1 (low) to 5 (high)

AREA: Sub-area:

	Attribute	*Comment*	*Value*
1	Any pre-1875 Public Health Act area historic landcape and housing? What effect on area development?		
2	Any distinctive, unusual or typical but now rare layouts (street grid, courts, etc)?		
3	Does the area show significant time depth (ie, evolution of layout and house types)?		
4	Does the area show homogeneous architectural quality?		
5	Does the area show homogeneous social quality (house size, etc)?		
6	Does the landscape have an historically intelligible quality?		
7	Is housing integrated with other facilities (places of worship, schools, pubs, open spaces, industry, etc)? Of the same or later date?		
8	Is the historical and architectural integrity of the area substantially unaltered?		
9	What, generally, is the range of house types in the area?		
10	Are there distinctively local or regional types of housing which are now rare or threatened?		
11	Does the housing have any local significance (eg, first 'improved' bye-law housing)?		
12	Are there any associations with important national or local figures (entrepreneurs, industrialists, phiilanthropists) or organisations (coop, church, clubs, etc)?		
13	Does the area make a unique and irreplaceable contribution to the story of the development of mass housing in the town and region?		
14	Any listed buildings or Conservation Areas?		
15	Are there particularly significant buildings or landscapes within the area which should be protected or, if clearance takes place, recorded? What level of record?		
16	Are there, nearby, readily identifiable less sensitive/significant areas which might be candidates for clearance?		

Figure A.1: English Heritage Prompt List

URBAN CHARACTERISATION: PATHFINDER AREAS

Research questions as a basis for assessment

The following list of questions is offered as a basis for assessment of the historical and architectural character of urban areas made up predominantly of 19th-century terraced housing. The list has been compiled following brief inspections of two areas of inner-city Liverpool, both part of the Housing Market Renewal scheme for the city. The list is intended to address the principal historical and architectural issues related to the material, but goes on to include questions related to conservation and management. A combination of sources may be used to address the questions: field evidence and historic maps will be important, published histories should be consulted, and readily accessible sources such as directories and census might be sampled

1. Historical and architectural character

   - When and why was the area developed/what are the principal stages in development?

   - How is the area laid out (street grid, etc)? Did it evolve? How and why?

   - How was development financed? What is the typical unit of development? What is the main driver behind development?

   - What was the social character of the area when first developed? - Does this change over time? When, how, and why? - Is there variety within the area?

   What is the architectural character of the area? - Which are the dominant buildings in the landscape? - What range of house types? What changes over time? - Which building materials used? Is there change over time? What explains any variety? - What type of urban landscape do the buildings form?

   What services were provided (churches, schools, shops, etc) and by whom?

   What provision was made for leisure (parks, recreation, etc) and by whom?

   What evidence is there for contemporary employment within the area?

   Which individual buildings/groups of buildings have importance and why?

   Are there readily identifiable 'character areas'?

   How does this area compare with others (in the same city/other towns)?

   Summarise historic environment character and assessment of significance, identifying and defining important groups and areas.

2. Condition

   What is the condition of the historic environment? The original street plan Survival of building types/building details

   What has been lost?

3. Values

   Which buildings/areas are designated as being of special interest? Which buildings/areas have local value? What value can be placed on 'character areas'?

4. The role of the historic environment in the future

   Which buildings/areas reflect the historic character of the area? Which are in good condition/could be refurbished? Are these valued by local people/a wider public? What would the consequences for the historic environment of demolition of parts of the historic fabric? Would areas lose their integrity and therefore become more vulnerable?

5. Other issues (for others to develop)

   The economic argument for retention Sustainability Integration of old and new in a new designed urban landscape?

CG 9 May 2003

Appendix B

Data Sources in the Pilot Study and Phase 1 of the Case-Study

DATA SOURCES USED IN THE PILOT STUDY

Resources and Skills Required

Maps:

OS MasterMap

OS 1st 6" edition maps in digital format

2007 vertical, full colour digitised, geo-referenced aerial photographs

OS 2nd - 4th edition 6" and 25" maps

Any other historical maps available

Subsequent National Grid Maps

Further sources:

Conservation Area Character Statements

Historic Environment Record

Newcastle Urban Landscape and Townscape Assessment

Newcastle Urban Record

Victoria County History of Northumberland

Other historical directories (e.g Kelly's / Ward's / Post Office etc.)

TWAS and Northumberland Archives

Published sources: - to carry out a literature search, both historical and modern; compile a bibliography of relevant sources

Historical and Spatial Data from the above sources: The specific data sources (to be

used in this case study) deemed most relevant during the pilot study (listed above) can be divide into Historical and Spatial Sources:

Historical Data

- Census data of residents, and historical directories which not only give information about the residents and their occupations and building use, but from this data you can also extrapolate what was built and where at which time. Census data also indicates household size / number of occupants, and weather the premises are being used as a lodging house, or if the household employs live-in servants.

- Development control building plans (TWAS) which indicate time of building, and indicate what was built and where, but also by whom (i.e. who's financing the build), and which architects and builders were involved, and also what kind of plans were approved and which were rejected or withdrawn (will also help in the construction of typologies)

- 'Rate-books' (from 1890) which indicate occupancy, type of property (i.e. rented or owner occupied), who owned the building (giving the names of private land lords, and occasionally in this research name of a building society), and what the rateable value of the house was, (this assessment is similar to council tax evaluation now.), and what the cross estimated annual rental value of the property were. This data can be used to construct patterns of house occupancy and ownership, as well as to add data to the housing typologies. The link between external appearance of the house, floor plan, location within the study area, and the rateable value / rental value, is an interesting but complex issue.

- - Archaeological data (e.g the Tyne & Wear HER) which identifies any known archaeological sites, ancient historic monuments, listed buildings etc. This data illustrates in part what is already known about the area, and which parts have already been identified as 'heritage'.

Spatial Data

- Current maps (printed and digital) which helps in definition of character areas, and in the presentation of data etc.

- Historical OS mapping which helps in definition of character areas, and in the presentation of data etc, but also illustrates the development pattern of the area

- Field work (i.e. notes and photos) which will help in urban design / townscape assessment of the area, and in the construction of house typologies, will also act as 'record' of the area

Data Sources in the actual Case-study

Case-Study Phase 1; archaeological desk-based assessment

The following sources of information have been consulted in order to meet the requirements of the desk-based assessment, and are in line with the guidelines laid down by the Institute of Field Archaeologists for such work (IFA 2001).

Archaeological archives and databases Information on previous archaeological finds and investigations within the study area was consulted in the Tyne and Wear. The Tyne and Wear Archives were consulted for historic maps and plans, antiquarian histories and other documentary sources.

Listed Buildings Information regarding Listed Buildings was obtained from the Newcastle City Council Historic Environment Section and from English Heritage's 'Images of England' website.

Scheduled Monuments Scheduled monument information was taken from the government's on-line environmental GIS website 'MAGIC'.

Other designations Information on other designated sites of archaeological or historic interest was obtained from the Tyne and Wear HER and the 'MAGIC' website.

Published and unpublished documentary sources A range of published and unpublished material has been researched and consulted. This includes academic journals and publications, trade directories and local histories, together with general sources on the area and its wider archaeological and historical background. These are listed in the bibliography.

Geological and soil surveys Information on the underlying geology and soils within the study area was taken from data collected by the former Institute of Geological Studies, now the British Geological Survey (BGS 1969a; 1969b).

The purpose of this 'desk-based assessment' is to give historical time-depth and context to the study area, and thus address the time aspect of the space - reality - time 3D corporeal materiality matrix discussed above in 'Conceptual Design' section. Desk-based assessment is among the 'archaeological research tactics' referred to by Groat and Wang (2004, 154) that can be used to gather determinative evidence about the physical environment. The information gathered in the desk-based assessment will then be use used in conjunction with archival research and field work to divide the study area into character 'polygons' in an approach akin to that used in HLC.

APPENDIX B. DATA SOURCES IN THE PILOT STUDY AND PHASE 1 OF THE
CASE-STUDY

Appendix C

Pilot Study Survey Pro-forma

Survey Form   **DATE** ☐

Street Address ☐
House number ☐
Block Reference ☐
Related Building Plans ☐

Historical Character

Fieldwork 'date of building' ☐

Building Type   Individual house ☐
                     Semi-detached   ☐
                     4-together   ☐
                     Terraced   house ☐
                                  Flats ☐
                                  Tyneside ☐
                     Tower-block; height ☐

Building Height ☐

Building Materials Walls ☐
                        Roof   ☐
                        Windows and Doors ☐
                        Rainwater goods   ☐
                        Chimneys
                        Bay Windows   shape   ☐
                                        Height ☐

Building Style ☐

Outside space   Front Garden ☐   Front Wall ☐
                     Back garden   ☐   Back Wall   ☐

   - Back extension   ☐
   - Loft conversion ☐

Streetscape   Pavement ☐
                  Trees   ☐

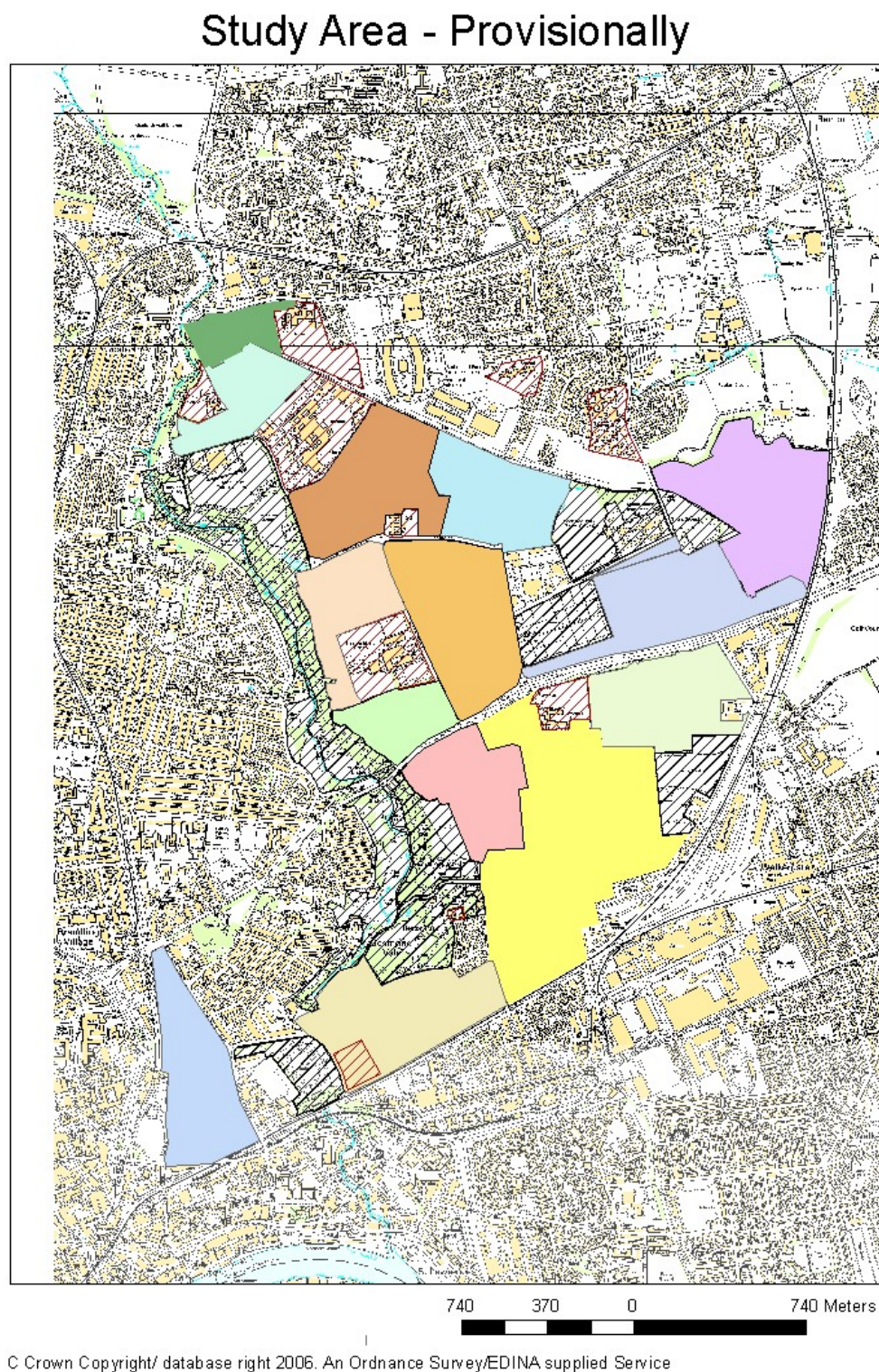# Appendix D

Selected Pilot Study Illustrations

Figure D.1: Proposed Heaton Study area in the beginning of the Pilot Study
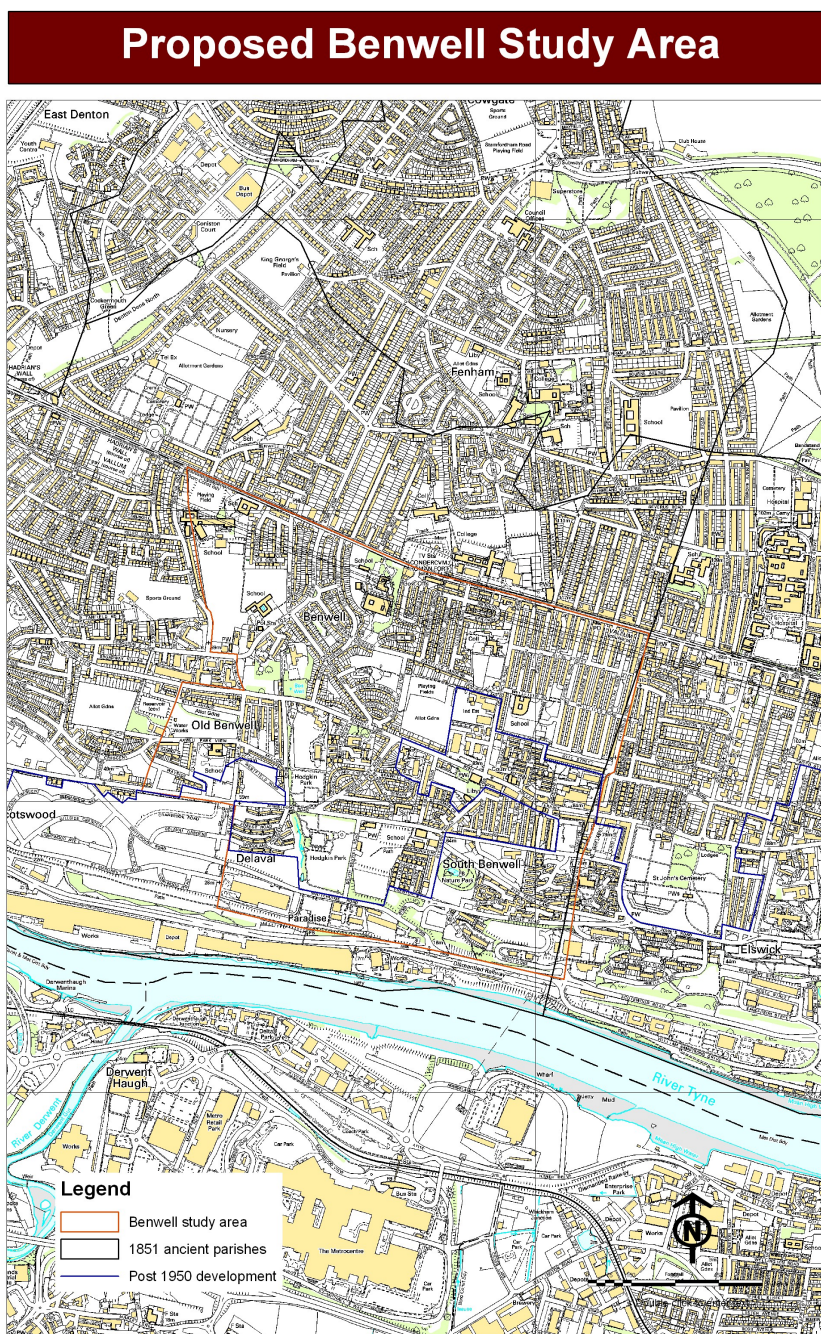
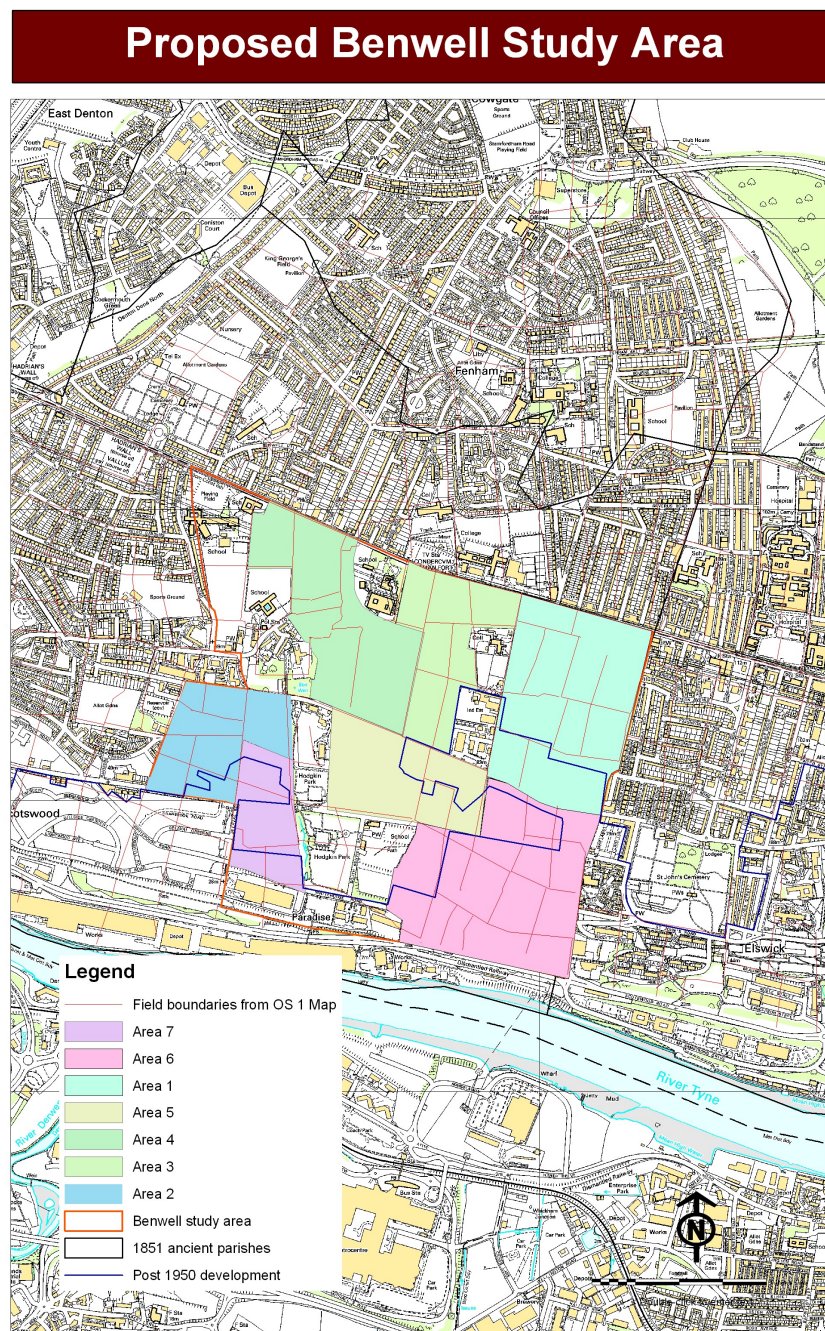Figure D.2: Proposed Benwell case-study area during Pilot Study

Figure D.3: Proposed Benwell Study provisionally divided into character areas

It is the non coloured-in (red parameter) Area 1 that has the largest amount of surviving 19th century terraced housing within the proposed Benwell study area. Areas 2 and 6 also have areas of 19th century terraced housing. Areas 3,4,5 and 6 are mainly of 20th century character, either inter-war development or post-1950 re-building. There is also a certain amount 'open space' within all these areas where demolished housing has not been replaced with anything specific.
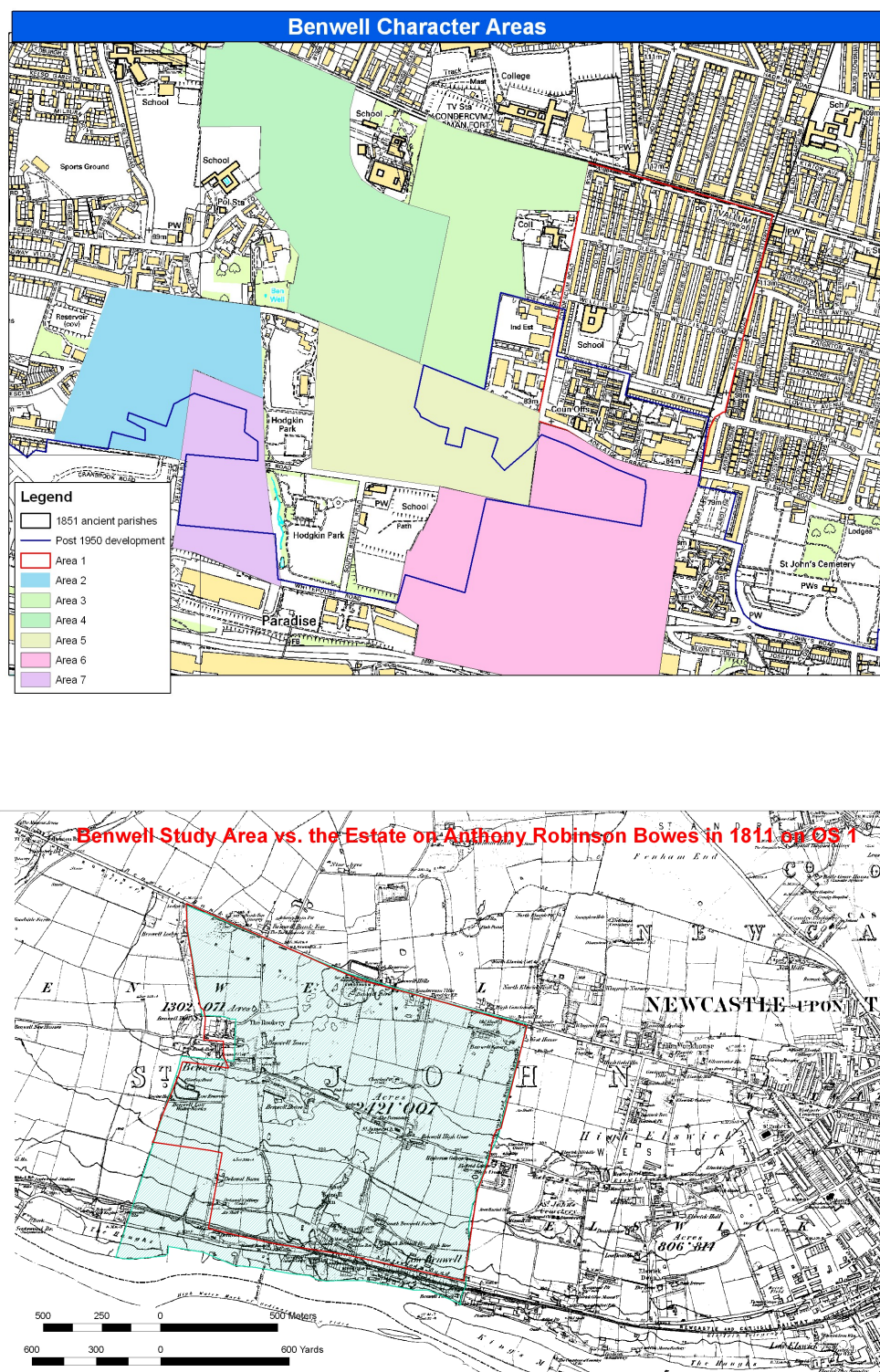
Figure D.4: Further consideration of the proposed Benwell study area
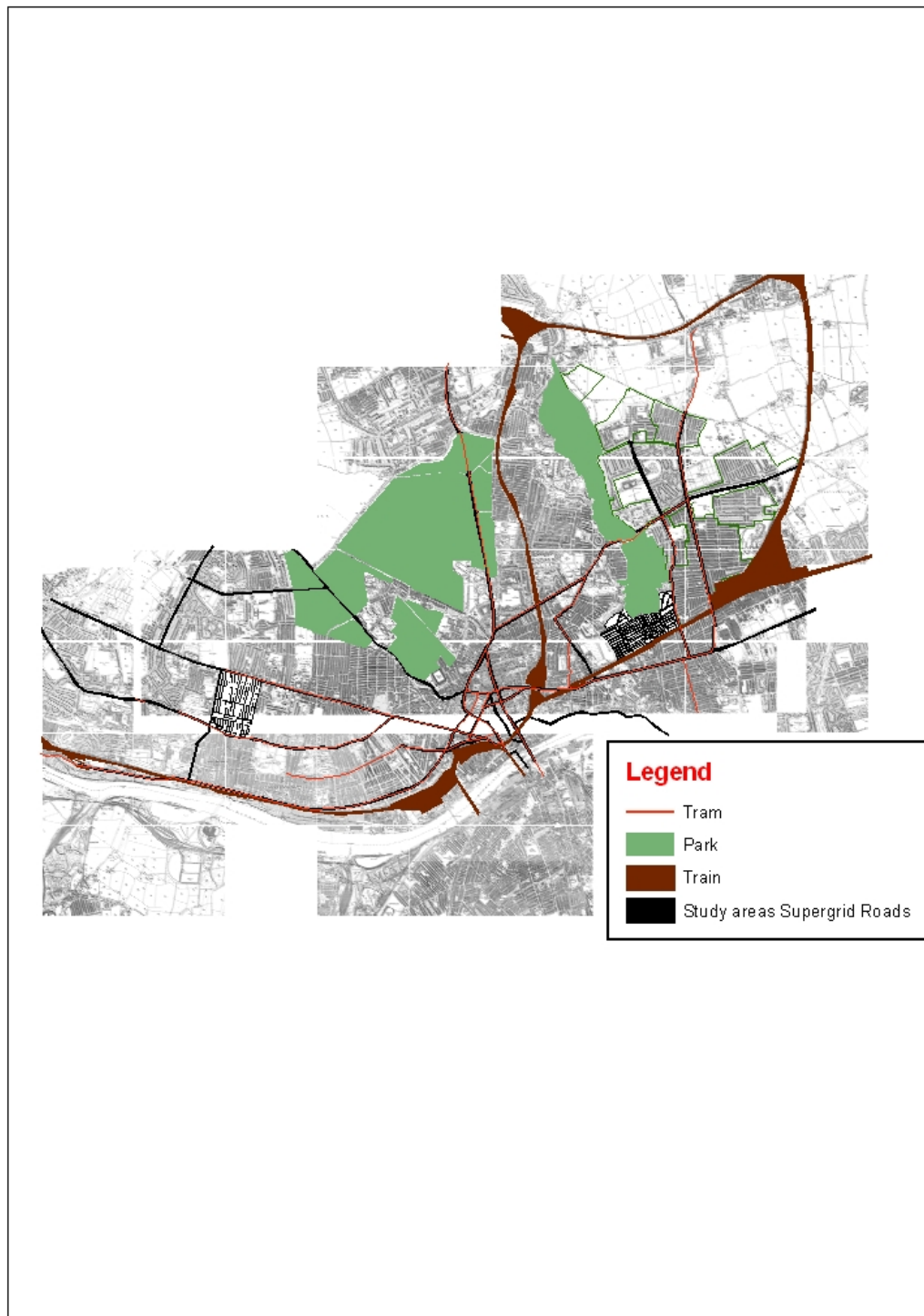
Figure D.5: Wider landscape features of Newcastle urban area

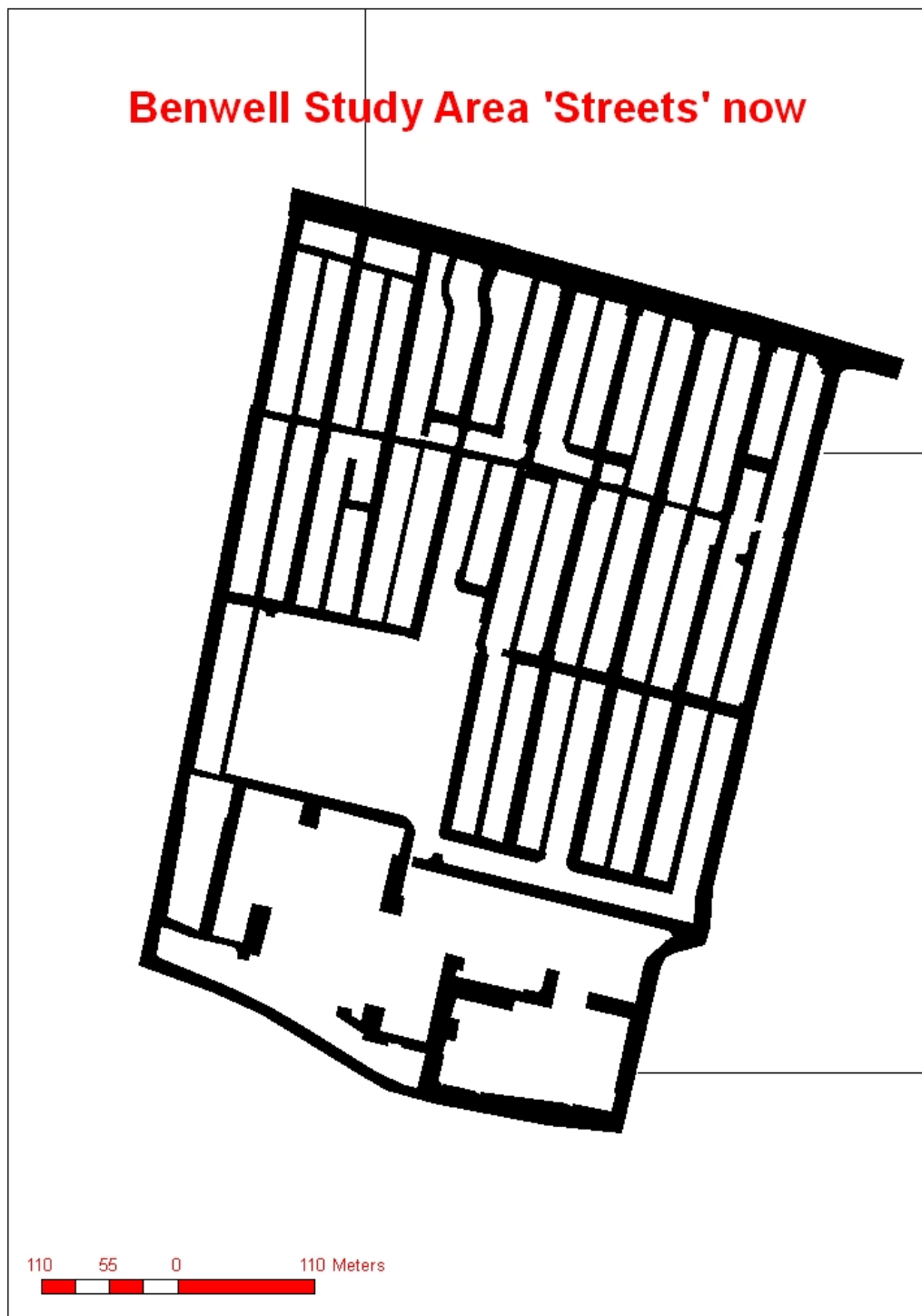Figure D.6: Proposed Benwell study area street pattern c.a. 1900

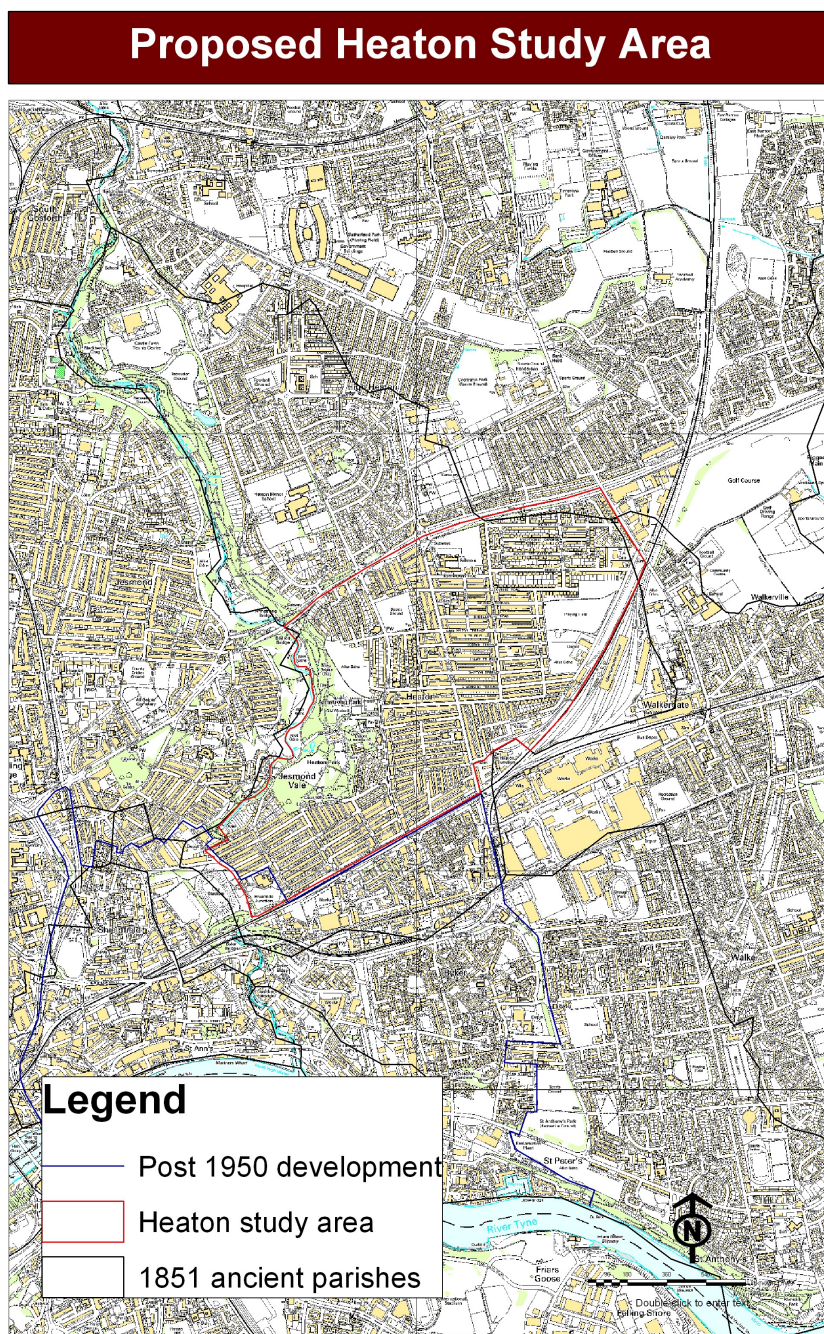Figure D.7: Proposed Benwell study area street pattern 2008

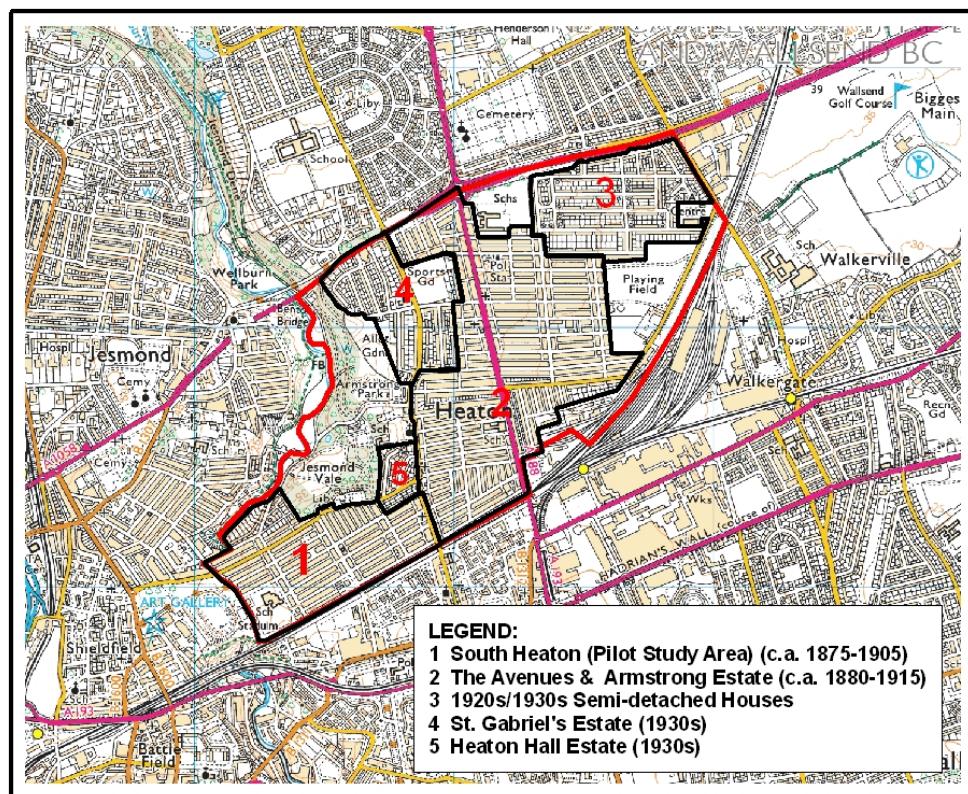Figure D.8: Proposed Heaton case-study area after the Pilot Study

Figure D.9: Provisional Character Areas in Heaton case-study area at the conclusion of the Pilot Study

Appendix E

HLC Attributes from S.Y.A.S.

Attributes for residential Polygons from SYAS South Yorkshire Historic Urban Landscape Characterisation project:

Attribute	Description	Recorded in Broad Type	Value	Scope Note
1) Housing Density	Number of houses per hectare	Residential	High Density Housing	(Over 55 Homes Per Ha.)
			Medium Density Housing	(25-55 Homes Per Ha.)
			Low Density Housing	(Under 25 Homes Per Ha.)
2) Historic Legibility	Records the extent to which 'the past' can be perceived within the present day polygon		Significant	Many elements of previous historic environment character types (for instance boundaries) are visible and form prominent elements in the present environment.
			Partial	Evidence relating to previous character types is visible within the present environment but is, on the whole, discontinuous.
			Fragmentary	Little remains visible; intelligible only through detailed study.
			Invisible	Evidence relating to previous character types is not visible.
3) Private Open Space	The private space relating to each individual residence within the polygon	Residential	Back and Front Garden	Garden areas to front and rear or all around
			Back Garden, Front Yard	Grassed areas to rear but a small courtyard to the front
			Back Garden	
			Back and Front Yard	
			Back Yard	
			Courtyard	Central courtyards with buildings to both sides

			Shared Yard	Where yards behind terraced houses are not internally divided with at least 4 houses sharing a yard.
			Farm Yard	
			No Private Space	
4) Public Spaces	Denotes whether or not there are publicly accessible areas included within the polygon which are part of an overall estate design but not large or clearly defined enough to form their own character unit.	Residential	Car Parking	
			Community Centre	
			Gardens	Used where no private space is provided but properties share a common grassy open space around the buildings.
			Library	
			Playing Field	
			Play Park	
			Pubs and Clubs	
			Shopping Parade	
			No Public Spaces	
			Not Discernable	
5) Settlement Parcel Shapes	Denotes the general shapes formed by the layout of housing in residential areas	Residential	Cul-de-Sac	Modern housing estates with roads ending in a dead-end
			Geometric	Formally planned geometric shapes such as arcs, concentric circles, hexagons etc
			Grid-Iron Layout	A regular grid-based street pattern
			Long Narrow Plots Perpendicular To Road	Thin narrow plots
			Other Shapes	
6) Status		Commercial, Institutional, Industrial, Extractive,	Active	Still in the same use as original character

		Residential		type
			Inactive	Currently not in use
			Re-used	Put to new use but retaining original and overt historic characteristics. E.g. warehouse conversions

Appendix F

Attributes Recording Form for HLC Polygons in the Case-Study

Attributes recording form for Case-study HLC polygons

Polygon :		
Short Written Description		
Vendors Plan Ref. No.		
HLC attributes		
Attribute	Description	Value
1) Housing Density		
2) Historic Legibility		
3) Private Open Space		
4) Public Spaces	Car Parking	
	Community Centre	
	Gardens	
	Library	
	Playing Field	
	Play Park	
	Pubs and Clubs	
	Shopping Parade	
	No Public Spaces	
	Not Discernable	
5) Settlement Parcel Shapes		
6) Status		
Existing Designations		

Appendix G

House Typology Gazetteer

Illustrated Housing Typology – Industrial Era Housing in Newcastle

Type 2.1   Georgian Terraced Houses

York Street, Summerhill Conservation Area

Westgate Road

Summerhill Conservation Area

Type 2.2   Pre-bye-law terraced housing

Type 2.3   3 Storey terrace with stable

Type 2.4   Narrow Terraces with front gardens, e.g Stratford Grove

Type 2.5   Large terraces with back-gardens, e.g . Startford Grove Way

Type 2.6   Large terraces (no back-garden) on e.g. Stannington Avenue

Stannington Avenue on the left, Falmouth Road on the right

Type 2.6   Terraced houses with front gardens, e.g Kingslay Place

Kingsley Place

Type 2.8   Terraced 'Villas'; e.g. facing Heaton Park Road

Type 2.9   Terraces of e.g. Warwick Street

Type 2.10   Terraces with white brick frontages, e.g. Falmouth Road and Cardigan Terrace

Type 2.11   White Terraces (2)

Medium Sized terraces (two storey bay window)

Warwick Street, (southside)

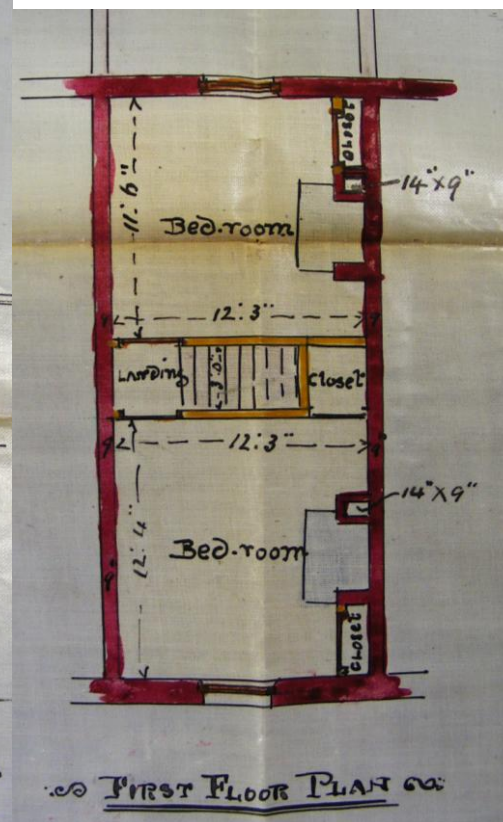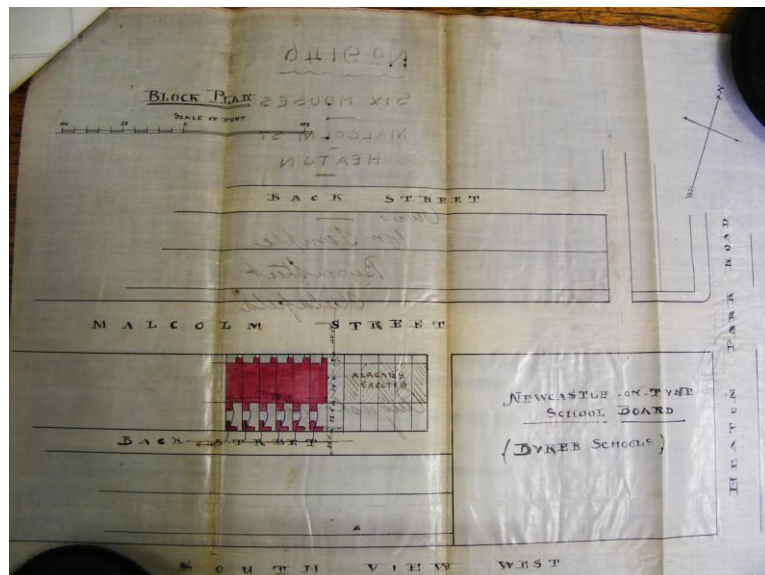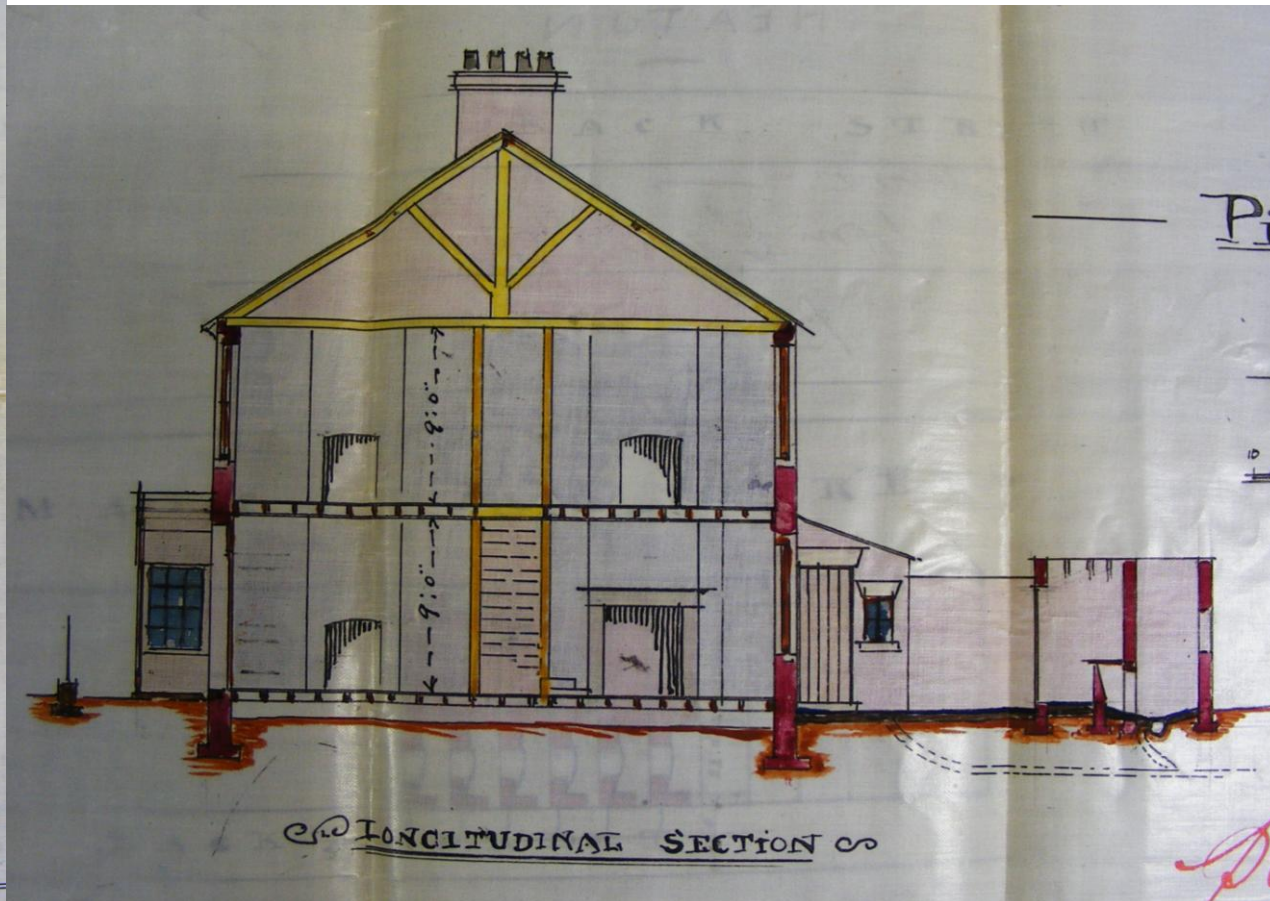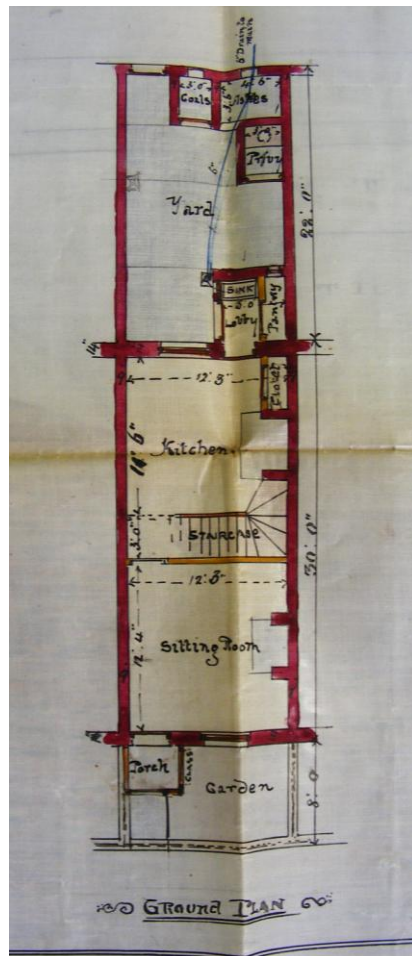## Type 2.12   Medium Sized Terraces (single-storey bay-window)

Falmouth Road

Hotsput Street

Type 2.13   Small Terraced houses e.g on Malcom Street

No 9116

BLOCK PLAN

SIX HOUSES

MALCOLM ST

HEATON

SCALE OF FEET

BACK STREET

MALCOLM STREET

BACK STREET

SOUTH VIEW WEST

PARK ROAD

NEWCASTLE-ON-TYNE
SCHOOL BOARD
(DYKER SCHOOLS)

ALREADY ERECTED

∽ FRONT ELEVATION ∽

∽ FIRST FLOOR PLAN ∽

11'·6"

Bed-room

14"×9"

Closet

12'·3"

Landing

Closet

12'·3"

14"×9"

12'·4"

Bed-room

Closet

Coals Ashes

C

Pfor

Yard

Sink

Pantry

Kitchen

Staircase

Sitting Room

Porch   Garden

22'.0"

50'.0"

12'.8"

12'.8"

18'.6"

~ Ground Plan ~

~ Longitudinal Section ~

Type 2.13   Small terraced House no bay-window

Type 3.1   Pre-Bye law Tyneside Flats

- Illustrated in 'Characterising 19th Century Residential Areas' Chapter
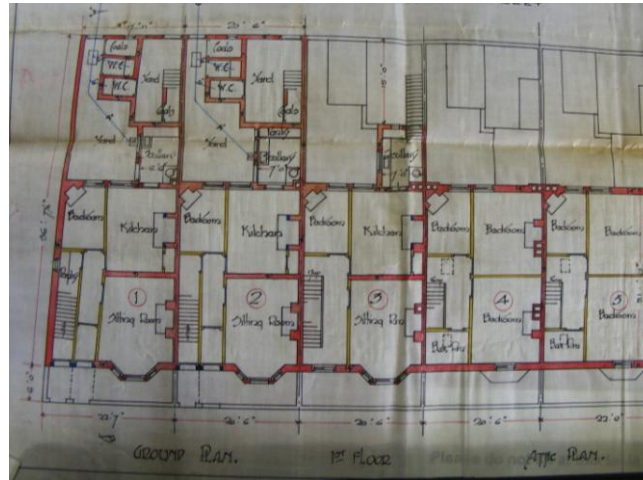
Type 3.2   Flats over Shops

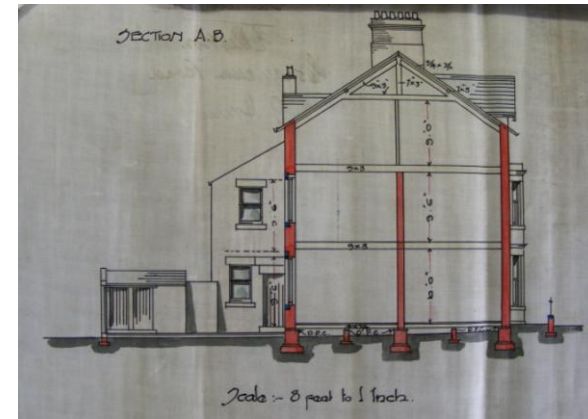See the shops gazetteer for this type.

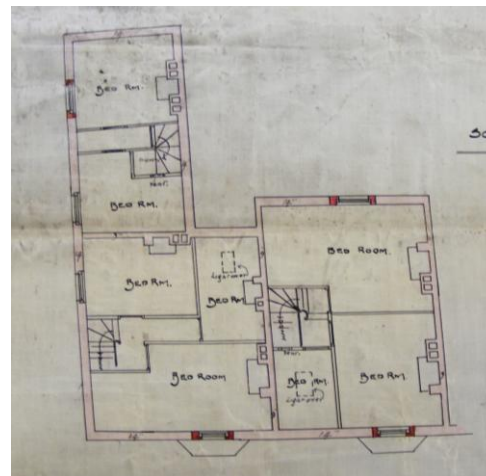## Type 3.3 : Tyneside with two-storey top flat

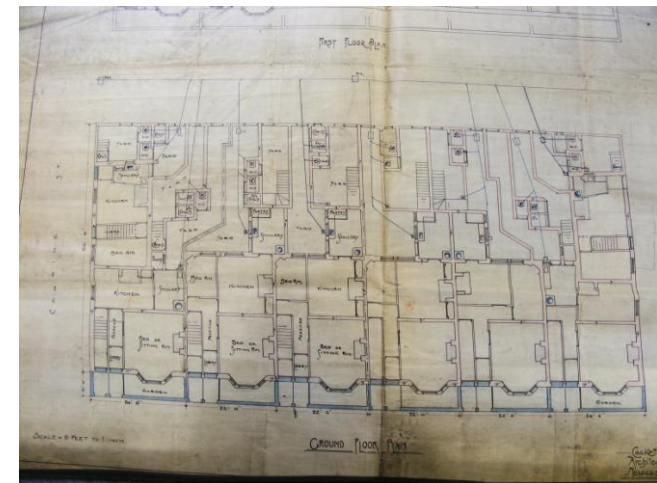Condercum Road, Benwell   Tyneside flat with two-storey top floor flat

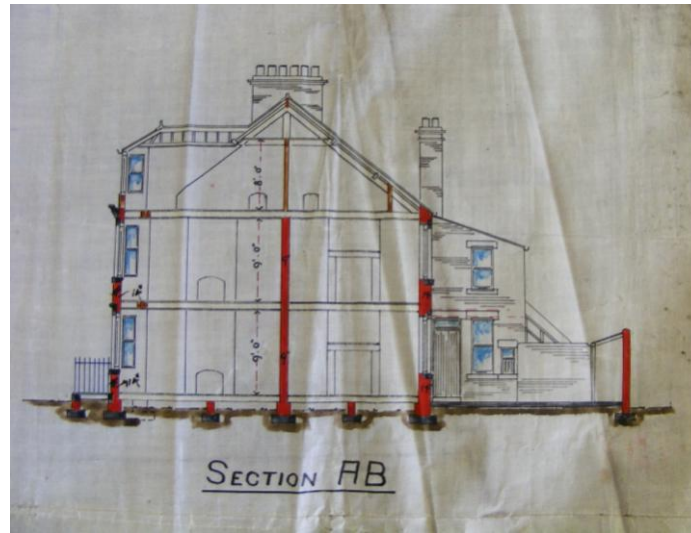Westgate Road (between Canning and Colston St), Benwell   Tyneside flat with two-storey top floor flat
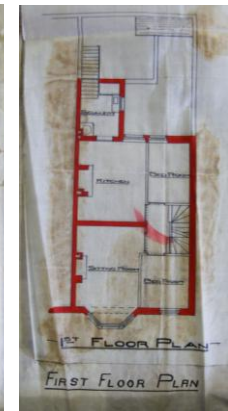
Ladykirk Road (Benwell)

SECTION AB

Tyneside flat with two-storey top floor flat
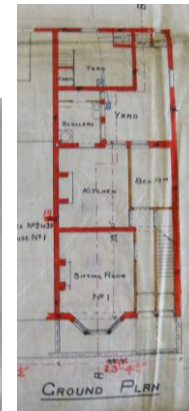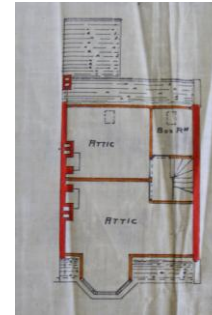
Photograph from Condercum Road

Type 3.4   Tyneside Flats with two-storey bay-window
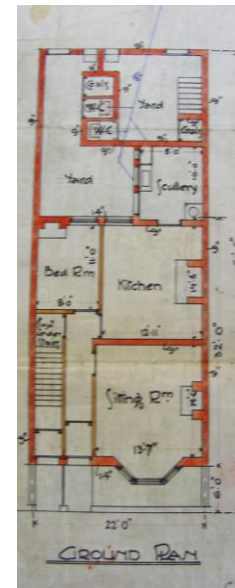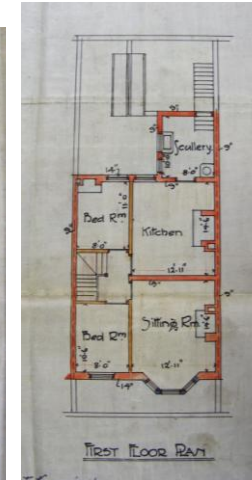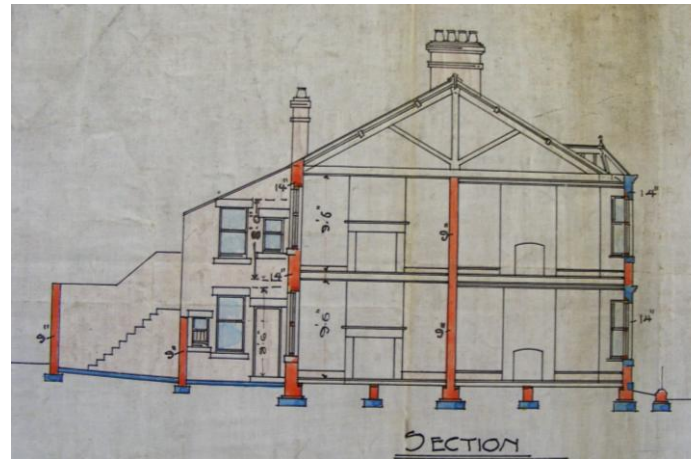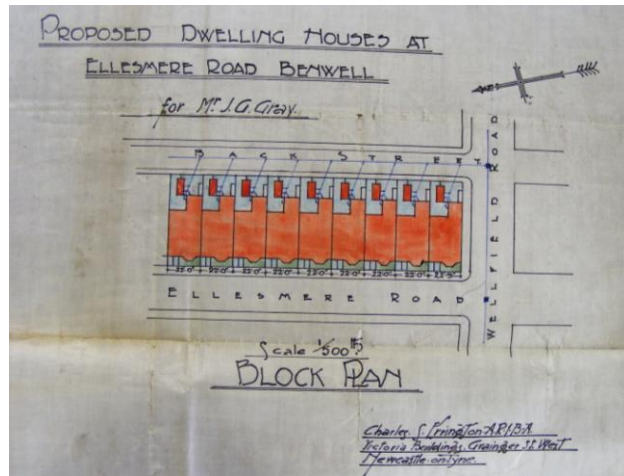
Photograph from Hampstead Road, Benwell

FIRST FLOOR PLAN

PLANS OF 12 HOUSES IN FLATS
NORTH VIEW BENWELL FOR
Mr J Mattinson, 62 Grim St

ELEVATION TO MAIN ROAD
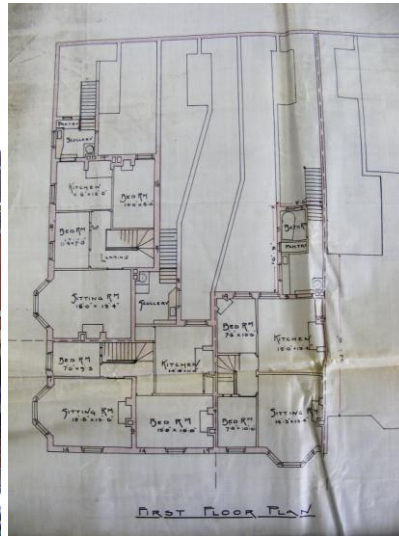
North View (this has changed to Strathmore Crescent) – The photo is from Strathmore Crescent
The 'standard' Tyneside flat with two storey bay-window.

Examples of the type in South Heaton Character Area

Type 3.5   Tyneside flats with single-storey bay-window
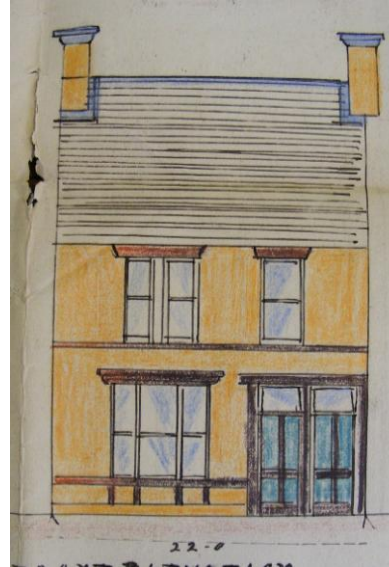
T186 / 11716

Type 3.6   Tyneside Flats without a bay-window

FRONT ELEVATION

BACK ELEVATION

BLOCK PLAN

FIRST FLOOR PLAN
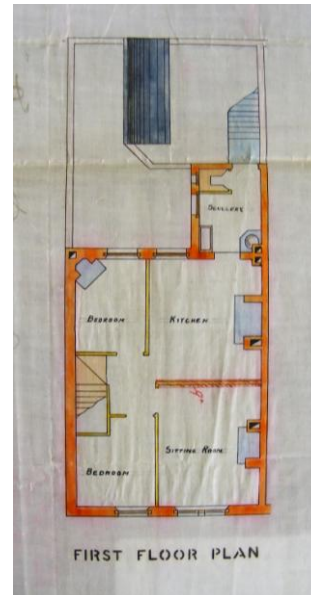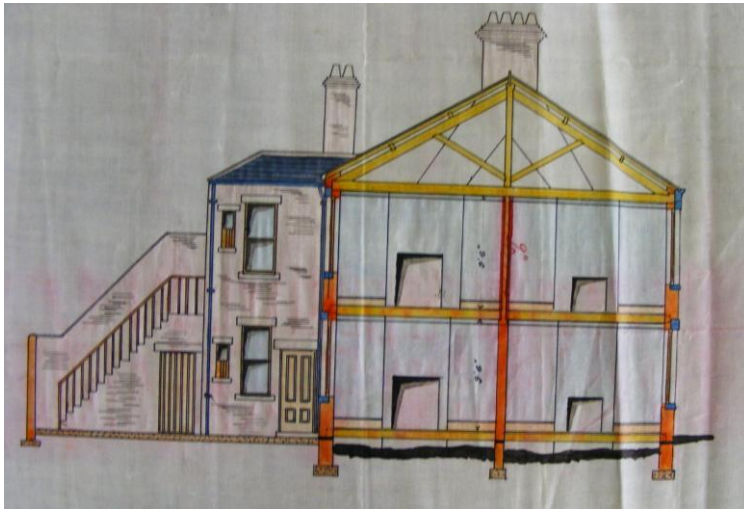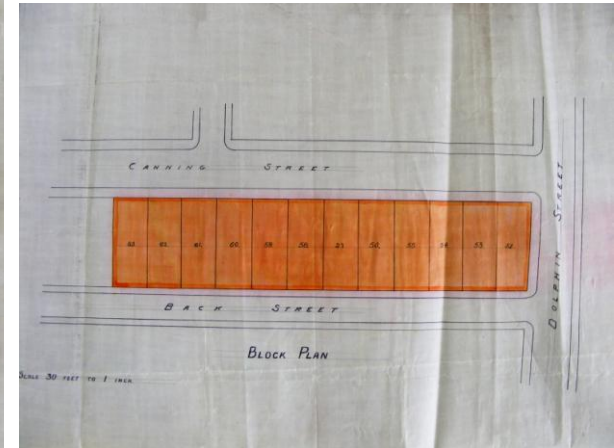
Canning Street, Benwell
T186 / 9173

Malcolm Street (southside) on the left; Bolingbroke Street (northside) on the right

Bolingbroke Street (northside)

Type 4.1   Detached House / Villa / Cottage

T186/11034   4 Warwick Street – for Samuel Scott by J. W. Dyson (architect)

Type 4.2   Semi-detached House / Villa / Cottage

Semi-detached villas on Burnville and Parkville

Semi-detached villa - Warwick Street (northside)

Appendix H

Door and Window Typology Illustrated

South Heaton Character Area: TYPOLOGIES of DOORS and WINDOWS Illustrated:

Examples of plain door way: Examples of wooden porch:

Examples of Stone Porches / Doorways:

The way of adorning the front door ranges from the meanest of stone lintels, to moulded stone work, to wooden door hoods and porches to stone porticos.

Small scale changes to individual properties emerge as key characteristic of surviving 19th century residential areas. The following illustrations describing changes to doorways in the South Heaton Character Area include examples where new is added to existing structure as well as removal of original features.

Examples of porches built after the original construction date:

Examples of loss of original detailing:

Examples of bay-windows:

Examples of Bay-Windows and Porches from architect's plans of the area:

Different elevations with a range of door /andwindow decorations from the architects plans:

Side Elevation

Above: Different porches from architects drawings.

Appendix I

Architectural Connections in the North East

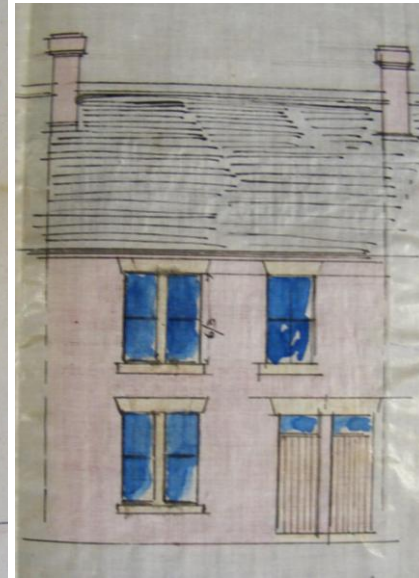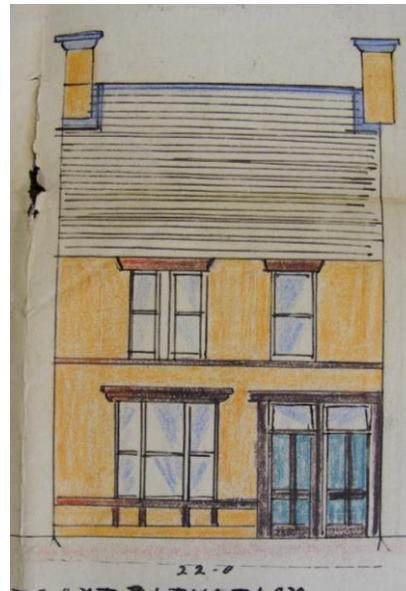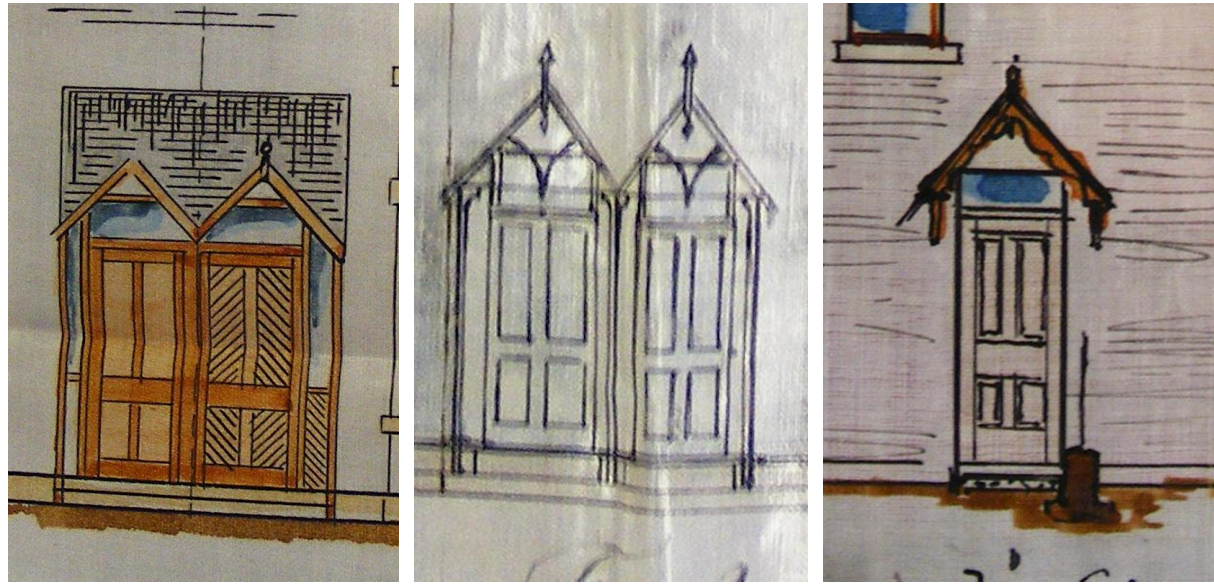| ARCHITECTURAL CONNECTIONS BETWEEN NORTH EAST ARCHITECTS BASED ON WORK IN HEATON				
	Architect	Known, 'canonical' buildings	Input in Heaton	Partners / Pupils / Sons
Thompson & Dunn, architects	Thomas Oliver (1824-1902)	- architect, surveyor, engineer	-	George D. Oliver (b.1851) *Andrew Thompson* R. J. Leeson
	Andrew Thompson (d. 1878)	DT.SC/241 Plan of building site at Cramer Dykes	11711 Falmouth Rd, 11531 Heaton Grove, 12654 Heaton Grove, 12073 Eversley Place	- J. H. Morton - ***William H. Dunn*** - Alfred Swan
	William Henry Dunn (1843-1905)	- Commercial Hotel corner of West Holborn / Weetman Street (1880)		- George E. Dunn (b. 1873) - Ernest A. Dunn (b.1877)
	Frank West Rich (1840-1929)	- Turnbull's Warehouse (1890) - St. Gabriel's Church, Heaton	- Main Sewer (T186/V143) - Road lay-outs - Building type plans for vendors plans	- Roland Rich - Edmund Rich
	John William Dyson (b. 1856)	- Stephenson Library, Elswick (1895) - Victoria Library, Heaton (1898) - Burt Hall, Northumberland Rd. - Extension of St. Nicholas' Hospital	T186/V239 and numerous building plans	- Charles Edward Cyril Dyson (b. 1881)
	Robert Fewster Waugh Liddle (1840-1908)	- architect, building surveyor and inspector (worked for Newcastle Corporation ?)		- *E. F. W. Liddle* (b. 1869) - Robert Fewster Waugh Liddle (b. 1874) - Charles E. Liddle (b.1871)
Liddle & Browne (partnership c.a. 1895-1908)	E. F. W. Liddle (b. 1869) - still listed in 1916 Directory			- Robert Fewster Waugh Liddle (b. 1874) (brother) - Charles E. Liddle (b.1871) (brother) - William Henry Wood (fl. 1898-1926)
	Liddle & Browne (partnership c.a. 1895-1908)	- Victoria Public Baths, Wallsend (1908)	13143 – terraced houses Stratford Grove West	
	Percy Lindsay L. Browne (1872 -1952)	- Gaumont Cinema, Glasgow (1910) - Picture House, Glasgow (1924) - Globe Theatre / ABC, Stockton-on-Tees (1935) - Savoy, South Shields - Ritz, Gateshead - Academy, Newcastle (1927)		- Kenneth Glover - Charles Alfred Harding - T. Lindsay Browne (b. 1897) - J. L. Browne
	John Walton Taylor (& Son) (1855- 1915)	- Esh Road Methodist Church (1899) - Morpeth Methodist Church (1904) - Spennymoor Wesleyan Chapel and Sunday School (1905) - Gateshead Methodist Central Hall (1911)	11735 Hotspur Street	- Lawrence Walton Taylor (b. 1884)

Appendix J

Illustrated Shops Gazetteer

SHOPS GAZETTEER

List of Shops on Heaton Park Road

House number		YEAR → 1890 Occupant	Occupation	1910 Occupant	Occupation	1916 Occupant	Occupation
97	SHOP	Peake, B.	surgeon	Heaton Park Laundry		Heaton Park Laundry	(Cen. 1034)
99	SHOP	Tickle, T.	manager	Cruddis, T.	fish monger	Cruddis, T.	fish monger
101	SHOP	O'Neill, J.	inkeeper	Girdlestone, J.	hardware dealer	- no listing	
103	SHOP	Brewster, R.	dairyman	Hodgson, J.	butcher	Baird. J.S.	Butcher (1157)
105	SHOP	Hiles, G.	bookkeeper	Brewis, M (Mrs)	confectioner	Woods, F.	confectioner
107	SHOP	Hunter, C. F.	collector	- no listing		- no listing	
109	SHOP	Thorburn, M.	agent	- no listing		Trobe, R.	draper
111	SHOP	Kirsop, E.	Mrs.	Marshall, E.J. & P (Misses)	dairy	Marshall, E.J. & P (Misses)	dairy
113	SHOP	Galleon, E.	moulder	Blockley, C.& U.	fruiters	Blockley, C.& U.	fruiters
115	SHOP	Birkett. J.	Iron founder	Gallon, W. & Son	Grocers	Hurst, R.	grocer
168	SHOP	-no listing		Anderson, M.	Confectioners	Anderson, M.	confectioners
164	SHOP	McIntosh, W. D.	Grocer	- no listing		- no listing	
162	SHOP	- no listing		- no listing		Bates Bros.	fruiters
158 / 156	SHOP	Clarke and Brough	Hosiers	Shannon, M. Mrs	confectioner	Watson, W. E.	fruiter
152, 154	SHOP (152)	Charlton, T.J.	Spirit merchant	- no listing		- no listing	
150	SHOP	McBryde, A.	newsagent	Bywell, W.	newsagent	Bywell, W.	Newsagent (717)
146,148	SHOP (148)	Pescod, W.	chemist	Duncan & Crake;	pharmacist	Townell, W.;	pharmacist
142,144	SHOP (142)	Clark, M. Miss	Fruiter	Knight, H.	fruiter	Ramsey, M. Miss	Confectioner
138, 140	SHOP (148)	Harvey, G.	grocer	Reay, M. (Mrs)	butcher	Reay, M. (Mrs)	Butcher

YEAR →		1890		1910		1916	
House Number		Occupant	Occupation	Occupant	Occupation	Occupant	Occupation
136	SHOP	Reay, T.	butcher	Bolam, J.	tobacconist	Bennett, G. S.	hairdresser
134	SHOP	Hern, E.	Miss	Blakey, E. M.	confectioner	Stobbs, J. R.	confectioner
132	SHOP	Young, J.	cashier	Nicholson, J.	grocer	Nicholson, J.	grocer
130	SHOP	Walker, E.	Miss	Brandling Laundry Company	laundry	- no listing	
122	SHOP	Tillar, J.	grocer	Carrick Dairy Co. Ltd.	Dairy	no listing ; WHAT ABOUT 2 Falmouth Road ?	
104	SHOP	Murray, W.	grocer	Whillance, C.	grocer	Whillance, C.	grocer

List of Shops on Stratford Road:

YEAR	House Number		1890	1910	1916
			Occupant, occupation	Occupant, occupation	Occupant, occupation
	1	end of terrace			
back lane					
	3	**shop**	n/a	Bruce J.; Fried fish dealer	Barker, R.A; Fried fish dealer
	(5)	flat			- no listing
crosses Malcom Street					
	7	**shop** +flat	n/a	Gunton, R. grocer	Gunton, R. grocer
	(9)	- no listing for no. 9			
	11	**shop**	n/a	Nelson, J & Sons; butchers	Potts, C; butcher
	13	flat	n/a	Spinks, A; butcher	Spinks, A; butcher
	15	flat			
	17	**shop**	n/a	Neil, F. Mrs; wardrobe dealer	Wilson, J.; hairdresser
	19	flat			
	21	**shop**	n/a	Southern, G.; newsagent	Towns, M. Mrs. newsagent
	(23)	- no listing			
	25	flat			
	27	**shop**	n/a	Worthington, R.; grocer	Guthrie, T.; grocer
	29	- no listing			
	31	-no listing			
	33	- no listing			
	35	**shop**	n/a	Charlton, N. Mrs; fruiter	Robinson, M.E. Miss; fruiter
	37+39	flats			
	41	**shop**		Bell, E. Mrs; hairdresser	Watson, J; hairdresser
crosses Bolingbroke St.					
	43	- flat above 92 Bolingbroke Street			
	65	**shop**	n/a	Walker, W.; fruiter	Walker, W.; fruiter
crosses Mowbray Street					
	67	**Shop**	n/a	Graham, M. Mrs; fruiter	Lowe, M. Mrs.; shop keeper
	69	flat			
	91	flat			
	93	**shop**	n/a	Clarke, F. Mrs; grocer	Clarke, F. Mrs; grocer
crosses Hotspur Street					

	95	**Shop**	n/a	Johnson, H.; butcher	Johnson, H.; butcher
	97	flat			
	119		n/a	Hodgon, H.; grocer and Post-Office	Minnikin, J; grocer and Post-Office
	121	**Ex-post office**			
crosses Warwick Street					
	123	**shop**	n/a	Ballance, W.; fruiter	Ogle, T.; shopkeeper
ENDS AT BURNVILLE					
	2 & 4	**Shop** and flat	Simpson, J.; grocer	Simpson, J.; grocer	Slipper, W. & E.; grocer
back lane					
	6	Shop / workshop	Drake, D; manager	- no listing	Reid, G; tailor
crosses Malcom street					
	8	**shop**	Henderson, R.; grocer	Hardy, W.; confectioner	Ripley, R.; confectioner
	10	flat	- no listing		
back lane					
	12	flat	- no listing	- no listing	
	14	**shop**	Irvine, A. Mrs; grocer	Dobson, J. Mrs; confectioner	Dixon, M & M.J. Misses; shopkeepers
crosses Bolingbroke Street					
		back lane			
	16a	(work)shop	- no listing	Thompson, W.; boot repair	Middleton, J. Mrs; boot repair
	18a	**shop**	- no listing	Lindsay, G; fried fish dealer	Lindsay, G; fried fish dealer
	18	**shop**	Churnside, W.; butcher	Robson, W.; butcher	Robson, W.; butcher
crosses Mowbray Street					
	20 + 22	**Shop** and flat	Bell, G; grocer	Gibson, J. Mrs; grocer	Mann, W. Mrs; grocer
back lane					
	24	**Shop**	Hunter, J. R.; shoemaker	- no listing	Storey, G. Miss; confectioner
	26	flat	Milne, J.; joiner	Milne, J.; joiner	Milne, J.; joiner
	28	- no listing	- no listing	Hall, R. ; confectioner	- no listing
crosses Hotspur Street					
	30	Flat	- no listing		
	32	Shop	Young, W. J.; grocer	Taylor, A.; grocer	Baker, F. S, Mrs; grocer
crosses Warwick Street					
	34	Poss. shop (corner of 70 Warwick Street)	Woods, M. Mrs; grocer	Nicholson, M. Mrs; laundress	Nicholson, M. Mrs; laundress
back lane					

Wandsworth Street

			1890 (year)	1910 (year)	1916 (year)
	2+4	**Shop** and workshop/flat	Cruddis, T.; fruiter	Walton, J.; tailor Walton, P. Mrs; draper	
	6	Shop / workshop	Young, W.; shoemaker	Little, J; boot maker	
	5	Shop/ workshop (?)	n/a	Horobin, T.; boot maker	

Warwick Street

			1890	1910	1916
	70	(shop at 34 Stratford Road)	Woods, W.; clerk (shop 34 Stratford St)	- no listing	- no listing

Heaton Hall Road

	House no.		1890 (year)	1910 (year)	1916 (year)
	21	**Shop**	n/a	Blackett, T; wine and spirit merchant	Blackett, T; wine and spirit merchant
	23	Flat			
	25	Flat / **shop**		No. 25 – no listing	No. 25 Wilson Bros; estate agent (Cen. 767)
	27	**Shop** / flat	n/a	27 – Edgar, J.J.; tailor	No. 27 – Gibson, J.
	29	Flat		No. 29 – no listing	No. 29 – no listing
	31	**Shop**	n/a	West. E. Mrs; confectioner	Gordon, W. T.; confectioner

			1890	1910	1916
Falmouth Road					
	1,3,5	**Shop** (ex -post office ?)	Elliott, E. Mrs Grocer + Post-office	Farmer's and Cleveland Dairies Co. Ltd.	- no listing
	98 + 96	Poss. shop and flat	n/a	Arthur, J; ale and porter merchant	Arthur, J.; beer retailer
	94	Workshop / flat above shop	n/a	Spotswood, J. Mrs; milliner	- no listing

			1890	1910	1916
Bolingbroke Street					
	92	**Shop** (also 43 Stratford Rd)	n/a	Coghill, J.; draper	Coghill, J.; draper & Coghill, M & E. Misses; dressmakers
	2a, b, c	Shop / flat	- no listing	Farrier, J.; confectioner	2a Brown, T.; guard
					2c Brown, M. (Mrs); confectioner
	1b	Flat / workshop	No. 1 – Richardson, T; yeast dealer	Hutchinson; cabinet maker	
	1a	Poss. shop/ workshop		Forsten, J. V.; boot maker	Forsten, J. V.; boot maker

			1890	1910	1916
Cardigan Terrace					
	1	Shop (and flat ?)	Harvey, G.; grocer	Cutter, R.A.; grocer	Ridley, A & E. (Misses); fruiters
	2a	Flat or shop ?	- no listing	Robson, G. H.; grocer	2a – Buchanan, J; boot repairer 2b – Bennett, L; slipper maker

HEATON HALL ROAD

21 to 27 Heaton Hall Road

21 to 31 Heaton Hall Road

HEATON PARK ROAD

97 to 113 Heaton Park Road

107 to 113 Heaton Park Road

Heaton Sandwich Cuisine (113 Heaton Park Road)
Heaton Used Furniture (111 Heaton Park Road)
Northumbrian Cottage Furnishing's (no. 109)
Ray's Barber Shop (no. 107)

104 Heaton Park Road

122 Heaton Park Road

138 to 124 Heaton Park Road (124 nearest)

140 to 162 Heaton Park Road

162 Heaton Park Road

164 to 168 Heaton Park Road

STRATFORD ROAD – uneven numbers

123 Stratford Road

119 to 121 Stratford Road (ex-post office)

95 Stratford Road

67 to 93 Stratford Road (93 nearest)

67 Stratford Road

35 Stratford Road on the right, 92 Bolingbroke Street on the left
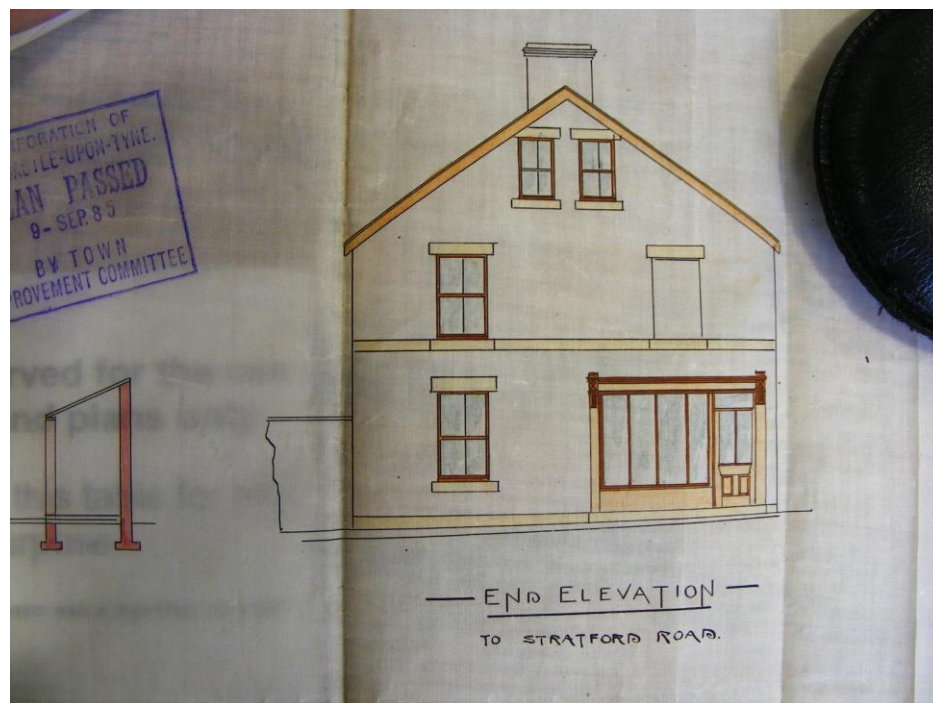
35 and 27 Stratford Road

7 to 13 Stratford Road

3 Stratford Road

STRATFORD ROAD even numbers

34 Stratford Road (shop might also be listed at 70 Warwick Street)

32 Stratford Road

24 and 28 Stratford Road

20 Stratford Road

Lynette's Hair Salon (16)
18 to 16 Stratford Road

12 to 14 Stratford Road

8 to 10 Stratford Road

BOLINGBROKE STREET

92 Bolingbroke Street (shop also sometimes listed as 43 Stratford Road)

FALMOUTH ROAD

1,3,5   Falmouth Road

WANDSWORTH ROAD

2,4 and 6 Wandsworth Road