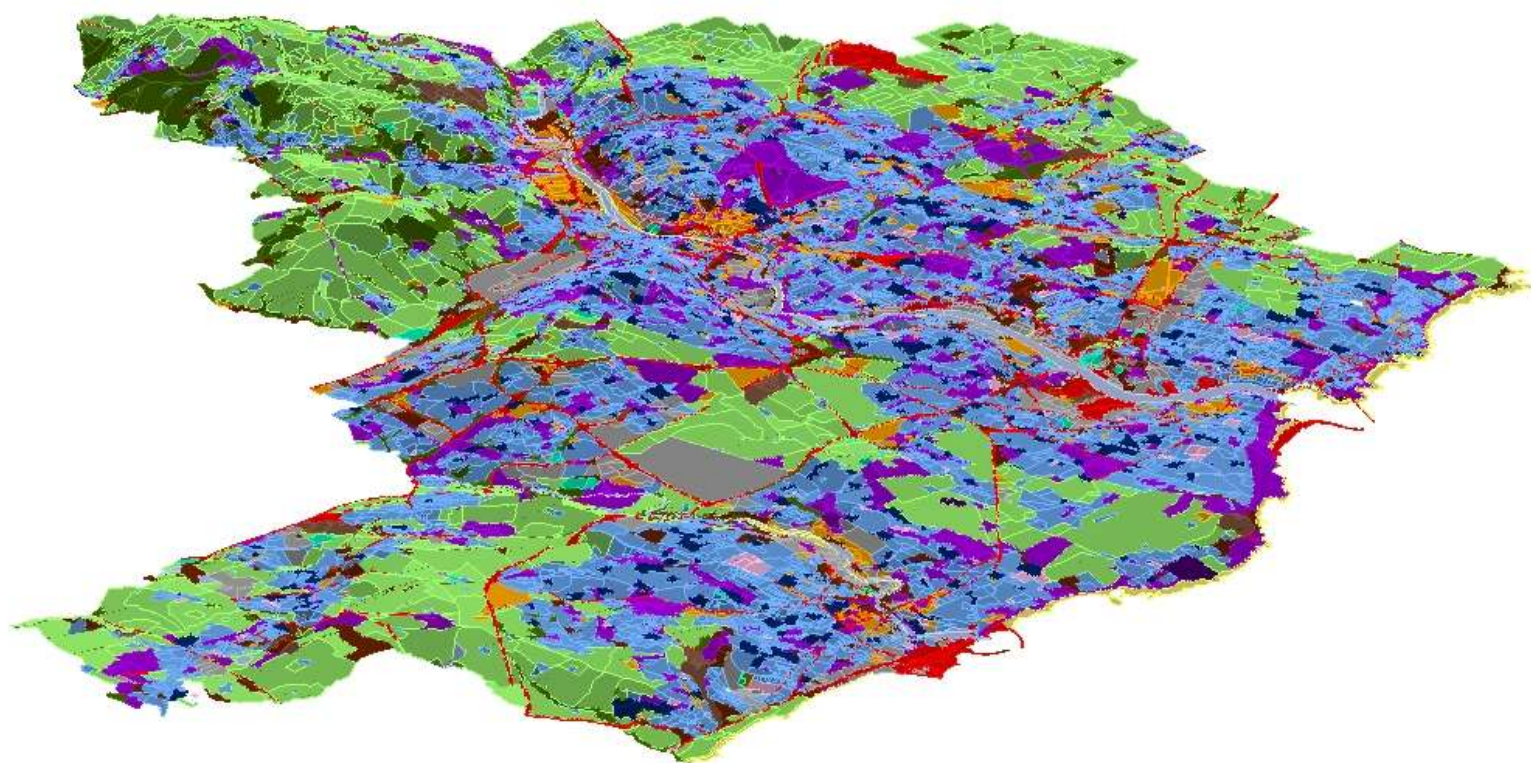




Tyne and Wear Historic Landscape Characterisation Final Report

English Heritage Project Number 4663 Main



Sarah Collins

McCord Centre Report 2014.1



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Front piece: (Top) Captain's Wharf South Tyneside (Sarah Collins); (Middle) Visualisation of Tyne and Wear HLC using ArcGIS (Sarah Collins)

EXECUTIVE SUMMARY

Sam Turner, Ian Ayriss *and* Sarah Collins

This report provides an overview of the Tyne & Wear Historic Landscape Characterisation (HLC) Project. The project was undertaken between 2012 and 2014 by Newcastle University in partnership with Newcastle City Council and funded by English Heritage as part of a national programme of research.

Part One of the report sets the Tyne & Wear HLC (T&WHLC) in its national context as one of the last urban based research projects in the English Heritage programme. It provides some background to the T&W region as well as the research aims and objectives since the projects inception in 2010. The report also discusses the characterisation methodology, data structure and the sources used.

Part Two provides an analysis of the main findings of the project by summarising the urban and peri-urban, rural, and industrial landscapes that make up the T&W project area.

Finally, Part Three focuses on an applications review with two case studies detailing intended future applications for the HLC data. The first of these case studies examines the application of HLC data within areas of small scale development that might assist in consultation regarding design. The second case study examines local development frameworks to see how the use of HLC data might inform landscape assessment at the medium to large scale.

The report demonstrates that the HLC data can be used in a variety of ways and by a range of users with different aims. The characterisation can inform through timeslice mapping; by observation of both broadly and narrowly defined landscape changes. It can produce distribution maps of different character types, such as settlement or industry and the differing relationships between types through time. It can produce detailed understanding of the form of field systems and settlements through analysis of attributes such as morphology or boundary loss in the case of field systems, or on density, scale or private space in the case of settlements. Finally the data can consider the extent of change through an analysis of legibility of earlier landscapes within the present.

ACKNOWLEDGEMENTS

The Tyne & Wear HLC project was delivered on time and within the specified budget granted by English Heritage.

Sarah Collins, (the Project Officer) would like to thank Marcus Jecock who acted as our advisor and link to English Heritage for the duration of the project.

The project was conducted in partnership with Newcastle City Council who provided HER data as well as regional and professional guidance to the Project Officer. She is especially grateful to Dave Heslop, Jennifer Morrison and Ian Ayris for their assistance.

The project commenced in April 2012 and was accommodated in the School of History, Classics and Archaeology at Newcastle University. Much of the early work, including the development of the HLC database and ArcGIS Geodatabase, was undertaken by Alex Turner. The Project Officer was joined in June 2013 by Dr Oscar Aldred who assisted with the characterisation stage of the project and completed parts of the Applications Review in this report. The project was funded by English Heritage as part of its national programme of Historic Landscape Characterisation.

Newcastle, April 2014

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PART ONE

INTRODUCTION

Sarah Collins

1 National Context

1.1 Background

HLC is a method for understanding and mapping the landscape with reference to its historic development and character (Fairclough 2003; Turner 2006; Turner and Fairclough 2007). It developed as a response to increasing awareness that traditional approaches used by archaeologists targeted individual monuments or find spots without an appreciation of the areas in between. HLC technique draws on methods which have long been in use in other disciplines, for example in geology to show soil-type or in ecology to map habitats. HLC is in accord with the understanding of landscape promoted by the European Landscape Convention, which regards landscape as both ubiquitous and culturally constituted (Council of Europe 2000). In the same sense that all parts of the landscape are different types of 'habitat', HLC recognizes that all parts of the landscape have historical significance which is the result of human activity and use over the millennia (Turner and Ayris 2012, 4). HLC maps those changes through interactive GIS-based descriptions of the landscape. It is a largely desk-based study making use of existing documents, maps, aerial photographs and historic environment data to broaden our understanding of the whole landscape.

1.2 The National Programme

HLC, as we know it today, was developed in the 1990s by English Heritage, however many of the underlying principles have origins from the 1960s onwards. The concept of 'character' was described in the 1967 Conservation Area legislation, but the emphasis was on evaluating which landscapes were 'better' than others (Swanwick 2002, 2). The 1980s saw the development of a new tool, 'landscape assessments', which sought to understand what made one place different/distinct from another, but the idea of defining character, while important, was not explicit (Swanwick 2002, 2).

Following the 1991 Government White Paper *This Common Inheritance*, English Heritage commissioned a project to evaluate and compare different methods for understanding and valuing the historic landscape. The resulting project sought to evaluate and compare different methods and concluded that a national register would not be beneficial; instead a holistic approach that sought to present interpretations of the historic character of the whole landscape was favoured (Fairclough *et al.* 1999).

Following a pilot study on Bodmin Moor in 1993 English Heritage commissioned county-wide coverage of the whole of Cornwall in 1994. Since then English Heritage has been instrumental in developing and applying the HLC methodology across the rest of England, with the aim of having complete HLC coverage for rural, urban and marine landscapes.

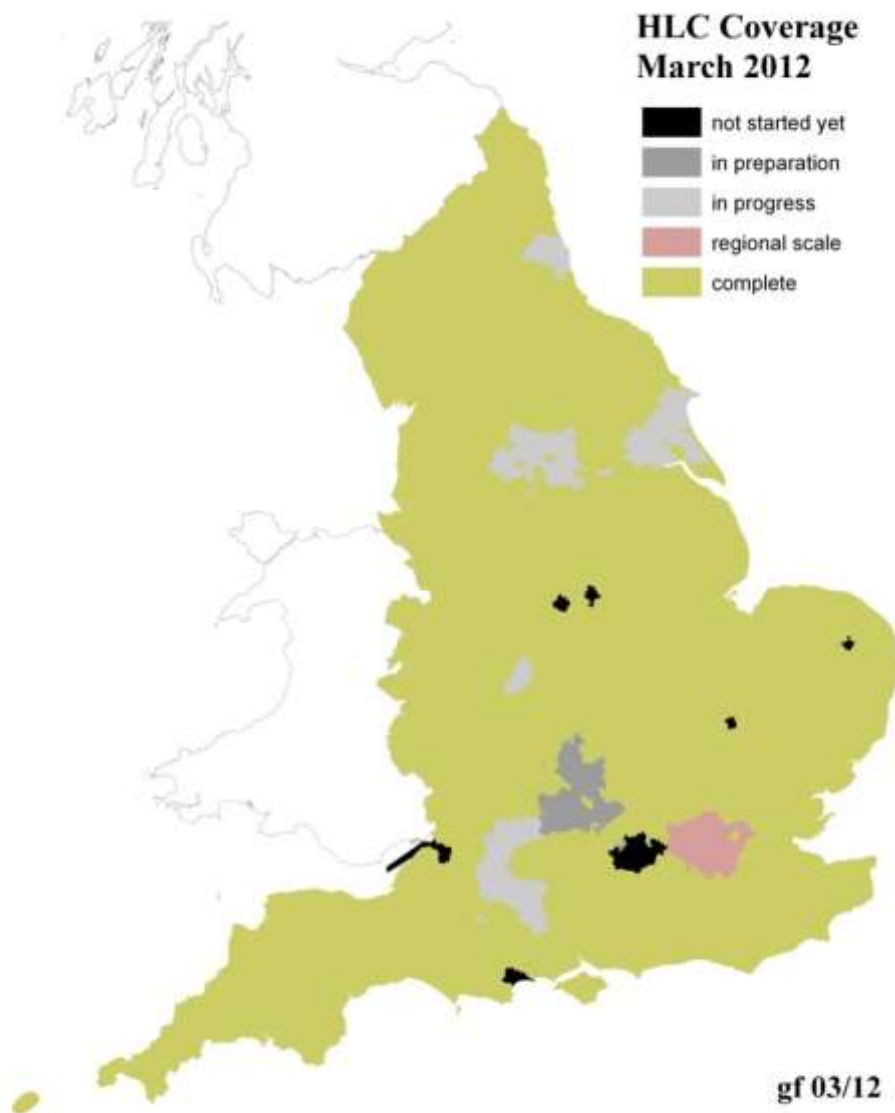


Figure 1. Coverage of the national HLC programme by March 2012.

The English Heritage Characterisation Team has always encouraged adaptation and improvement of earlier methodologies. Projects from the late 1990s onwards rapidly developed the use of GIS and this has enabled HLC projects to become more sophisticated in their analysis of aspects such as time-depth. A 2002 review, *Taking Stock of the Method*

(Aldred and Fairclough 2003), examined the evolution of the methodologies applied in the county HLCs at that date and concluded that as many as four stages of development could be identified. In keeping with this development English Heritage commissioned the first 'metropolitan' type HLC project in 2003 in Merseyside and this was closely followed by others, including the Black Country and South Yorkshire.

The Tyne & Wear project is a 'metropolitan'-type HLC. It has built on earlier methodologies to include even more detail from available historic sources, particularly the detailed sequence of Ordnance Survey maps that exist for the period from c. 1850 to the present. This has enhanced the usefulness of the HLC as a management tool in fast-changing urban landscapes.

Traditionally most HLC projects have been undertaken by local authorities, and typically by their historic environment services. The T&WHLC differs as it was a partnership between Newcastle University and Newcastle City Council. The collaboration has benefited the project in a number of ways: the project officer has been able to draw on the range of expertise housed in Newcastle University's School of History, Classics and Archaeology – the core team of which has recently become a university research centre called the McCord Centre for Historic and Cultural Landscapes; the project has benefited from the regional experience of the Urban Design and Conservation Team at Newcastle City Council; the project officer has been able to reach out effectively to help inform the work of professionals within the five unitary authorities in T&W. Overall, the partnership has effectively facilitated the integration of relevant research expertise and professional experience.

Figure 1 shows that at the time the T&WHLC began, English Heritage had achieved almost complete coverage in its national HLC programme. The map dates from March 2012 so it should be noted that at the time of writing Oxfordshire is in progress, as is Wiltshire, East and South Yorkshire (which is almost complete) and East Berkshire, which is about to get under the way. This leaves only a few cities to complete (Pete Herring, pers. comm.).

2 The Tyne & Wear Project

1.1 Location

The T&WHLC covers the five unitary authorities that make up the former county of Tyne & Wear: Newcastle, Gateshead, North Tyneside, South Tyneside and Sunderland. The area stretches from the northern boundary of County Durham to the southern boundary of the County of Northumberland, covering a total area of 538km² with a population of approximately 1,083,200 people. Although primarily an urban based project the T&WHLC can be roughly divided into three zones. About 46% of the modern project area can be described as urban in basic character, with an additional 6% making up the peri-urban fringe

such as suburban housing, or commercial and industrial zones. This leaves around 48% of the project area as rural in character.

2.3 Physical Landscape

The T&WHLC covers an area that includes four joint character types on the National Character Map. The majority of the T&W project, in its central urbanised areas, is characterised as the Tyne and Wear Lowlands, which covers Newcastle, Gateshead, North and South Tyneside and Washington as well as their various suburbs. The rivers of Tyne and Wear flow through an undulating landscape with broad glacial valleys (Countryside Commission 1998, 79). The Upper Carboniferous Coal Measures which underlie most of the county are made up of mainly mudstones and sandstones with numerous coal seams. These seams were mined from the early 13th century and fuelled the development of heavy industry and the rapid urbanisation of the 18th and 19th centuries. The bedrock is overlain by glacial deposits. The northern part of T&W is predominantly built up and covers the southern fringe of the South East Northumberland Coastal Plain. The whole of this area is relatively low lying and featureless, leading to the North Sea coast with its rocky headlands and sweeping sandy beaches (Countryside Commission 1998, 61). The most westerly tip of the county forms the edge of the Durham Coalfield Pennine Fringe, a more upland landscape with broad open ridges and valleys, stretching up towards the Pennines in the west (Countryside Commission 1998, 77). The landscape changes in the south east of the county where the area, including Sunderland and a large stretch of coastline, forms part of the Durham Magnesian Limestone Plateau. This comprises a gently undulating low upland plateau and with a west facing escarpment and varied coastal scenery (Countryside Commission 1998, 71). The Magnesian Limestone plateau which underlies the whole of this area dips eastward and overlies the Coal Measures (Countryside Commission 1998, 72).

2.4 Aims and Objectives of the T&WHLC Project

2.4.1 Main Aim

The main aim of this project, set out in the original Project Design in 2012 was to carry out a GIS-based HLC of Tyne & Wear. The project utilised a method for urban HLC based on recent projects funded by English Heritage such as South Yorkshire and the Black Country. It also developed a methodology adapted for the study area as part of the Wearmouth-Jarrow 'As One Monastery in Two Places' project (also funded by English Heritage).



Figure 2. The Tyne & Wear landscape

2.4.2 Specific Aims

Within this main aim the project had five more specific aims:

1. To follow the national HLC method to create a GIS-based characterisation of the historic and archaeological dimension of the present rural and urban landscape across the full extent of the project area, at a scale appropriate to use in management and planning applications in the region.
2. To demonstrate how the application of HLC produces a framework of understanding, which will structure and promote well-informed decision-making relating to the sustainable management of change and conservation planning affecting the historic environment in the study area.

3. To ensure that application of the method produces a GIS database fully compliant with the principles of HLC, with the present and anticipated user-needs of the five unitary authorities, English Heritage and their partners; and with available standards for data content, management, inter-operability and accessibility.
4. To structure, inform and stimulate future research programmes and agendas relating to the historic landscape of the study area.
5. To produce a tool that can be used to improve the awareness, understanding and appreciation of the historic dimension of the cultural landscape amongst professional and non-professional users.

2.4.3 Key Objectives

The Project Design also set out the projects five key objectives, outlined below:

1. To produce a GIS-based characterisation of the historic and archaeological dimension of the present landscape across the full extent of the specified project area.
2. To analyse and interpret the project's HLC database to identify and document contexts and applications in the project area with particular reference to the sustainable management of change in line with UK commitments arising from the European Landscape Convention (CoE 2000).
3. To define Historic Character Areas covering the whole of Tyne & Wear and disseminate them to conservation officers, strategic and development management planners, regeneration departments, etc. (we will invite EH's relevant Historic Areas Advisor to be involved in the preparation of the Historic Character areas) after the main digitisation phase is completed in autumn 2013.
4. To produce an Archive and a Project Report. Included within the Project Report will be a project method statement detailing the project's methodology and practical implementation; and an application review summarising the management and planning applications, current and potential, which HLC could be used to inform.
5. To disseminate information on the progress and results of the project through the internet and through professional and popular publications and other media.

These objectives were retained with the exception of number 3. While the creation of Historic Character Areas (HCAs) has been popular within previous HLC Project Reports the decision was taken to exclude these in preference for more detailed analysis of the urban and peri-urban, industrial, and rural landscapes for the whole project area, following the example of the recently published Manchester HLC Report (2012). While HCAs can prove

useful, on completion of the digitisation phase of the project and in appreciation of the needs of the professionals using the HLC data it was felt that in the context of T&W, character areas could only offer a generalised overview that might result in the temptation to dismiss the raw data in analysis. In addition, there is flexibility in the approach which offers a different examination of character that is different from the more static definition of Character Areas. Thus, built into the design of the particular HLC project are a set of results that accommodates differing kinds of data relevant to various applications.

Given the already extensive knowledge of professionals working in T&W coupled with the detailed nature of the T&W methodology; its ability to offer broad and fine-grained analysis, along with the usefulness of features such as *legibility* (outlined in Part Three of this report) the project team agreed that small-group meetings with potential users that concentrated on the utilisation of the raw data as a more profitable way to gain long term use of the HLC research in the future.

METHODOLOGY

Sarah Collins, Alex Turner *and* Sam Turner

3 Introduction

The project followed the broad methodology for HLC projects outlined in the recommendations within *The Historic Landscape Characterisation Programme: Template Project Design* (Aldred and Fairclough 2002). However, the T&WHLC methodology evolved from an undertaking by Sam Turner and Alex Turner in Newcastle University's School of History, Classics and Archaeology. In 2011, Alex Turner carried out an urban HLC as part of the Wearmouth-Jarrow 'As One Monastery in Two Places' project. This project developed the methodology used in the Black Country and South Yorkshire HLCs to produce an HLC database and GIS using Microsoft Access and ArcGIS. The area characterised covered c. 100km² of the districts of South Tyneside and Sunderland. The T&WHLC adapted the methodology used in this project to bring it in line with the national HLC programme and the area formed the initial pilot study for the project.

The following sections summarise the finalised characterisation methodology used throughout the main characterisation phase of the T&WHLC.

4 Sources of data

The T&WHLC was a largely desk-based survey that used a range of sources including Maps, the Tyne & Wear's Historic Environment Record, and Google Earth including Street View.

4.1 Maps

As characterisation is generally a rapid, desk-based exercise the decision was taken to only use digitally available maps which covered the majority of the project area. The primary source material therefore was provided through a range of Ordnance Survey (OS) maps available digitally for use in ArcGIS (see table 1 below). Current character was defined with reference to the OS MasterMap (2011). As MasterMap is updated regularly a copy of the data as it appeared in 2011, at the time of the creation of the Wearmouth-Jarrow 'As One Monastery in Two Places' project, was adopted throughout to retain consistency (this was also the most up-to-date copy available at the start of the project in April 2012). The core of the historic character was derived from consultation with a sequence of the OS maps at both National Grid (1:10,000 and 1:10,560 scales) and the County Series (1:10,560). The historic maps used range in date from the 1990s back to the 1860s. These proved hugely important not only because of their consistent coverage but also in providing a wider perspective of the landscape.

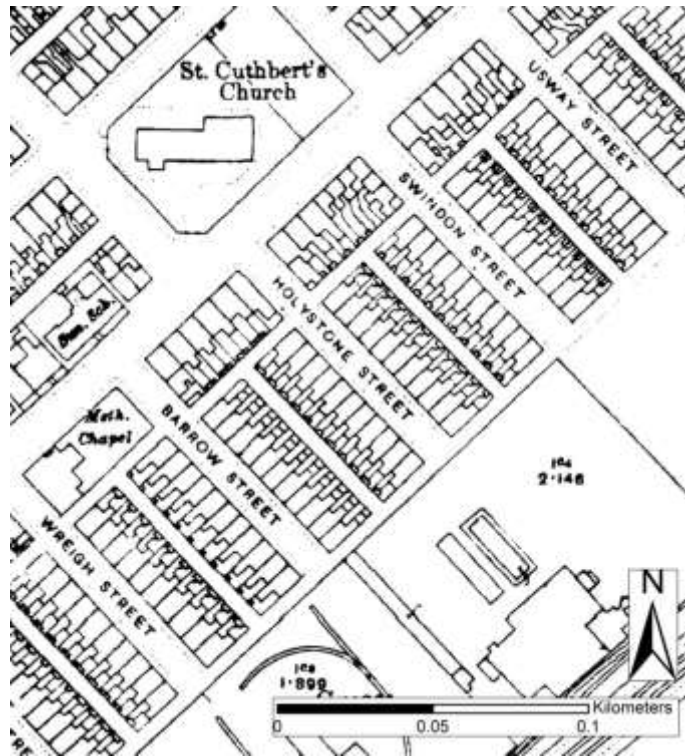


Figure 3. Tyneside Flats in Hebburn, South Tyneside at 1:2,500 scale © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1921).



Figure 4. Tyneside Flats at Hebburn, South Tyneside at 1:10,560 scale © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1921).

In addition to these core maps the project also utilised digitally available copies of the OS maps at National Grid (1:10,000 scale) for the 1980s back to the 1960s. These were used as reference only as coverage was severely limited, but provided guidance where the 1979-1996 coverage was lacking.

Finally, the project utilised the OS maps at the County Series (1:2,500) with date ranges from the 1930s back to 1860s. The purpose in using these maps was in the form of consultation against the County Series 1:10,560 scale only. The digital availability of the 1:2,500 maps was good but they were not consulted consistently throughout the whole of the project area. Where they were essential was in use characterising the urban cores, where the 1:10,560 maps proved inadequate at detailing the complexity of urban development. This was particularly notable in areas of the distinct local housing type - Tyneside flats. The cartography of this particular style of property is unique, but is only shown at the 1:2,500 scale. Figures 3 and 4 show the distinct split in back yards that is not depicted on the 1:10,560 maps.

The 1:2,500 maps proved invaluable for recognising this particular character type, which otherwise may have been wrongly identified as terraced housing. This was particularly important as the 1960s and 1970s saw the mass demolition of Tyneside flats throughout the project area so site visit or assessment through Google Street View was not always possible.

<i>Year of Publication (Survey)</i>	<i>Map</i>	<i>Coverage</i>	<i>Districts covered</i>
2011	OS MasterMap	100%	All
1979-1996	National Grid 1:10,000	100%	All
1966-1969	National Grid 1:10,560	100%	All
1951-1957	National Grid 1:10,560	100%	All
1938	County Series 1:10,560	c. 85%	All
1921	County Series 1:10,560	100%	All
1898-1899	County Series 1:10,560	c.86%	All
1861-1865	County Series 1:10,560	c.87%	All

<i>Year of Publication (Survey)</i>	<i>Map</i>	<i>Coverage</i>	<i>Districts covered</i>
1982-1989	National Grid 1:10,000	c. 47%	All
1972-1978	National Grid 1:10,000	c. 95%	All
c. 1960s	National Grid 1:10,000	c.42%	Newcastle, Gateshead, North Tyneside and small section of South Tyneside
1938	County Series 1:2,500	100%	All
1921	County Series 1:2,500	100%	All
1898-1899	County Series 1:2,500	100%	All
1861-1865	County Series 1:2,500	100%	All

Table 1. Map sources used (Reference lower table).

Although earlier maps were available they were not consulted during this project; whilst potentially limiting the decision was taken to exclude any mapping that was not available at the county scale. It was also felt that use of these maps might lead to the temptation to focus too much effort on the urban cores, and ‘over characterise’ them (i.e. not respect the minimum polygon size threshold of 0.5 hectares). If further research is carried out on the T&WHLC, it may prove beneficial to consult works such as the maps of Newcastle by Charles Hutton (1770) or Thomas Oliver (1830). Copies of both these maps are archived at Newcastle City Council; others are available in Newcastle University Library’s Special Collections.

4.2 Tyne and Wear’ Historic Environment Record (HER)

The project’s collaboration with the Urban Design and Conservation Team at Newcastle City Council, who provide advice to all five authorities in T&W, meant that the project was able to make good use of the HER. HERs are housed within local authorities and form archives of information regarding archaeology, Listed Buildings, Scheduled Ancient Monuments, Registered Parks & Gardens and Conservation Areas; they also provide a wealth of further information on the local area and interpretation of the Historic Environment. The T&WHLC was supplied with access to the HER’s GIS, and this data was used in conjunction with the online version (<http://www.twsitelines.info/>) as well as the more detailed HER files archived at Newcastle City Council.

The HER was useful in providing pre-1860s dating evidence, such as exact dates for the establishment of waggonways, railways or collieries. It was also helpful in relation to the fast turn-over of industries in the project area; although the footprint of buildings between mapping sources often stays the same, the HER’s more detailed information revealed subtle changes in use. Wherever possible, consultation with the HER was recorded in the *Notes* section of the database.

The T&WHLC emphasises to users that while the HLC data is a stand-alone product it is greatly enhanced when used in conjunction with the HER and should not be viewed as a replacement.

4.3 Other datasets

Other important sources included Google Earth, which allowed more accurate interpretation of *Period*, particularly for changes occurring between OS National Grid (1979-1996) and OS MasterMap 2011. The ability to accurately reflect the amount of 21st century change has demonstrated the fast pace of urban development within the project area.

Google Street View was used during the course of the project to counter some of the criticism that HLC under-uses fieldwork in preference for an over reliance on ‘vertical’ sources (Barnes and Williamson 2006). Google Street View allowed the team to inspect the landscape from a ‘ground-based’ viewpoint without prohibitively expensive and time-

consuming site visits. The project team found it was particularly helpful where interpretations based on mapping was ambiguous. For example, many of the former industrial sites along the rivers Tyne and Wear have been converted in recent years to quayside apartments, bars and restaurants, but this is not discernible from maps or aerial photography alone. Finally, Google Street View proved especially useful in identifying the range of different housing types within the *Settlement* Class. The footprint of many of the housing types is similar to that expected from terrace housing so Street View allowed for this diversity to be reflected in the dataset where examples still survived.

Natural England's *Ancient Woodland* dataset was consulted to support characterisation within the *Woodland* Class, specifically in identifying areas of ancient and semi-natural woodland or areas of ancient replanted woodland (using <http://magic.defra.gov.uk/>; reference was also made to the HER).

In line with the methodology used in the Wearmouth-Jarrow 'As One Monastery in Two Places' project the T&WHLC was fortunate to be able to draw on a GIS-based reconstruction of the extent of 'waste' in the historic county of Durham c. 1600. Professor Brian Roberts kindly shared the data created by his team which drew on historical maps and documentary sources to plot the rough pasture/rough ground that was not usually under arable crops (Dunsford and Harris 2003; Turner et al. 2013, 24). As the reconstruction was restricted to the historic county of Durham only the districts of Gateshead, South Tyneside and Sunderland benefited from the availability of this dataset.

5 Database methodology

Alex Turner *and* Sarah Collins

The database developed for the T&WHLC has one core table that is split into a series of tabbed screens for data entry. Figure 5 shows the *Description* tab, or front page of the database which details the *UID*, as well as general information regarding the district, parish and last update.

The screenshot shows a software interface for data entry. At the top, there are several tabs: Commercial, Communication, Extractive, Field System, Industrial, Military, Open Land, Public Services, Recreation, Religious, Settlement, Utilities, Woodland, Coast, and Water. The 'Description' tab is selected. Below the tabs, there are several input fields and a text area. The 'UID' field contains the number 12225. The 'District' dropdown menu is set to 'Sunderland'. The 'Parish' dropdown menu is empty. The 'Compiler' dropdown menu is set to 'Oscar Aldred'. The 'Record Complete?' checkbox is checked. The 'Last Update' field contains the date 08/04/2014. The 'General Notes' field is a large text area. To the right of these fields, there is a section titled 'Polygon # for District' with five empty input fields. At the bottom of the window, there is a 'Notes - Quick Entry' section with a 'Duplicate Record' button. The status bar at the very bottom shows 'Record: 11 of 11206 of 11206'.

Figure 5. Description tab from T&WHLC database

The remaining tabs represent a characterisation, where possible, for the *Modern OS MasterMap*, the seven sources of historic mapping (1980s-1862), as well as further characterisation tabs for *Post Medieval*, *Medieval* and *Roman* that infer character based on a combination of data from the HER and a visual assessment of boundary characteristics from the County Series 1:10,560 or 1:2,500 (1861-1865).

The database has a series of *Class* character type buttons at the top of the data entry form that present, as a series of drop-down menus, only those *Broad* character types that are relevant in each category. These are based on an editable single underlying list of types and controlled by a series of SQL queries.

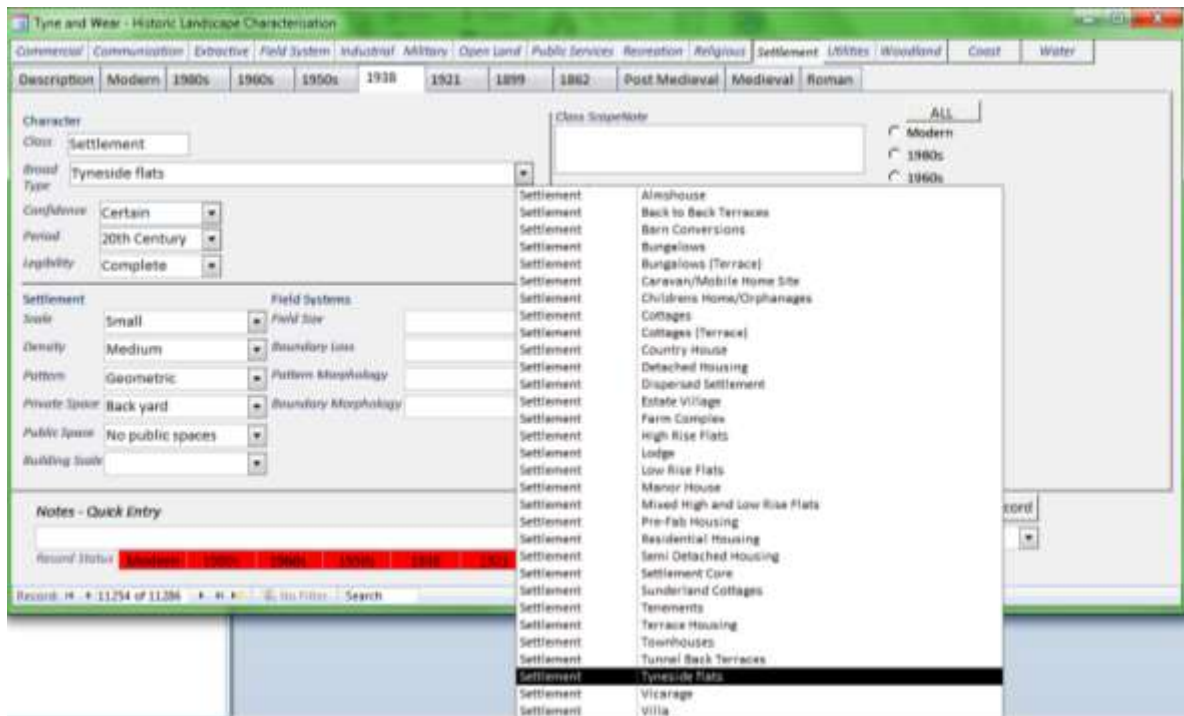


Figure 6. 1938 tab detailing Broad Type drop down list and attributes relating to Settlement and Field Systems.

A series of check boxes is provided for each character period and underlying code within the database allows for the duplication of data across periods with a single command button. This allowed for rapid population of the records where there was a single historic character type over multiple periods.

The database contains data relating to a series of attributes that are also accessible from within the period tabs (see figure 6). More general *Confidence*, *Legibility* and *Field Systems* attributes are typical of most HLC projects. As the T&WHLC is an urban project the decision was taken to add a series of *Settlement* attributes. A full list of attributes with scopenotes can be found in Appendix 2: Database Structure. In brief, these represent the key characteristics that can be assigned to individual settlement types allowing for a detailed representation of the changing style of settlement in the project area.

6 Digitisation methodology

The project was mapped using ESRI's ArcGIS 10 and subsequently 10.1. Historic raster maps were stored as a series of raster catalogues within an ArcGIS geodatabase to facilitate the rapid display of such large datasets. The use of ArcGIS also allowed for other datasets, such as district or parish boundaries and the HER to be displayed within the same user space.

Polygonisation of the T&WHLC was carried out with initial reference to OS MasterMap (2011) to define discrete blocks of character. Each of the seven sources of historic mapping was then consulted to ascertain previous land uses and the date of origin. Where necessary, these discrete blocks of character were divided further before polygonisation began, to reflect the historic character of the landscape. For example, figures 7 and 8 show the potential loss of information regarding the historic character of the landscape currently in use as Newcastle International Airport if only the modern block of character had been used. The area defined as the airport is divided into several polygons in figure 7 to accommodate historical differences in landscape character in figure 8.

Previous HLCs have overcome this by use of a 'mixed origin' character type or reliance on 'Notes'. The decision was taken that within a fast-changing urban environment such as T&W that this would lead to over use, and as a result, meaningless historic data. However, to avoid over-polygonisation, a threshold limit on polygon size of no less than 0.5 hectares was stipulated. Any discrete blocks of character, modern or historic, falling under this limit were included within a larger adjacent type.

The resultant polygon layer is a SHP File made up of 11,286 polygons that is easily populated by users within ArcGIS or QGIS. Spatial polygon data from ArcGIS is joined to the Access database with a single common field OBJECTID. All non-graphical data is available for querying within the Access database, while graphical and non-graphical data is available for querying within ArcGIS.

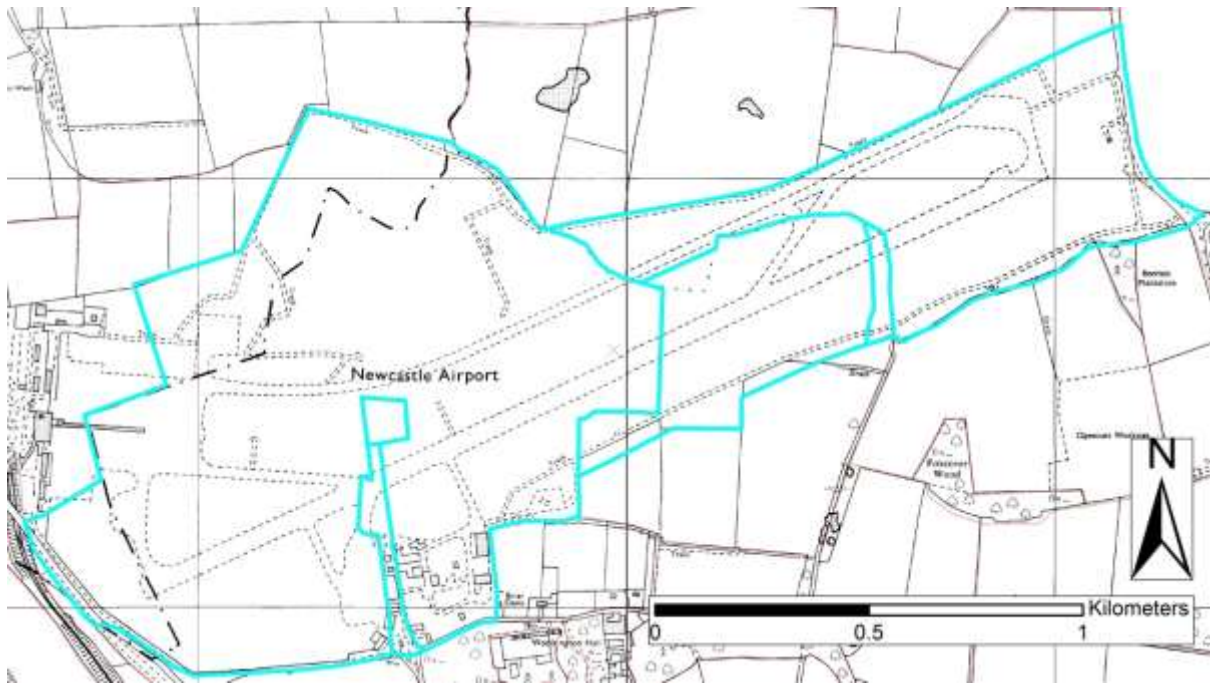


Figure 7. Newcastle International Airport © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1979-1996).



Figure 8. The historic character of the area of land now characterised as Newcastle International Airport © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

7 HLC types methodology

7.1 Type Methodology

When considering how to divide up the T&W landscape into categories of historic landscape character, the first step was to consult and compare previous HLC projects. Being one of the last HLCs to be undertaken, the T&WHLC had the advantage of being able to consult several other urban-based HLC projects. The two adjoining HLC projects of Durham and Northumberland were also considered, as well as the suggested list of types in 'Using Historic Landscape Characterisation' (Clark et al. 2004, 8) (see Table 2 below).

<i>Tyne & Wear Class</i>	<i>South Yorkshire Broad Historic Type</i>	<i>Black Country Broad Category of Land Use</i>	<i>Northumberland Basic Character Type</i>	<i>Durham</i>	<i>Using Historic Landscape Characterisation</i>
Commercial	Commercial	Commercial	Communications	Infrastructure	Communications
Communication	Communications	Communications			
Extractive	Extractive	Extractive	Fieldsapes	Enclosed Land	Enclosed Land
Field System	Enclosed Land	Field System	Industry	Industrial	Industrial Land
Industrial	Industrial	Industrial	Military	Military	Military
Military		Military	Rough Land	Unenclosed Land	Unenclosed or unimproved land
Open Land	Unenclosed Land	Open Land			
Public Services	Institutional	Public Services	Ornamental/ Parkland/ Recreation	Recreational and Ornamental	Ornamental and Recreational
Recreation	Ornamental, Parkland and Recreational	Recreational			
Religious		Religious	Settlement	Settlement	Settlements
Settlement	Residential	Settlement			
Utilities		Utilities	Woodland	Woodland	Woodland
Woodland	Woodland	Woodland	Coast	Coastal	Water Bodies
Coast			Water	Inland Water	Water and Valley Floor Orchards
Water	Water Bodies				

Table 2. Comparison of general categories used within previous HLC Projects.

7.2 Class Types ¹

The *Class types* used in the T&WHLC are generally similar to those used in previous urban-based projects, with obvious additions, such as *Coast*. The T&W project purposefully matched all the types within the Northumberland and Durham projects to make comparisons between the three project areas easier. Given that T&W was historically part

¹ The correspondence between the HLC projects and the terminologies used to describe HL character in the T&WHLC match with the HLC's more usual terminology hierarchy in the following way: Class = Broad Type, Broad Type = Type and Sub-Type. An Attribute Interpretation was used specifically for the Settlement and Field System Classes. The issue of inconsistency was raised at the beginning of the project: As the project inherited an already established database, the terms that were used in it were adopted by the T&WHLC. To change at that stage would have involved an entire database rewrite, and was considered to be an unnecessary use of resources.

of the counties of Northumberland and Durham, this might be particularly important for historic cross-boundary research by future users. A full list of T&W *Class* types (in order of their appearance within the HLC database) and their scopenotes can be found in table 3 below.

<i>Class</i>	<i>Class Scopenote</i>
Commercial	Areas predominately retail/office
Communication	Areas of transport networks and associated services
Extractive	Areas predominately quarrying/mining
Field System	Areas of enclosed fields both arable and pasture
Industrial	Areas of industrial activity
Military	Military sites
Open Land	Areas of open land such as common or heath
Public Services	For areas predominately government services, community/publicly accessible centres
Recreation	Areas predominately recreation, sport or large landscaped areas
Religious	For areas of religious buildings or civil cemeteries
Settlement	Areas of residential housing
Utilities	Areas predominately utilities, including reservoirs, sewage and power stations
Woodland	For areas of woodland
Coast	Areas of land closely associated with or between the high and low watermarks
Water	Areas predominately water, either natural or artificial

Table 3. *Classes of Historic Landscape used within the Tyne & Wear HLC.*

7.3 Broad Types

The *Broad types* (the narrower, more specific types that sit within the *Class* types) were also drawn up at the beginning of the project. Some of these are general types that could be found within any characterisation project in the UK, while others reflect the individual nature of the T&W landscape (for example *Class: Settlement, Broad Type: Tyneside Flats*). An initial list was created and additions were made during the characterisation stage of the project as new character types were identified.

7.3.1 Commercial

Table 4 provides scopenotes on the *Broad types* used within the *Commercial Class*. Some types provided a cross-over between commercial and recreational activity, for example *Public House and Clubs* or *Cinema Complex*. The project team decided to characterise these as ‘recreational’ rather than ‘commercial’.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Animal Farm	For farms and associated buildings marked for a specific type of animal (also to include temporary boarding facilities for pets – eg: Cattery)
Builders Yard	For commercial sites supplying building materials

Business Park	For areas specifically marked as Business Park
Commercial Core (Suburban)	For suburban centres away from urban centres with mixed use offices and shops
Commercial Core (Urban)	For urban centres with mixed use offices and shops of various dates
Dairy	For large dairies that are identifiable as not being within a mixed use area
Hotel/Motel	For large hotels/motels with attached car parks
Market	Includes inside and outside markets of any kind, for example: cattle market; fish market; market halls; market places (to be defined as a permanent market or, if outside, one that meets on regularly organised days)
Offices	For large office complexes that are not part of a mixed use area
Offices and Shops	For mixed use area outside of the town centres
Other Commercial Site	For areas of commercial buildings with unknown use
Petrol Stations	For large, stand alone, petrol stations with attached car parks
Plant Nursery	For plant nurseries covering large areas
Retail Park	For large warehouse type shops selling products such as large furniture or white goods, and with attached car parks
Shopping Centre	For shopping centres with many small units, and may include restaurants, pubs and cinemas within them
Shops	For large areas of shops away from the main commercial core that are not part of a more dominant character type
Superstore	For large, stand alone, single stores, such as supermarkets or furniture outlets, and with attached car parks

Table 4. Commercial Broad types used within the T&WHLC.

7.3.2 Communication

Communications types are dominant feature within T&W on account of the urban and industrial nature of the region. We have attempted to detail the variation of communication types whilst attempting to be consistent with HLC methodology that often avoids linear features.

The threshold width for characterising railways, rivers and roads was set after advice from the Northumberland HLC to ensure consistency.

Broad Type	Broad Type Scopenote
Airport/Airfield	For areas of land set aside for the takeoff and landing of civilian aircraft and also including associated buildings for maintenance and facilities for passengers
Ballast Hill	For marked/known artificially formed hills made from ballast dumped from shipping; ballast traditionally takes the form of heavy material such as gravel which is carried low in a vessel to improve stability and typically dumped in the river mouth when cargo was loaded
Ballast Railway	Areas marked as ballast railway
Bridge	For large bridges across major rivers (specifically the Rivers Tyne and Wear); to be defined as bridges that span rivers at points where the channel is greater than 100 meters wide
Bus/Coach Station	For large transport hubs where passengers and cargo are exchanged between vehicles; specifically bus/coaches (also includes Park & Ride and associated car parks)
Car Park	For large car parks and multi storey car parks
Disused Docks	For areas of former docks no longer in use

Disused Railway	For former railway line (greater than 20m wide), including former sidings
Disused Staiths/Quays	For former quays, jetties and staiths
Docks	For dockyards where docks and equipment are supplied for repairing and maintaining ships, boats etc; also where loading/unloading of cargo takes place (includes associated buildings)
Harbour	For artificial and natural harbours; to include deliberately constructed breakwaters, sea walls and/or jetties
Lighthouse	For lighthouses and associated buildings
Marina	For areas where private yachts and small boats are moored, and including areas for refuelling, washing and repairing boats, also stores, restaurants and car parks
Navigation Channel	For areas marked 'Channel' or 'Navigation Channel', used by ships to gain access to an inland dock
Port	For the large ports of Sunderland and Tyne exclusively
Railway	For use with large modern passenger/mineral railway lines (greater than 20m wide), and including sidings and junctions when not large enough to characterise separately
Railway Sidings	For areas of large railway sidings including engine sheds and goods sheds
Railway Stations	For large railway stations including the station building and the tracks within it, platforms and other associated buildings such as ticket offices or waiting room
Road	For use with large modern roads (dual carriageways, greater than 20m wide), and including embankments and service areas
Slipway	Marked as slipway
Staiths/Quay	For quays, jetties and staiths where cargo and passengers are loaded/unloaded along the river shore or within harbours (commonly comprising a fixed platform, often of pilings)
Tram Depot	For large depots where trams are stored
Tunnel	For use with large tunnels (specifically the Tyne Tunnel) that are greater than 20m wide
Waggonway	For use with large waggonways associated with the coal industry

Table 5. Communications Broad types used within the T&WHLC

7.3.3 Extractive

The T&W region has a long history of mineral extraction activity resulting in a significant percentage of past use being attributed to various forms of extraction. As the quality of the mapping information and HER was good enough to record the exact nature of extraction the decision was taken to be more detailed than neighbouring HLC projects by listing the specific type of mineral being extracted wherever possible. Early identification showed that it was common for sites to go through multiple periods of use and disuse throughout the sequence of maps being examined. For this reason, as much attention was paid to *Disused* sites as sites under extraction

Broad Type	Broad Type Scopenote
Clay Quarry	For areas marked as clay quarry
Colliery	For areas of coal mining with associated outbuildings, industrial equipment and rough grassland
Disused Clay Quarry	For former clay quarries
Disused Colliery	For areas of former coal mining marked as disused or as 'old shafts'
Disused Limestone Quarry	For former limestone extraction sites

Disused Quarry	For former quarries with unknown extraction
Disused Sand/Gravel Pit	For former sand or gravel extraction sites
Limestone Quarry/Mines	For areas of limestone extraction
Opencast Workings	For areas of open pit mining where mineral resources are found close to the surface
Quarry	For areas of quarrying with unknown extraction
Sand/Gravel Pit	For areas of sand or gravel extraction
Slag Heap	An artificial hill formed of the waste matter from extraction/industrial activity

Table 6. Extractive Broad types used within the T&WHLC.

7.3.4 Field System

Field System Types are largely in keeping with previous HLC projects (see table 7 below for further detail on scopenotes).

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Agglomerated Fields	Fields that are large and typically 20 th century in date (generally post-World War II); they demonstrate a significant alteration from post-medieval enclosure through field boundary loss or re-organisation
Other Enclosed Fields	For assumed field systems that cannot be identified as anything else
Paddocks and Closes	Small irregular fields that are closely associated with settlement; often being located on the edges of settlement; these commonly consist of small dry meadows, paddocks and closes of varying dates
Piecemeal Enclosure	Fields that are characterised by irregular boundaries and pre-date the main period of surveyed enclosure. Typically created from the medieval open fields, they commonly follow the old strips so can be found with reverse-s boundaries, dog legs and/or ridge & furrow
Re-organised Piecemeal Enclosure	Fields with many straight boundaries but which are probably based on medieval strip fields; these fields have been enclosed but have been substantially re-organised during the post-medieval period
Squatter Enclosures	Small piecemeal fields associated with squatter settlement often in areas of collieries or former common land
Strip Fields	Fields that are characterised by reverse-s curves or dog legs and/or ridge & furrow (historic type only)
Surveyed Enclosure	Fields that are dominated by straight boundaries, often in regular, grid-like patterns, with the appearance of being laid out as a piece by a surveyor; they relate to fields that were enclosed as a result of acts of parliament, or through private agreement during the post-medieval period

Table 7. Field System Broad types used within the T&WHLC.

7.3.5 Industrial

The long history of industrial development in T&W meant that, at the beginning of the project, the decision was taken to be very detailed with the *Broad Types* assigned and that wherever possible industrial zones would be divided into their specific types of industry. It was hoped that this would reflect the often high turnover of industry and allow for

assessment of the diverse use of differing industrial types along the River Tyne and the River Wear.

However, the often small-scale nature of urban plots means that the polygons reflect the dominant industrial type. Smaller forms of industry are sometimes lost in favour of a larger more dominant type, unless the polygon truly reflects an area of *Mixed Works*.

It is also worth noting that while *Industry/Works* was avoided as much as possible it does reflect those areas where the exact industrial activity could not be identified. The mapping from the 1950s (National Grid 1:10,560) through to OS MasterMap (2011) increasingly records 'Factory' or 'Works' instead of specific industrial types. In these instances the HER was used as a guide to establish the likely length of site occupancy of earlier marked types of industry. For example, 'engineering works' are typically marked as such up to and including the County Series (1938) mapping, but then change to 'Works' from the 1950s onwards. Where this occurred the 'end date' recorded within the HER was used. The specific industry was characterised up to the mapping source within which the HER 'end date' fell, and then subsequently as *Industry/Works* for any mapping sources after the established 'end date' within the HER. This has resulted in the mapping source of *1980s* being the most likely to be recorded as *Industry/Works*. This is because the HER rarely records site occupancy of specific industries up to this date. The 80s represented a period of massive change in industry in the T&W region, but modern sources such as Google Earth were of limited use.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Abattoir	Areas marked as abattoirs or slaughterhouses
Alkali Works	Areas marked as alkali works
Barium Works	Areas marked as barium works
Bauxite Works	Areas marked as bauxite works
Boiler Works	Areas marked as boiler works
Bottle Works	Areas marked as bottle works
Brewery/Cooperage	For large brewery sites and/or cooperages
Brick Works	For brick works which include clay extraction pits if associated with the works
Cement Works	Areas marked as cement works including any associated quarry
Chemical Works	Areas marked as chemical works, including soap works
Clothing Factory	For large marked clothing factories, including textiles and hats
Coke Works	Areas marked as coke works
Copper and Sulphur Works	Areas marked as copper and sulphur works
Corn Mill	For areas marked as corn mill
Depot	For marked depots
Disused Brick Works	For former brick works
Disused Corn Mill	For former corn mills
Disused Flour Mill	For former flour mills
Disused Foundry	For areas marked as foundry (disused)
Disused Glass Works	For former glass works
Disused Lead Works	For areas of former lead works
Disused Lime Works/Lime Kilns	For former lime works/kilns
Disused Metal Works	For areas of former metal works
Disused Pottery Production Site	For sites of former pottery production
Disused Ship Building Yard	For areas of former ship building no longer in use

Disused Timber Pond	Area of a River formally used for storage and curing of timber
Electrical Engineering Works	Areas marked as electrical engineering works
Engineering Works	Areas marked as engineering works
Flour Mill	For marked flour mills and associated buildings
Food Processing Plant	For factories processing food/drinks products
Forge	For areas marked 'forge'
Foundry	For areas marked as foundry
Garage	For large repair garages and car show rooms
Gas Valve Compound	For areas marked as GVC/GVCs
Glass Works	Areas marked as glass works
Grease Works	Areas marked as grease works
Industrial Estate	Areas marked as industrial estate that contain small units of light industry (can also be used for sites marked as 'trading estate')
Industry/Works	For areas which indicate industrial activity or are marked as 'works' but where the exact activity is unknown (can also be used for sites marked 'factory')
Lead Works	Areas marked as lead works
Leather Works	Areas marked as leather works, including shoe factories, saddlery makers and tanneries
Lime Works/Lime Kilns	Areas marked as lime works/kilns including associated quarry
Machine Tool Works	For areas marked as 'machine tool works'
Metal Works	For areas marked as metal works but where no further more specific industry can be identified
Mixed Works/Workshops	For areas of small industrial units that are too small to characterise individually and where the industry is either unknown or mixed (can also include associated settlement)
Oil Terminal	For large terminals where petroleum products are stored or transported from
Ordnance Works	For areas marked as ordnance works, or where armaments/artillery was manufactured
Paint Works	For areas marked as 'paint works'
Paper Mill	Areas marked as paper mill
Photographic Works	For areas of industrial activity connected to the photographic industry
Plastic Factory	For areas marked as 'plastic factory'
Pottery Production Site	For areas where pottery is produced and to include any associated extraction pits
Rope Walk/Hemp Factory	For marked rope and hemp making sites
Salt Works	For areas of salt production on an industrial scale
Scrap Yard	Areas marked 'scrap yard'
Ship Building Yard	For areas marked as ship building yards, but not to be used for ship repair
Ship Repair Yard	For areas marked as ship repair yards, but not for ship building
Storage Yard	For areas that indicate use as a yard but where the exact activity is unknown
Timber Pond	Area of a river used for storage and curing of timber
Timber Yard/Saw Mill	For areas marked as timber yards and/or saw mills
Tobacco Factory	For large tobacco factories and associated buildings
Vehicle Works	For areas where vehicles (both motorised and non) are manufactured
Warehouse	Areas marked 'warehouse'
Windmill	For windmill and associated mound

Table 8. Industrial Broad types used within the T&WHLC

7.3.6 Military

T&W, being originally made up of Northumberland and County Durham, has well-known evidence of military occupation at various phases during its history. Hadrian's Wall is perhaps the most notable of these, running through parts of the Newcastle and North Tyneside districts. When dealing with military character types the decision was taken to characterise only where the type had influenced or been preserved by later landscape character types.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Defensive Structure	Structures used for civil defence: artillery batteries; barrage balloons; bunkers or tank traps
Disused Defensive Structure	For former structures used for civil defence
Disused Military Airfield	For areas marked as former airfields
Disused Rifle Range	For areas marked as disused rifle range
Disused/Abandoned Fortified Site	For former fortified sites
Fortified Site	Any fortified site, for example, castle or fort: Prehistoric; Roman; Medieval or Post-Medieval
Military Airfield	For areas marked as military airfields (to be defined as areas directly owned by the military and operated by them)
Military Depot or Camp	For marked military camps or depots
Rifle Range	For rifle ranges and targets
Territorial Army	Centre for sites of territorial army activity

Table 9. Military Broad types used within the T&WHLC.

7.3.7 Open Land

Open Land types are largely in keeping with previous HLC projects (see table 10 below for further detail on scopenotes).

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Ancient Unenclosed Common	Areas of open uncultivated land such as heaths or moors For areas marked 'common' or 'green' that are areas of open land for public use and typically located near to settlement
Derelict Land	For areas of land that have been cleared of buildings, but have not been put to further use; also, for areas where the map does not indicate what the land use is/was, or where aerial photography shows no vegetation
Marginal Riverside	Areas of grassland or scrub at river edge
Reclaimed Mud Flat	Former tidal mud flats or docks that have been reclaimed
Rough Grassland/Scrub	For areas of rough pasture that is largely made up of grassland with some bushes
Vacant Plot	For smaller plots of land within settlement or industrial areas that cannot be defined as anything else

Table 10. Open Land Broad types used within the T&WHLC.

7.3.8 Public Services

Public Service types form a new addition within urban based HLC projects. The decision was taken to follow the example of the South Yorkshire and the Black Country HLCs by including a selection of these types of building that are closely connected to settlement. They were characterised only when falling above the minimum polygon size of 0.5 hectares. Some of the types, such as, *School, Hospital, or Library* were also included within the *public space* attribute attached to settlement types. This allowed for those types under the minimum polygon size to be noted within the often more dominant type of *Settlement*.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Asylum	For marked asylums, including green space; the definition of an asylum is taken to mean an institution for the care of the mentally ill and those requiring specialised assistance (historic type only)
Community Centre	For community centres, meeting halls, working men’s clubs, etc.
Court Building	For crown courts and magistrates courts where civil and criminal cases are tried by a judge or magistrate
Emergency Services Building	For marked police stations, fire stations and ambulance stations, where free-standing
Higher Education Facility	For university and college campuses including; associated buildings, car parks and green space
Hospital	For marked/known hospitals including; associated buildings, car parks and green space
Library	For public libraries
Medical Facility	For marked medical facilities including; small hospitals, clinics and medical centres
Municipal Buildings	For municipal buildings including; city/town halls, and centres of local/national government
Public Building	For non-specific public buildings
School	For schools, nurseries and day care centres and including grounds/playing fields
Wireless Station	For areas marked as wireless stations and including masts and other associated space
Workhouse	For marked work/poorhouses that acted as a public institution where the poor could seek board and lodging in return for work (historic type only)

Table 11. *Public Services Broad types used within the T&WHLC*

7.3.9 Recreation

Recreation types form a large proportion of the historic and modern landscape within T&W. As with public service types some of the broad types within the recreation class can also be found within the *public space* attribute attached to the *settlement class* type.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Allotments	For allotments that are typically for the cultivation of vegetables or fruit crops for the owner rather than commercially
Amusement Park	For areas marked ‘amusement park’
Archaeological/Historical attraction	For archaeological/historical sites that are open to the public
Art Gallery	For art galleries, and including attached car parks and landscaped gardens
Bowling Alley	For large, stand-alone bowling alleys, including attached car parks
Caravan Park/Campsite	For caravan parks and campsites that are not permanent

Cinema Complex	For cinemas that are stand-alone (not within a shopping centre or retail park, but can contain smaller units, such as shops, within them)
Deer Park	For land historically used as a deer park
Detached Gardens	For gardens that are disconnected from associated housing
Golf Course	For areas marked as a golf course
Monuments/Sculpture	For large monument and sculptures
Museum	For museums, and including attached car parks and landscaped gardens
Nature Reserve	For marked nature reserves
Pigeon Lofts	For large areas of land containing pigeon lofts
Private Parkland/Ornamental landscape	For parkland and ornamental landscapes associated with country houses
Promenade	For promenades along sea fronts and major rivers
Public Baths	For public swimming or bathing complexes
Public House and Clubs	For public houses or clubs and including attached car parks and beer gardens (typically out-of-town)
Public Open Space	For areas of land accessible to the public and usually landscaped for a specific purpose
Public Park	For publicly accessible parks that can include an ornamental lake, designed flower beds, tennis courts and children's play areas
Public Square	For public squares that are designed as a meeting place for large amounts of people; they may contain seating, monuments, sculpture/art installations, and temporary markets
Racecourse	For all racecourses such as horses or greyhounds
Restaurants	For large, typically out-of-town restaurants and attached car parks
Sports Centre	For complexes marked 'sports' or 'leisure' centre
Sports Ground	Where one or more sports may be played (also includes land defined as 'playing field')
Stadium	A stadium where sport is played professionally
Theatre	For buildings marked 'theatre'

Table 12. Recreation Broad types used within the T&WHLC.

7.3.10 Religious

Table 13 provides further details on the scopenotes for *Religious* Broad Types. An attempt was made, wherever possible, to record character by the specific religious belief rather than under a broader, general term such as 'religious building'. It was hoped that this might add to a better understanding of the diversity of cultural backgrounds emerging over the course of the 20th century within T&W. In reality, the buildings of the religious character types of *Hindu Temple*, *Islamic Mosque*, *Jewish Synagogue* or *Sikh Temple* were often too small to characterise individually and so they are frequently subsumed within another class type, typically *Settlement*. In these instances they are recorded under the *public space* attribute attached to settlement types, but are recorded as *Religious Building*. When using the *Religious* broad types for analysis therefore, it should be borne in mind that the relatively early establishment of *Anglican Church* and *Roman Catholic Church* types results in an increased likelihood of individual polygon characterisation, which may skew results.

Broad Type	Broad Type Scopenote
Anglican Church	For marked churches of Anglican denomination and including associated

Cemetery	buildings, churchyards, and car parks For cemeteries that are separate to churchyards and including associated buildings such as chapels and lodges
Hindu Temple	For marked Hindu Temples
Islamic Mosque	For marked Islamic Mosques
Jewish Synagogue	For marked Jewish Synagogues
Monastic Complex	For marked/known monastic complexes
Non-Conformist Church	For marked churches of non-conformist denomination and including associated buildings, churchyards, and car parks
Roman Catholic Church	For marked churches of Roman Catholic denomination and including associated buildings, churchyards, and car parks
Sikh Temple	For marked Sikh Temples

Table 13. Religious Broad types used within the T&WHLC.

7.3.11 Settlement

Given that around 52% of T&W can be described as urban in character, *Settlement* types were given particular attention at the beginning of the project because they reflect a large proportion of the *Modern* land use and significant parts of the historic ones.

Wherever possible settlement zones were divided into their specific housing types; it was hoped that this would provide an accurate reflection of the diversity of housing types within the project area. As with other class types, the often small-scale nature of urban plots meant that occasionally polygons reflect areas of mixed housing types. In these instances the dominant settlement type was used whenever possible. *Settlement Core* was used only for areas which demonstrated a complete mix of housing types of differing origins, and where the diversity was too fine-grained to reflect in the characterisation.

The HLC methodology allowed for the inclusion of individual, county-specific types, in conjunction with national wide types. Examples in Table 14 include *Tyneside Flats* and *Sunderland Cottages*.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Almshouse	For areas of known or marked almshouses; the definition of an almshouse is taken to mean those that are typically run by charities to provide independent living for needy people, such as the elderly; they often relate to certain forms of previous employment (such as mining) and are for retirees or their widows
Back to Back Terraces	For areas of mainly back to back terraces; to be defined as terraced houses which share a rear wall or where the rear wall directly abuts another building, such as a factory
Barn Conversions	For former barns that have been converted for use as residential housing and are stand alone, including any associated parking or gardens
Bungalows	For areas of mainly bungalows, either detached or semi-detached; to be defined as no more than two bungalows adjoined
Bungalows (terrace)	For single storey terrace of houses
Caravan/Mobile Home	For sites of mobile homes/caravans that are permanently sited or permanently lived

Site	in; if permanency cannot be established it will be characterised as <i>Class Recreation, Broad Type Caravan Park/Campsite</i>
Children's Home/Orphanages	For marked children's homes and orphanages designed for the care and education of children without parents
Cottages	For areas of (at least) two-storey cottages that are detached from one another or semi-detached; to be defined as no more than two cottages adjoined
Cottages (terrace)	For areas of (at least) two-storey cottages that are in a terrace; to be defined as a row of cottages of at least three or more buildings
Country House	For large detached houses, commonly located in rural or semi-rural settings and usually surrounded by ornamental gardens and/or parkland; to be characterised individually, only when large enough to stand alone from the ornamental gardens/parkland
Detached Housing	For areas of mainly detached housing; to be defined as housing built as single family units
Farm Complex	A large complex of farm buildings that include the farm house, farm yard, barns and any other associated outbuildings
High Rise Flats	Tower blocks and high density blocks of flats/apartments; to be defined as more than six storeys
Lodge	For marked or known lodges, typically found on the outskirts of ornamental gardens/parkland
Low Rise Flats	Flats, apartments and maisonettes that are generally five storeys or less
Manor House	For the principal house of a manor or village (historic type only)
Mixed High and Low Rise Flats	For areas of dense housing dominated by a mixture of high and low rise flats, apartments and maisonettes (only where no single dominate type can be defined)
Pre-Fab Housing	Areas dominated by pre-fab housing (detached, semi-detached or terraced); the definition of pre-fab housing is taken to mean those which were originally built as temporary residences but which subsequently became permanent
Residential Housing	For marked residential homes that can either be for the elderly or for student accommodation
Semi Detached Housing	For areas of mainly semi-detached housing; where housing is built in pairs as units sharing a party wall and commonly with each house's layout being a mirror image of its twin
Settlement Core	For areas of settlement, assign only if sure of date
Sunderland Cottages	For area dominated by Sunderland Cottages; Sunderland Cottages are a distinctive form of low cost housing that developed in Sunderland for use by workers of Sunderland's shipyards; they are typically defined as single-storey, terraced homes
Tenements	Former townhouses that were sub-divided by the poor after they were abandoned by their original owners; the original buildings were typically located along rivers and owned by wealthy merchants; the houses were later occupied by working class families who worked in local factories, also commonly located along rivers (historic type only)
Terrace Housing	A row of three or more identical or mirror-image houses that share side walls
Townhouses	For areas of townhouses; defined as terraced housing having three or more floors
Tunnel back Terraces	For areas of mainly tunnel back terraces; to be defined as a row of three or more terraces with a rear yard/garden but without a rear lane; instead yards/gardens typically share a rear wall with the next terraced row with tunnels placed at intervals to allow access for those in the middle of the row to the rear yard/garden
Tyneside Flats	For areas dominated by Tyneside Flats; a distinctive form of low cost housing throughout Tyneside; defined as pairs of single-storey flats within a two-storey terrace with their own separate access to the rear yard (the upper flat by external steps), which could be shared or divided; they distinctively have separate front doors which are adjacent to each other; variants include two door and four door types.
Vicarage	For buildings marked as vicarage or rectory that are independent of church grounds
Villa	For detached or semi-detached villas in residential districts; typically located within suburbs or at the limits of the urban fringe, where, historically, they represented a rural retreat on a smaller scale than the Country House

Table 14. Settlement Broad types used within the T&WHLC.

7.3.12 Utilities

Utilities types form a small but important addition within an urban based HLC project. Given the industrial heritage within T&W the *utilities* types often provide useful support services to industry and the settlement that subsequently developed. The decision was taken to follow the Black Country example by including a small range of these types where necessary.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Disused Gas Works/Storage	For areas marked as disused gas works or for former gasholders/gasometers that are no longer in use for the storage of gas
Disused Reservoir	For areas marked as disused reservoir/dry reservoir
Gas Works/Storage	For areas marked as gas works and for gasometers
Mill Pond	For natural and artificial mill ponds (defined as a body of water for use as a reservoir for a water powered mill)
Power Station	For power stations that are either electrical or gas
Refuse Site	For areas of landfill, dumps/tips and recycling centres
Reservoir	For areas marked as reservoir that provide storage and regulation of a water supply
Sewage/Water Works	For areas marked as sewage works, filter beds, water works or pumping stations
Sub-Station	For large electricity sub-stations

Table 15. Utilities Broad types used within the T&WHLC.

7.3.13 Woodland

Woodland types are largely in keeping with previous HLC projects (see table 16 below for further detail on scopenotes). The scopenotes for *Ancient and Semi Natural Woodland* and *Ancient Replanted Woodland* were created from definitions provided by Natural England (http://www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/final_designation_s.aspx).

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Ancient and Semi Natural Woodland	For areas of land that have had a continuous woodland cover since at least 1600 AD
Ancient Replanted Woodland	For areas of woodland where the original native tree cover has been felled and then replaced
Arboretum	A place devoted to the cultivation and exhibition of rare trees
Mixed Woodland	A mix of both deciduous and coniferous trees
Orchard	For areas marked as orchard or for areas where historic mapping mark a unique conformity of trees that can be interpreted as an orchard

Plantation	An area of planted woodland
Wet Woodland	For areas dominated by carr (waterlogged alder and willow that commonly represents a succession between reedy swamps and eventual forest formation) or for areas of osier beds (historically where willows were planted and coppiced to be used in the production of baskets, fish traps, etc.)

Table 16. Woodland Broad types used within the T&WHLC.

7.3.14 Coast

Being bounded by the North Sea to the east and with two rivers with tidal limits well into the project area it was decided that the project would adopt coastal types used in other HLC projects. This also ensured that the project was consistent with the two bounding HLC projects of Northumberland and County Durham and Darlington.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Cliffs	For areas of steep or sheer slopes
Coastal and Flood Defence	For areas associated with active protection of land from the sea
Dunes	For areas of sand dunes above the high water mark
Intertidal Zone	For areas between high and low water marks including, sand, mud and rock platforms
Saltmarsh	For areas marked 'saltmarsh'

Table 17. Coast Broad types used within the T&WHLC.

7.3.15 Water

Water Broad Types are largely in keeping with previous HLC projects (see table 18 below for further detail on scopenotes). The scopenotes for the width of characterising rivers was taken from advice from the Northumberland HLC to be in keeping with bounding HLC methodology.

<i>Broad Type</i>	<i>Broad Type Scopenote</i>
Manmade Open Water	For large manmade bodies of open fresh water: lakes; ponds; fisheries or flooded quarries (not to include artificial bodies of water with a utilitarian use)
Marsh	For areas of ground that are waterlogged throughout the year
Natural Open Water	For large natural bodies of open fresh water (for use exclusively with known naturally occurring water bodies only)
River	For the large major rivers of the Tyne and Wear, and their tributaries, with a limit of characterisation where the channels are wider than 20 meters only
Water Meadows	For areas of grassland that are subject to controlled irrigation (commonly marked 'haugh' in the Tyne & Wear project area)

Table 18. Water Broad types used within the T&WHLC.

PART TWO

ANALYSIS

Sarah Collins

8 Introduction

8.1 Analysis of *Class*

The following analysis offers an overview of the *Class* character, which is used to produce broad landscape trends, across the T&W region as a whole. The *Class* character maps are most informative at producing broad percentages and differences in the distribution of historic landscape types. Observations about the *Modern* landscape can be compared through history by using the timeslice mapping produced at the end of this section (figures 10 to 16).

Using a combination of *Class* and *Broad* character maps, Sections 2, 3, and 4 then analyse the main findings of the project in greater detail within the industrial, rural, and urban and peri-urban landscapes. This is not an exhaustive analysis; rather it aims to give a general overview whilst highlighting the potential for using the HLC data in future research.

In figure 9 *Settlement* is clearly the most distinct *Class*: *Settlement* polygons within the *Modern* landscape make up 30.2% of the total area characterised. North of the Tyne the districts of Newcastle and North Tyneside are dominated by an almost continuous band of settlement from Throckley in the west to Tynemouth in the east. Settlement has also spread north in both districts, with the coastline in North Tyneside being dominated by it as far as Whitley Bay, leaving very little of the *Field System Class* intact. Newcastle has seen significant expansion west of the A1 leaving only small pockets of the *Field System Class* along the west boundary. South of the Tyne in the districts of Gateshead, South Tyneside and Sunderland the percentage ratio of *Settlement Class* overall is lower, but settlement is still a defining part of the landscape. A similar pattern can be seen with South Shields to Dunston producing an almost continuous belt of settlement along the south bank of the River Tyne that is only halted in the west because of the Metrocentre shopping and leisure complex. Viewed at this scale the once distinct settlements of Gateshead, Hebburn, Jarrow and South Shields form an urban continuum, which is continuing to expand southwards. This leaves the appearance of surviving belts of the *Field System Class*, particularly in South Tyneside. Further south, the settlement cores of Sunderland, Washington and Birtley are particularly distinctive as more discrete areas of settlement. Smaller settlements are found within the districts of Gateshead, such as Whickham, Blaydon and Ryton, and in Sunderland, such as Shiney Row, Houghton le Spring, and Hetton le Hole. In both these areas the

distinction between settlement and field systems is more easily defined than along the Tyne to the north.

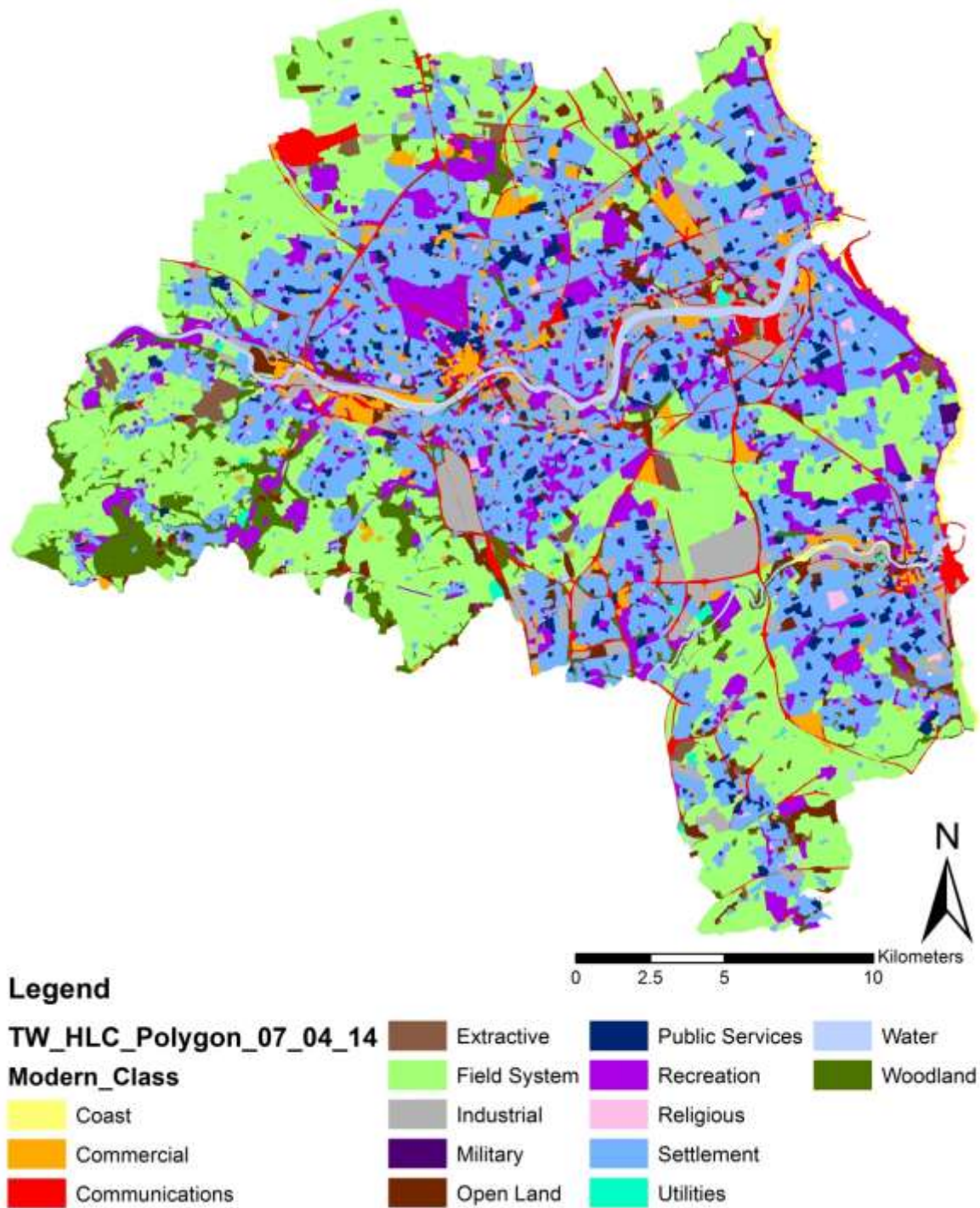


Figure 9. Class character map of the Modern landscape.

Within the areas of *Settlement* Class the *Recreation* Class is also very distinctive and makes up 10.3% of the area characterised within the *Modern* landscape. Of particular note is the large area of recreation polygons that make up the Town Moor directly north of the

commercial core of Newcastle City Centre. Other large areas of recreation are made up of *Public Parks, Sports Grounds* and *Golf Courses*. These often occur in areas of land that were in former use as extractive or industrial types, as potential for subsidence or pollutants from industry makes development of these sites difficult. Many of the much smaller *Recreation Class* polygons are made up of allotments that are typically found in close association with communications types such as railways, where they provide a suitable use for otherwise lower value land.

Also, within the areas of *Settlement Class* is a high distribution of *Public Services Class* types, typically in the form of *Schools*, and *Religious Class* types, although these are difficult to see without zooming in a little closer. *Commercial Class* types also feature and often represent town centres that are most evident at this scale within Newcastle upon Tyne and Sunderland. However, of increasing note are the large, out-of-town commercial types, including *Superstores* and *Shopping Centres* that can be seen on the edge of settlements, such as the Metrocentre to the north of Whickham, or *Business Parks*, again on the edge of settlements, such as Boldon Colliery and Doxford.

The *Industrial Class* makes up around 5.8% of the *Modern* landscape characterised. Smaller scale industrial sites are somewhat difficult to spot at this scale, but are still concentrated heavily along the rivers Tyne and Wear. Larger industrial sites are most distinct where they are located away from historic settlement or commercial centres, and these typically represent industrial developments of the mid-late 20th century, rather than re-use of an earlier industrial site. Of particular note is the Nissan Manufacturing Site within Sunderland district and the Team Valley Trading Estate within Gateshead.

The *Field System Class* is prominent on figure 9, although somewhat more so for its absence in the *Modern* landscape rather than dominance. The *Field System Class* represents 30.1% of the total area characterised in the *Modern* landscape and although this reflects a similar percentage area to *Settlement* it represents a dramatic drop from OS County Series (1861-1865). *Field Systems* are not distributed evenly throughout the region; the majority can be found in the south and west areas of Gateshead district and these also represent some of the highest levels of legibility of OS County Series (1861-1865). As noted above, pockets of field systems are also evident along the west boundary in the district of Newcastle, as well as belts of field systems west of the A19 in the districts of South Tyneside and Sunderland.

Woodland and *Extractive Class* types are strongly associated with the *Field System Class*, typically being found on the periphery of settlement, and at this scale only really being discernible in the west and south of the district of Gateshead. Extractive sites make up 1% of the *Modern* landscape and are most notable where quarrying has taken place since the late 20th century. Woodland is similarly low (4.7%) and is noticeable most strongly within Gateshead district: in areas of *Ancient and Semi Natural Woodland* or *Ancient Replanted Woodland*; in areas associated with *Private Parkland/Ornamental Landscapes*; or, on a smaller scale, within denes.

The *Communications* Class links the above landscapes together by providing a network of roads and railways, which are fairly evenly distributed throughout the region. The A1 and A19 are the most dominant. The A19 appears, within the *Modern* landscape, to be acting as a buffer between settlement and field systems, while the A1 has had the opposite effect by facilitating expansion west towards Newcastle International Airport. The airport is by far the largest communications site, although the ports of Sunderland and Tyne can also be distinguished at this scale.

Coast and *Water* Class types make up a very small proportion of the *Modern* landscape (0.7% and 1.4% respectively), but are discernible because they make up such prominent areas of the landscape in the form of the coastline on the eastern boundary of the characterised area and in the form of the rivers Tyne and Wear, which dissect the region from west to east.

Military and *Utilities* Class types represent less than 1% each of the total characterised area, but are virtually invisible at this scale. Military sites are typically made up of small areas of land within settlements that are used by the Territorial Army. The largest military site can be found along the South Tyneside coast at Whitburn and comprises an early 20th century rifle range that was in use until c.2010.

Open Land is evenly distributed through the whole region in the *Modern* landscape. Although, individually these sites make up quite small pockets of land they represent about 3.1% of the total area characterised. They are strongly linked with settlement and where found in the modern landscape typically represent areas of *Rough Grassland/Scrub*, *Derelict Land* or *Vacant Plots*. This 3.1% is important as it represents sites where development may take place relatively soon.

8.2 Class of the Modern landscape

The *Class* character map of the *Modern* landscape reveals the common patterns found in many of the districts as well as the diversity of forms across the region as a whole, with differing characteristics taking form in different areas. By characterising the modern landscape in conjunction with the seven sources of historic mapping a record of previous types of character at different times can be produced as a series of timeslices. This allows for general comparisons to be made about the development of the region over time.

The seven timeslice maps can be found below in figures 10 to 16. Tables 19 to 25 detail the percentage that each *Class* represents of the total area characterised (this can also be viewed in Appendix 2). General observations include:

Settlement expands by over 571% in conjunction with the retraction of field systems by 61% between OS County Series (1861-1865) and OS MasterMap 2011;

the nature of settlement has changed, with individual settlements becoming less defined from OS County Series (1938) onwards;

Public Services, Recreation, Religious and Utilities types have seen a rise consistent with the expansion of settlement;

The Town and County Planning Acts post 1945 have acted as instruments in affecting the location of *Class* types;

Industry steadily increased up until the 1980s but has subsequently dropped;

The distribution of industry has also changed with an increasing emphasis on out-of-town sites from the 1960s onwards. Industrial development is more easily defined along the rivers Tyne and Wear in the earlier mapping sources of the 1860s and 1890s;

The area occupied by communications character types peaked in the 1960s and 1980s but has subsequently dropped, despite new infrastructure such as the A1. This is the result of a reduction in railways throughout the region;

Extractive sites rose steadily up to the 1950s and 60s but then saw a loss of almost half the total sites between the 1960s and 1980s that has continued with further loss in the 21st century.

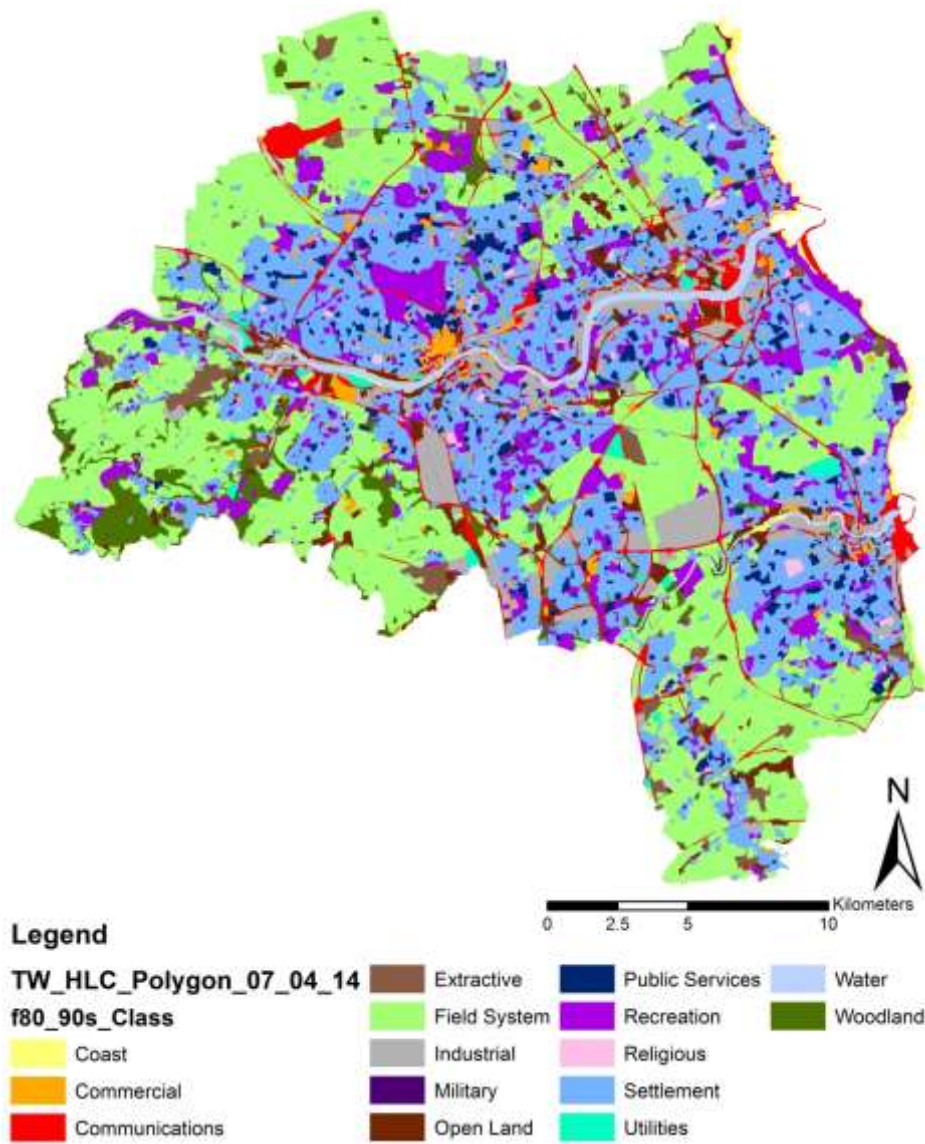


Figure 10. Class character map based on OS National Grid (1979-1996)

Class	Percentage of whole area characterised
Coast	0.6%
Commercial	1.4%
Communications	4.7%
Extractive	2%
Field System	33.5%
Industrial	6.2%
Military	0.1%
Open Land	3.3%
Public Services	3.7%
Recreation	9.2%
Religious	0.7%
Settlement	27.4%
Utilities	0.7%
Water	1.3%
Woodland	4.2%

Table 19. Class percentage (1979-1996).

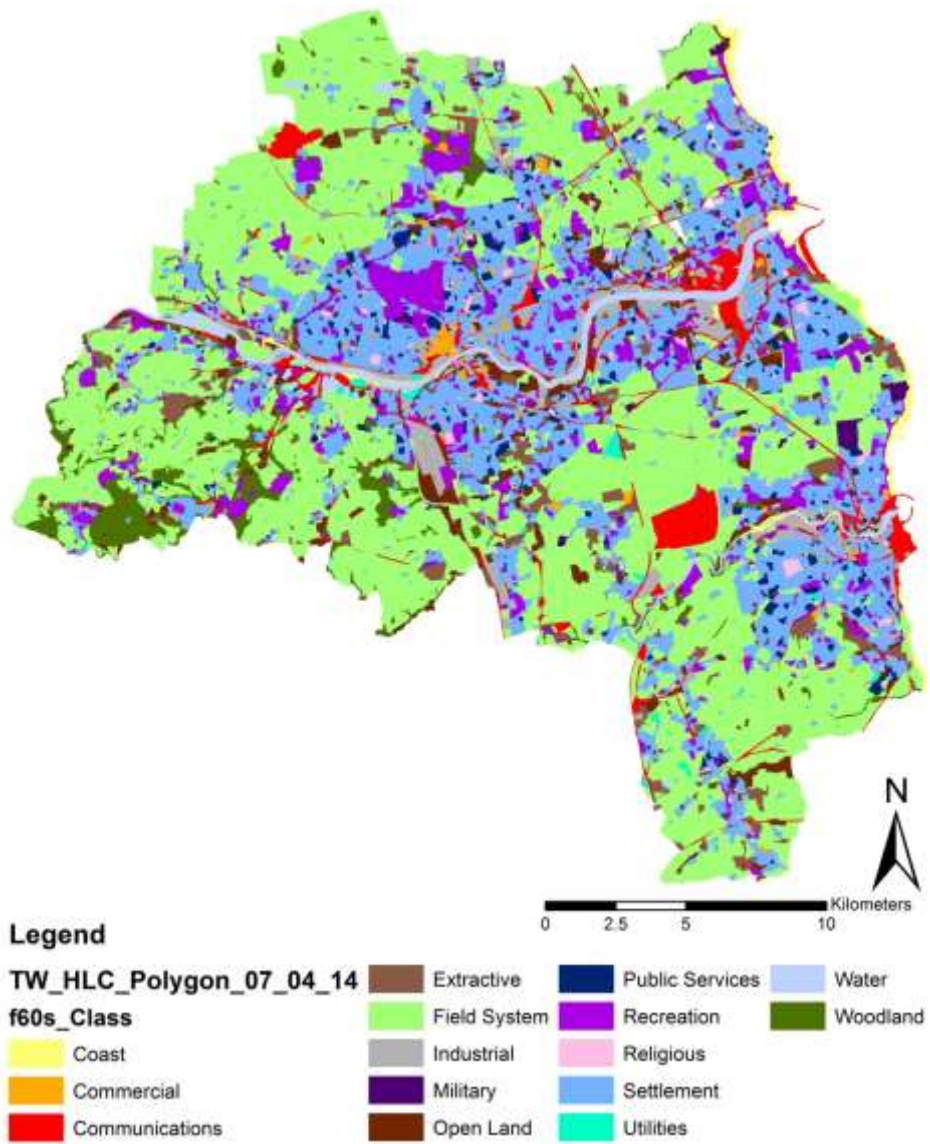


Figure 11. Class character map based on OS National Grid (1966-1969).

Class	Percentage of whole area characterised
Coast	0.7%
Commercial	0.8%
Communications	4.5%
Extractive	3.4%
Field System	45%
Industrial	3.3%
Military	0.4%
Open Land	3.4%
Public Services	2.1%
Recreation	7%
Religious	0.7%
Settlement	22.3%
Utilities	0.4%
Water	1.6%
Woodland	3.5%

Table 20. Class percentage (1966-1969).

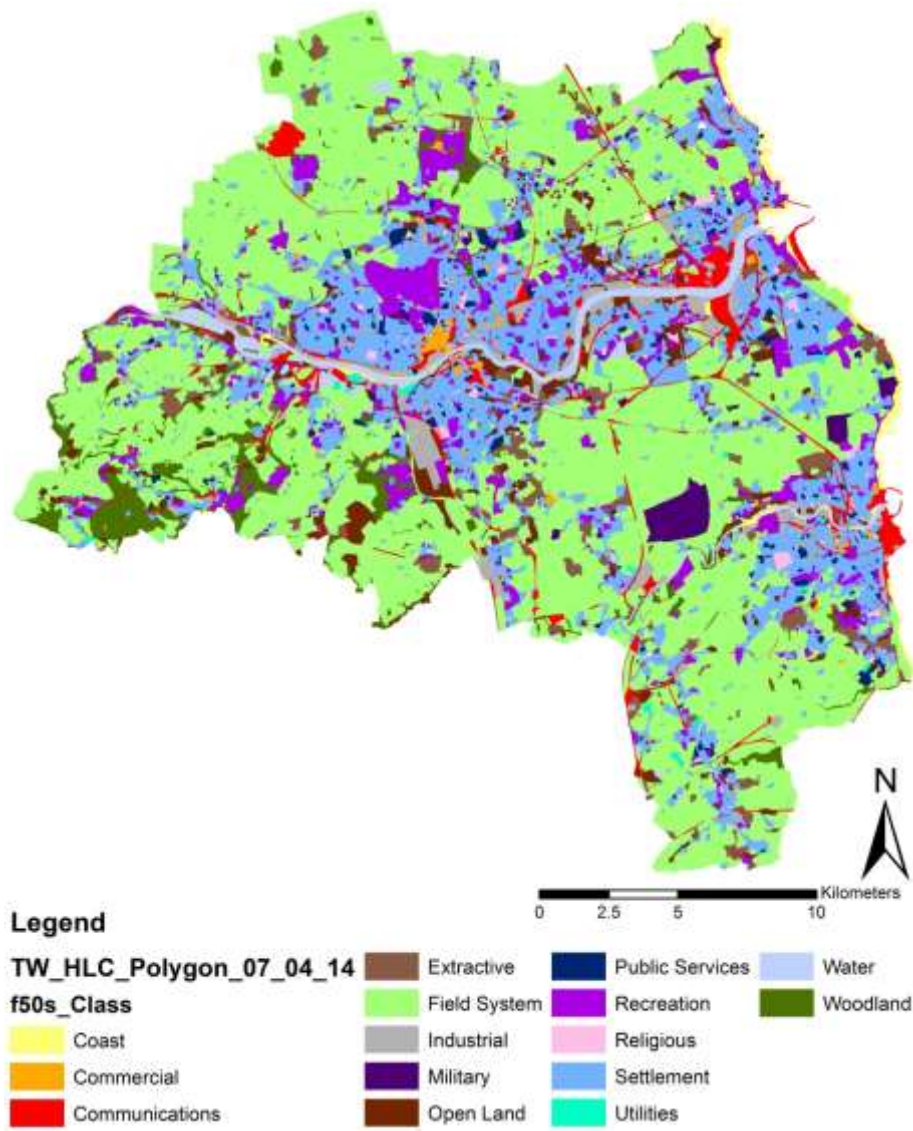


Figure 12. Class character map based on OS National Grid (1951-1957).

Class	Percentage of whole area characterised
Coast	0.8%
Commercial	0.6%
Communications	3.8%
Extractive	3.4%
Field System	50.5%
Industrial	3%
Military	1%
Open Land	3.6%
Public Services	1.4%
Recreation	6.7%
Religious	0.7%
Settlement	18.1%
Utilities	0.3%
Water	1.7%
Woodland	3.6%

Table 21. Class percentage (1951-1957).

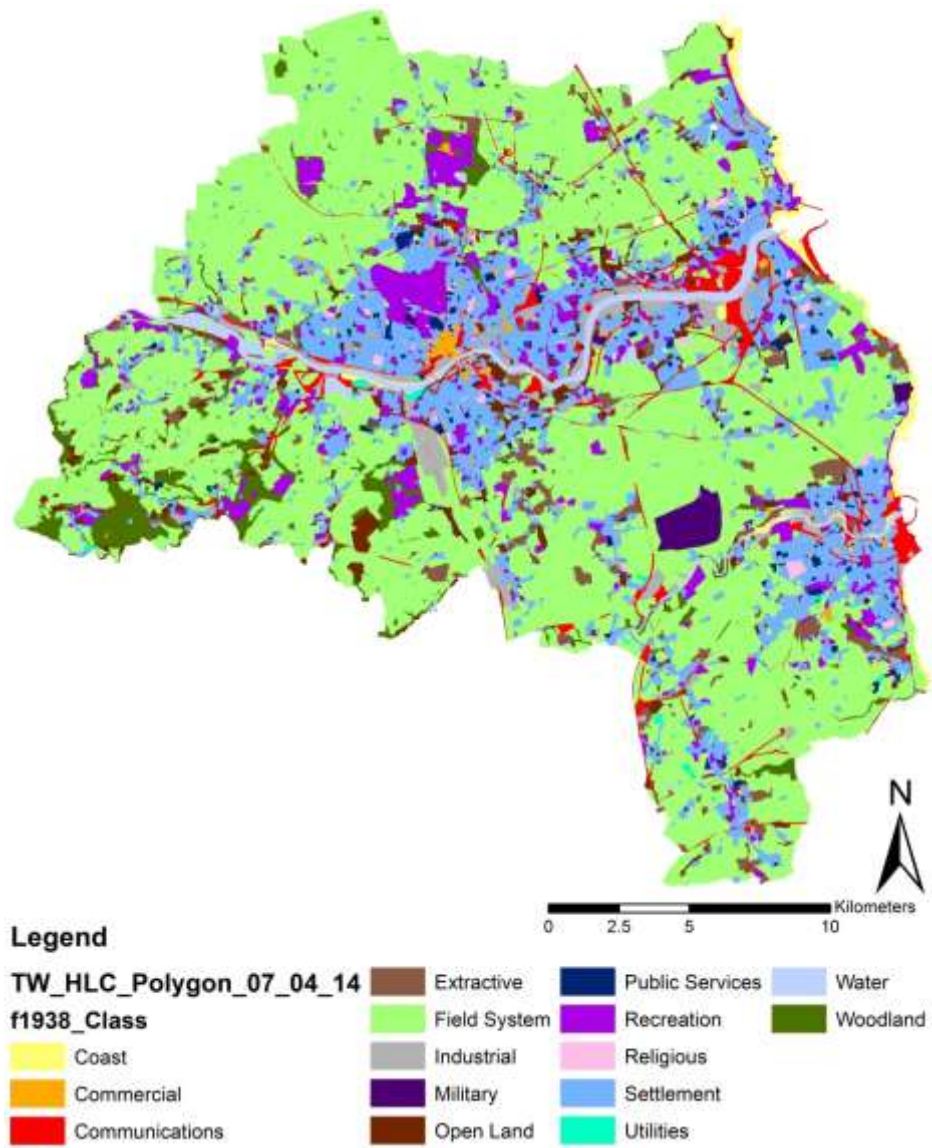


Figure 13. Class character map based on OS County Series (1938).

Class	Percentage of whole area characterised
Coast	0.8%
Commercial	0.5%
Communications	3.5%
Extractive	3.1%
Field System	54.9%
Industrial	2.9%
Military	0.8%
Open Land	2.7%
Public Services	1.2%
Recreation	5.8%
Religious	0.7%
Settlement	16.8%
Utilities	0.3%
Water	1.6%
Woodland	3.7%

Table 22. Class percentage (1938).

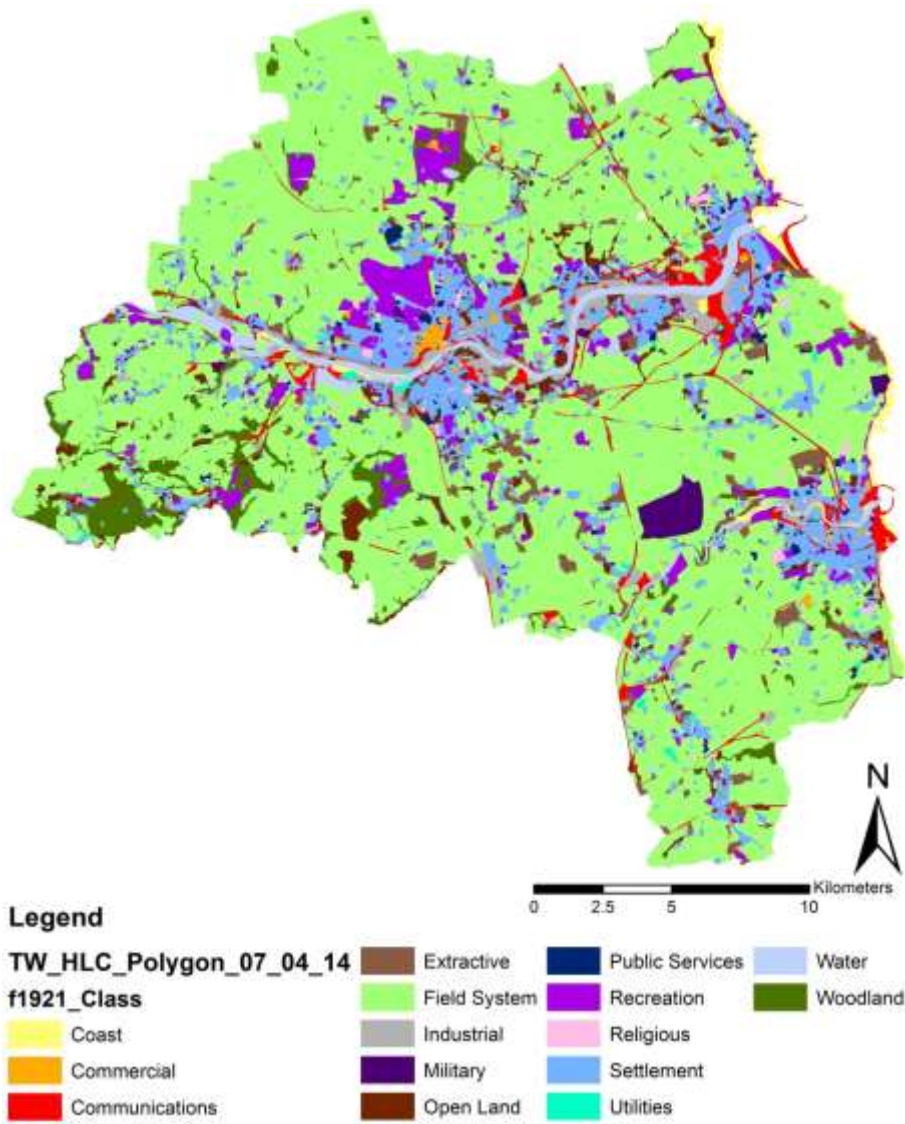


Figure 14. Class character map based on OS County Series (1921).

Class	Percentage of whole area characterised
Coast	0.8%
Commercial	0.4%
Communications	3.3%
Extractive	3.1%
Field System	62.8%
Industrial	2.6%
Military	0.8%
Open Land	2.4%
Public Services	0.8%
Recreation	5.1%
Religious	0.6%
Settlement	10.8%
Utilities	0.3%
Water	1.6%
Woodland	3.8%

Table 23. Class percentage (1921).

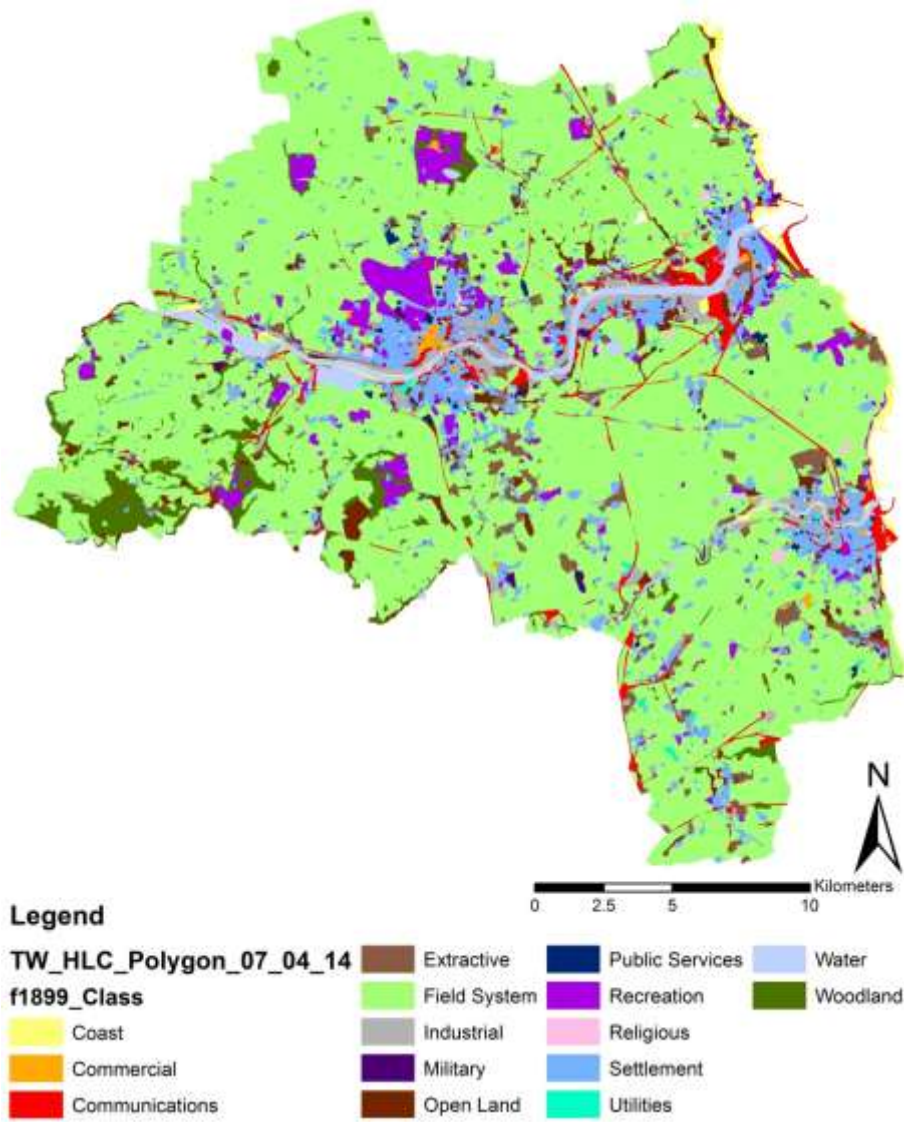


Figure 15. Class character map based on OS County Series (1898-1899).

Class	Percentage of whole area characterised
Coast	0.9%
Commercial	0.3%
Communications	3%
Extractive	2.8%
Field System	69.1%
Industrial	2.3%
Military	0.1%
Open Land	2.3%
Public Services	0.4%
Recreation	3.7%
Religious	0.5%
Settlement	7.9%
Utilities	0.2%
Water	1.8%
Woodland	3.8%

Table 24. Class percentage (1898-1899).

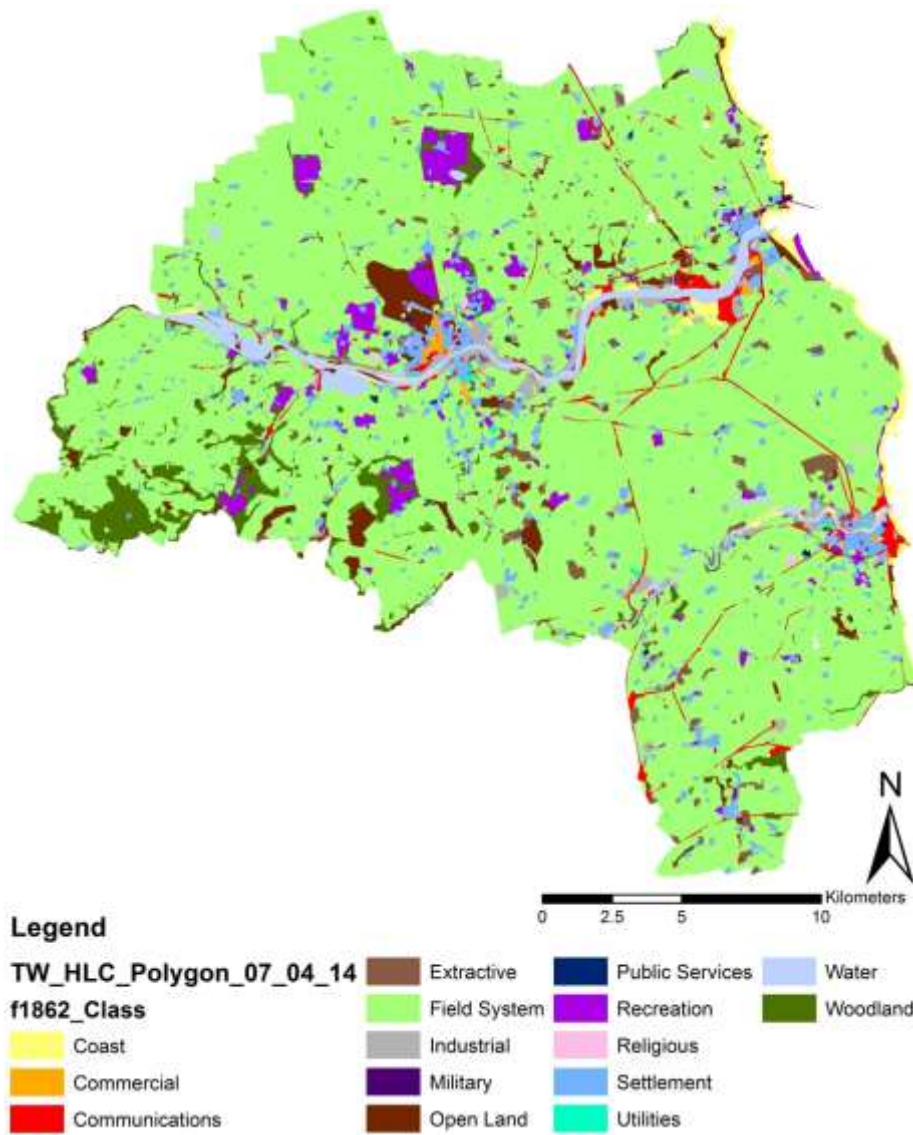


Figure 16. Class character map based on OS Country Series (1861-1865).

Class	Percentage of whole area characterised
Coast	1.1%
Commercial	0.2%
Communications	2.1%
Extractive	2%
Field System	76.6%
Industrial	1.6%
Military	0.04%
Open Land	2.5%
Public Services	0.07%
Recreation	2.6%
Religious	0.2%
Settlement	4.5%
Utilities	0.1%
Water	2%
Woodland	3.8%

Table 25. Class percentage (1861-1865).

9 Urban and Peri-urban Housing

9.1 Housing

The urban and peri-urban landscape makes up c. 52% of the modern landscape of T&W and comprises a rich variety of *Class* types including: *Commercial; Communications; Industrial; Open Land; Public Services; Recreation; Religious; Settlement; and Utilities*. The following discussion will focus primarily on the urban and peri-urban housing varieties, but will also examine some of the relationships with the *Class* types listed above. For the purposes of this discussion urban is taken to mean an area of higher population density in comparison to the areas surrounding it, while peri-urban relates to the processes of urban growth that create the blurred lines between urban cores and areas with rural characteristics. Faulkner summarises the urban landscape as one that includes the totality of a town or city's appearance, '...involving its layout, buildings, public spaces and streets' (2010, 207). Many of these features are encapsulated within the HLC data.

The Industrial Revolution transformed north-east England, changing its social, political and economic organisation (McCord 1979, 25). Changes in the urban and peri-urban landscape of T&W are, in many ways, typical of cities across Britain during this period. The urban cores of Newcastle upon Tyne, Gateshead and Sunderland developed, in our modern sense, from the mid-19th century onwards. New areas, such as Grainger Town, developed between 1824 and 1841, created opportunity to move away from the steadily degraded historic core along the river Tyne, and what remained became tenements, which can be seen on the earliest mapping source; OS Country Series (1861-1865). Industrial housing types become a common feature of the urban landscape from OS County Series (1898-1899) onwards, but the growth in mass urban expansion is more dramatic when looking between this and the OS County Series (1921). It is at this point that the variety of industrial housing can be seen in close reference to the industrial zones that they served. OS Country Series (1938) to OS National Grid (1951-1957) reveals the rise of the residential suburb in the region, where the major cities were encircled by a suburban belt of aspirational houses for the middle classes. The 1960s onwards saw great change within the urban and peri-urban landscapes of the region. Much of the earlier industrial housing was demolished in favour of new forms of residential housing, such as high-rise flats, which have left a lasting impression of the region on outsiders, even where these have now been demolished. Housing estates built in the 1970s and later have blurred the boundaries between once distinct settlements, meaning that what we delineate today as 'urban' usually comprised discrete settlements in the 19th and early 20th centuries. More recently the pressure for increased growth has led to the drive for residential housing along river fronts in the form of new apartments and the conversion of industrial types. The last 30 years has therefore seen a reversal in trend, with settlement increasing in historic cores rather than the suburbs. Nevertheless, with continued pressure on local authorities to find new residential housing the urban landscape continues to expand.

9.2 Industrial settlement types

9.2.1 Industrial Housing Types

As with many areas dominated by mass urban expansion T&W saw dramatic increases in population as a result of the growth in industry during the 19th century and into the 20th. Between the OS mapping sources of 1861-1865 and 1898-1899 'settlement' types increased from 4.5% to 7.9% of the total area, marking the growth of industrial housing in the region. Census data provided by Wadsworth (2011, 23) supports this. Between the years 1871 to 1911 the population of Newcastle grew from 128,443 to 266,671, representing a population increase of 108%.

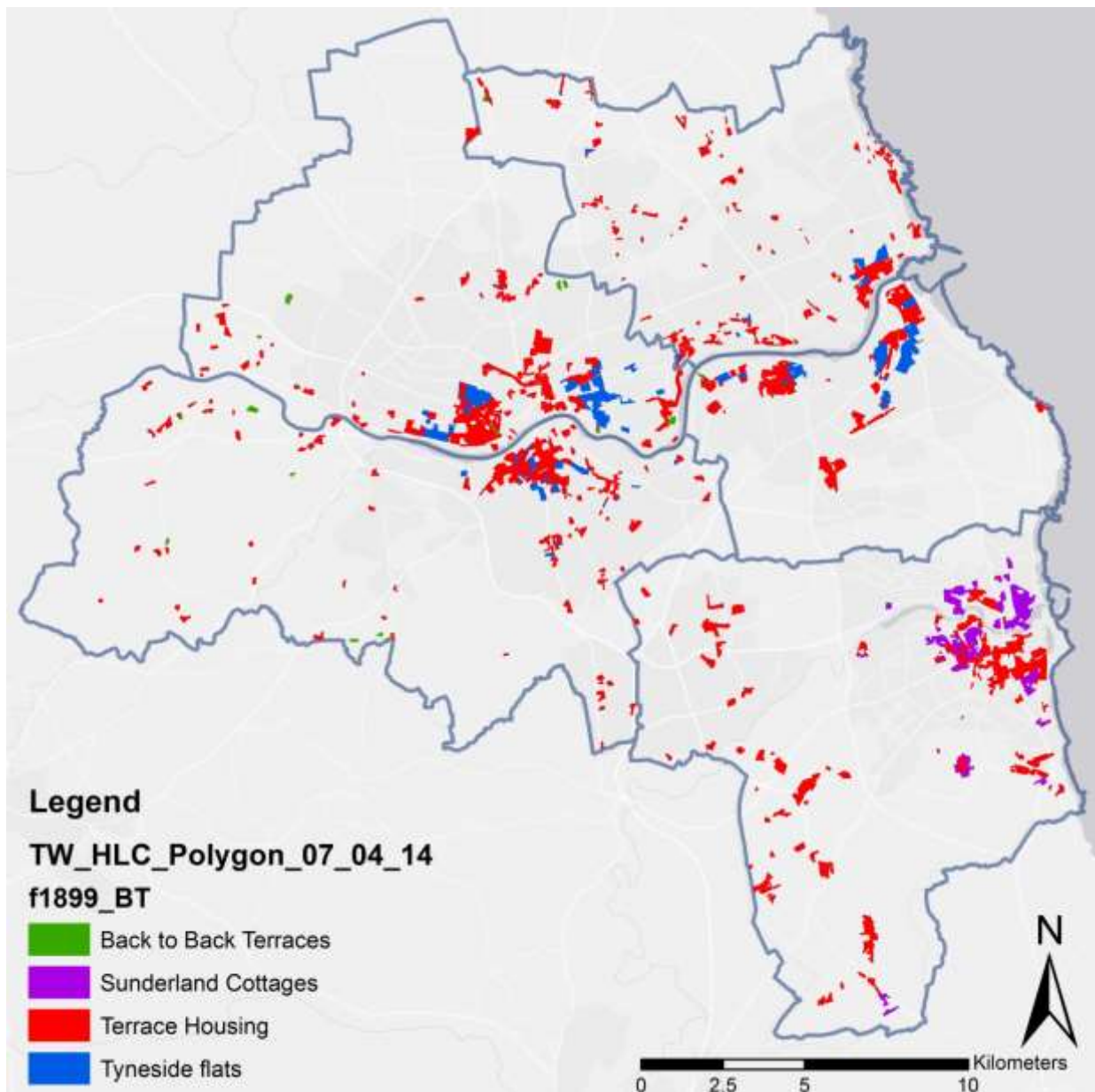


Figure 17. Industrial housing types in T&W c.1898-1899.

The problems created by the need to house so many industrial workers led to many different designs for buildings in different parts of the UK. In general, terraced housing was popular, since it could be laid out in a grid to maximise available space and building efficiency. Back to back terraces, popular in other UK industrial towns do not feature largely in the T&W landscape. Instead, standard terraces were popular in addition to locally distinctive types of low cost housing in the form of Tyneside Flats and Sunderland Cottages. The distribution of these types of housing from OS County Series (1898-1899) is shown in Fig. 17.

Although standard terraces are well known it is worth discussing some of the key characteristics of the local types, Tyneside Flats and Sunderland Cottages

9.2.2 *Tyneside Flats*

Tyneside Flats are typically laid out as pairs of terraced flats, one above the other. Each flat has its own front door, with the doors adjacent to one another, and individual access to the back yard via a flight of stairs for the upper flat (Wadsworth 2011, 26).



Figure 18. Tyneside Flats at Croydon Road, Arthur's Hill, Newcastle, taken from Google Street View.



Figure 19. Rear of Tyneside Flats, taken from Google Street View.

Within this basic form there is much variety. For example, back yards are typically divided but are sometimes shared yards; some have front yards or gardens while others open directly on to the street; and some consist of a four or three door variety. In another, later, variation they applied the design to semi-detached houses, as at Marleen Avenue in Heaton (figure 20).



Figure 20. Semi Detached Tyneside Flats, image from Google Street View.

The internal space typically takes the form of one or two bedrooms in the lower flat, it being made slightly smaller by the staircase to the upper flat, and two or three bedrooms in the upper flat. Additionally, upper flats sometimes made use of attic spaces to add further bedrooms. The kitchen was the largest central room and terraces usually had a rear extension containing a scullery.

The Tyneside Flat is distributed beyond the area its name suggests (Wadsworth 2011, 42). The T&WHLC data has evidence of Tyneside Flats within all the districts, although significantly less in Sunderland. However, varieties are known in Northumberland at Hexham and in County Durham at Consett (Wadsworth 2011, 42).

9.2.3 *Sunderland Cottages*



Figure 21. Sunderland Cottages, Ripon Street, Sunderland.

Sunderland Cottages are virtually unique in England. They are single-storey terraces that each had their own entrance and backyard, and, for some, a front yard or garden. There is much variety externally, some with bay windows, others without, some with second floor conversions (as seen in the far left of the above picture), and the style is rarely consistent throughout an entire street. The internal space typically took the form of one or two rooms lying immediately behind the frontage, a bedroom and kitchen to the rear, and a back extension accommodating a washhouse. Muthesius (1982, 103-106) suggested that the Sunderland Cottage afforded a similar amount of private space to that found in a Tyneside Flat.

They were originally built for the workers of Sunderland's shipyards and Long (1996, 97-122) has suggested that they may have originated as early as 1840. The HLC data has them

existing from at least 1861-1865. They are less widespread than the Tyneside Flat and although some instances are recorded in South Tyneside they are largely contained within the district of Sunderland.

9.2.4 Industrial Housing Growth

As suggested the most notable period of industrial housing growth occurs between the mapping sources of 1898-1899 and 1921. During this time *Tyneside Flats* increase in the HLC record from 0.7% of the total area characterised to 1.5%; while *Sunderland Cottages* increase from 0.4% to 0.6%. Despite the emphasis from researchers on local housing forms, more traditional terraced houses still remain the dominant type within the T&WHLC. For example in 1898-1899 *Terrace Housing* represents 3.1% of the total area characterised, rising to 4.3% in 1921. Having said this, some margin of error should be noted as in cases where mapping was insufficiently good to distinguish between local forms and terraced housing the decision was taken to input as *Terrace Housing* rather than make false assumptions.

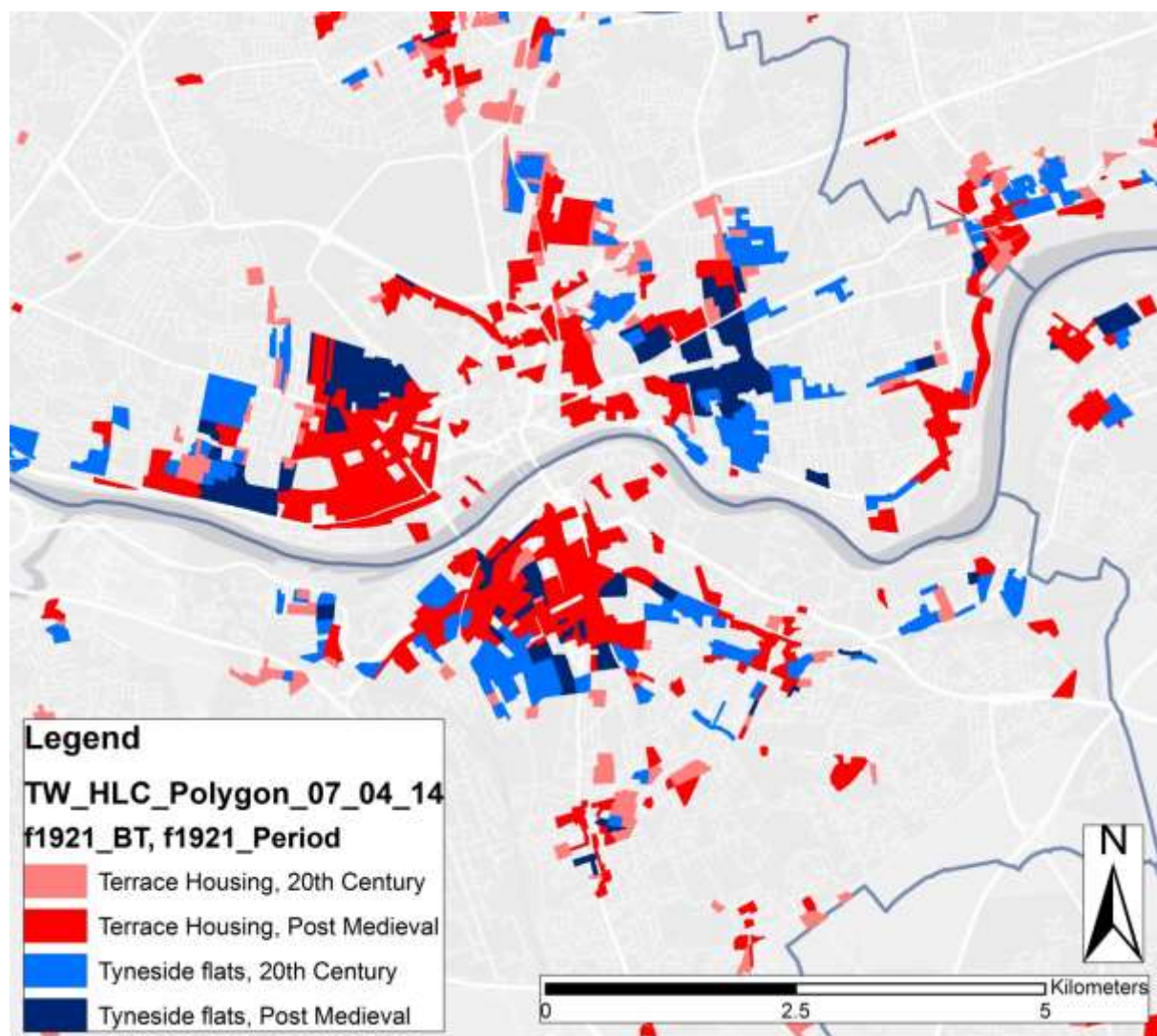


Figure 22. Distribution of Terrace Housing v Tyneside Flats.

The increase and distribution of industrial housing is shown in figure 22, and several observations can be made:

- Terrace housing is dominant in this part of the region during the post-medieval period (shown in dark red), and is shown covering sizeable, self-contained blocks;
- Terrace housing during the 20th century (shown in pink) is far less dominant and is typically found in smaller blocks that are more widely distributed;
- Tyneside flats built during the 20th century outnumber terrace houses built during the same period.

Although, terrace housing, as suggested above, is the dominant form of settlement in the region at this time, figure 22 reveals that for a brief period (1898-1921) local settlement forms became extremely popular. For example, the area characterised as *Tyneside Flats* increased by 114% during this period in comparison to *Terrace Housing* that increased by only 39%.

9.2.5 Local Industrial Settlement

The popularity of local industrial settlement forms was short lived; whilst terrace housing types have continued to be a popular form of low cost housing in the modern landscape, Tyneside Flats and Sunderland Cottages lost favour. Between their height in 1921 and the present, Tyneside Flats and Sunderland Cottages collectively drop in the HLC record from 2.1% of the total area characterised to 1.4%. This drop can largely be attributed to clearance from the 1960s onwards although this collective drop is not evenly distributed; *Tyneside Flats* represent a loss of c.40% in comparison to *Sunderland Cottages* (c.17%). The scale of this clearance is best demonstrated by figures 23 and 24.

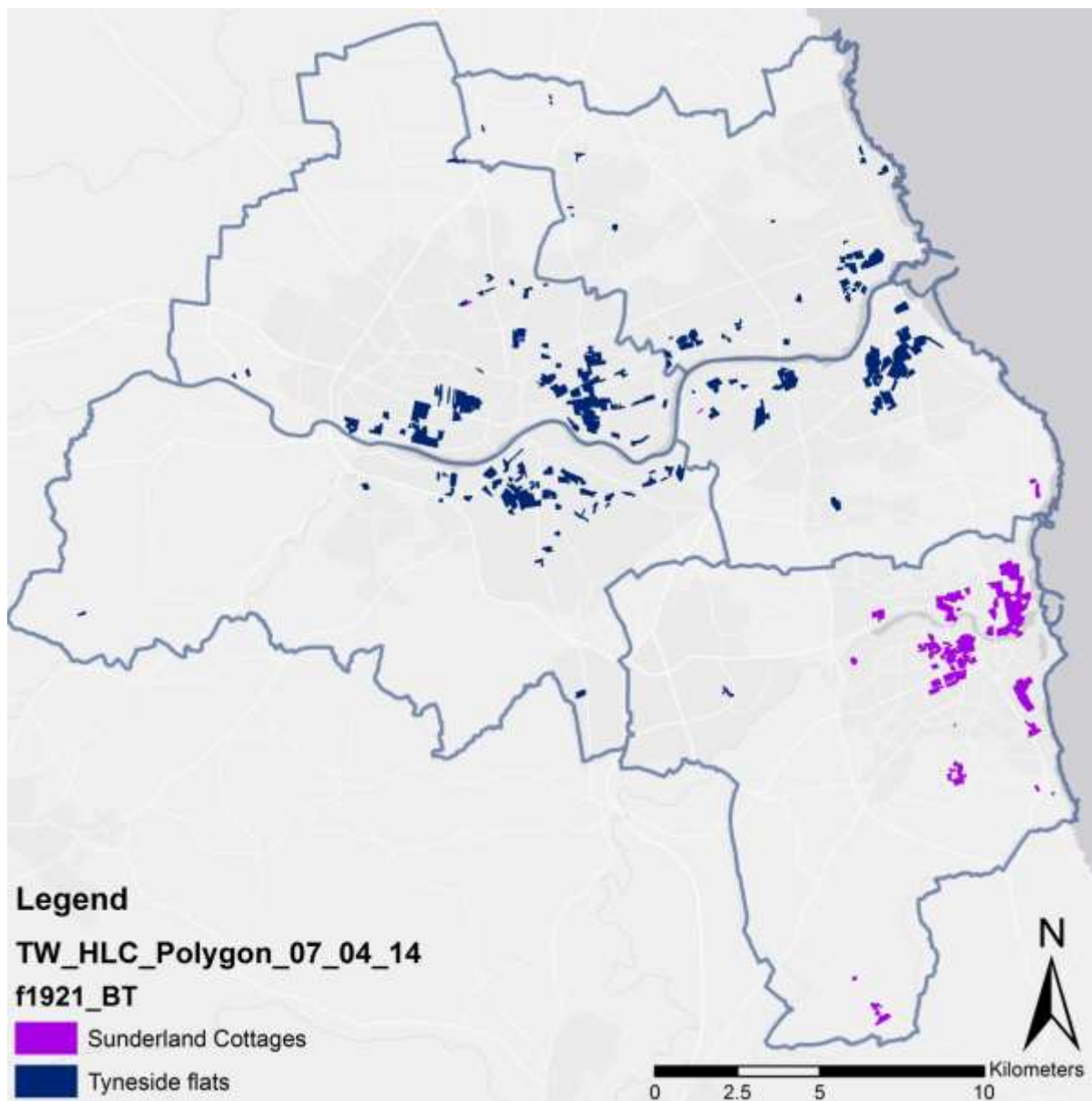


Figure 23. Local settlement forms – 1921.

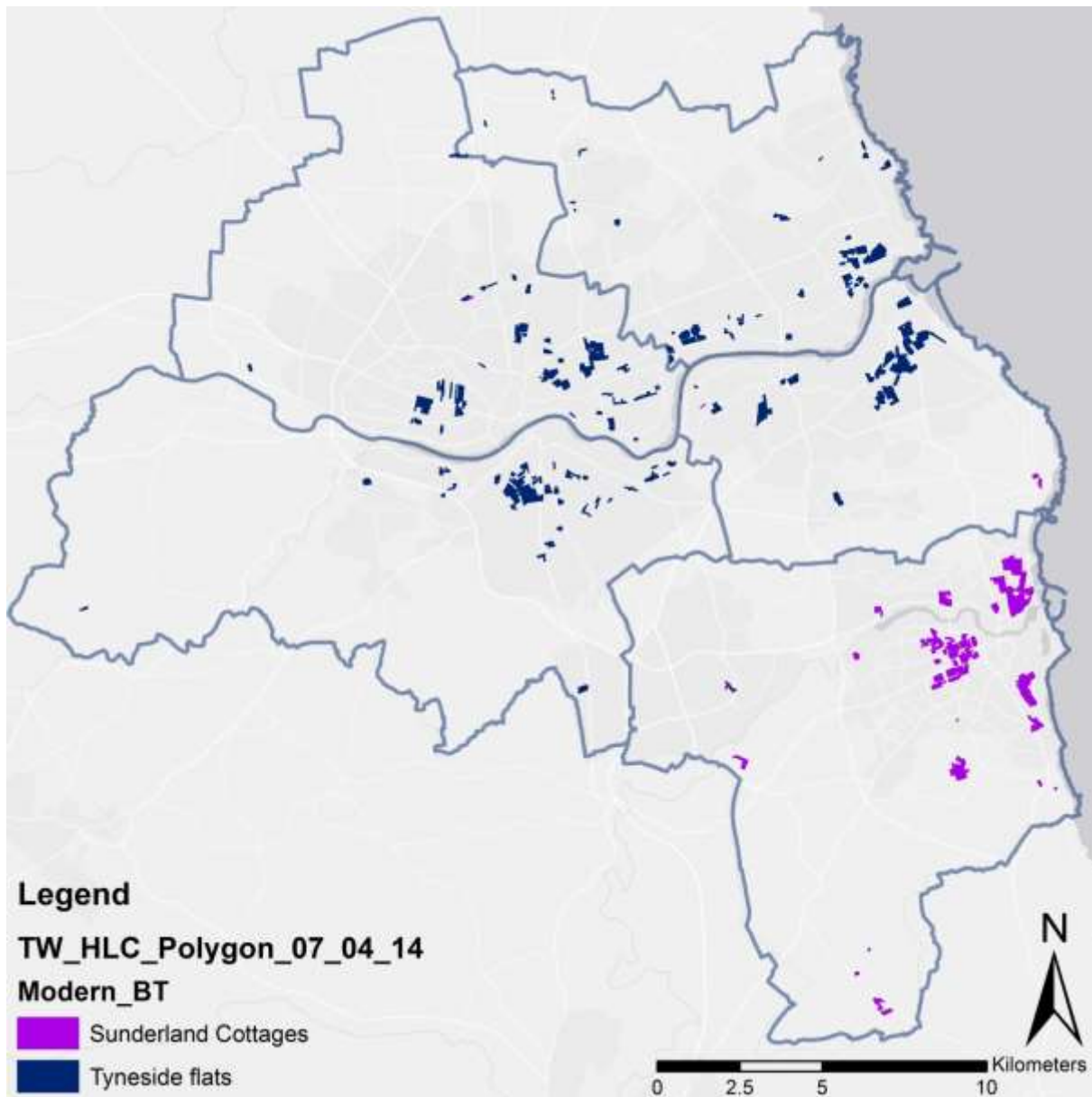


Figure 24. Local settlement forms – Modern.

9.2.6 Urban Morphology

One of the major benefits of HLC data is its ability to reveal the complex and varied differences in urban morphology that would not be apparent from using historic mapping alone. The distribution of early local settlement forms versus national types such as terrace housing provides a case in point. Using mapping alone it is very difficult to distinguish between these variants but HLC picks out the finer distributions. Figure 25 shows one such area in Gateshead; similar patterns are found throughout the region.

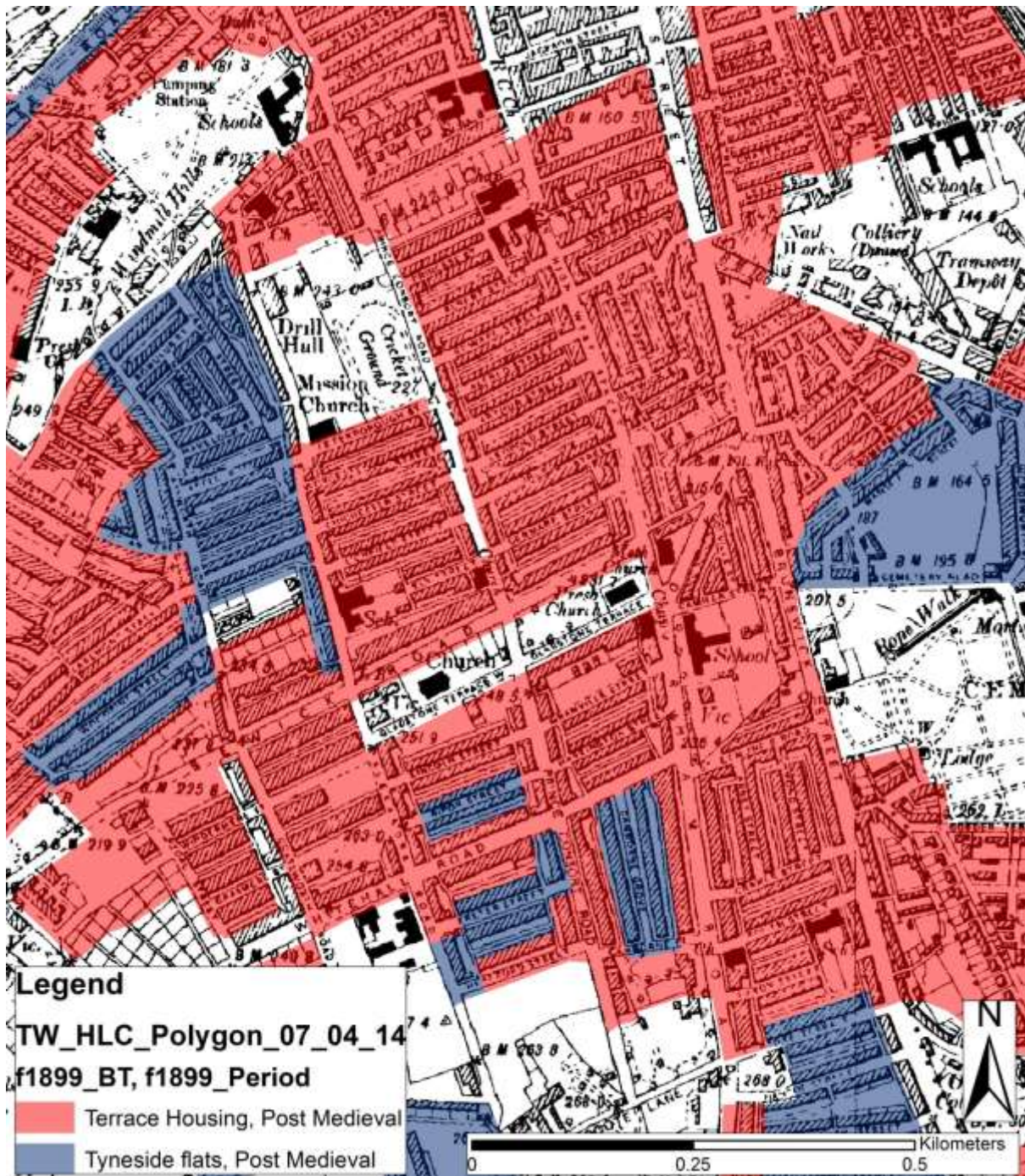


Figure 25. Distribution of Terrace Housing versus Tyneside Flats – 1898-1899 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

Figure 25 shows that early forms of *Tyneside Flats* were often hidden within a core of *Terrace Housing*. Tyneside flats were not *usually* found fronting onto major roads (although there are examples that occupy prominent roadside locations such as Howdon Road, North Shields). Instead terrace housing, which was often slightly larger and with front gardens, provided a screen on main roads. This suggests two possible reasons why this might be the case. First, there may have been a conscious effort, early on, to hide less desirable forms of

industrial housing from major route ways. Secondly, early Tyneside Flats may have been built in the space left between early developments of terraced housing. However, further research is needed to disentangle the intentions behind construction and the sequences of building and uses of urban spaces. By comparison figure 26 below shows a shift in this pattern between 1898-1899 and 1921 (the major period of industrial housing development).

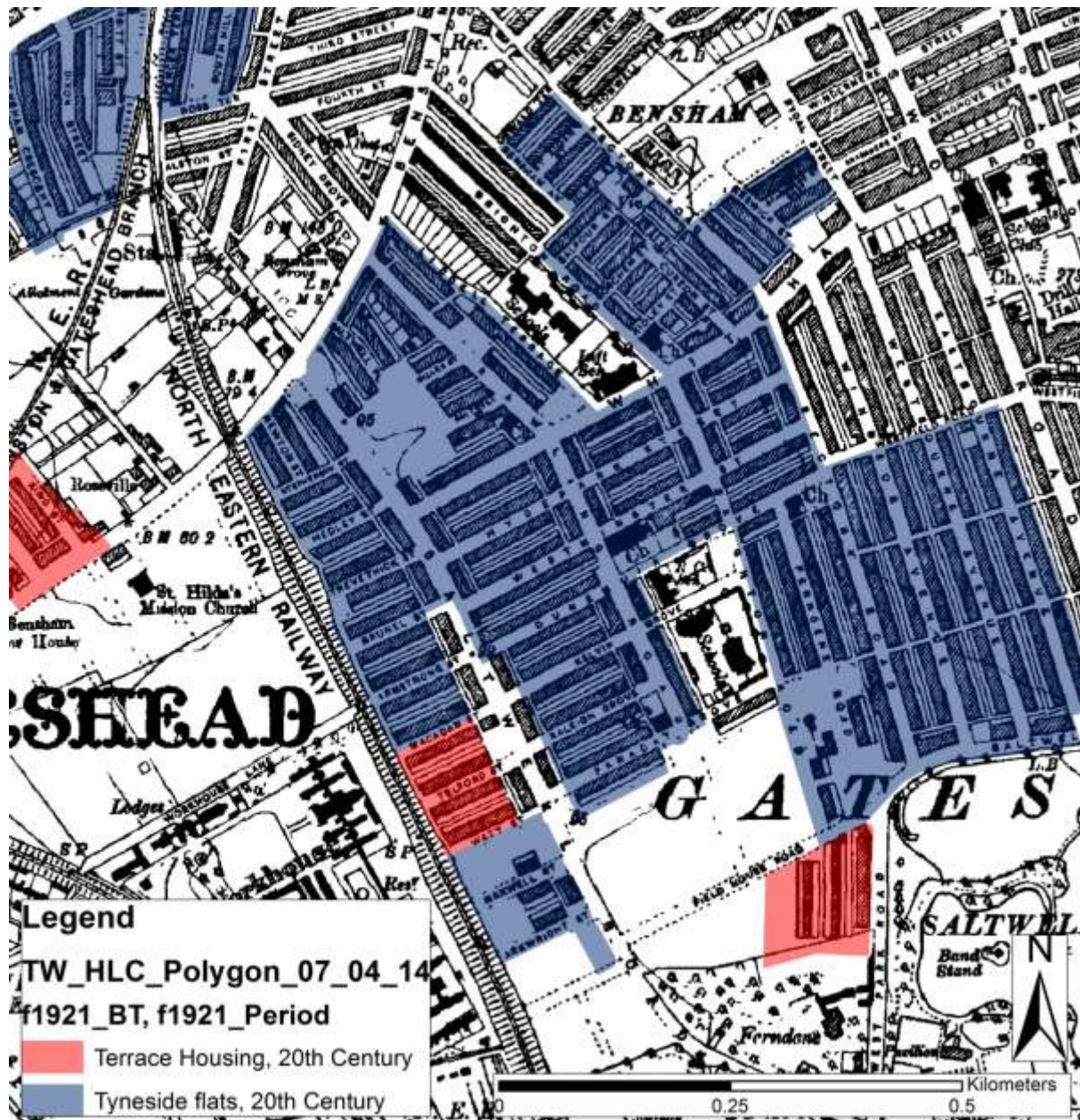


Figure 26. Distribution of Terrace Housing versus Tyneside Flats – 1921 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1921).

The HLC shows that by 1921 the popularity of Tyneside Flats resulted in defined blocks of housing types. Whether this was done by design remains unclear, but these more explicit,

settlement type zones had a knock-on effect of creating social and economic housing bubbles within the urban landscape. This is a trend that continued within T&W until relatively recently. Figure 27, for example, shows the clustering of different settlement types from the mapping source 1938. The blocking of different forms of suburban housing can be seen clearly, with little intermingling between settlement types.

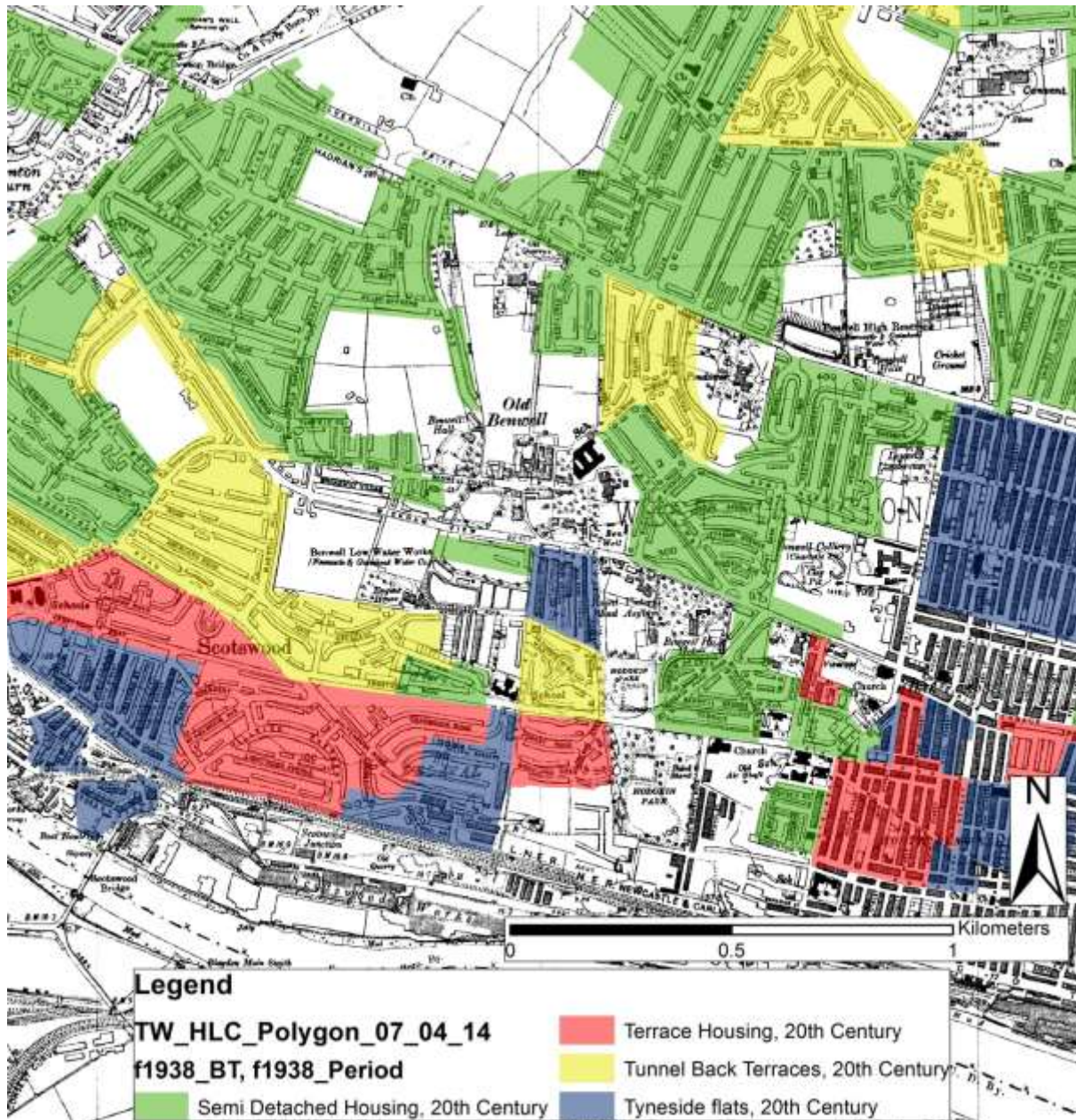


Figure 27. Distribution of settlement types – 1938 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1938).

It has only been in the last 30 years that there has been a move to multiple settlement types within housing estates that are planned/built in a single phase. One such example is found

at Captain's Wharf in South Tyneside, which was built in the late 1990s; here, low rise flats, terrace housing, detached housing and townhouses are seen together within one housing estate (figure 28).



Figure 28. Captain's Wharf, South Tyneside

9.2.7 Different Settlement Types

In addition to observations regarding distribution of settlement types, the HLC also proves useful in making observations regarding the key characteristics of different settlement types and their relationship to other *Class* types. T&WHLC records a number of attributes in relation to the *Settlement Class*; one such attribute is *scale*. *Scale* records the rough size of properties within a polygon. To the general observer terrace housing is seen as *small*, semi-detached as *medium* and detached as *large*; however there are many nuances amongst these categories that the HLC is able to highlight. Figure 29 shows an area of mixed settlement types including: *Terrace Housing*; *Tyneside Flats*; *Semi Detached Housing* and *Detached Housing*, but shown from the perspective of scale.

The mapping source of 1898-1899 (displayed in figure 29) shows the dominance of the works established by W. G. Armstrong in 1847. Between the mapping sources of 1861-1865 and 1898-1899 settlement grew on the slopes between the works and Westgate Road, many built by Armstrong for his workforce. It is perhaps unsurprising that the *small scale* housing (≤ 50 sqm) is found closest to the works along Scotswood Road, although there are also clusters of *small scale* housing found either side of Westgate Road. As a general rule, larger properties are found higher up the slope, with *medium scale* (50-100 sqm) found immediately behind, and shielded by the *small scale* housing. They also have a higher proportion of *Public Service* types, such as *Schools* or *Religious* types within them. Finally, *large scale* housing is found beyond, most notably lining the Westgate Road.

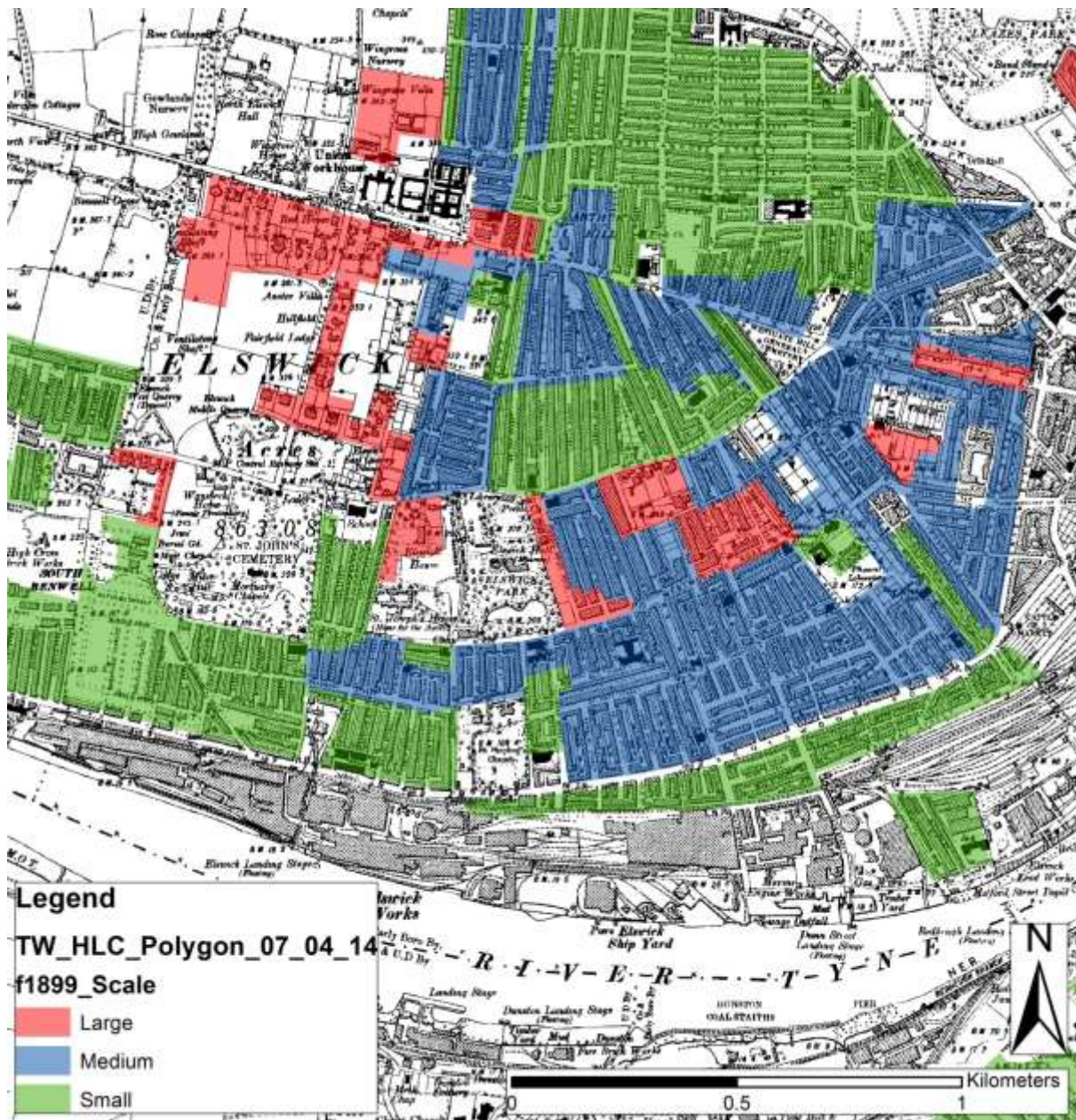


Figure 29. Settlement Scale – Elswick, Newcastle district © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

There are, however further patterns to be examined beyond this crude measure of *scale*. By examining the *private space* attached to properties a better impression can be made of the fine-grained differences of social and economic scale within a single workforce. As with the present day, two properties of the same scale but with different amounts of private space would attract owners/tenants from different economic backgrounds and with different social aspirations. Figure 30 shows the same area of Elswick, but from the perspective of *private space*.

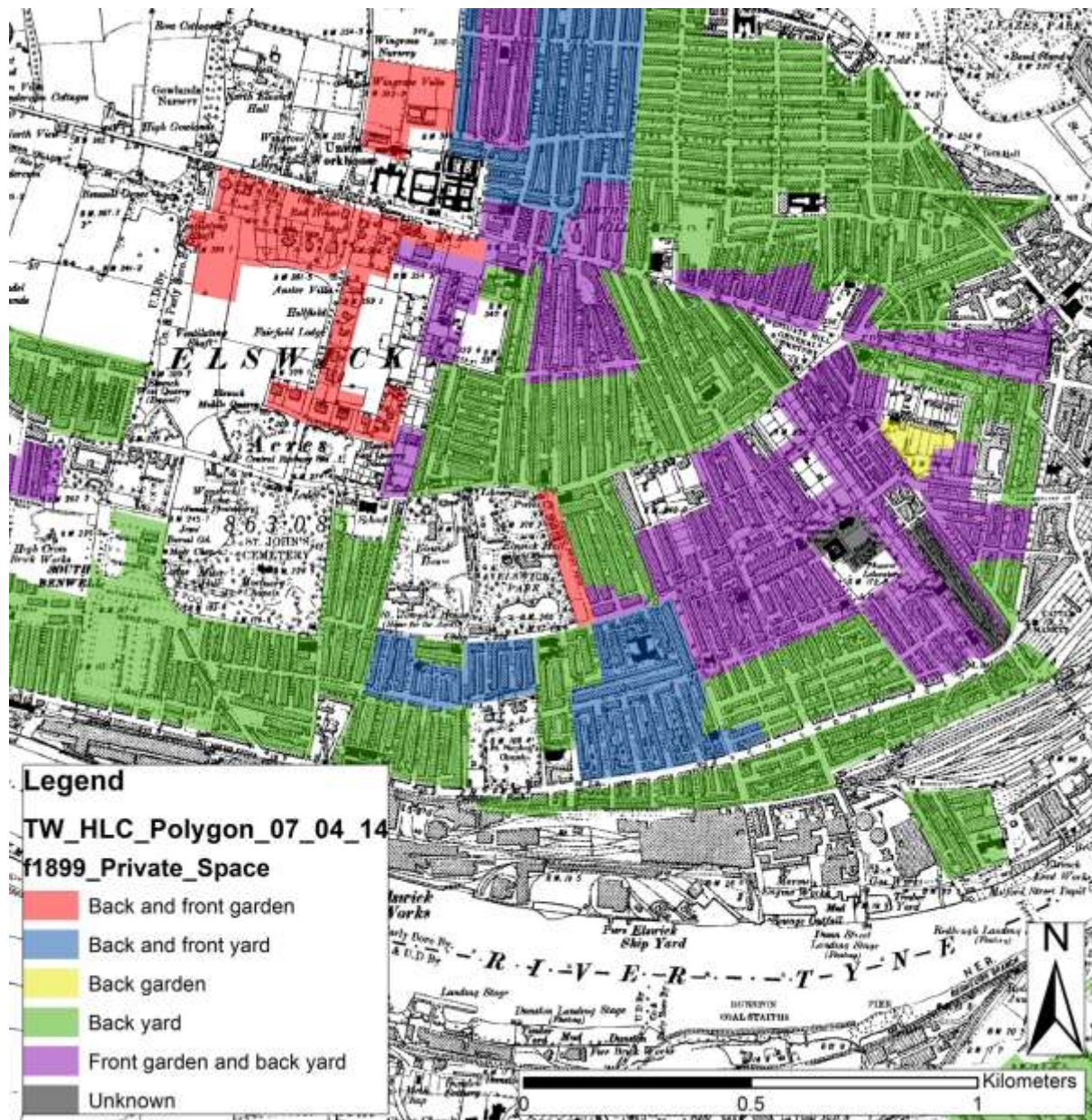


Figure 30. Settlement_Private Space – Elswick, Newcastle district © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

If viewed in conjunction with figure 29 what this reveals is that while *small scale* settlement is almost always related to those properties with only a back yard, the *medium scale* settlement has much more variation in its relation to *private space*. Those areas that were of *medium scale* in figure 29 show clusters of properties: some with only back yards that are typically found just behind the *small scale* housing and therefore closer to the Elswick Works; those with a back and front yard, also found directly behind the *small scale* properties but with better access to Elswick Park and a greater proportion of *Public Service* and *Religious* types within them; and finally those that had a front garden and back yard

that form an internal cluster, being surrounded by *medium scale* properties that had less *private space*, or found along the Westgate Road.

By zooming in, the higher proportion of properties that have a front garden and back yard along Westgate Road can be seen more clearly (figure 31).



Figure 31. Private Space, Westgate Road, Newcastle – 1898-1899 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

Westgate Road was a major route leading out to the west of Newcastle upon Tyne. Properties with a front garden and back yard were commonly located along the road. In those instances where properties had only a back yard two observations can be made. Firstly, where these properties front onto the road they occur in those developments shown on the mapping source of OS County Series 1861-1865, i.e. they represent early terraced housing closer to the city centre. Secondly, in later examples they meet the road at an angle so that their *scale* and *private space* would have been less visible from it. Westgate Road

provides a typical example of the decisions that were being taken in the 19th century for all the major urban settlements within the region.

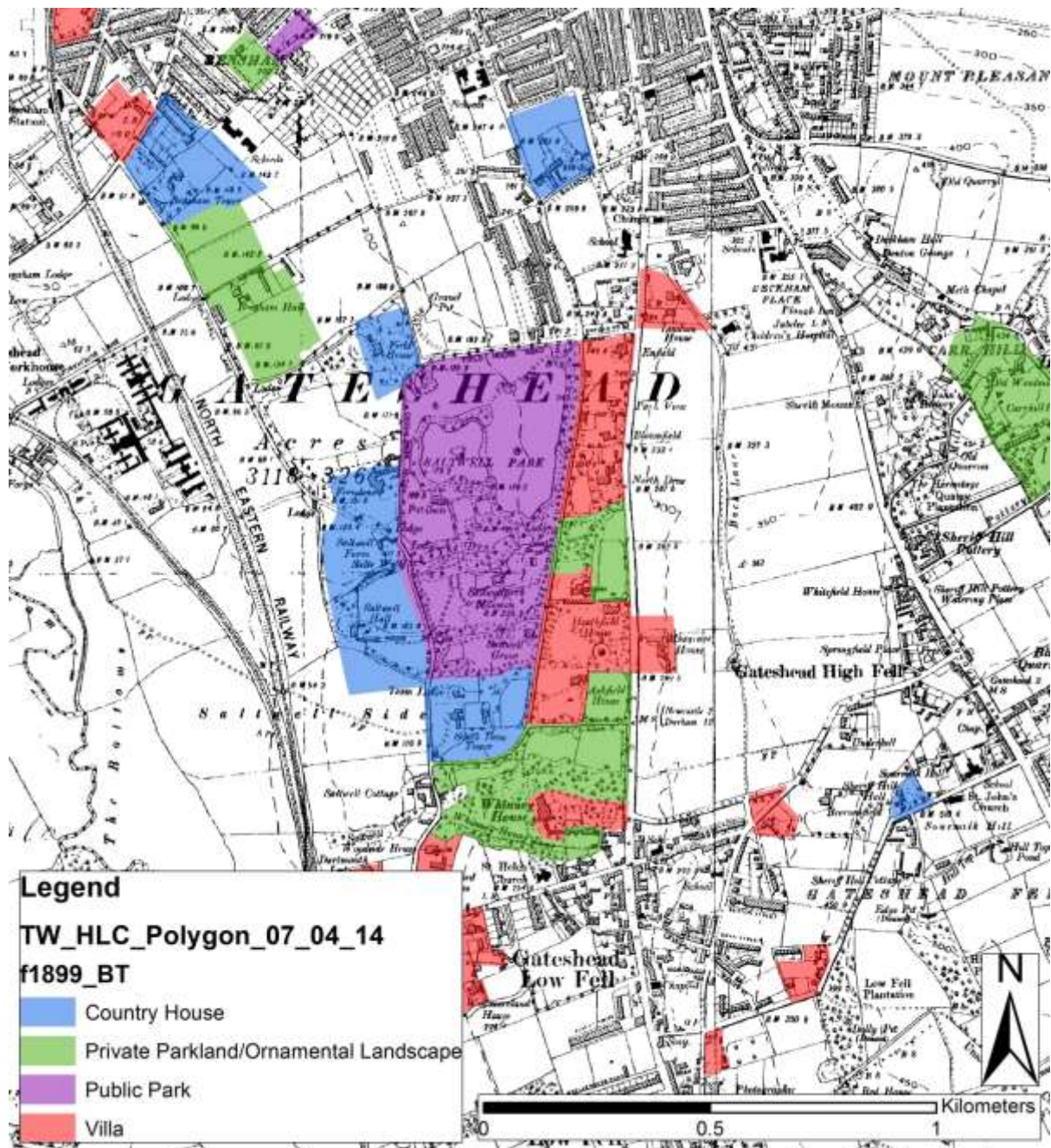


Figure 32. Gateshead Villas – 1898-1899 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

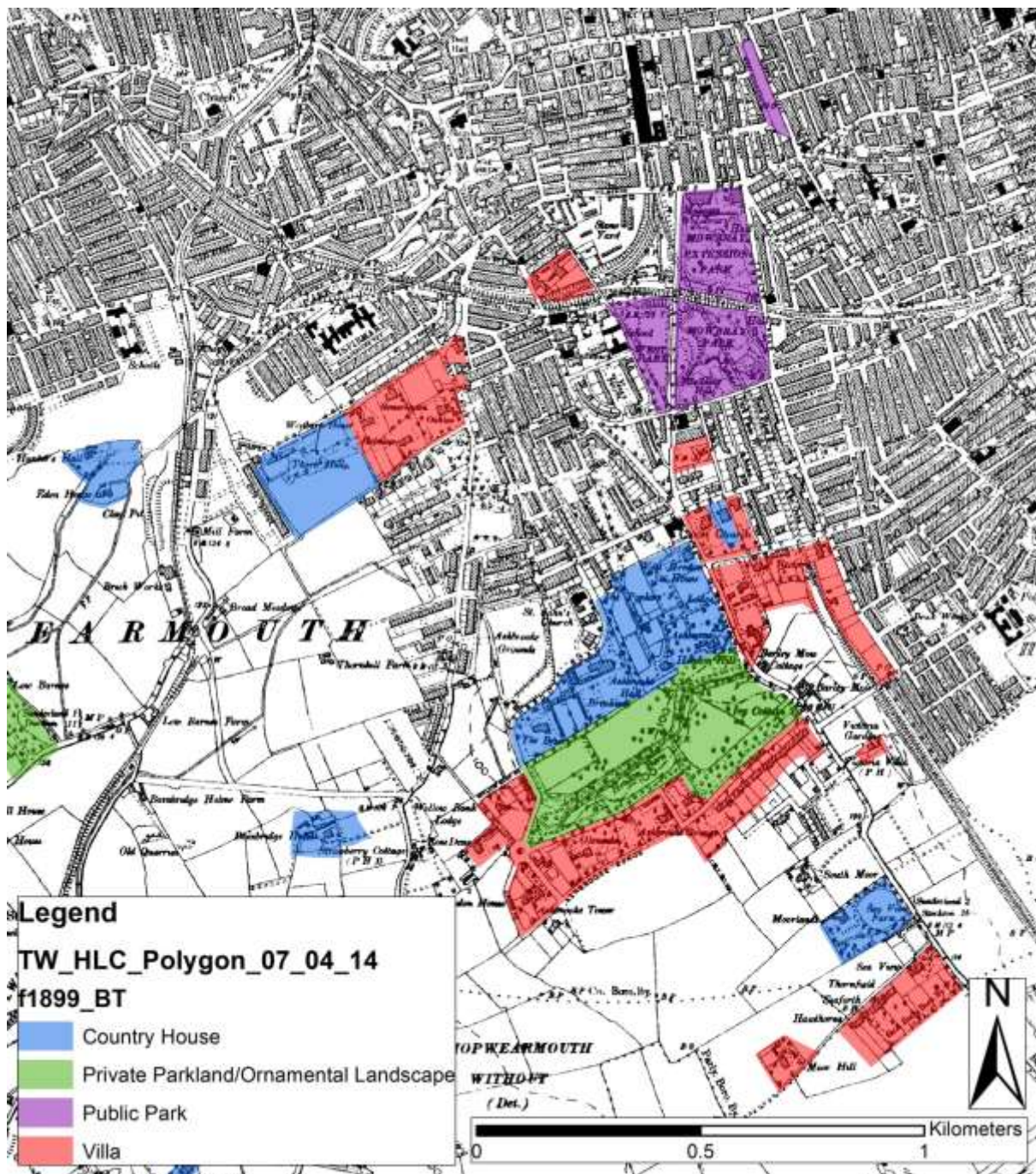


Figure 33. Sunderland Villas – 1898-1899 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1898-1899).

9.3 Suburban villas

The late 19th century saw the emergence of the suburban villa, found in a variety of styles but typically being large semi-detached or detached family homes, standing in private gardens, back and front. Linda Polley (2010, 232) suggests that, in the 19th century, villas became associated with relaxed country living. These were aspirational homes that provided an image of grand living for people who desired the type of lifestyle normally

reserved for the owners of country houses. Their location within T&W lends support to this idea. Villas are typically found alongside, or at a short distance from, the major routeways leading away from the industrial housing cores detailed above. They are also found (e.g. in Gateshead (figure 32) and Sunderland (figure 33)), in association with the following types: *Country House; Private Parkland/Ornamental Landscape and Public Park*.

This relationship with country living was short lived. By the mapping source of 1921 villas are less easily defined as separate from urban cores. Industrial housing steadily encroached and surrounded the villas, although they often survived, as at Saltwell, as idyllic pockets within the urban landscape that continues to the present day. Gateshead Council (1999, 64-68) describes how Saltwell Conservation area still retains its Arcadian feel, with trees making a major contribution to the area's character.

9.4 20th Century Changing Suburbs

The inter-war years in England have become synonymous with the development of garden suburbs and the semi-detached housing with which they are so closely associated. Garden suburbs were built on a massive scale between the two world wars and consisted of single family homes with private gardens that were located on urban fringe sites (Whitehand and Carr 1999, 79-80).

When considering the inter-war years in T&W the HLC can demonstrate that *Semi Detached Housing* increased from 0.5% of total area characterised in 1921 to 5.5% in 1938: a rise of c. 1000% within a 17 year period. Whitehand and Carr (1999, 80) note that garden suburbs consumed huge areas of land and this is again supported by evidence from the T&WHLC. When examining *scale* in relation to *Semi Detached Housing* and *Terraced Housing* in 1938 the HLC demonstrates that 79.4% of *Semi Detached Housing* fell within the *Medium scale* (50-100 sqm) relative to 58.2% of *Terraced Housing*, thus representing a much larger proportion of the whole. Coupled with the increase in private space, this reduction in density and a favouring of geometrically designed streets, rather than grids, resulted in much larger proportions of the landscape being taken up by garden suburbs.

9.5 Legibility

One of the major considerations of the T&WHLC during its development phase was the extent to which the character of earlier historic landscapes could be perceived within the present landscape. Given the urban nature of the HLC the legibility of earlier field systems within street layouts was of particular interest. Figure 34 shows the legibility of OS Country Series (1861-1865) within the modern landscape; (1861-1865) is used because it represents the date where the characterisation shows *Field Systems* at their greatest extent).

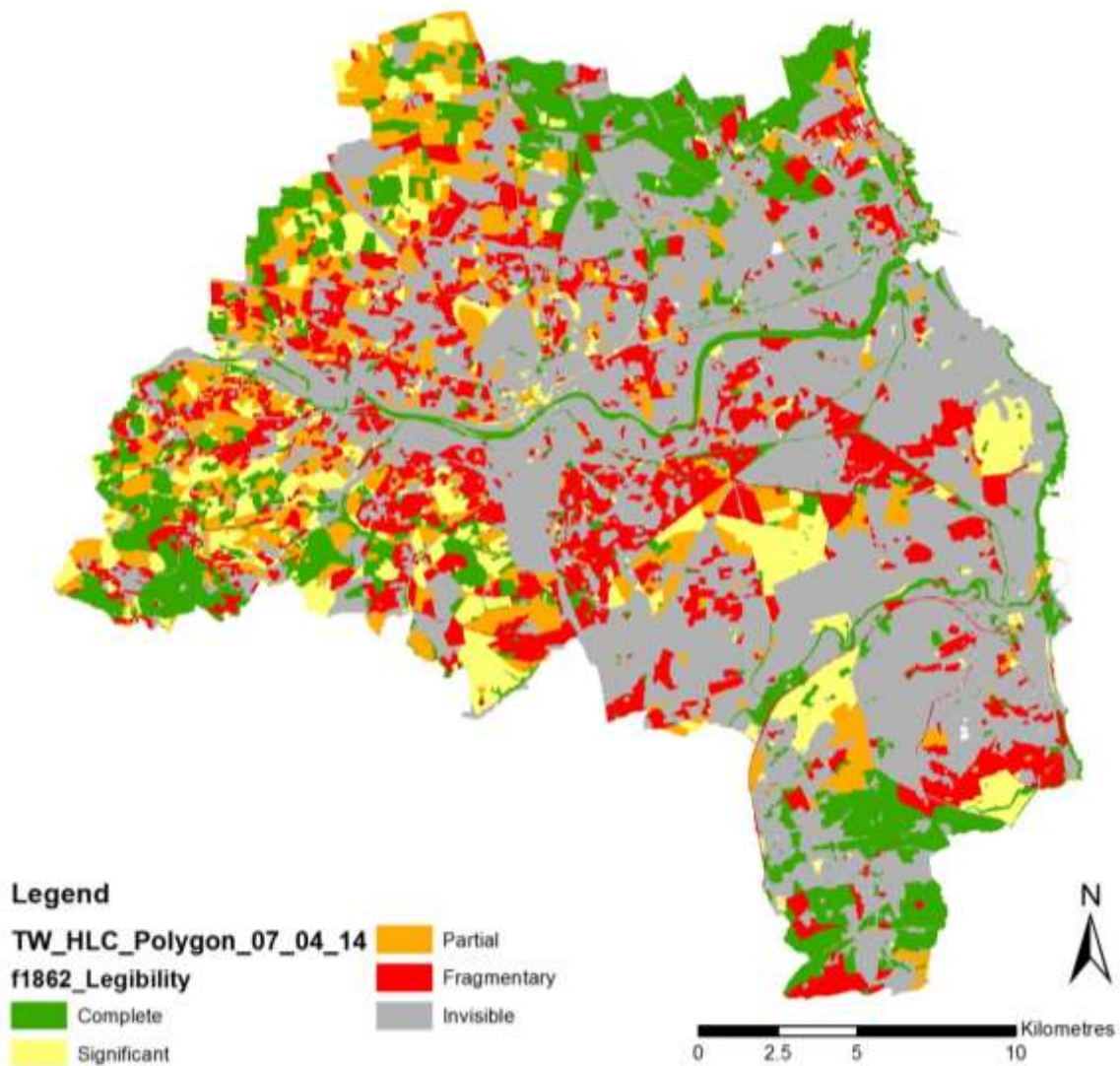


Figure 34. Legibility within the Modern landscape.

From a crude glance figure 34 demonstrates that legibility within the present landscape is not good (*Invisible*), particularly within those areas where the highest density of settlement is found; while those areas of rural landscape still surviving have a higher likelihood of preserving historic field boundaries ranging from *Complete* to *Fragmentary*. However, the HLC has been able to identify many areas within the urban and peri-urban landscape where legibility of field boundaries is at least *Fragmentary* and these are particularly found within the garden suburbs discussed in 2.4. The large amount of land required for these garden suburbs resulted in groups of fields being developed at once. Coupled with the typical geometric pattern of their street layouts, this increased the likelihood of field boundaries being preserved in at least a fragmentary fashion. The area surrounding Old Benwell, Newcastle district, is a good example of this (see figure 35).

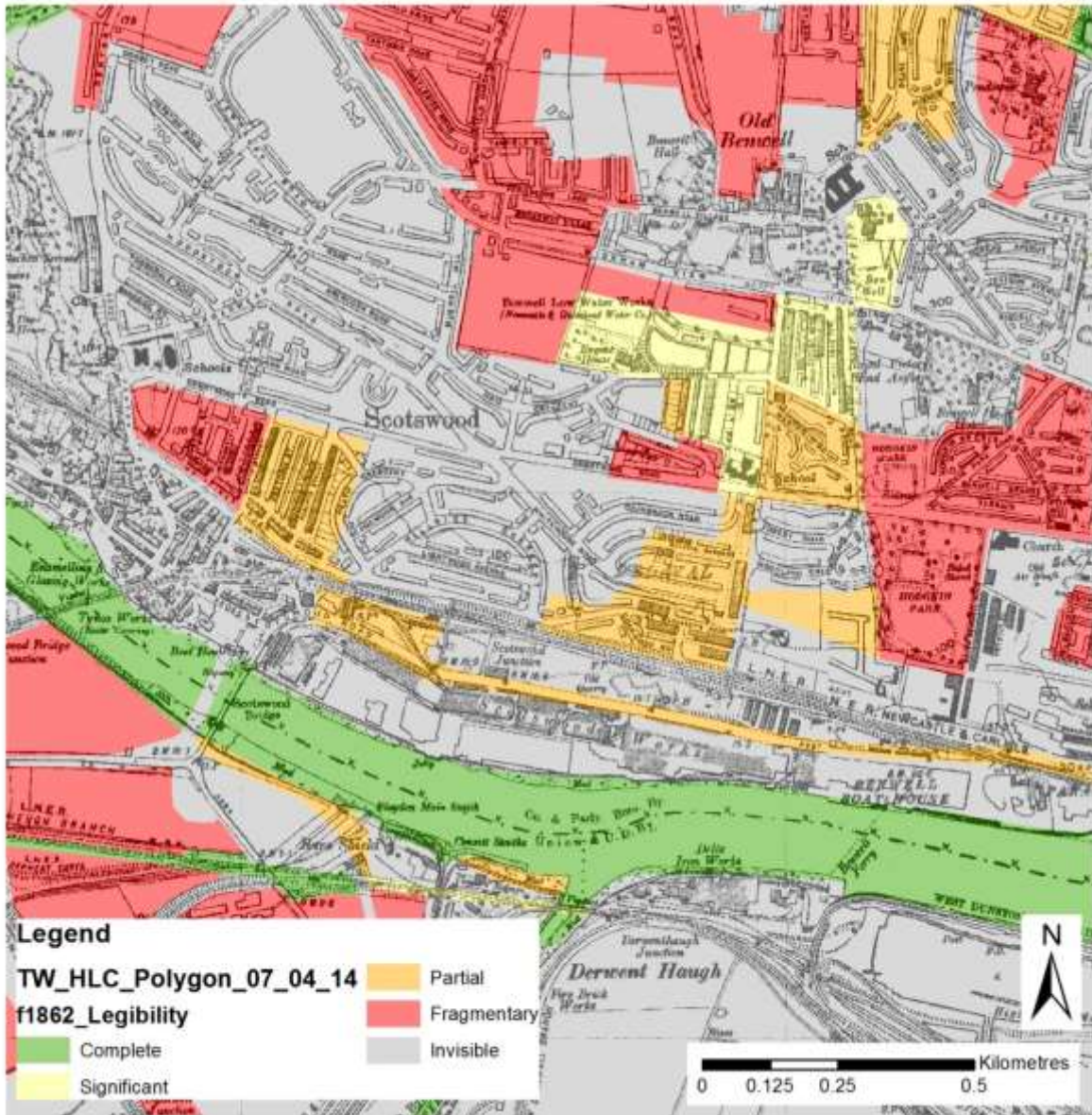


Figure 35. Legibility – Old Benwell, Newcastle © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1938).

This area contains a large amount of semi-detached and tunnel-back terraces that were constructed during the inter-war years, although parts have seen subsequent development dating from the late 20th century to the present. Figure 35 shows in greater detail the distribution of *Fragmentary*, *Partial* and *Significant* areas of legibility from OS County Series 1861-1865. It demonstrates that within a typical area of urban expansion the legibility of field boundaries within street layouts is better than might be expected. It is worth noting that those areas of *Invisible Legibility* represent those parts of Old Benwell that have seen subsequent development from the late 20th century onwards. The T&WHLC has found that in instances where inter-war housing is being replaced, field boundaries that were preserved within the street layout are also being lost.

9.6 Conclusion

The study of settlement within T&W is a massive subject and only parts of it have been discussed above. English Heritage (NHPP Activity 4A) has identified that suburban housing in the UK is poorly understood and as it represents one of the most changeable areas in T&W further research would be beneficial before re-development. The HLC is a step towards providing a framework within which the urban and peri-urban landscapes can be understood, from which further research and HLC applications can be developed. Furthermore, it can also contribute to informing the evidence base on which local authorities made decisions on planning applications in terms of design, development impact, or landscape assessment for those areas most under threat from development.

10 Rural Landscapes

The modern landscape of T&W can be roughly defined as being 48% rural. The survival of the rural landscape is not distributed evenly and this has, in part, been dictated by the varying topography and geology of the region. For example, the upland regions of the district of Gateshead comprising broad open ridges and valleys contain the highest percentage of survival of the rural landscape for the whole region.

For the purposes of the following discussion 'rural' is defined as undeveloped land that is agricultural in character or part of the open countryside. Within the T&WHLC several of the *Class* character types can be defined as broadly 'rural' using this definition. These include: *Field Systems* and *Open Land*; and to a lesser extent: *Woodland*; *Water*; *Extractive*; and *Recreation*, in particular *Private Parkland/Ornamental Landscape*.

10.1 An Overview of Field Systems

10.1.1 Enclosure

Several works have concentrated on landscapes of enclosure in relation to the T&W region, although they are typically focussed on the historic counties of Durham and Northumberland. Examples include R.I Hodgson's work on the history of enclosures in County Durham (1979; 1990); Dunsford and Harris' review on the colonization of wasteland in County Durham (2003); and Turner *et al.*'s examination of the rural landscape as the context for the monasteries of Wearmouth and Jarrow (2013).

Enclosures in T&W can be divided into two main categories: those where the enclosure boundaries are sinuous or irregular in nature, revealing possible transformations from earlier field systems; and those that are often later in date where the boundaries are typically straight, having been laid out by survey (Williamson 2002, 7-14). These are often associated with enclosure by act of Parliament, which affected some of the upland areas of T&W.

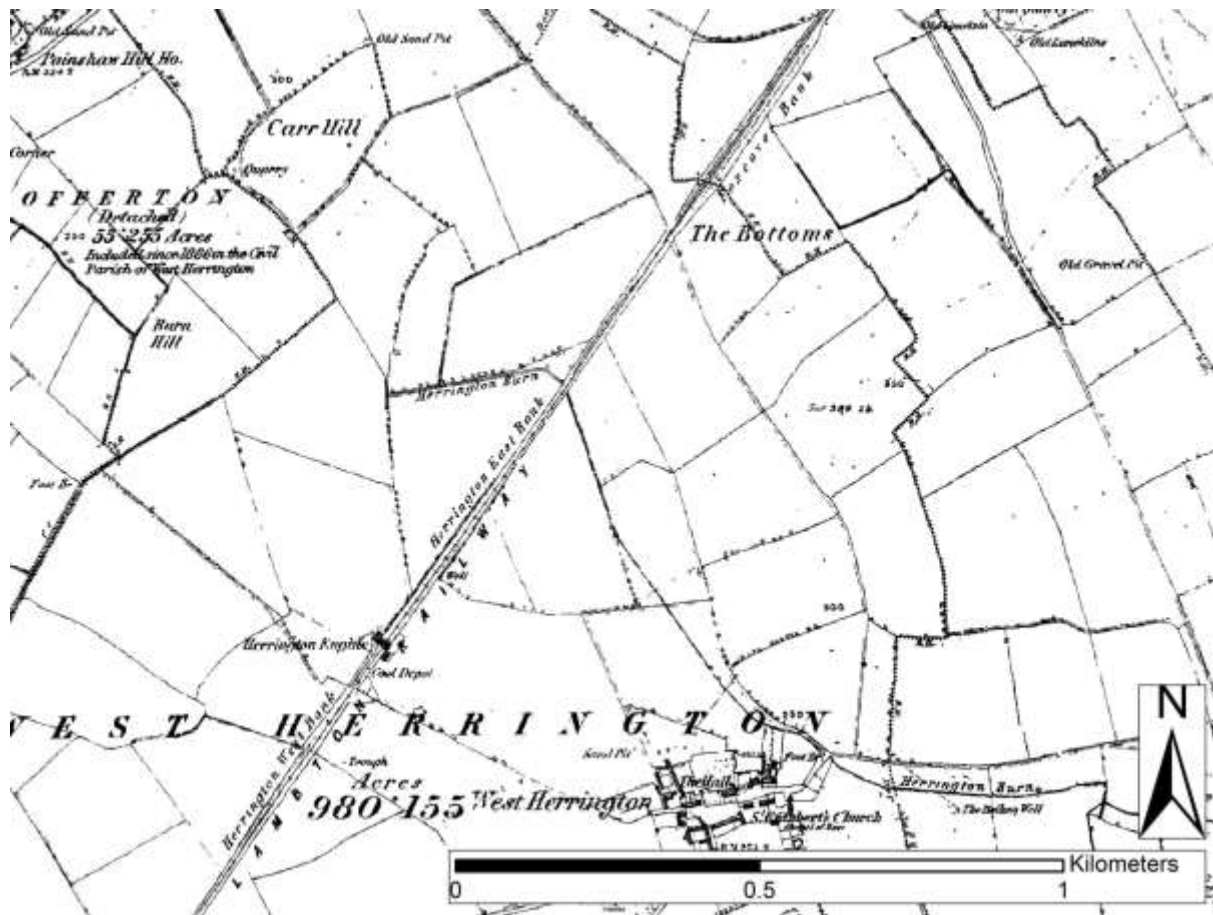


Figure 36. Sinuous/irregular field boundaries north of West Herrington, Sunderland © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1861-1865).

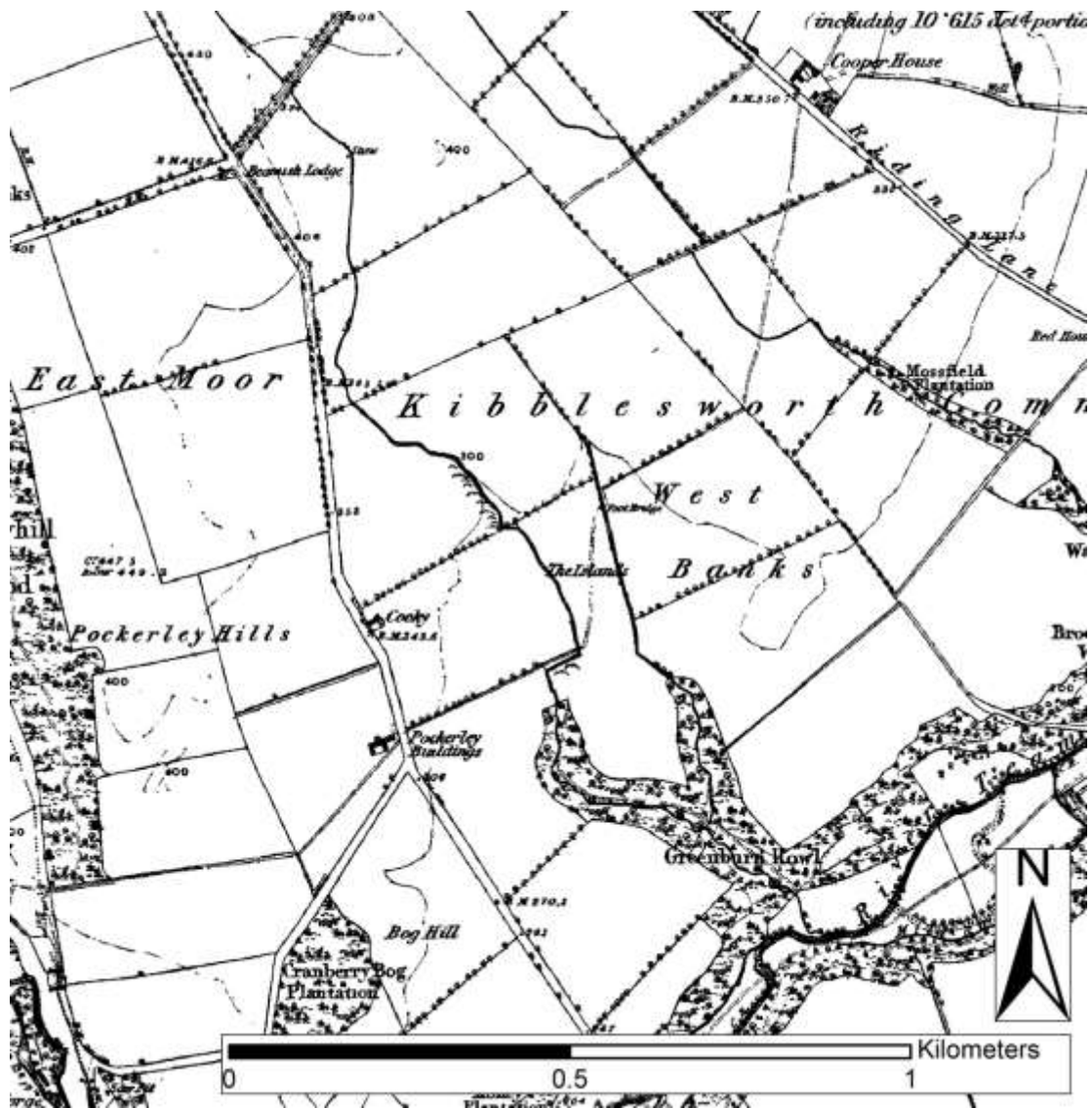


Figure 37. Straight field boundaries on Kibblesworth Common, Gateshead © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1861-1865).

10.1.2 Field System Survival

The survival of *Field Systems* is not distributed evenly throughout the region. Figures 38 to 40 show the extent of field system loss in the region from 1861 to the present.

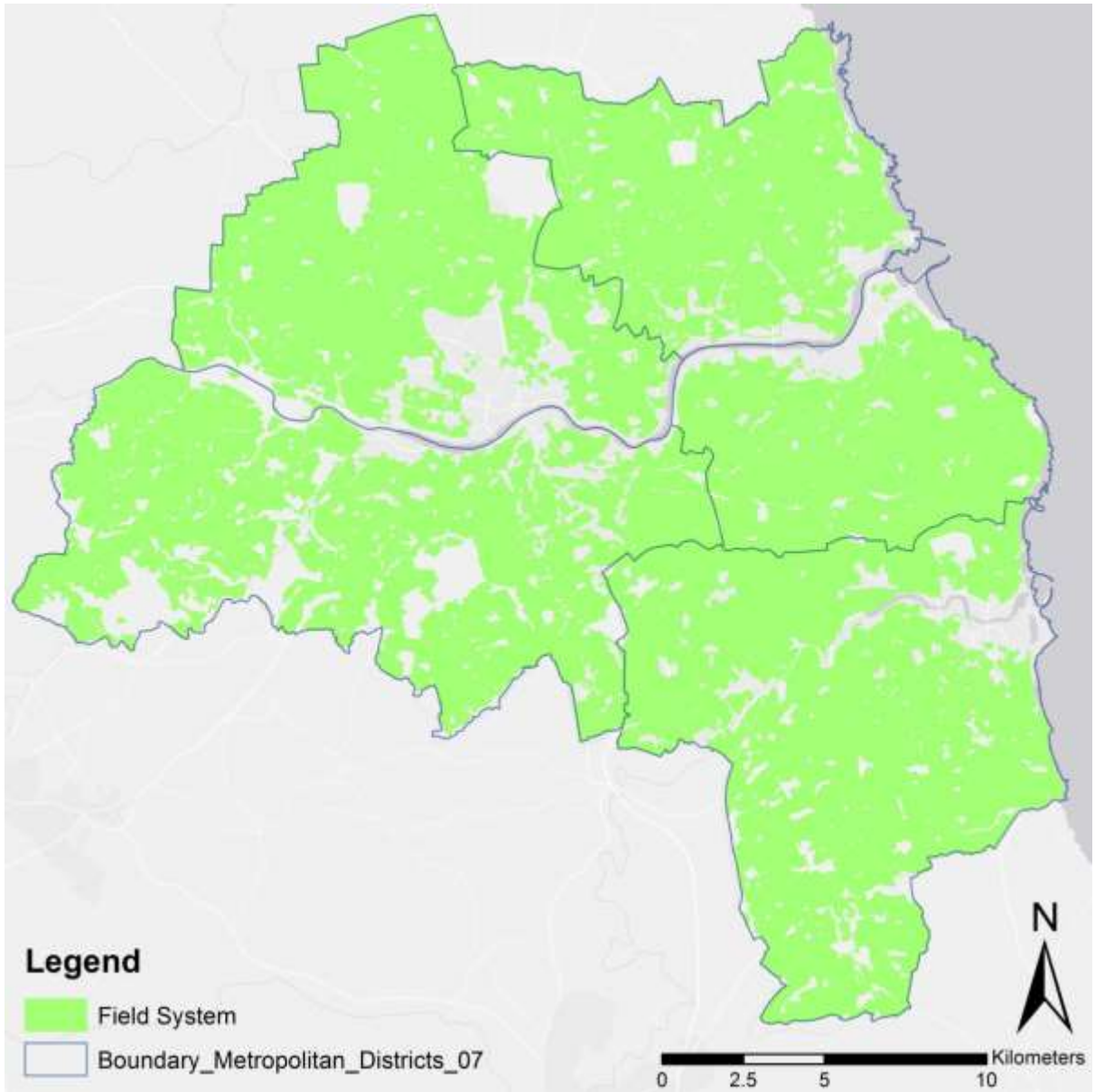


Figure 38. Field System Class – 1861-1865.

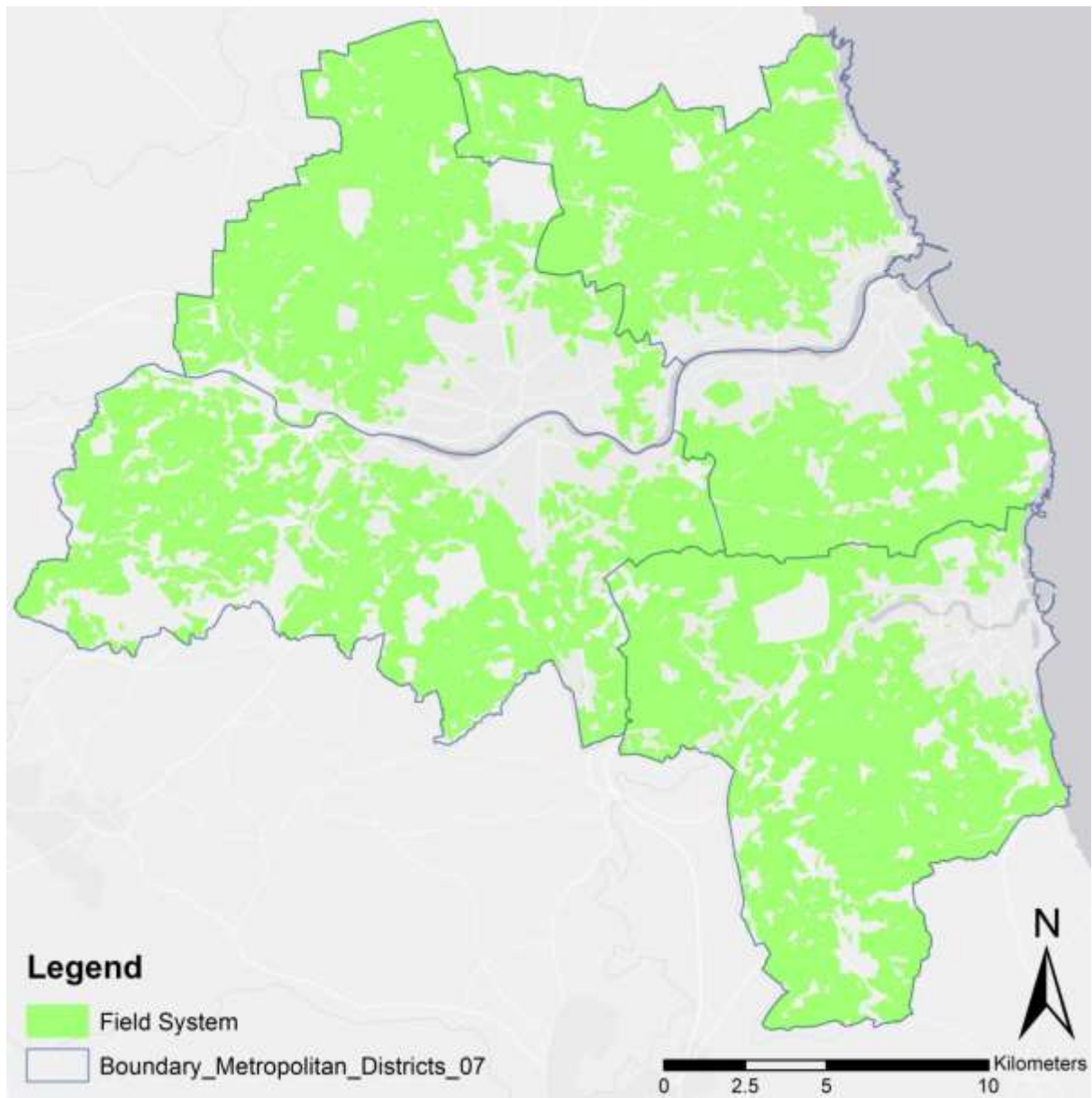


Figure 39. Field System Class – 1921.

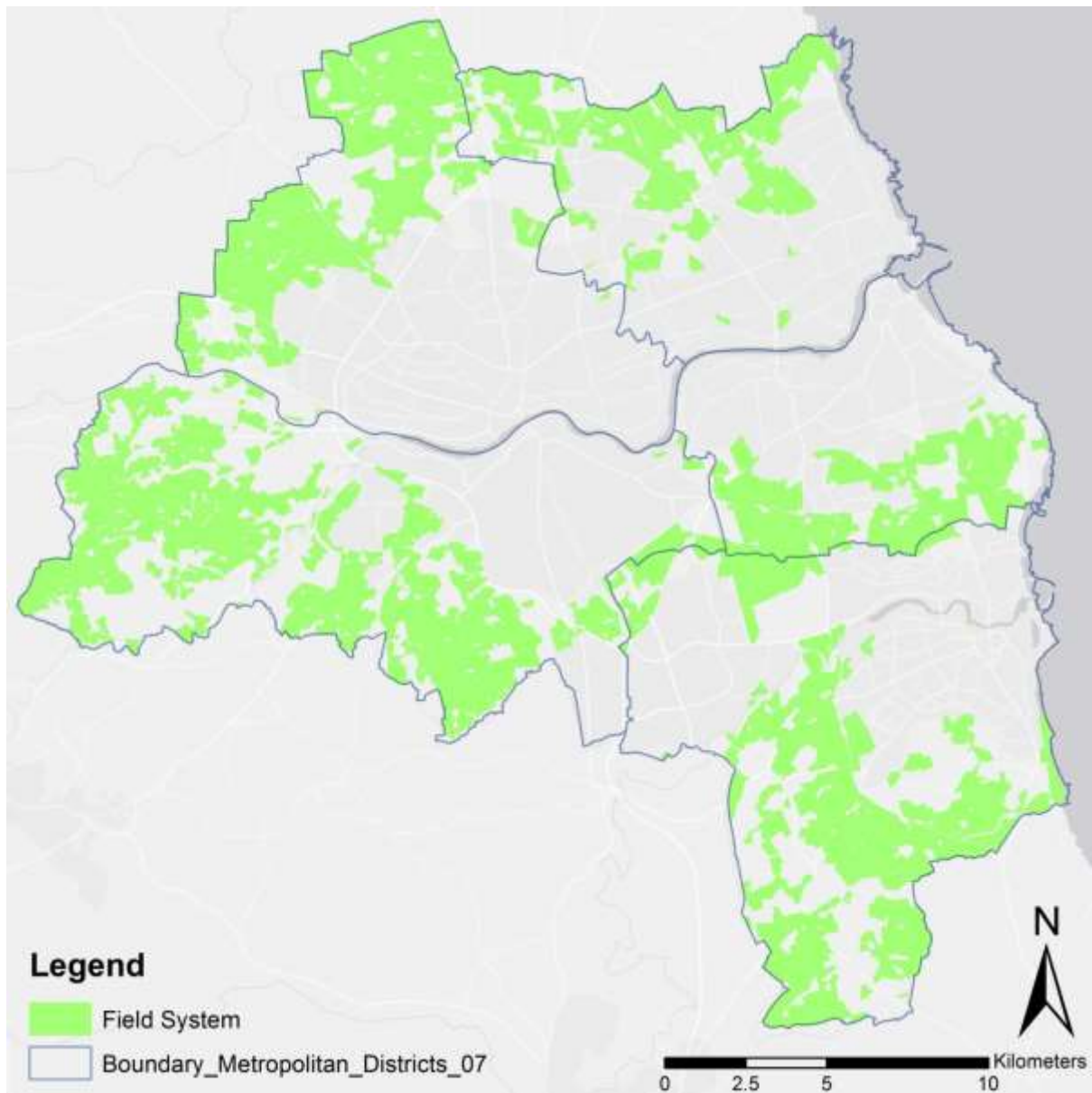


Figure 40. Field System Class – Modern.

The rate at which field systems have been transformed into other classes is striking, but perhaps unsurprising given the history of urbanisation. Analysis of the HLC database can provide information about the condition of field boundaries where they survive. Figure 42 denotes the degree of boundary loss between OS County Series (1861-1865) and OS MasterMap (2011). The data is divided into three categories. Those areas with *Much* loss represent a loss of greater than 40% and correlate directly (if compared with figure 9) with those areas of densest settlement in the modern landscape. However, in those areas where there are surviving field systems the percentage of loss of field boundaries is much lower, usually falling into the *Some* or *Little* category and representing 15 - 40% or lower than 15% respectively.

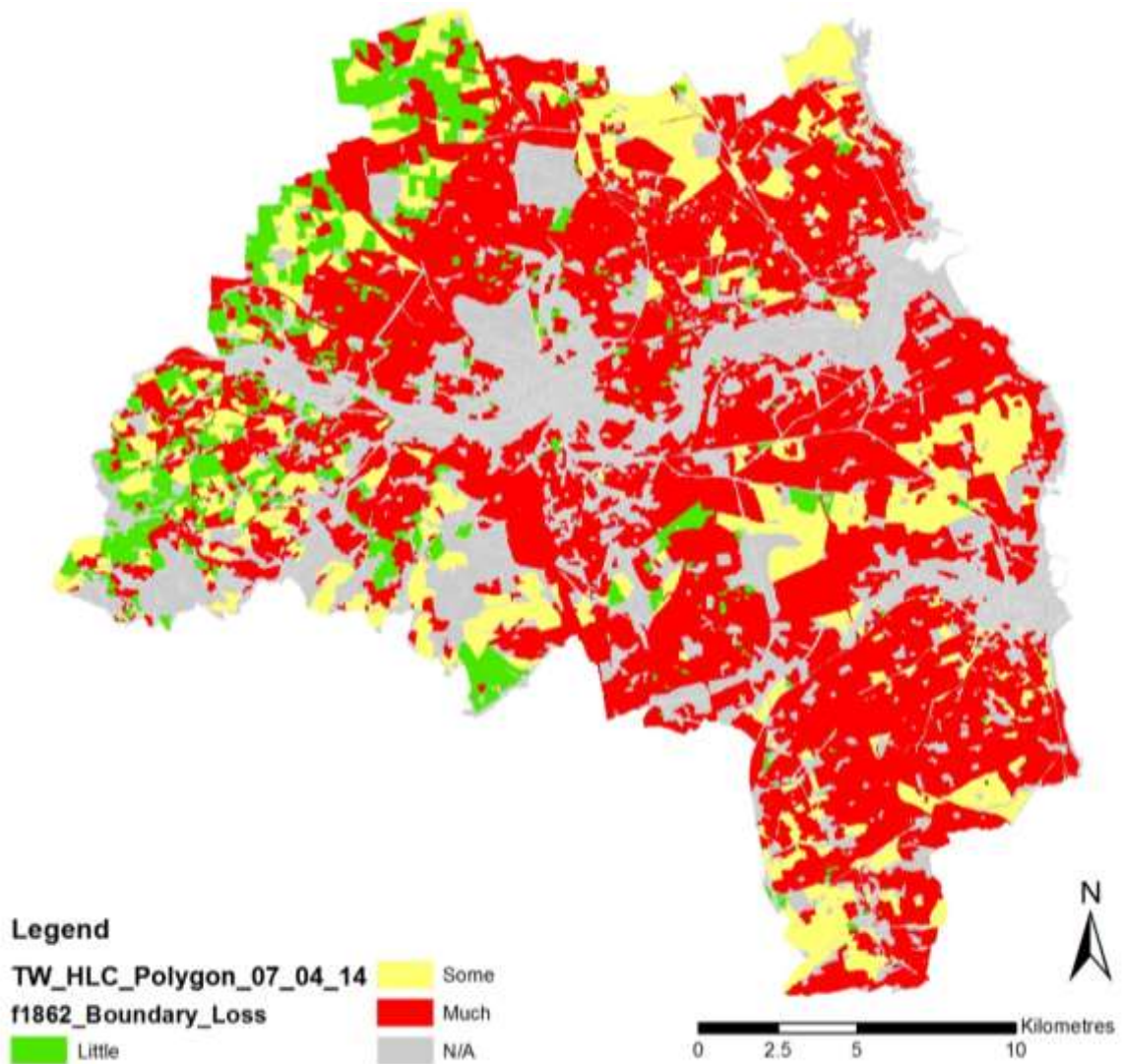


Figure 41. Field boundary loss between 1861 and 2011.

10.1.3 Field Boundary Loss

Field boundary loss is a typical feature of most 20th century landscapes in Britain and is often associated with the transformation of relatively small fields into much larger fields from the mid-20th century onwards. However, parts of South Tyneside show evidence that this process was happening pre-1920 (see figures 42 and 43).

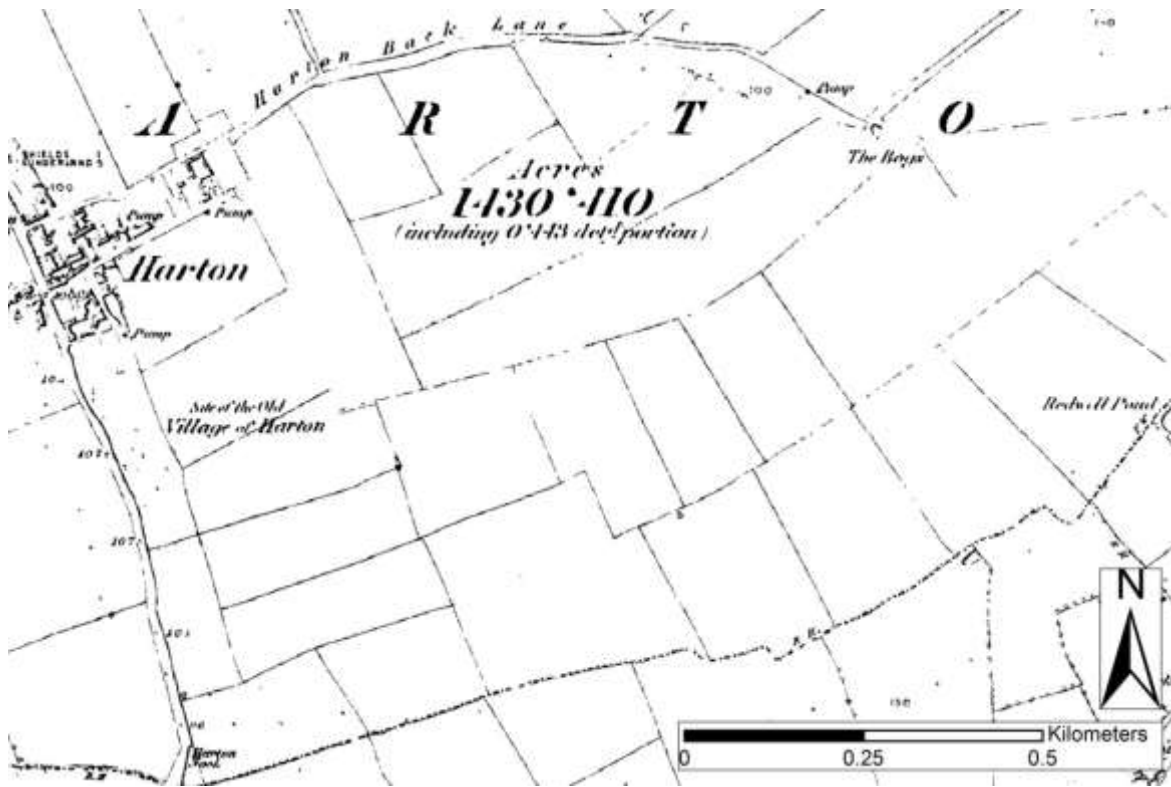


Figure 42. Post-Medieval enclosed fields east of Harton, c. 1861-1865 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1861-1865).



Figure 43. Field boundary loss east of Harton, 1921 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1921).

Where boundary loss is occurring in South Tyneside it is not as a result of new features, such as railways, which cut through pre-existing enclosed fields, or a re-organisation of enclosed fields, which is also typical in the late 19th and early 20th centuries. Rather, the case of South Tyneside appears to demonstrate a desire to increase field size and it typically occurred in those areas where the *Field Size* recorded was *small* (≤ 2 ha) on OS County Series (1861-1865), as shown in figure 44.

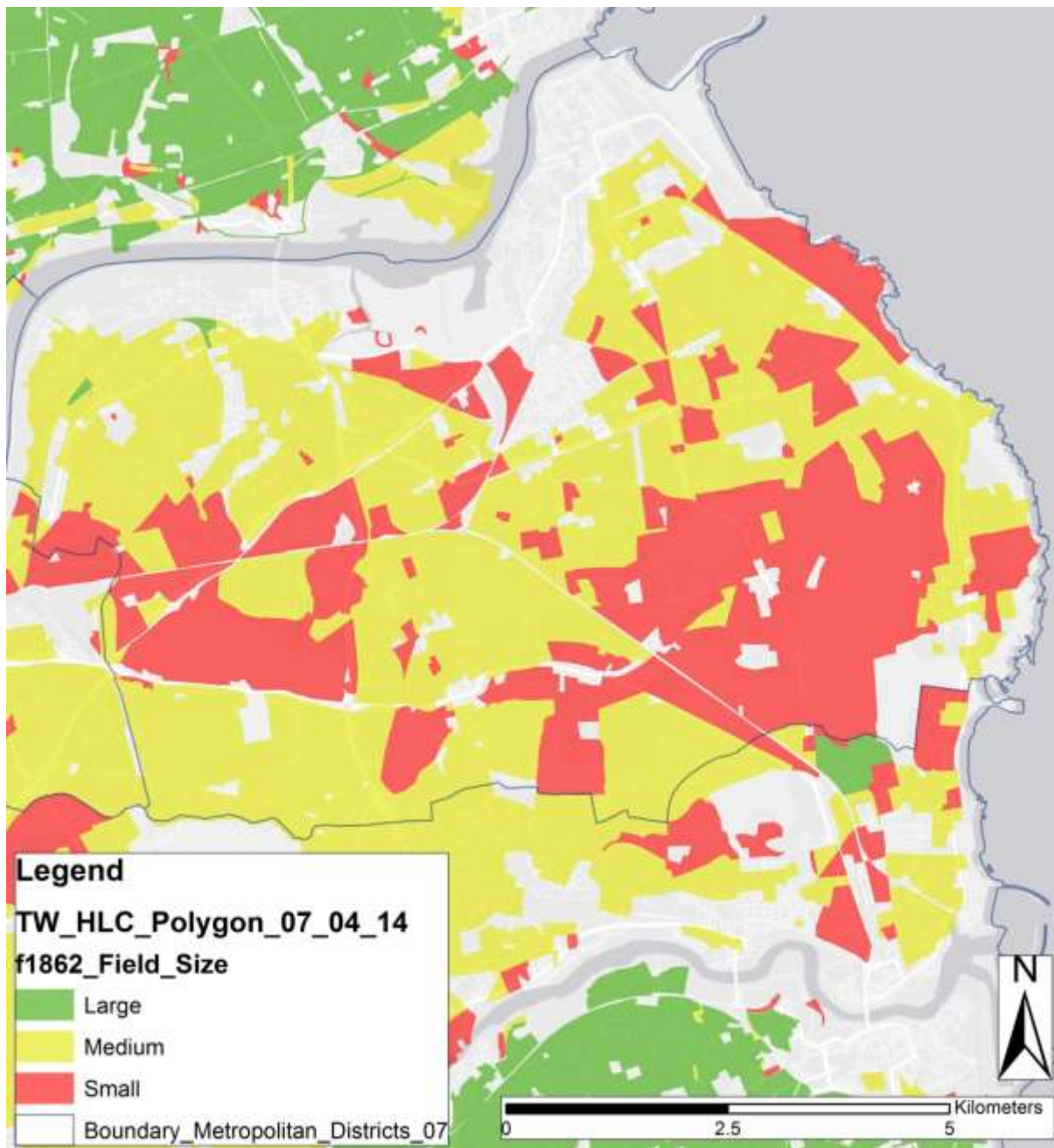


Figure 44. Field Size in South Tyneside 1861-1865.

South Tyneside is the only district where *small* fields are recorded and interestingly this pattern of small enclosed fields corresponds with those areas that show evidence of Medieval strip fields. It may be that the enclosure in this area resulted in the creation of fields that were considered too small by the late 19th and early 20th centuries.

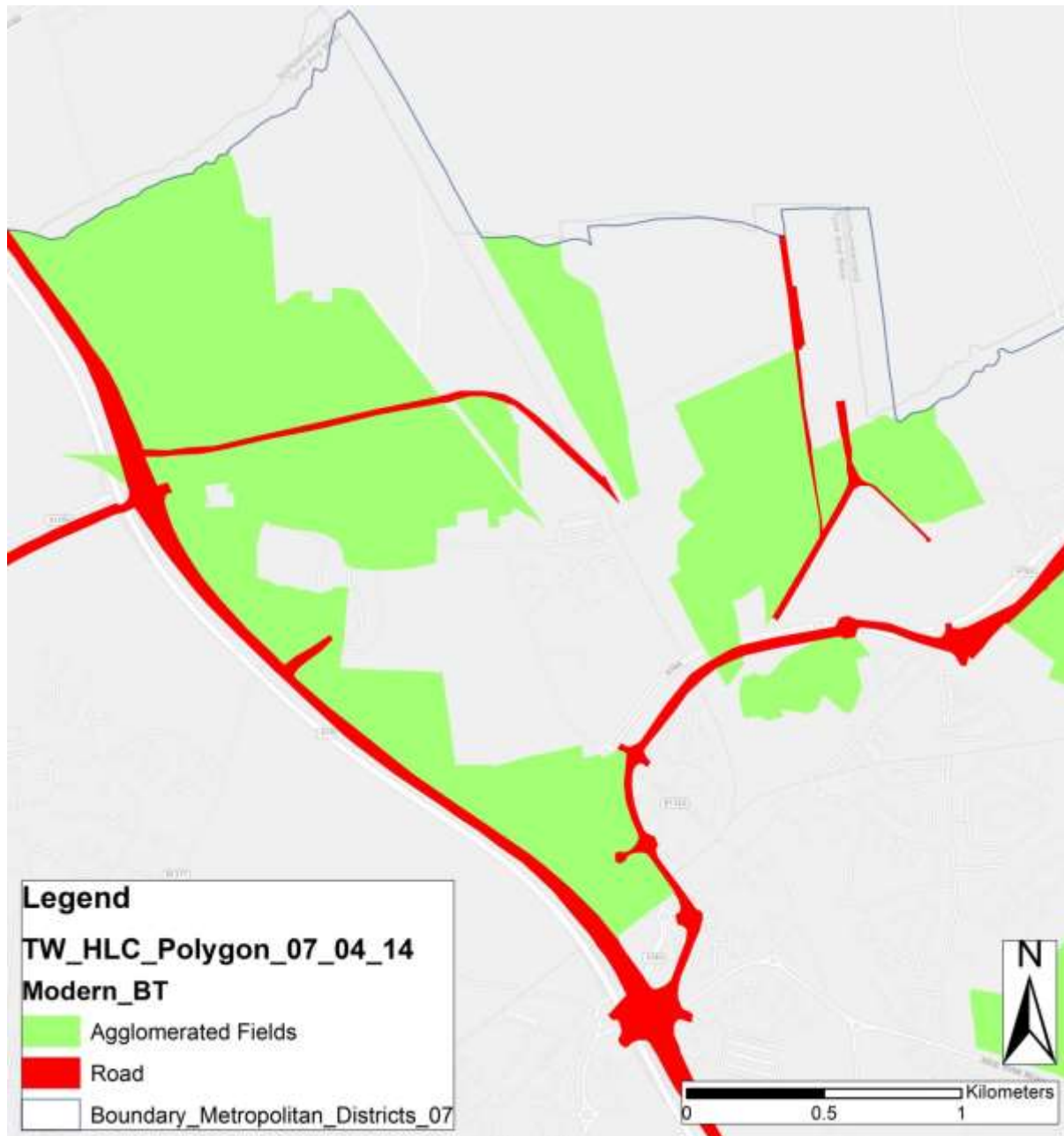


Figure 45. Agglomerated Fields on the North boundary of the North Tyneside district.

10.1.4 Agglomerated Fields

Field boundary loss continues to impact the rural landscape and *Agglomerated Fields* are a common *Broad Type*, but are not as prevalent as might be presumed from an area struggling with urban expansion. *Agglomerated Fields* make up c. 16.5% of the total area characterised as *Field Systems* from OS National Grid (1979-1996). This can be compared with *Surveyed Enclosure*, c. 8.2% and *Other Enclosed Fields*, c. 3.6% from the same period. The representative proportion of *Agglomerated Fields* increases to 16.8% in the Modern landscape and this is due, in part, to recent additions in communication networks such as the A1. Figure 45 shows the relationship between *Roads* and *Agglomerated Fields* in the *Modern* landscape.

The HLC data reveals that where field systems do survive they demonstrate a partial preservation of earlier patterns of enclosure that should be taken into account given the increasing pressure for 'development' land.

10.2 Rural landscapes before enclosure

The T&WHLC can be used to provide information on some of the processes that occurred in the landscape pre-enclosure. The nature of field boundaries, as discussed above, is examined from the first mapping source available (in this case 1861-65). As noted above, this was done with reference to evidence provided in the HER in conjunction with the GIS-based reconstruction of County Durham 'waste' supplied by Professor Brian Roberts. From this, a crude model of the rural landscape of T&W during the Medieval period can be reconstructed.

This map of *Medieval* landscape character is partial, reflecting limited knowledge about different parts of the T&W landscape. This is particularly notable in those areas that have undergone significant change, or early development. Early railways, for example, often divide enclosed landscapes making interpretation of field boundaries more difficult.

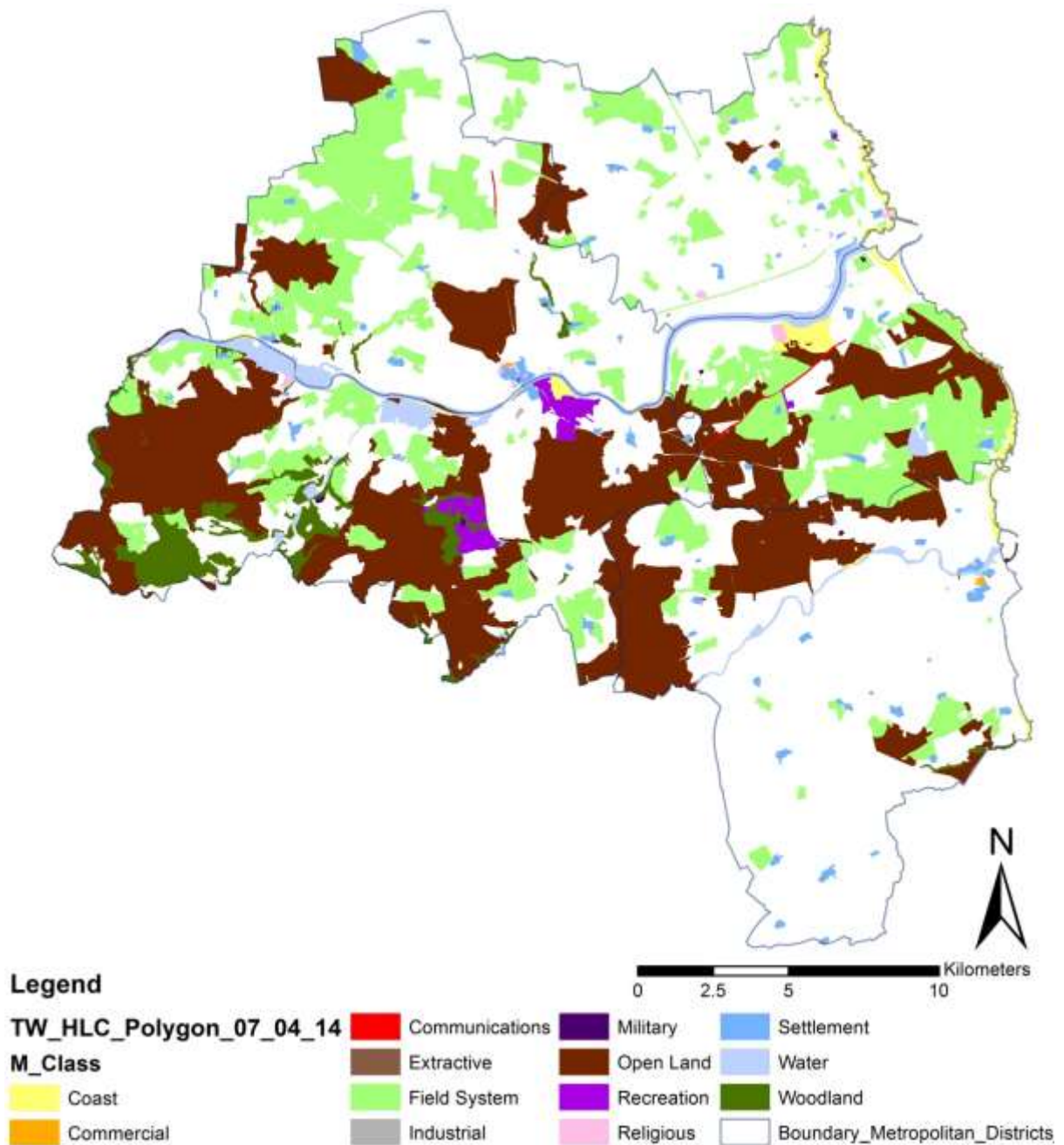


Figure 46. Class character map – Medieval Period.

10.2.1 Visualisation

This data can be displayed usefully using a 3D raster model of the region. By overlaying the HLC data on the model, observations can be made about the distribution of *Class* types relative to the topography. Figure 47 shows a reconstruction of the Derwent valley in the Medieval period, looking south-west from the north bank of the river Tyne (roughly from the location of today’s Metrocentre).

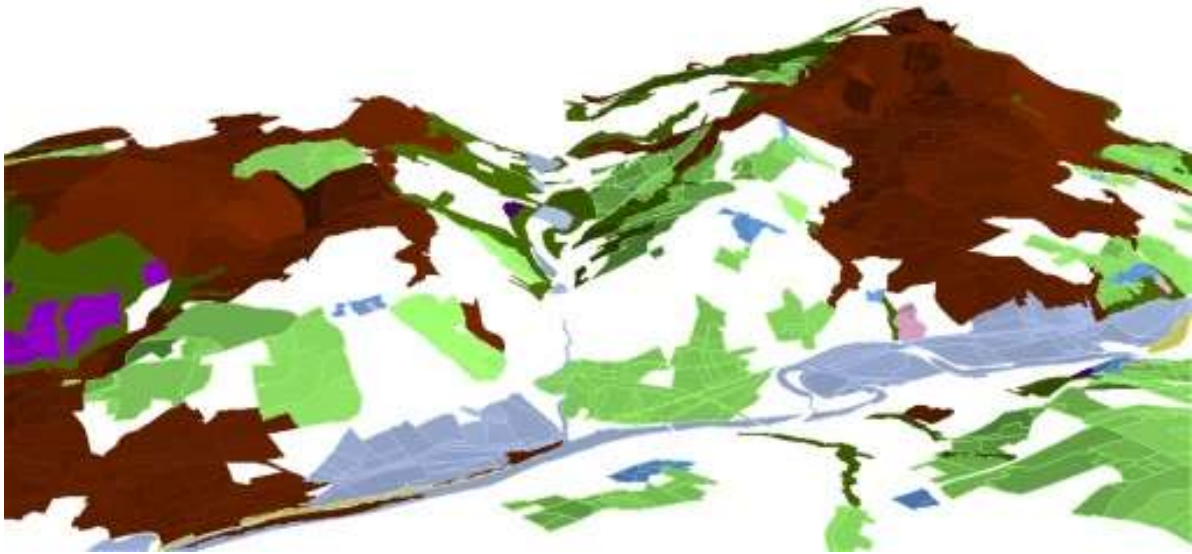


Figure 47. 3D model of the Derwent valley using Medieval HLC data. Vertical Exaggeration: None

General observations include:

- The river Tyne can be seen in the foreground as well as extensive systems of haughs (also shown in light blue) either side of the river;
- The nunnery at Stella (HER 623) can be seen close to these haughs towards the right hand side of this image (pink);
- The *Open Land*, in this case *Ancient Unenclosed*, is found on the upland ridges (brown);
- *Field Systems* (light green) hug the valley sides, or are found in the valley bottom;
- The valley has scattered woodland (dark green) and dispersed settlement (blue).

By comparison the east of the region is much flatter. Figure 48 shows a reconstruction of the landscape around Jarrow, South Tyneside:

- Jarrow Slake (yellow) can be seen in the foreground with Jarrow monastery (pink) occupying a slight rise in the landscape next to the Slake;
- The generally lower topography in this part of T&W results in a less discernible difference between *Field Systems* (light green) and *Open Land* (brown), but *Open Land* still tends to occur in areas of higher ground;
- The Wrekendyke Roman road (red) is still discernible in the landscape;
- Settlement (blue) is dispersed throughout the landscape.



Figure 48. 3D model of Jarrow Slake using Medieval HLC data. Vertical Exaggeration: None.

10.3 The role of Private Parkland/Ornamental Landscapes

Private parkland and ornamental landscapes have traditionally been associated with the rural land that lies beyond the urban and peri-urban landscape. The loss of *Private Parkland/Ornamental Landscapes* is shown in figures 49a and 49b. *Private Parkland/Ornamental Landscapes* represented 1.9% of the total area characterised in 1861-1865; this drops to 0.4% in the *Modern* landscape.

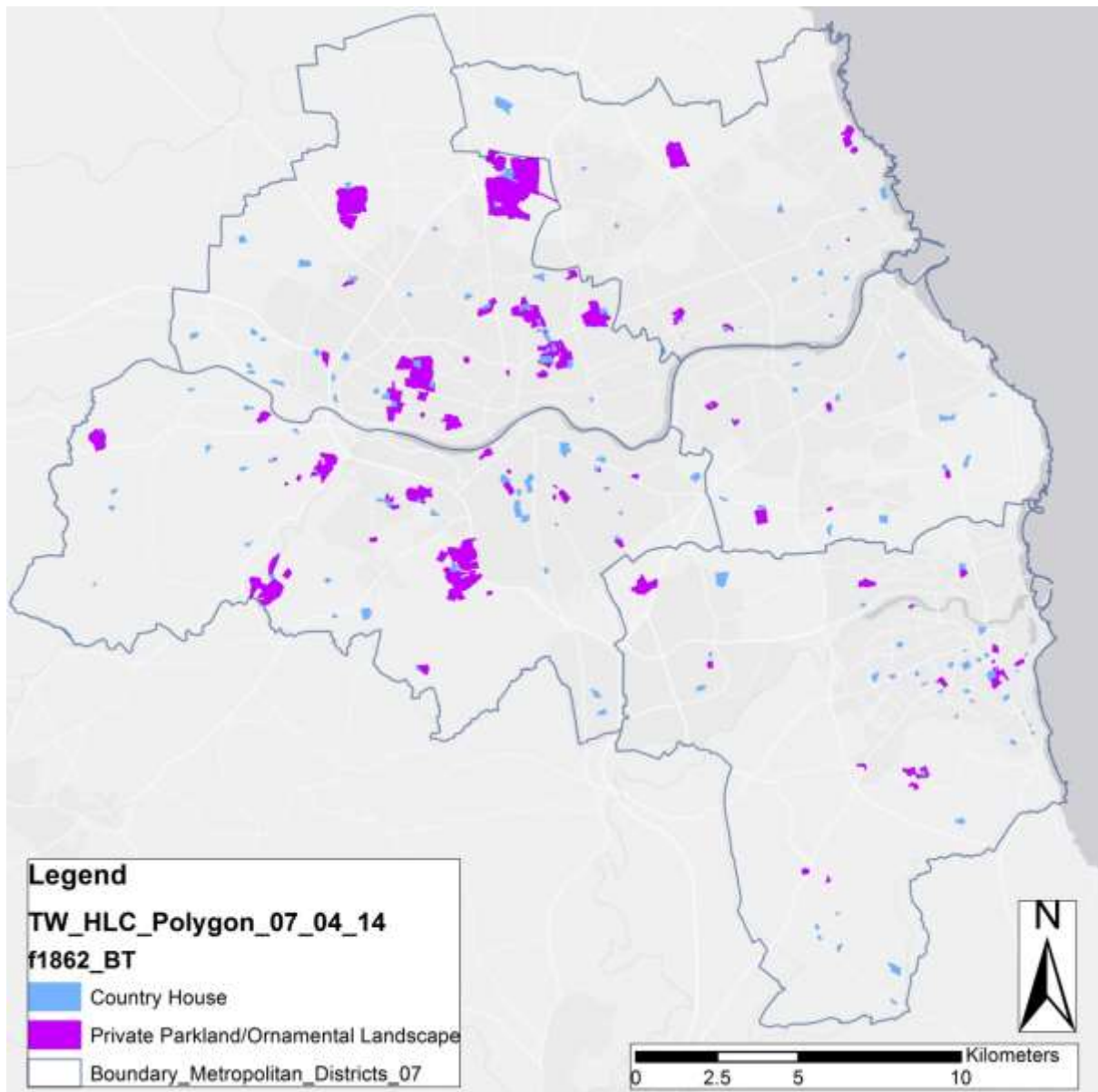


Figure 49a: Private Parkland/Ornamental Landscape 1861-1865

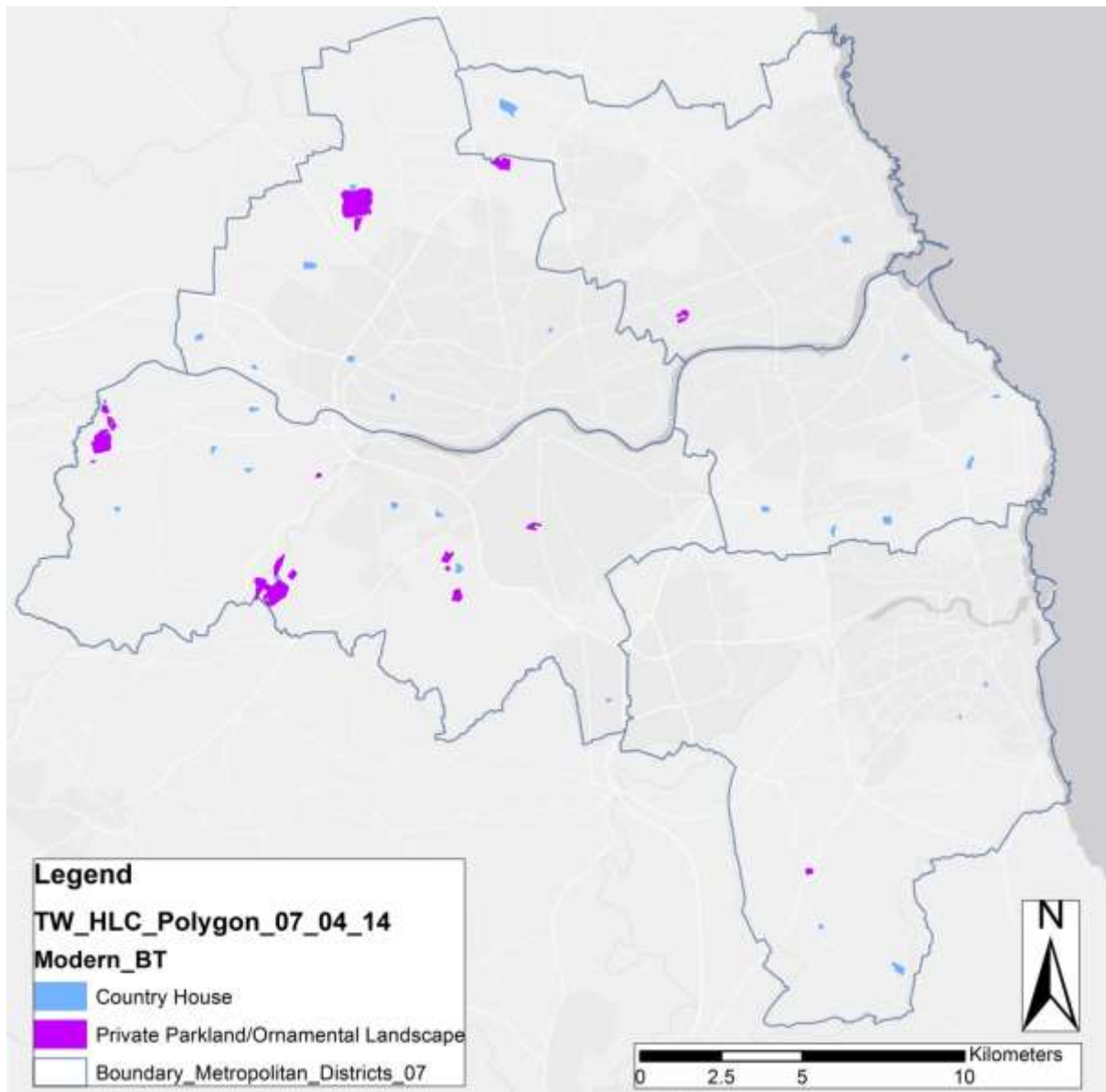


Figure 49b. Private Parkland/Ornamental Landscape 2011 (compare with 49a).

There has been some change in use to former parkland and ornamental landscapes, for example Gosforth Park, which was resold and converted into a racecourse in 1880 (Green 1995, 20). However, the 79% decrease in the area occupied by private parkland and ornamental landscapes can be largely attributed to total loss rather than conversion. Where total loss has occurred some of the *Broad Types* associated with parkland can still be recognised in the present landscape. The location of belts of woodland can provide evidence of estate boundaries where parkland and ornamental landscapes, as well as buildings, have been removed (Green 1995, 12). An example of this can be seen at Low Gosforth House and grounds which were lost to housing developments in two stages during the 1960s and 1980s. As the HLC characterised *Plantation* separately the preservation of the plantation belts at Low Gosforth can be seen in the highlighted polygons in figure 50.

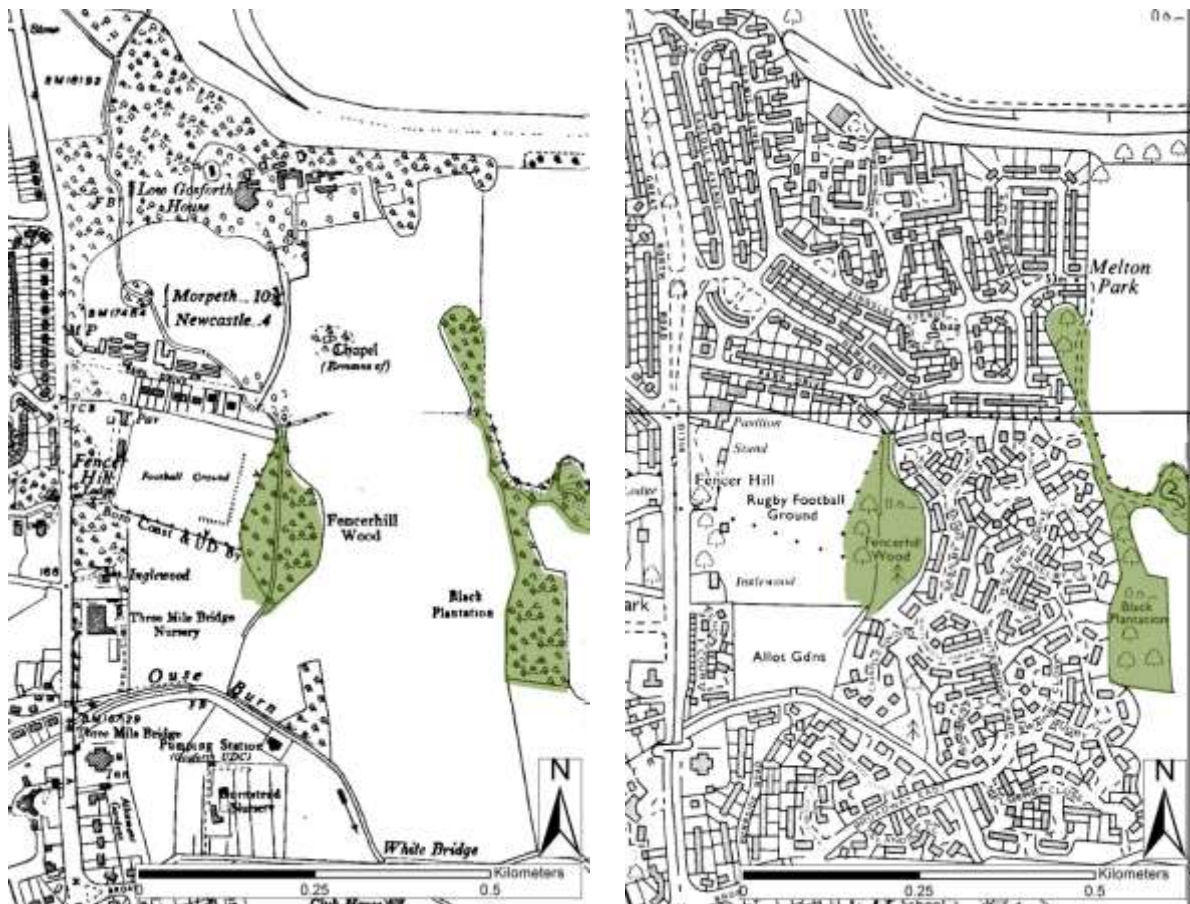


Figure 50. (Left) OS National Grid (1951-57) © Crown Copyright and Landmark Information Group. Limited 2014. All rights reserved (1951-1957) - (Right) OS National Grid (1979-96) © Crown Copyright and Landmark Information Group. Limited 2014. All rights reserved (1979-96).

10.4 Landscapes of Extraction

The Upper Carboniferous Coal Measures underlying much of T&W have numerous coal seams that were mined from the early 13th century onwards (Countryside Commission 1998, 61). In addition to collieries T&W has an extensive history of quarrying which has typically taken place within the rural landscape. The characterisation of *Extractive* sites rose steadily during the late 19th and early 20th centuries, peaking at 3.4% of the total area characterised in the 1950s and 1960s. Between 1966 and 1979 the percentage of extractive sites falls by 42% and many of these sites become *Rough Grassland/Scrub*. This has continued in the present landscape where extractive sites have now reduced by 71% from the 1960s.

Extractive sites have a direct association with communication networks, in particular, *Waggonways, Railways, and Staiths/Quay*, as shown in figure 51.

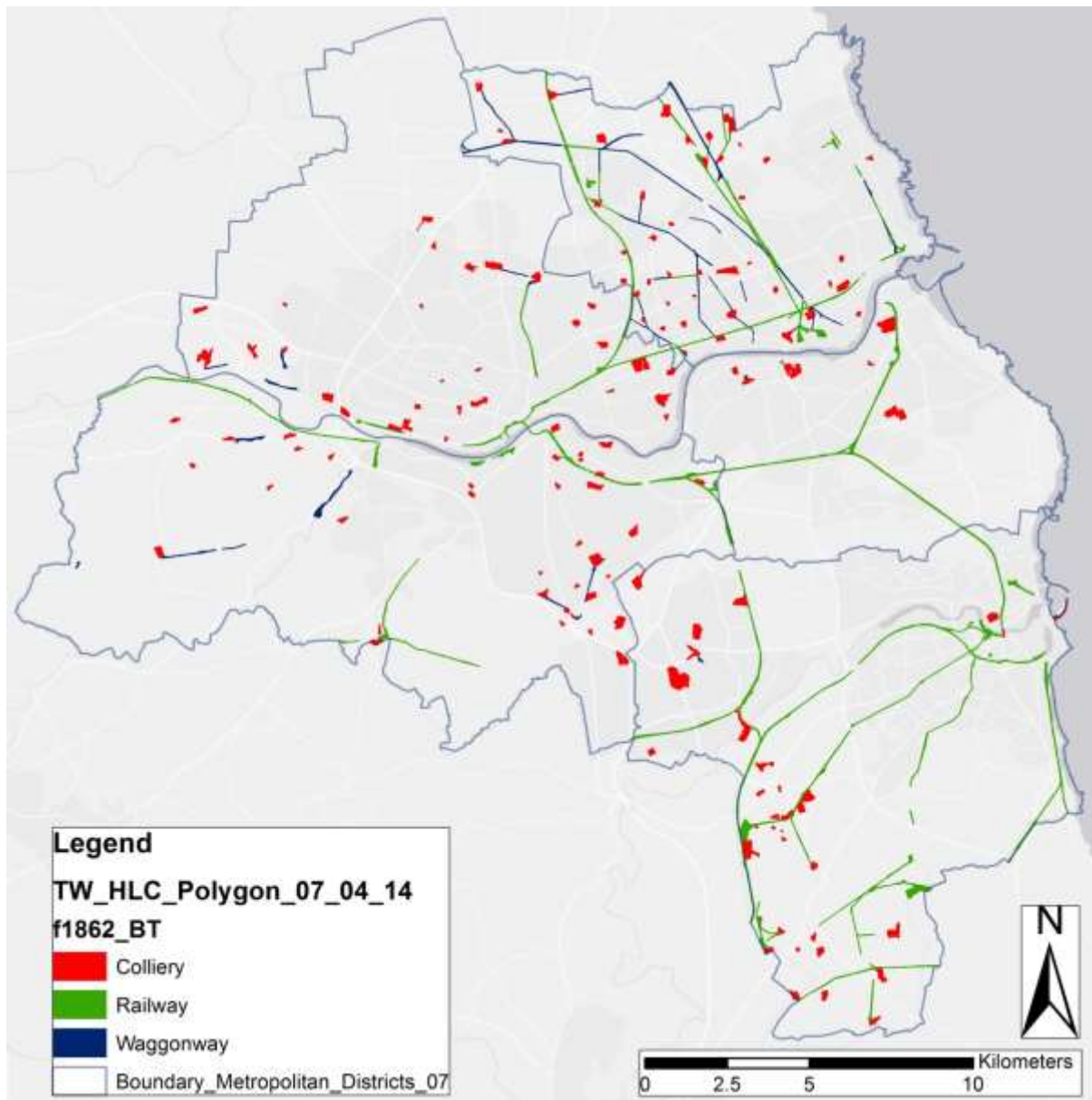


Figure 51. The distribution of Colliery sites versus Railways and Waggonways c. 1861-65.

Communications types have not seen as dramatic a decrease as *Extractive* types because they continue to form an important part of infrastructure in the region. Nevertheless, even the construction of major new communication routes like the A1 and A19 have not offset the diminution of *Communications* types (7% since the 1980s) that is largely due to the closure of railways. This, in turn is as a result of the loss of extraction sites since without them mineral railways have become unnecessary. Some of these railways are now in use as public footpaths so are preserved in the modern landscape as a network of *Public Open Space*.

Also in association with extractive sites are many of the rural villages that show expansion from the 19th century onwards linked to industrial growth. Marley Hill, Gateshead provides a good example of a typical settlement associated with extraction (seen in figure 52).

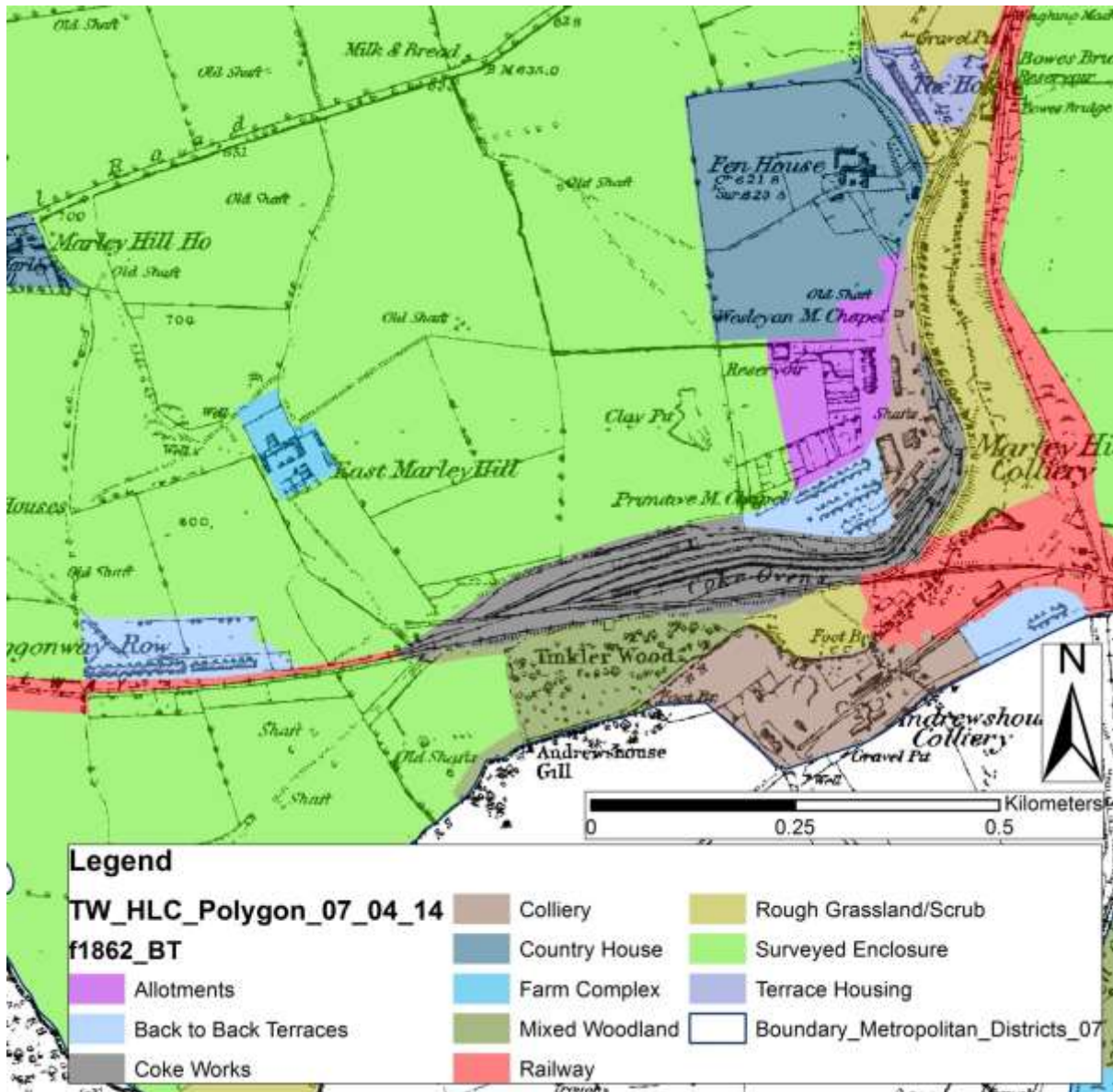


Figure 52. Marley Hill, Gateshead – 1861-65 © Crown Copyright and Landmark Information Group Limited 2014. All rights reserved (1861-1865).

Marley Hill colliery was associated with a *Coke Works* and the *Railway*, as well as prestigious settlement in the form of a *Country House* and poorer settlement in the form of *Back to Back Terraces*. Back to back terraces are not a particularly prevalent housing type within T&W when compared with other urban HLCs such as Greater Manchester. Instead, they are typically associated with rural villages and as a historic type only. Where they are found in

villages they are closely associated with recreational grounds or allotments, as at Marley Hill. Therefore, although the houses themselves afforded little in the way of private space they had greater access to publicly shared space than many of the poorer settlement types found in the urban and peri-urban landscapes of T&W.

10.5 Conclusion

There has undoubtedly been significant change in the rural landscape within T&W, however the HLC reveals that this is not as drastic as one might assume from an 'Urban HLC'. The proportion of *agglomerated fields* is similar to what might be expected from a 'Rural HLC'. What is clear is that the rural landscape is under increasing pressure due to its proximity to the urban centres of Newcastle upon Tyne, Gateshead and Sunderland. The balance between rural and urban landscapes is one that the HLC can contribute to managing by informing change.

11 Industrial Landscapes

The following section provides an overview of the contribution that HLC can make to understanding the industrial landscape of T&W. The role of industry in the region was hugely important and is closely associated with its mining history (see e.g. Ayris 1994; Milne 2006).

T&WHLC data demonstrates that between the mapping sources of 1861-1865 and 1898-1899 the area occupied by the *Industry Class* increased by 143%. This is followed by a consistent rise of c. 10% between each mapping source until the 1980s. However, over the last 30 years the area occupied by industrial types in the region has declined by 7%.

Specific types of industry were mapped wherever possible in the T&WHLC. This has created an improved understanding of different industries in the region at different times. The relative prevalence of different industrial types can be seen below in table 26, which shows the three most frequently occurring forms of industrial *Broad Type* in six of the mapping sources used in the T&WHLC.

1861-65	1898-99	1938	1966-69	1979-96	2011
Brick Works	Brick Works	Brick Works	Ship Building Yard	Industrial Estate	Industrial Estate
Mixed Works/Workshops	Ship Building Yard	Ship Building Yard	Engineering Works	Depot	Depot
Ship Building Yard	Mixed Works/Workshops	Engineering Works	Mixed Works/Workshops	Ship Building Yard	Ship Building Yard

Table 26. Most frequently occurring Industrial Broad Types by map source.

Brick Works were consistently the most frequently occurring industrial type until the mapping source of 1938, despite the fact that the number of brick work sites declined

during this period by c. 47%. *Brick Works* are distributed throughout all of the districts, although far less so in North Tyneside. Due to their association with clay extraction they are closely tied to geology so unlike other types they are not so exclusively associated with the rivers Tyne and Wear. Where they did occur away from the rivers they tend to have a direct link with *railways* (see figure 53).

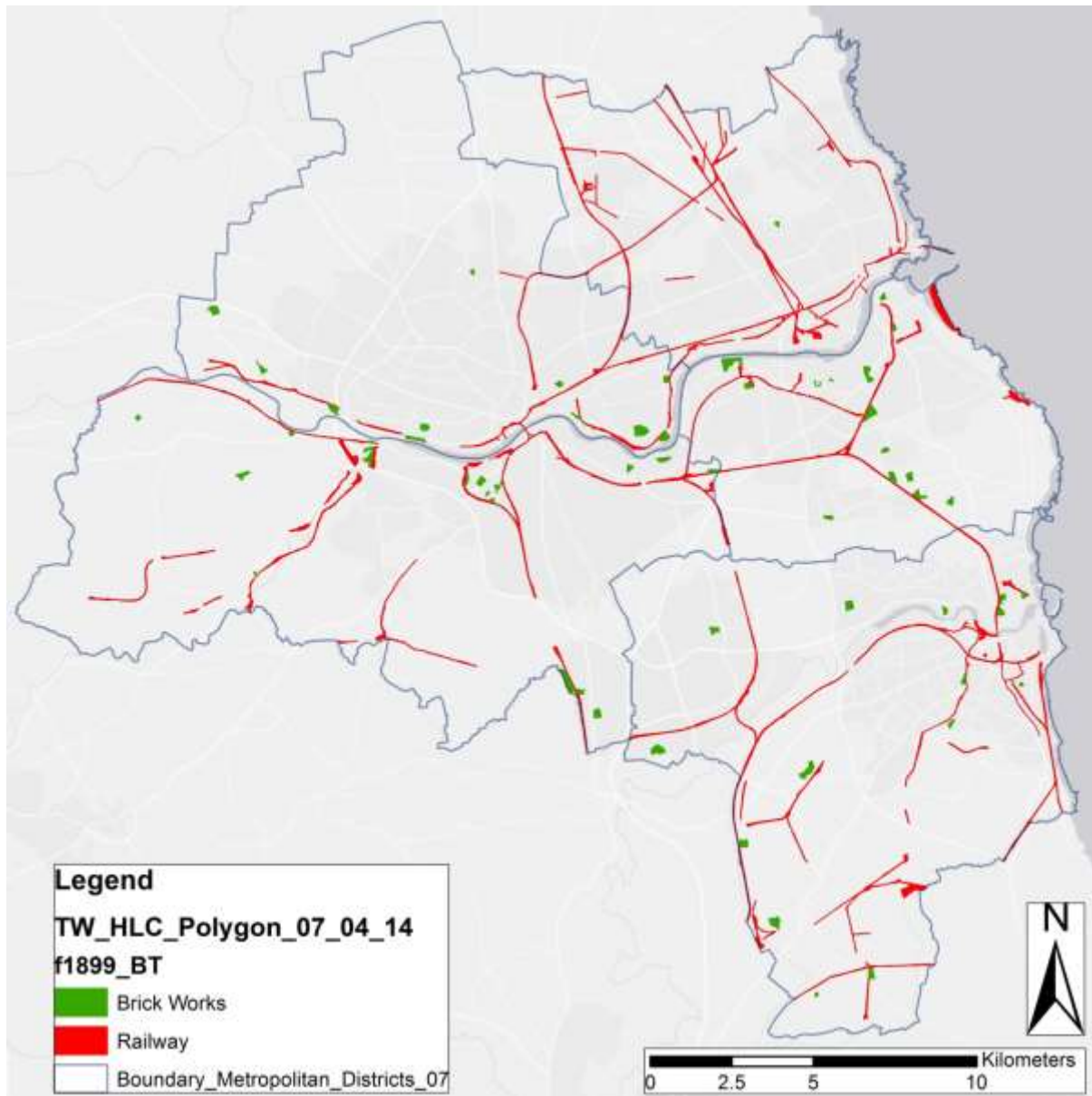


Figure 53. The relationship between Brick Works and Railways – 1898-1899.

Ship Building Yards - Between 1870 and 1918 shipbuilding was relocated from the Thames and South East of England to the North East, with the largest concentration on the rivers Tyne, Wear and Tees (Slaven 1992, 8). This is supported by the HLC data that shows a marked increase in ship building yards between the mapping sources of 1861-1865 and

1898-1899, which continues to rise until the 1960s, despite periods of setback such as the Depression of the 1930s. Table 25 shows that ship building remains a prominent industrial character type in the region, even in the present landscape.

Mixed Works/Workshops are consistently important until the 1960s. These small sites, consisting of a mix of small scale industrial activity form an important group that are geographically concentrated on the river banks surrounding Newcastle upon Tyne and Gateshead. They are strongly associated with *tenements* and represent pockets of the landscape where the distinction between settlement and industry was significantly blurred. Pipewellgate in Gateshead is indicative of this type of character.

Finally, worth noting is the rise of the *Industrial Estate* from the 1960s onwards. They often form a bridge between *Industrial* and *Commercial* types and tend to favour locations accessible by road. This shift of industrial types away from the rivers has allowed the establishment of other forms of character type. Alice Mah (2012) has described this process along the River Tyne close to the centres of Newcastle and Gateshead, where the quaysides have been transformed into an area dominated by leisure and consumption. Former industrial sites have either been converted into or replaced by apartments, restaurants, pubs, art galleries and museums. This process is epitomised by the Baltic (figure 54), once a flour mill and now a major gallery for contemporary art.



Figure 54. *Baltic Flour Mill, Gateshead.*

11.1 Conclusion

The HLC provides a useful general guide of the changing extent and locations of various forms of industrial character within T&W. The dominance of mining and ship building in the region has resulted in an under-appreciation of the smaller forms of industry that were a vital component in the development of T&W. Although they only form small pockets, the HLC helps to draw these together and provide a tool for a better understanding of the history of industry in the region. Within T&W, and in particular within the north-east region, industry has been a major driver of landscape change; directly in the form of industry areas such as coal and ship building; and indirectly as a force for change, resulting in the re-organisation of post medieval and early modern housing, which in turn established new kinds of communities in metropolitan and urban areas. The T&WHLC has characterised several later episodes of these force for change both in the form of industrial areas and what replaced it, as well as documenting the tangible results of the social effects of housing,.

PART THREE

APPLICATIONS REVIEW

Oscar Aldred *and* Sarah Collins

12 Introduction

This Applications Review is designed to identify and illustrate some of the future roles of HLC and its potential for application to a range of planning and outreach scenarios. The review seeks to show how HLC can enable the historic character of the present landscape and townscape to play its full part in shaping distinctive and legible landscapes for the future. It uses two case-studies from the project area to support the discussion. However before the case studies, the HLC is discussed in its strategic and policy contexts.

13 Policy context

13.1 European Landscape Convention

Implementation of the European Landscape Convention (ELC), which came into force in the UK in 2007, also highlights the Council of Europe's recognition of the need to take account of the cultural landscape during development. The ELC is underpinned by a requirement '*to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity*' (CoE 2000 Article 5). In emphasising the central roles of human perception in defining landscapes and of human activity in creating them, the ELC embodies concepts already at the heart of all historic landscape and seascape characterisation (Clark *et al.* 2004; Hooley 2007). This is clearly expressed in the ELC definition of landscape: '*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*'.

The ELC encourages the understanding and management of dynamic landscapes, recognising their diversity and the complex interplays of cultural and natural forces that influence their perception. The importance of the ELC's concept of 'landscape' as a connective concept, offering a much needed bridge between expert views with people's perceptions of place, has recently been emphasised by the European Science Foundation (ESF 2010). As with the ELC, HLC recognises that landscape change is inevitable, often desirable, and needs to be accommodated. English Heritage has published an Action Plan for implementing the ELC (English Heritage 2009).

13.2 Planning Policy Statement 5 (PPS5): Planning for the Historic Environment

PPS5 has been superseded by the National Planning Policy Framework (NPPF), although the PPS5 Practice Guide is still valid until its replacement (anticipated in summer 2014). In light of this only the Planning Policy Practice guide for PPS5 has been consulted.

Although the new practice guidance has been published – NPPG - the two elements are discussed because of this issue of ‘inheritance’ that English Heritage refer to.

The pertinent points of the PPS5 Guidance include:

27. Our Understanding of the historic environment is continually evolving in response to new information that is generated by owners, developers, researchers, local planning authorities, community groups and other organisations. In collecting and collating the evidence base for plan-making local planning authorities are advised to:

10. Consider how established methods of environmental appraisal might contribute to a better understanding of the asset in question and its wider context. These can vary from large-scale historic landscape characterisations, to more detailed, local conservation area appraisals, Village Design Statements, area assessment studies and intensive urban surveys. Historic characterisation might also be used in sensitivity studies and in the development of green infrastructure strategies.

41. Regional planning bodies will be assisted in understanding the heritage significance in their area through the following:

1. High-level historic characterisation studies and landscape character assessment that define sub-regional landscape character areas and areas of particular environmental sensitivity that are unique or threatened.

2. Urban characterisation or similar studies created to inform the assessment of the capacity of settlements for growth or regeneration.

128. Work in putting together the regional and local development framework, from the core strategy through to supplementary planning documents on specific issues, will often generate new evidence of the state and significance of the historic environment. Documents, such as historic landscape characterisations, sustainability studies, strategic environmental assessments, conservation area appraisals, studies supporting supplementary planning documents and local listing assessments, will often contain new evidence. Compliance with the policy in HE12.2 requires that local planning authorities collect this information and make it publicly available, including through the historic environment record. The information can be invaluable in improving plan-making and decision-making in the future and is of significant public benefit in furthering the understanding of our surroundings and our past. (CLG 2010)

13.3 National Planning Policy Framework (NPPF) (2012)

The *National Planning Policy Framework* (NPPF 2012) supersedes the *Planning Policy Statement 5: Planning for the Historic Environment* (PPS5) and provides the new framework guiding the land-based planning system. It gives clear advice that a respect for the character of places is essential for ‘*promoting the vitality of our main urban areas*’ and ‘*supporting thriving rural communities*’ (NPPF 2012, Core Planning Principles); that good design for an area should be based on ‘*an understanding and evaluation of its defining characteristics*’ (NPPF 2012, Section 7 para 58); and that it is desirable for new development to make ‘*a positive contribution to local character and distinctiveness*’ and take ‘*opportunities to draw on the contribution made by the historic environment to the character of a place*’ (NPPF 2012, Section 12 para 126). HLC provides the necessary evidence base for local character to enable implementation of those sections of the NPPF in a consistent and transparent manner.

13.4 National Planning Policy Guidance (NPPG) (2014)

Since the start of writing this report, the NPPF Planning Practice Guidance relevant for HLC and archaeology in general – *Conserving and enhancing the historic environment* – has been published; referred to as NPPG. While it is too early to gauge the impact of the practice guidance, it is nonetheless important to make some general considerations in light of the T&WHLC.

The NPPG for *Conserving and enhancing the historic environment* outlines the different ways in which the planning requirements are implemented. The T&WHLC has characterised both *designated sites* (e.g. listed buildings, registered parks and gardens, battle fields), as well as *non-designated sites* (e.g. rows of Tyneside Flats and Sunderland Cottages). The latter group and examples fall under non-designated sites because they are ‘those that have yet to be formally assessed for designation’ and are largely indicated in the HER. However, adding to the significance of non-designated sites, HLC is used to demonstrate the time-depth of these houses/sites within the context of other landscape changes. HLC for example is also used to identify non-designated heritage assets, alongside HER, in order to emphasise non-designated assets “as having a degree of significance meriting consideration in planning decisions but which are not formally designated heritage assets. In some areas, local authorities identify some non-designated heritage assets as ‘locally listed’”. (*Conserving and enhancing the historic environment* Paragraph: 039 Reference ID: 18a-039-20140306) The HLC therefore provides a useful tool to increase the profile and understanding of non-designated assets, as well as to trace their origins and legibility.

13.5 Localism Act (2011)

The Localism Act came into effect in 2011. The aim of the act was to devolve some of the powers of central government and place these in the hands of individuals, communities and councils (CLG 2011).

Key themes include:

- General power of competence;
- New rights and powers for communities;
- Reformation of the planning system making it clearer, more democratic and more effective;
- Ensuring that housing decisions are taken locally (CLG 2011).

13.6 Neighbourhood Planning

General regulations governing neighbourhood planning came into effect in 2012. Neighbourhood planning is related to the Localism Act, being enforced through it. It is intended to be a new way for communities to decide the future of the places where they live. In general terms neighbourhood planning should enable the community to *influence* where new homes, shops or offices should be built; what they should look like; and be able to grant planning permission for the new buildings that they want to see go ahead (CLG 2012). How HLC is used for Neighbourhood Planning is linked to development plans for future planning, such as Local Plans. Therefore, HLC has the potential to provide useful evidence for Local Plans and other statutory and non-statutory future planning, Neighbourhood Planning could potentially be heavily influenced by HLC. Furthermore, the specific character of a 'neighbourhood' or community, will be informed by the time-depth attributes of the HLC such as period and legibility that will lead to a greater consideration of historic character and significance in future planning. The following case studies draw on such future looking plans that can be considered in a similar way for the development of Neighbourhood Planning.

14 Case Studies

HLC is designed to inform the management of change affecting the landscape in a positive way.

The two case-studies presented in this report are used to provide examples of applications based on scenarios from the project that help to illustrate the way that HLC can be used to inform positive enhancements in the urban environment and surrounding rural landscape. Although they use actual examples from the Tyne and Wear area, they are, for current purposes, *theoretical* examples, aimed to examine the limitations and possibilities of using HLC in spatial planning or landscape management processes. The case studies should therefore be read with caution in light of the various measures recently and currently being used in planning (e.g. the transition from PPS5 to NPPF PPG). However, that said, the case studies examine how HLC might involve Local Plans which form the basis for Neighbourhood Plans. However, while the setting of local measures is influenced by National policies and politics, the following examples are grounded in their specific local contexts.

A short reflection on the case studies will be made after both have been presented.

The policy review presented above provides the context for the two case studies.

1. Case study 1 examines the way that HLC helps to inform planning decision-making at small scales – *micro* - either at the scale of individual/small groups of buildings, or at the scale of neighbourhood development. Examples in North Tyneside Council area are used.
2. Case study 2 details the way that HLC can contribute to planning decisions at the larger scales - *macro* - of landscape assessment by using an example of the ways in which HLC data can be feed into a Local Development Framework for an area in South Sunderland.

14.1 Case Study 1: Planning Application and Assessment using HLC: North Tyneside Council

Oscar Aldred

14.1.1 Background

The case study assesses the way in which the T&WHLC might be used as another source of evidence for decision making. HLC can be used through various National guidelines and Local Authority directives, bolstering support for or assisting in the refusal of planning applications in which a proposed development might enhance or alter the historic

character. Local planning authorities are required to prepare and maintain an up-to-date information base on key aspects of the social, economic and environmental characteristics of their area.

At present, HLC is routinely used to contribute towards assessments of visual impact – as a change in character – or in the impact on known heritage assets. In this way HLC contributes towards several planning policy frameworks:

14.1.1.1 Local Plan

The Government requires North Tyneside Council to prepare a 15-year plan, setting out how much new housing, employment and retailing is required and where it will go. Once adopted, the Local Plan will become the starting point to determine planning applications within the district.² However, as the North Tyneside Local Plan is still being prepared and consulted on, there may be further opportunity for the HLC to influence the content of the Local Plan prior to adoption (especially in relation to the allocation of sites for development), and thereafter in the determination of planning applications judged in relation to it.

The Local Plan takes into account other policies and evidence produced at the national, regional and local level. These include:

- Government policy statements, guidance and circulars;
- Evidence developed by the North East Local Enterprise Partnership, and the now revoked North East of England Regional Spatial Strategy where the evidence it is based on may still be relevant;
- The North Tyneside Council Plan *Our North Tyneside 2014 to 2018* and evidence either produced or commissioned by North Tyneside Council to inform the plan - such as the Strategic Housing Market Assessment or Green Infrastructure Strategy.

The more locally specific evidence-bases for the Local Plan are:

- Water Cycle and Flood Risk
- Green Space Strategy
- Retail assessment
- Strategic Housing Land Availability Assessment 2013 and 2014
- Strategic Housing Land Availability Assessment 2008 to 2012
- Employment Land Review
- Housing Land Monitoring
- Retail Centres Regeneration Study
- Strategic Housing Market Assessment and Viability

² [Local Plan] http://www.northtyneside.gov.uk/browse.shtml?p_subjectCategory=182; [Evidence-base sectors] http://www.northtyneside.gov.uk/browse.shtml?p_subjectCategory=809 - Accessed 24/04/2014.

- Tyne and Wear Commercial and Industrial Waste Survey
- Tyne and Wear Gypsy and Traveller Accommodation Needs Assessment

At present, the *Vision and Objectives* of the draft Local Plan (Local Plan Consultation Draft 2013) includes a number of ways in which HLC can be used.

Objective No. 10 (Protect and enhance the built environment) which states: “North Tyneside will preserve and enhance these special features [World Heritage Site i.e. Hadrian’s Wall and Scheduled Ancient Monuments] for present and future generations. The more recent urban development of the Borough will be protected and where necessary enhanced to continue to provide pleasant and attractive communities in which to live.” (Local Plan Consultation Draft 2013: 20) The emphasis on special features only, the lack of ordinary sites, and the attention towards ‘areas’, could, in any future Supplementary Planning Document (SPD), be addressed by considering the HLC data.

The Local Development Scheme (LDS) 2013 sets out the future programme for the preparation of planning policy documents – Local Plan and SPD for North Tyneside. The Council is required by law to publish the LDS, and to issue updates as required.

The latest version of the LDS (Fifth Review) was adopted by the Council in October 2013, and has effect from 1st November 2012. It sets out the programme for the preparation of seven documents as listed below between now and 2016³.

These documents are:

- Local Plan
- Weetslade Development Brief SPD (review)
- Local Register SPD (review)
- Design Quality SPD (review)
- Transport and Highways SPD (review)
- Planning Obligations SPD (review)
- Community Infrastructure Levy (new)

HLC has the potential to shape and help influence *where* acceptable change might occur in North Tyneside. For example, HLC data could help to identify where a housing development or other land use change would not negatively affect the historic character of the potential development area in Pro-active use of existing knowledge can contribute toward several Evidence-base sectors for the Local Plan, in particular those concerned with the Built Environment (Local Plan Consultation Draft 2013: 107-26 [9 *The Built Environment*]).

14.1.1.2 *The Built Environment – Local Plan Consultation Draft*

³ However, the present Government (in 2014) has expressed an intention to introduce regulation that would remove the need for local authorities to produce Local Development Schemes (LDS). This also extends to *Building for Life* (see later) along with other codes for housing standards. The Government intends to introduce a mandatory set of National standards to replace them all.

One of the key strategic priorities in the Local Plan is concerned with the Built Environment, which relates to 1.10 in *Local Plan Consultation Draft (2013:7)*:

- Homes and jobs needed in the Borough;
- Conservation and enhancement of the natural and built environment.

HLC therefore has the potential to influence development, in connection with “policies for enhancing design quality through development, and improving the image of the Borough whilst targeting improvements to the public realm.” (Local Plan Consultation Draft 2013:13)

According to the S/1.1 Spatial Strategy for Sustainable Development for North Tyneside, most housing development will be located:

- in a dispersed pattern in the Main Urban Area; and
- within the areas of North Shields, Wallsend, the Coast and the North West where development could bring particular benefits to the regeneration of the area.

The Main Urban Area covers the remainder of the borough not included as a Priority Investment Area (these locations include three of the Borough’s town centres identified as priorities for North Tyneside, covering the Coast, North Shields, Wallsend and Willington Quay, and the North West Communities) or in the Urban Fringe (the area running east across the north of the Borough from Seaton Burn to the Coast). The Main Urban Area therefore is constituted by: Killingworth; Longbenton; Forest Hall; Shiremoor; New York; Battle Hill; Murton; West Chirton; Monkseaton, and the area between North Shields and Whitley Bay (inland area and not in the priority investment area). In this respect HLC should be used to assess the impact of change in housing or land use in these areas.

According to the Local Plan *DM/9.2 Design of Development* (Local Plan Consultation Draft 2013:108):

“Development will only be permitted where it demonstrates high and consistent design standards. Designs should be specific to the place, based on a clear analysis and respond to the characteristics of the site, its wider context and the surrounding area, creating a place with a distinctive character and taking account of the following objectives:

- Appropriate street level presence and a positive relationship to neighbouring buildings and spaces to reduce opportunities for crime and antisocial behaviour;
- Makes connections to the immediate local area and the wider area by linking to existing pedestrian and cycle routes and encouraging people to walk and use public transport where possible;
- A well designed public realm (and associated management arrangements) that is not dominated by vehicular traffic;
- Take advantage of existing topography, landscape features and existing buildings;
- Protects the amenity of existing and future residents.”

The Objective DM/9.2 also states: “Residential developments of 10 units or more are required to demonstrate that they have successfully addressed *Building for Life 12* criteria.”

Building for Life 12 is a nationally recognised methodology for assessing the design quality of residential development. *Building for Life* methodology offers a systematic way of demonstrating that the overall objective and criteria in the Policy have been addressed for residential schemes and can be related to, and perhaps enhanced by, the information contained in the T&WHLC.

HLC can be used to help inform *Building for Life 12*, but also assess whether applications have adequately considered the effect of the new design on the surrounding townscape, and whether the design is in keeping with the existing (historic) character of the surrounding development area. HLC, in a similar way can also help to assess DM.9.2 Objective d. Take advantage of existing topography, landscape features and existing buildings by placing the development in the existing topography, landscape features and existing buildings, to determine what effect the new development may have.

Additionally, DM/9.3 Extending Existing Buildings is another area in which HLC can contribute to the assessment of a planning application. In the Local Plan Consultation Draft (2013:109):

- “Extensions should always complement the form and character of the original building. This may be achieved either by continuation of the established design form, or through an appropriate contrast in high quality contemporary design. The scale of an extension and its position should generally emphasise a subservience to the main building. This will usually involve a lower roof and eaves height, significantly smaller footprint, spans and lengths of elevations.
- When assessing applications for extending buildings the Council will consider all of the following:
 - Whether or not the property is affected by any designations;
 - The location of the extension in relation to the public zone of the street and the nature of the street scene;
 - The effect that the extension will have on adjacent properties and land such as outlook, loss of light or loss of privacy;
 - The cumulative impact if the building has been previously extended;
 - The effect that the extension will have on the existing property and whether it enhances the overall design; and
 - The form and scale and layout of existing built structures near the site.”

In this regard, HLC can help assess a planning application by considering the effect of the development on all of the considerations associated with DM/9.3, but particularly b., c., d., and f.

These measures are associated with, only in related content, to the Supplementary Planning Document in the Local Development Framework: *SPD Design Quality (LDD11)*.

14.1.1.3 North Tyneside Unitary Development Plan (NTUDP 2002)

The North Tyneside Unitary Development Plan is the statutory development plan for the borough and was adopted in March 2002, although some of the policies were replaced in 2007. Important in the implementation of planning applications for many of the different building works that might be carried out in a development, policy H11 defined the measures by which an application is assessed (NTUDP 2002: 73). As NTUDP states:

“The quality and design of housing and its immediate environment is an important element in ensuring the borough provides a standard of housing that will prove attractive to existing and prospective residents. Housing is a significant land use and any development should support plan objectives and enhance the image of the borough.

It is not the Local Planning Authority’s intention to stifle creativity or to produce standardised development proposals. Rather, the Development Control Policies and Statements set out in Chapter 11 will allow developers and applicants to assess the Local Planning Authority’s requirements prior to the submission of any proposal. They can then contribute to the development process in an efficient manner and in partnership realise the Plan’s aims and objectives.” (NTUDP 2002: 73)

H11 is an enabling policy for those applying for planning of new development through the planning application process, whether new builds, conversions, extensions and alterations. H11 states that the local planning authority will require that any proposals take into account:

- i. The quality of its layout and design with particular regard being given to measures to realise a safe and secure environment.
- ii. The scale, density, massing, construction, landscaping and materials.
- iii. The impact of the proposal on its site, local amenity, the environment, and adjoining land uses.
- iv. The protection of natural features during construction and their subsequent retention.
- v. The provision made for parking, access, pedestrian and vehicle circulation.

- vi. The need for the resulting dwelling to have acceptable external standards of space, light, outlook and privacy.
- vii. The need for the layout to facilitate the efficient provision of public transport.
- viii. The provision made for special needs groups such as elderly persons.
- ix. The provision of public open space, amenity open space and children's play space in association with the dwelling or dwellings.
- x. The provision made to secure energy efficiency.

In this respect HLC can be used to provide evidence for assessment against several of the H11 policy's measures.

14.1.1.4 SPD Design Quality (LDD11 2010)

The character, distinctiveness and viability of a successful area and community often lies in the quality of its built environment and public realm. This success is derived from high quality design of buildings, and places and spaces that create attractive environments for a positive context for the development of sustainable communities. Design in this regard is not just about how development *looks*, but how it *works*, and how well it *meets the needs*, in the context of those living in a given community. Design is also related to how well a development fits with the surrounding environment. It is therefore an issue that permeates all other topics, and so must also be informed by them.

As part of North Tyneside Council's commitment to high quality design and best practice, the Council has produced a SPD - *Design Quality* (2010). This document provides the overall context for design guidance in the district. This is because, as suggested above, it is important to ensure that *all* development proposals are of the highest architectural and urban design quality and relate appropriately to their immediate contexts.

The SPD relates to all building works which include:

- Refurbishment to existing buildings;
- Extensions to existing buildings;
- Conversions of existing buildings;
- New buildings including individual buildings and groups of buildings;
- Redevelopment and infill schemes; and
- The spaces and infrastructure between buildings.

In particular, how building works impact on the historic assets and the historic environment – which is all round a development – that creates a sense of place and local identity, and establishes a link between the past and the present – which is essential for healthy, vibrant community living. An important requirement is to accommodate any change of character in a sensitive manner. To facilitate this process, and to assess the design quality of a planning

application, HLC can be used in various practical scenarios, for example to assess the type of development and its effect on the historic character of the area it is situated in. These practical scenarios might be:

- Small-Scale Infill Development;
- Design in Historic Environments;
- Extending Existing Buildings;
- Conversions.

In this respect, HLC attends to the following Key Points relating to Best practice in *Design Quality* which are recommended by LDD11 within each practical scenario.

1. Firstly, to assess the positive contribution of a new building or renovation of an existing structure, on the area's character or appearance. For instance, whether the new development is a pastiche or is mimicking historic styles, and to what extent it considers the *scale, materials, grain and elevational rhythm of its context*.

- HLC can be used as an Evidence-base to assess what impact the proposed change may have on the character of the area, and whether it *respects* the pre-existing character by detailing the *type* of house within the development area according to the various attributes in the database, such as Character Class; Settlement: Scale, Density, Pattern, and the ratio of Private and Public Space.

2. Secondly, where there is an extension, or a new build, several criteria are used to assess the impact on, and how it will complement the form and character of the original building (if an extension) and neighbouring buildings, and to what extent the historic character of the existing will be affected by the proposed development.

- HLC can be used as an Evidence-base to assess how dominant the new development would be in the context of the existing historic character, particularly with respect to Listed Buildings, and the influence at the scale of streetscape

HLC can be used to assess planning applications on the basis of the two key points that are derived from LDD11 and the objectives in the *Local Plan Consultation Draft DM/9.2 and DM/9.3*, the NTUDP 2002 H11 policy. To examine this in more detail, several planning applications examples have been selected to demonstrate how HLC might have been used to assess the various forms of assessment.

14.1.2 Example 1: Planning application for the demolition of existing house and construction of a new house

In example 1, the planning application proposal 14/00350/FUL was refused on three grounds, two of which are relevant for the discussion here, quoted directly from the planning officer's letter to the applicant.

One ground for refusal was:

"The proposed development would result in a highly incongruous feature in a prominent location, which by virtue of its design would not integrate well, or compliment neighbouring dwellings and the local area resulting in a significant adverse impact on the character and appearance of the surrounding area. The proposal therefore conflicts with policy H11 of the North Tyneside Unitary Development Plan 2002, and Local Development Framework document LDD11 'Design Quality'."

The second grounds for refusal was:

"The proposed development will have a significant adverse impact on the residential amenity of the occupants of the adjacent property [...]. This is contrary to policy H11 of the North Tyneside Unitary Development Plan 2002, and Local Development Framework document LDD11 'Design Quality'."

Table 26 indicates the attributes attached to each polygon, located by the planning application 14/00350/FUL. The existing houses were built after 1960s – probably in the 1970s – and were small detached houses, within a medium density cluster of similar houses, with back and front gardens. Previously – from 1860s – there was a complex called Whitley Lodge.

The reasons for these two refusal points were because the *design* of the proposed re-build did not fit with the existing and surrounding houses in reference to NTUDP H11 and LDD11, and – in terms of the content of the refusal – to the Local Plan Consultation Draft DM/9.2 and DM/9.3.

The assessment of design, based on these four references is to do with the *design* character of the existing houses, which forms a core part of the HLC approach. This is because the *design* of the houses is such that different designs refer to broad periods of time through its assessment of different maps and house development.

While a planning application for a re-build could appeal against a refusal on the grounds that it did not reference the original (historic) design, the planning documents NTUDP H11 and LDD11 make it clear that it is the *present-day* character that is important in considering house design; discussed in terms of 'existing' features. HLC therefore provides a way to verify the grounds of refusal on the basis of a systematic and district wide historic characterisation (between 1860s to the Modern day) assessment of house development.



Period	Class	Broad Term	Period	Confidence	Legibility	Scale/ Field Size	Density/ Boundary Loss	Pattern/ Pattern Morphology	Private Space/ Boundary Morphology	Public Space
Modern	Settlement	Detached Housing	20th Century	Certain	Complete	Small	Medium	Geometric	Back and front garden	No public spaces
1980s	Settlement	Detached Housing	20th Century	Certain	Complete	Small	Medium	Geometric	Back and front garden	No public spaces
1960s	Settlement	Lodge	Post Medieval	Certain	Invisible	Large	Low	Other	Back and front garden	No public spaces
1950s	Settlement	Lodge	Post Medieval	Certain	Invisible	Large	Low	Other	Back and front garden	No public spaces
1930s	Settlement	Lodge	Post Medieval	Certain	Invisible	Large	Low	Other	Back and front garden	No public spaces
1920s	Settlement	Lodge	Post Medieval	Certain	Invisible	Large	Low	Other	Back and front garden	No public spaces
1890s	Settlement	Lodge	Post Medieval	Certain	Invisible	Large	Low	Other	Back and front garden	No public spaces
1860s	Settlement	Lodge	Post Medieval	Certain	Invisible	Large	Low	Other	Back and front garden	No public spaces
Post Medieval	/	/	/	/	/	/	/	/	/	/
Medieval	/	/	/	/	/	/	/	/	/	/

Table 27. The Tyne and Wear HLC polygon attributes for uid 5127 [ObjectId 129, 03-Jul-13, North Tyneside, TYNEMOUTH]. Figures above (left – modern map with development; right – 1860s map showing same development area); the light blue outline is HC polygon uid 5127.

14.1.3 Example 2: Planning application for the demolition of Coach House and development replacement dwelling house with two parking spaces

The second example, a planning application proposal numbered 14/00441/FUL, was still being assessed at the time of writing this report. The location of the proposed site is behind an existing terrace of townhouses that date from at least the 1860s. The application area is currently occupied by an outhouse – the Coach House – that is currently being used for parking and storage.

On the grounds of Consultee comments to date the planning application requires further information. In particular, it is noted by the New Development officer that more information is required on the relationship between the application area and the other houses along the same terrace (especially parking, but also about the relationship between the properties themselves). Another officer for Environmental Health (Contaminated Land) wants assessment for any hazardous chemicals or contaminants on site.

The HLC can be used to assess or add further information about the impact of the proposed development. This is because, at the scale of the characterisation it is possible to assess the nature of the proposed development and its relationship to other houses in spatial and temporal ways since the townhouses along Tynemouth Terrace have been characterised together. There has been little change along the terrace since 1860, whose historic character has remained relatively stable since that date. In this respect, demolition of the Coach House and replacement with a new structure which is substantially different to the surrounding houses may impact negatively on the overall historic character of the terrace. The application would have to consider the significance of the new development and its impact on the legibility of historic character, which could be evidenced by the HLC.

Period	Class	Broad Term	Period	Confidence	Legibility	Scale/ Field Size	Density/ Boundary Loss	Pattern/ Pattern Morphology	Private Space/ Boundary Morphology	Public Space
Modern	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1980s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1960s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1950s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1930s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1920s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1890s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
1860s	Settlement	Townhouse	Post Medieval	Certain	Complete	Large	Medium	Grid layout	Back yard	No public spaces
Post Medieval	/	/	/	/	/	/	/	/	/	/
Medieval	/	/	/	/	/	/	/	/	/	/

Table 28. The Tyne and Wear HLC polygon attributes for **uid 7464** [ObjectId 2493, 19-Dec-13, North Tyneside, TYNEMOUTH].

14.1.4 Example 3: Demolition of three garages and the erection of a two storey house with loft rooms and two garages

In example 3, the planning application proposal 14/00557/FUL is still being assessed at the time of writing this report. The location of the proposed site is a set of garages behind an existing row of terraces. The application is currently occupied by a structure, possibly a house from 1890s.

The Consultee comments provided up to the date of writing suggest the planning application requires further information about the existing garages. The HLC cannot help to address ownership in its current form, but it can help to assess – as in example 2 –the relationship between the properties and how significant the impact of the proposed development will be on the legibility of historic character within the street and the existing HLC polygon. For example, the Back yard of the houses along this terrace is an integral part of their historic character. But this earlier development has already been significantly impacted on by the construction of existing garages, which have, in effect, re-shaped the historic character into a new type. Therefore, the assessment of historic character in this example would not be significant in the context of what already has occurred on the site.

Period	Class	Broad Term	Period	Confidence	Legibility	Scale/ Field Size	Density/ Boundary Loss	Pattern/ Pattern Morphology	Private Space/ Boundary Morphology	Public Space
Modern	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1980s	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1960s	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1950s	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1930s	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1920s	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1890s	Settlement	Terrace Housing	Post Medieval	Certain	Complete	Medium	Medium	Grid layout	Back yard	No public spaces
1860s	Field System	Surveyed Enclosure	Post Medieval	Certain	Invisible	Large	Much	Semi- regular	Straight	Large
Post Medieval	/	/	/	/	/	/	/	/	/	/
Medieval	/	/	/	/	/	/	/	/	/	/

Table 29. The Tyne and Wear HLC polygon attributes for uid 5857 [ObjectId 866, 29-Sept-13, North Tyneside, TYNEMOUTH].

The use of HLC to inform Planning Applications and Assessments is applicable in other districts, not only North Tyneside Council; similar planning requirements exist in all districts at present (although see note 2). Although the precise wording might be different, the meaning and interpretation of the measures used will be similar.

Case study 1 has suggested that:

- HLC provides a means by which to assess planning applications and give evidence that supports decisions for that assessment;
- HLC can be used in the context of applications related to the demolition of individual existing structures – as well as at much larger scales– but also to assess what the potential impact of a proposed development might be on changing the historic character of the area;
- The aspects of HLC applied here provide contextual evidence about the nature of the relationship between the proposed development and the existing houses in terms of their design – leading to an assessment on whether they fit into the existing character types used by HLC.

14.2 Case study 2: Using HLC within a local development framework in an area of South Sunderland

Sarah Collins

14.2.1 Introduction

Planning legislation under the directive of the Planning and Compulsory Purchase Act 2004 (updated in 2008) stipulates that Local Planning Authorities prepare a Local Development Framework (LDF). An LDF sets out the Council's policies for meeting the community's economic, environmental and social aims with regard to future development and land use.

The LDF comprises:

- The Local Development Scheme (LDS);
- The Statement of Community Involvement (SCI);
- A Sustainability Appraisal/Strategic Environmental Assessment (SA/SEA);
- Local Development Documents

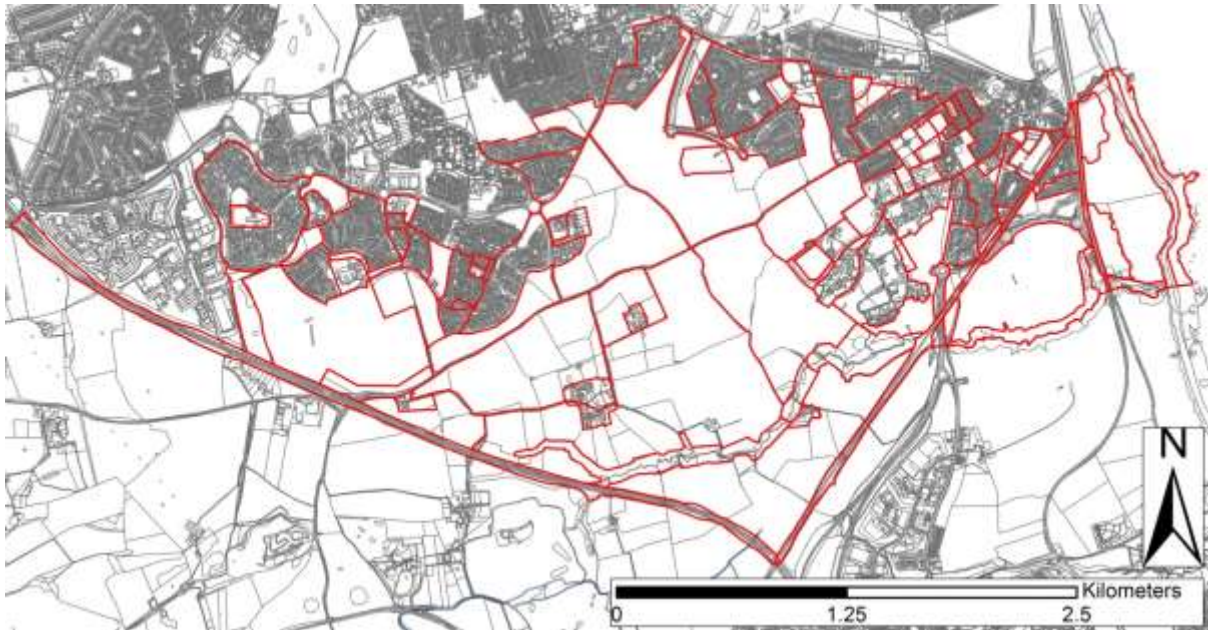


Figure 55. Final polygonised area © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

In September 2012 the T&WHLC Project Officer (Sarah Collins) was contacted by a Senior Planner at Sunderland City Council making enquiries about how HLC data could be used for a Development Framework that was being undertaken for an area of South Sunderland taking in Ryhope and parts of Doxford. In addition to producing the required HLC data for the area concerned the Project Officer met with various Council officers in November 2013 to further discuss results. What follows is a discussion of the key steps that the HLC Project Officer felt might be appropriate when using the data for larger scale landscape assessments such as these. The principles outlined below relate specifically to the South Sunderland case study but could be used in any part of T&W where Development Frameworks are required in the future.

The final polygonsied area is shown in figure 55. The total area polygonised consisted of an area comprising 860 hectares, which extended the original reed line plan of the area in an attempt to place it within a wider landscape context.

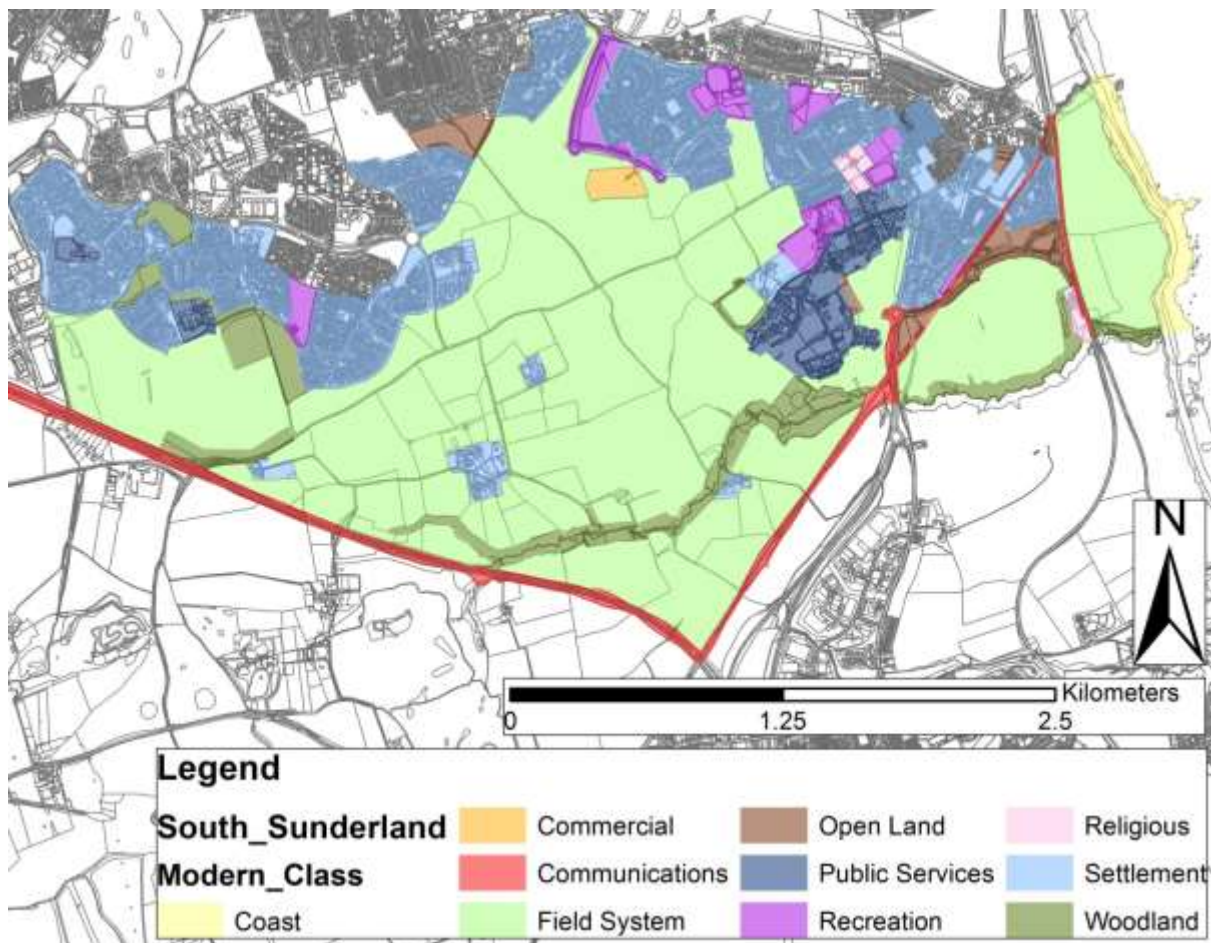


Figure 56. Modern Class © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

14.2.1.1 Stage 1 of Assessment

In order to make an initial assessment of the area *Class Character* maps were made of the modern landscape as well as the 7 mapping sources, and *Post Medieval* and *Medieval* epochs.

This provides an initial first step that gives a general impression of the changing character within the polygonised zone. Three have been selected for display below (figures 56 – 58).

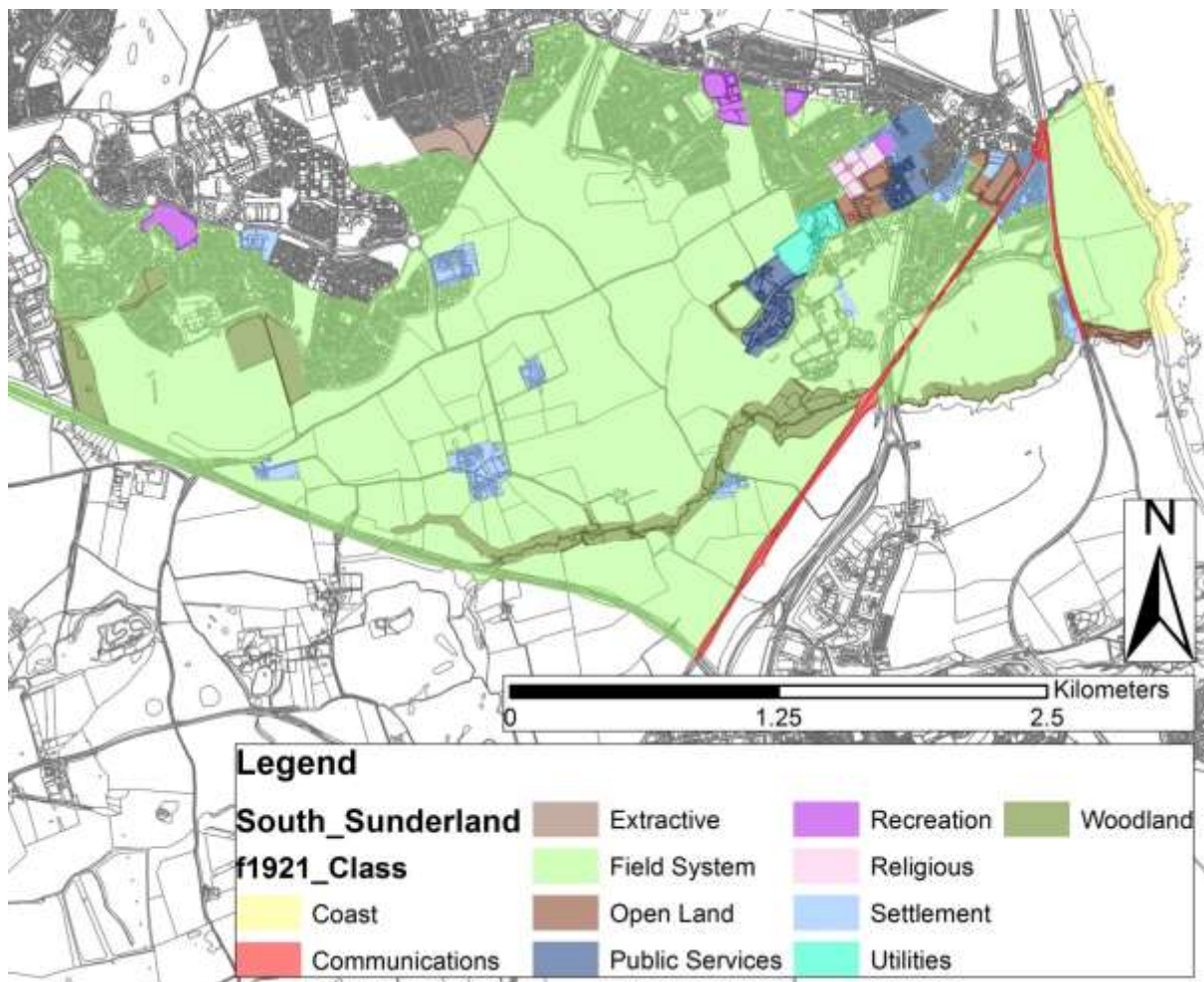


Figure 57. 1921 Class © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

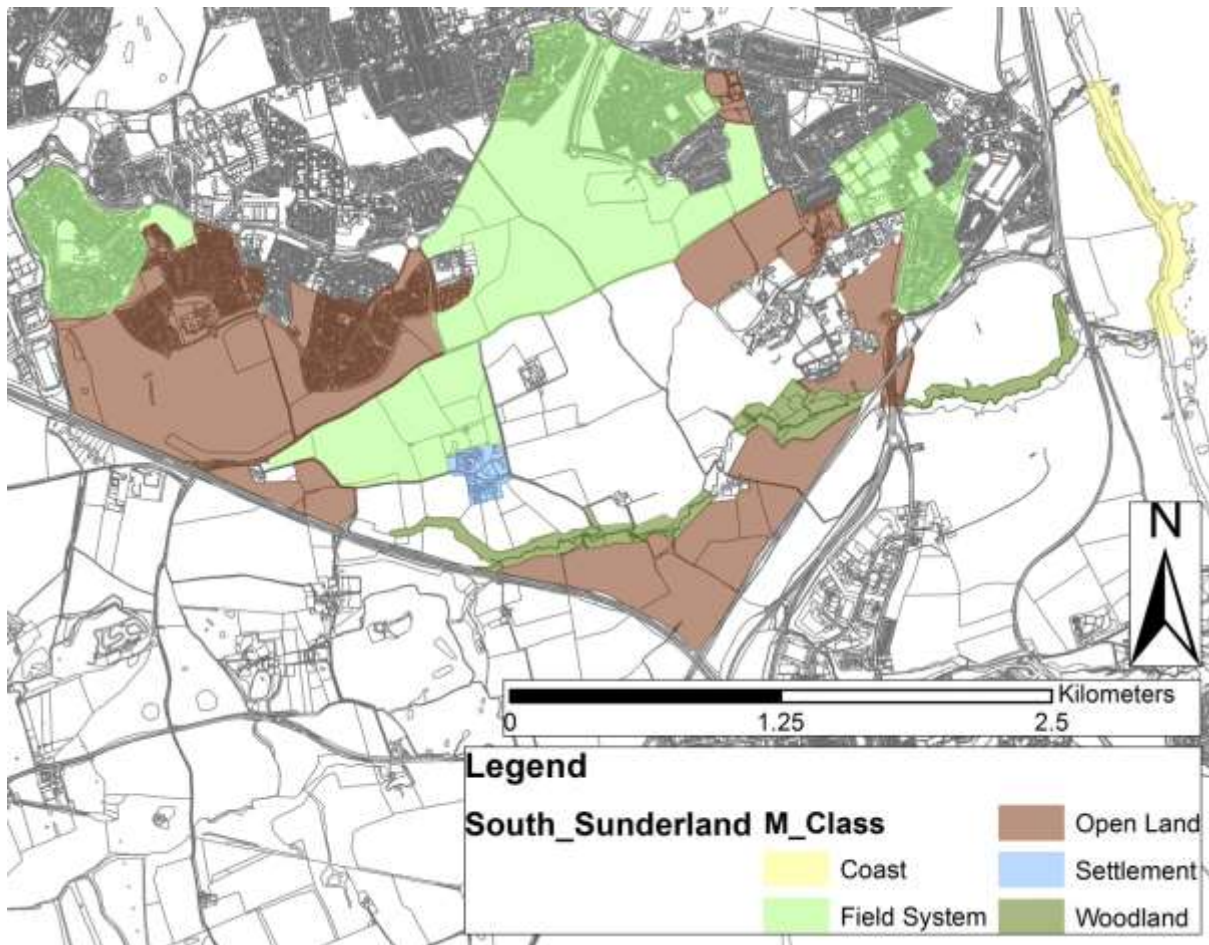


Figure 58. Medieval Class © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

The data drawn from the HLC provided an overview of the key character types affecting the polygonised area. *Class* character maps can be combined with *Broad Type* analysis to make general observations. These included:

- Medieval: the main *Medieval* influences on the landscape are from former areas of open unenclosed landscape and strip fields, evidence for which was derived from HER documentation of ridge and furrow survival, as well as field boundary analysis. To the south of the area there is evidence of long term survival (through to the present) of a medieval period settlement core at Burdon. There is also survival of ancient and semi natural woodland at Cherry Knowle Dene.
- Post Medieval – OS County Series (1861-65): The area is dominated by field systems during this period that are a mixture of surveyed and piecemeal enclosure of varying dates. By the OS First Revision (1899) the piecemeal enclosure has been re-organised and somewhat rationalised with straighter, more consistent field boundaries. This period also sees the first recorded evidence of the Sunderland & South Shields Water Works and the Sunderland Borough Lunatic Asylum and Hospital.

- OS County Series 1921 – 1938: The area remains dominated by field systems but is increasingly affected, from the 1920s onwards, by field boundary removal. This period also sees the expansion of settlement in Ryhope and increasing public service character types, such as schools.
- OS National Grid Series 1951 – 1969: The field systems are now almost exclusively agglomerated, displaying at least some boundary loss from the original surveyed and piecemeal enclosure. The expansion of settlement in Ryhope continues as does the increase in public services, in particular, the expansion of the Borough Lunatic Asylum ('Cherry Knowle Mental Hospital', as annotated on the 1950s map).
- OS National Grid (1980s) – OS MasterMap (2011): There is survival of agglomerated field systems, but also increasing settlement expansion in Ryhope and Doxford Park that contain mixtures of terraced, semi-detached and detached housing estates of varying date.

14.2.1.1 Stage 2 of Assessment

The next stage examines when change has occurred (as a general measure) and how legible historic character types are within the present landscape (figures 59 and 60).

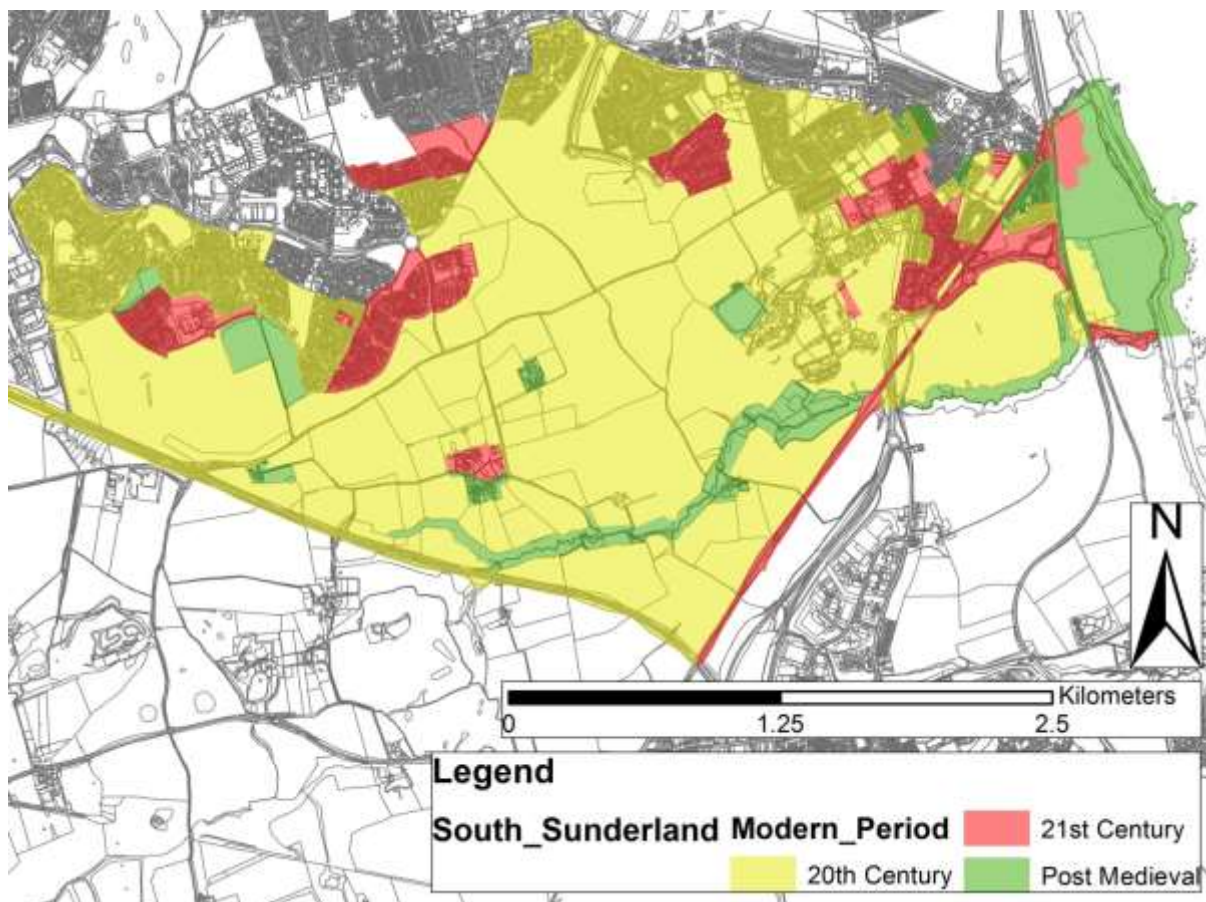


Figure 59. A representation of the most recent period of significant landscape change © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

Figure 59 demonstrates, as expected, that the majority of the landscape under consideration for development last witnessed significant changes in historic character during the 20th century, and some areas during the 21st. However, there remain pockets in the landscape that have not seen change from the Post-Medieval period (in this instance mostly woodland and field systems).

It should be noted that this map should be treated with some caution; as it is not intended as a guide to significance. It is not enough to assume that a later period of change results in lower significance; rather these maps should be used as a general guide to where change is likely to have taken place most recently.

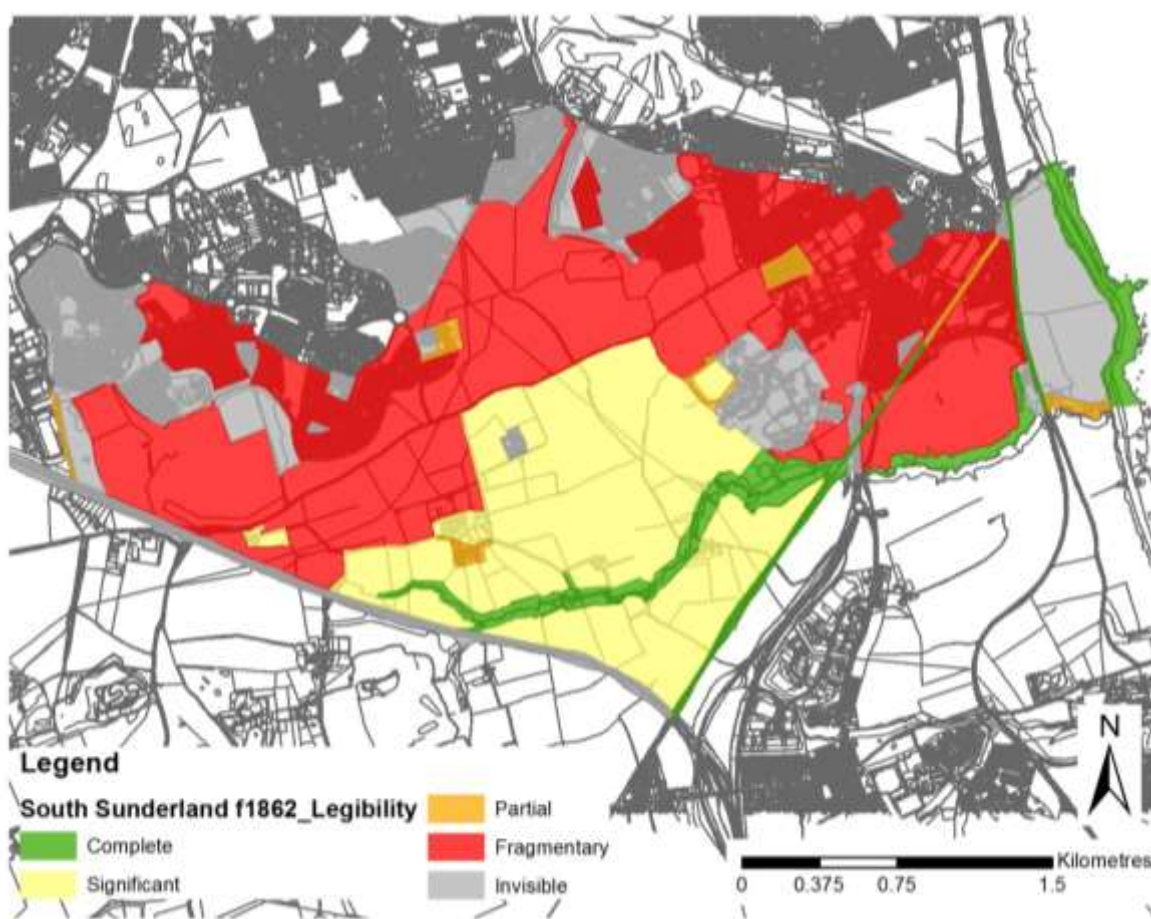


Figure 60. A representation of the legibility of OS County Series (1861-65) within the modern landscape © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

Figure 60 reveals that several areas of the landscape show signs of significant to fragmentary legibility of the OS County Series (1861-65) within the modern landscape. What this means in real terms is that many of the field boundaries survive within the modern

landscape, not only in areas of surviving field systems, but also in areas where settlement has occurred. When viewed in conjunction with figure 59 it demonstrates how even in areas of 20th or 21st century change there is likely to be some persistence of earlier historic character.

3.3.2.3 The final stage would be to begin a more detailed appraisal of the attributes in relation to *Settlement* (for those areas where it is relevant), in a way similar to that outlined in Case Study 1, and also in relation to *Field Systems*. Two examples of attributes that relate to *Field Systems* are given below (figures 61 and 62).

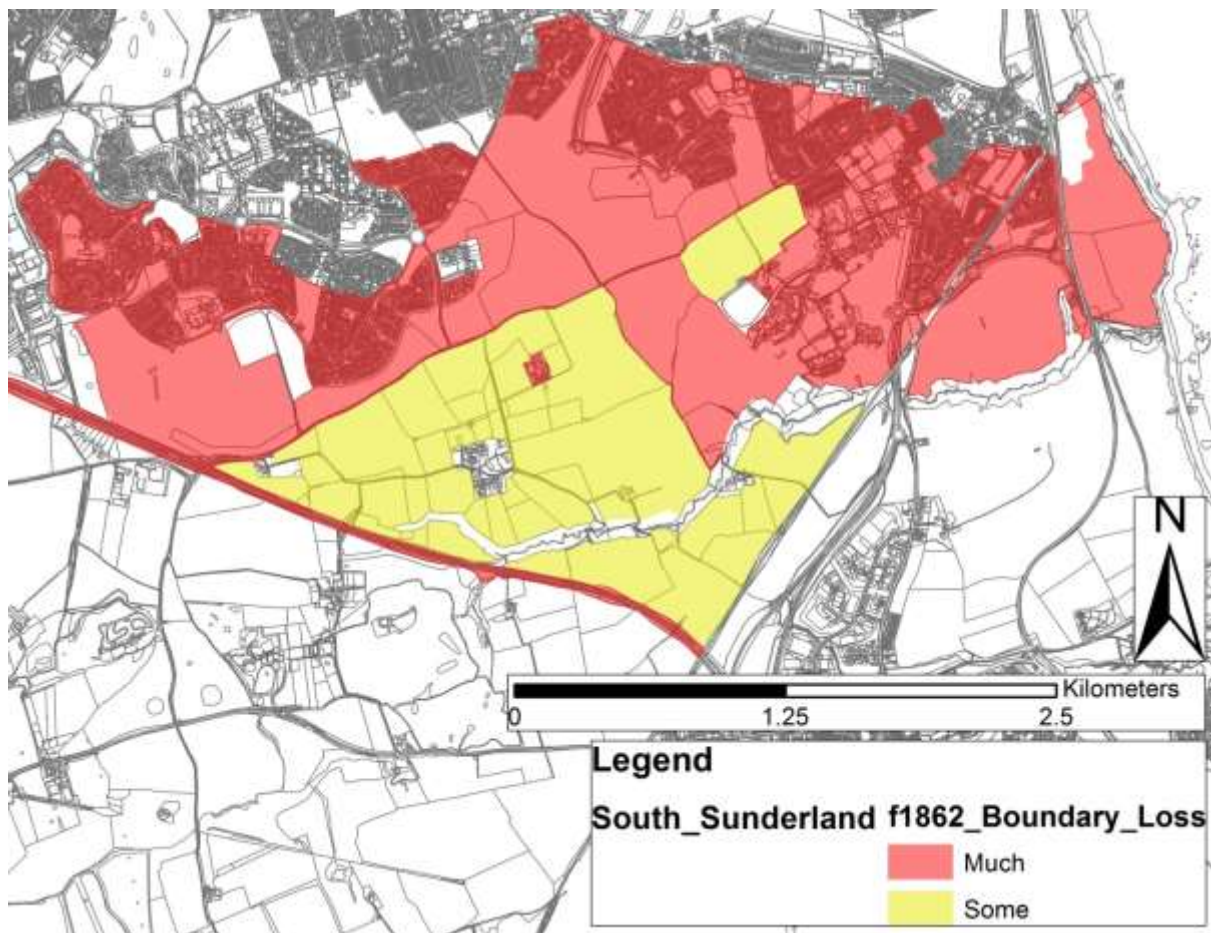


Figure 61. Boundary loss since OS County Series (1861-65) © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

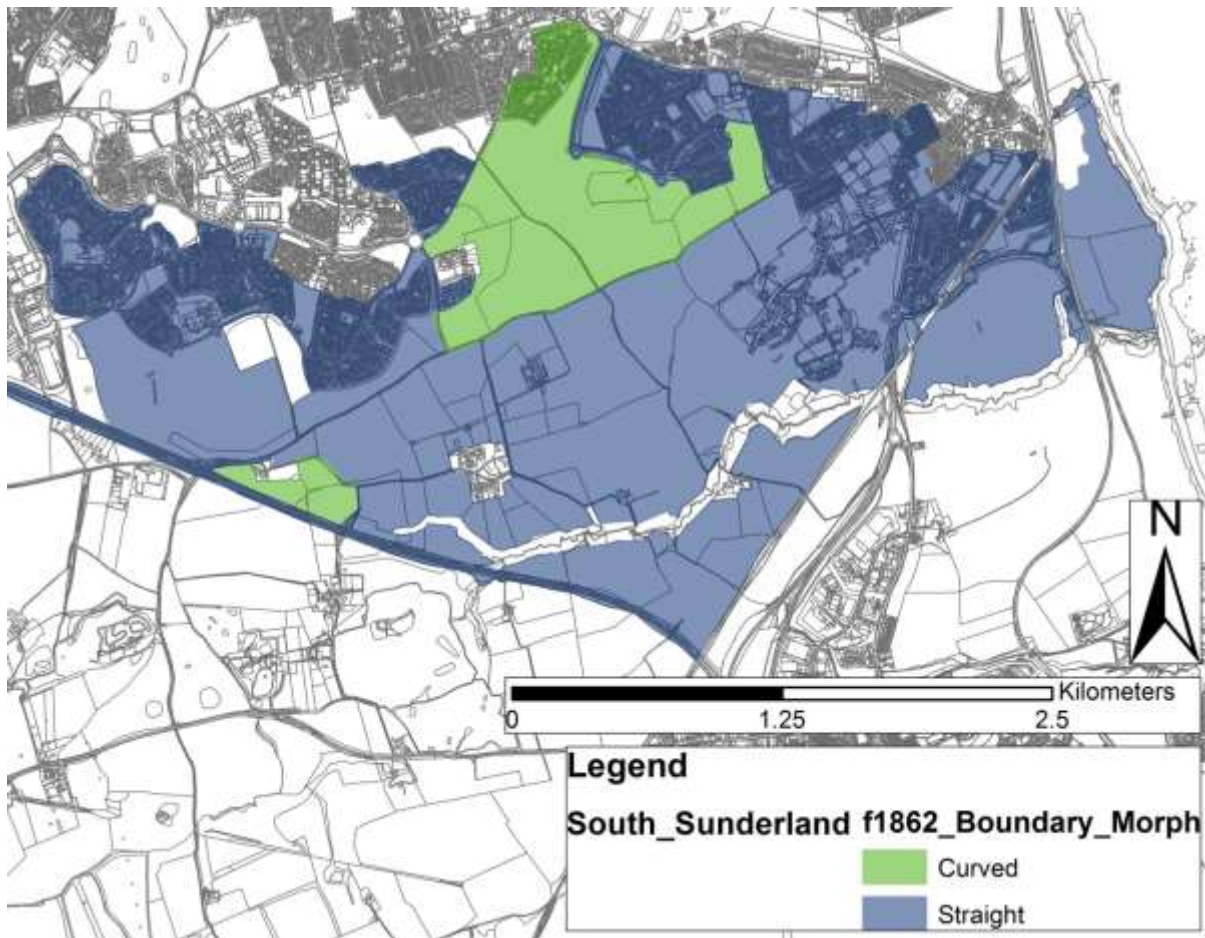


Figure 62. Boundary morphology from OS County Series (1861-65) © Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service.

These figures reveal some of the complexities that cannot be appreciated from consultation of a single map source. For example, figure 61 shows an area in the north central section, which is within the original reed line plan sent to the HLC Project Officer, and is shown with *Much* ($\geq 40\%$) boundary loss. However, figure 62 shows that of those surviving boundaries some still retain a morphology which is *curved*. In combination with information held within the HER, the HLC suggests this particular area's historic character may retain elements derived from a former use as *Medieval Strip Fields* (figure 58).

The HLC can be used in several different ways. For example, HLC data can be used to provide a simple map of the prevailing historic character in any given area. However, Case Study 2 suggests that HLC might be most usefully employed in the creation of Development Frameworks by producing a more extensive range of maps to show different aspects of the data in the HLC database. These help identify not just the prevailing historic character, but also areas where distinctive features that preserve elements of older historic character types may still exist. When using the HLC data for Local Development Frameworks, it is

suggested that planning professionals use methods such as the one outlined above in the first instance, but also explore the data fully in the context of their own in-depth knowledge of the districts in which they work.

14.3 Conclusion

The *Applications Review* is designed to highlight a few ways in which HLC data can contribute to the work undertaken by planning professionals in the region by enhancing understanding of the historic character of the modern landscape. Change is inevitable and necessary within fast-changing landscapes such as Tyne & Wear.

The *Applications Review* has sought to demonstrate the ways in which HLC data can assist in making appropriate decisions in light of proposed change. In particular it has highlighted the contribution to be made when considering the design and location of new development. Further examples of potential applications of HLC can be found in other recent reports produced as part of urban HLC projects undertaken for English Heritage elsewhere in England.

However, the two case study application examples presented above show the potential ways that HLC can contribute to the planning process – in making an assessment of the proposed impact of a new development, but also specifically in reference to forward planning process such as Local Plans. Both provide an evidence base for decision makers. Arguably, HLC has the potential to fulfil the same function for *any* forward planning process, irrespective of whether it is part of the statutory planning process or not (e.g. non-statutory masterplans, village design statements, conservation area management plans, heritage strategies etc..).

The case studies also suggest some of HLC's limitations. For instance, at a launch of the HLC in May 2014 several planners felt that how HLC was being used in case study 1 was stretching *beyond* its intended use as a spatial-planning and landscape tool. They intimated that it was not possible to use HLC to examine the *micro* – scale planning application process associated with case study 1. Arguably, though, the HLC provides a contextual evidence base that could be used, and while this was discussed, it generally agreed that its use at such specific small scales was not of tremendous use. HLC's greatest potential is in the landscape or *macro* – scale assessments, which is related to case study 2. On reflection, it may be that the next steps for assessing the application limitations and potential of HLC are in assessing: how small a scale of HLC is useful for planners? For example, it may be that a scale of use in-between the micro - and macro – is more suitable. This could be explored as a follow on project.

The *Applications Review* has attempted to place HLC within a broad range of policy that applies to the historic environment. As 'Character' is a key theme within many of the policy

documents outlined in this review the use of HLC data should enhance the work of professionals in the region. Another theme is 'Community': to this end, HLC can raise public awareness of the historic character of the Tyne & Wear landscape, contributing positively to local residents' sense of place.

PART FOUR

15 Conclusions

15.1 How the project's objectives have been met

The following section summarises how each of the five objectives outlined in *Part One* of this report has been met, and where further work is intended.

To produce a GIS-based characterisation of the historic and archaeological dimension of the present landscape across the full extent of the specified project area.

The project has produced a data set containing 11,286 records linked to GIS polygons which describe the current and previous historic character of the project area.

To analyse and interpret the project's HLC database to identify and document contexts and applications in the project area with particular reference to the sustainable management of change in line with UK commitments arising from the European Landscape Convention (CoE 2000).

The *Applications Review* in this project report outlines some of the suggested uses for the HLC data in line with recent and developing local, national and international policy.

Some other notable themes highlighted by the report include:

- The impressive pace with which demand for settlement was met in the late 19th and early 20th centuries;
- The complexity of industrial housing in the region, particularly considering scale and density relative to private and public space;
- The remarkable levels of legibility of historic field boundaries in the modern landscape, particularly where these are preserved by street layouts;
- The survival of field systems in the region despite the significant urban expansion;
- The historic mix of industry in the region and the high levels of relatively small scale industrial activity along the rivers Tyne and Wear; additionally, the impact of brick works on the past historic character alongside the better-known regional association with coal mining and ship building.

To produce an Archive and a Project Report. Included within the Project Report will be a project method statement detailing the project's methodology and practical implementation; and an application review summarising the management and planning applications, current and potential, which HLC could be used to inform.

The *Project Report* has detailed the methodology used and its practical implementation, as well as analysis of aspects of the changing urban and peri-urban, rural and industrial historic landscape character of the region. The HLC data will become an integral part of the Tyne and Wear HER's GIS, and as such will be accessible to council officers, the public and other users. The master copy of the full project database, reports and archive will be retained within the HER. The digital archive including report and data will also be deposited with the Archaeology Data Service to facilitate public access.

To disseminate information on the progress and results of the project through the internet and through professional and popular publications and other media.

At an early stage, the team produced publicity materials including a webpage: <http://www.ncl.ac.uk/historical/research/project/4264>. In addition to local presentations on the project, members of the project team will present some results at the 12th EAUH International Conference on Urban History in Lisbon, Portugal (September 2014) in a main conference session on 'Managing Change in Historic Settlements'. It is anticipated that some of the findings contained within this report will be disseminated through academic and professional publication after the conference.

15.2 Suggestions for further work

Although the objectives of the current research project have been met, HLC is useful in identifying where further research or outreach might be of benefit in the future. Some of these include:

- The relationship between character and topography; the HLC has a tendency to 'flatten' the data, which the Project Officer was concerned could be misleading in areas such as the Ouseburn area of Newcastle district;
- The role of visibility and perception within the landscape; to this end the project benefited from work carried out by Niels Dabaut as part of an EU funded Erasmus Work Placement relating to his Masters in Conservation at the Raymond Lemaire International Centre for Conservation, KU Leuven, Belgium; this work will be the subject of a separate, additional report.
- The complexity of historic town cores before the earliest mapping source (1861-1865);

- The relationship between settlement and recreation/green space in settlement cores;
- The relationships between settlement, industry, prosperity, community and health between the late 19th and early 21st centuries;
- The development of garden suburbs;
- The development of social housing;
- The development of rural settlement;
- The complexity and enclosure history of local field systems;
- More detailed analysis of *open land* north of the river Tyne;
- The relationship between industry and settlement;
- The effect of *Communications* types on shaping the landscape;
- Comparative analysis of *public service* across T&W;
- Comparative analysis of *utilities* across T&W;
- Combination with Northumberland and Durham and Darlington HLCs for comparative analysis of how T&W fits into the regional landscape , both in the modern day and historically;
- Comparative analysis of the T&WHLC with the Town and County Planning Acts post 1945 to determine their impact on the landscape;
- Use of the HLC in conjunction with 3D modelling and view-shed analysis to provide quantitative data for setting debates; an example of this would be examining the exact landscape affected by a proposed wind-farm to quantify the visual impact, rather than relying on subjective, qualitative assertion;
- Public engagement through a conference or publications.

It is hoped that this report will form a useful guide for those wishing to use the T&WHLC in the future, as well as highlighting some of the research potential of the data. In particular, one reviewer of the T&WHLC suggested that ‘time and resources could be directed towards some form of training and advocacy aimed at raising the profile of HLC as a worthwhile and practical tool for those who engage with the complexities and realities of the planning world’.

The report covers some of the interesting themes that have come to light during the characterisation stage of the project, but there is potential for further analysis in the future. It is hoped that the data will become an integral part of Tyne & Wear HER being used by members of the public and professionals alike.

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Appendix 1: Database Structure

Attribute	Description	Recorded in (left blank if not specific)	Value	Scope Note
ID Number	The unique ID number for each polygon			
Last Update				
District	A list of the five authority districts		Gateshead Newcastle North Tyneside South Tyneside Sunderland	
Parish	A list of the parishes within T&W			
Record complete	Tick box			
Period	An assignment of historical period based on the first instance of a Class and Broad Type being recorded			
Source	A series of tabbed screens detailing the commonly used sources		1862 1899 1921 1938 1950s 1960s 1980s Modern (2011)	
Confidence	The compilers measure of confidence in relation to the Class and Broad type used and the interpretation attributes		Certain Probable Possible	>80% 75-80% >50%
Legibility	Records the extent to which 'the past' can be		Complete Significant Partial	

	perceived within the present day polygon		Fragmentary Invisible	
Notes	Free text area			
Class	A characterisation, where possible, of the Class type			
Broad Types	A characterisation, where possible, of the Broad type			
Scale	Rough guide to size of properties within a polygon	Settlement	Large Medium Small	Footprint of approx. 100sqm or more Footprint of approx. 50-100sqm Footprint of approx. <50 sqm
Density	Number of homes per hectare	Settlement	High Medium Low Unknown	Over 55 homes per ha 25-55 homes per ha <25 homes per ha
Pattern	General shapes formed by the layout of housing	Settlement	Cul-de-sac Geometric Grid layout	Modern housing estates with 'dead-end' roads Formally planned geometric shapes

			Irregular Other	Regular grid-based street pattern
Private Space	Rough guide to the private space relating to settlement within a polygon	Settlement	Back and front garden Back garden and front yard Back garden Back and front yard Back yard Front garden Shared yard Front garden and back yard Court yard Farmyard No private space Unknown Detached Garden Front yard	
Public Space	Denotes publicly accessible areas within a polygon	Settlement	Car parking Community centre Gardens/ Memorial Garden Religious building	

			<p>School</p> <p>Public open space</p> <p>Library</p> <p>Playing field</p> <p>Play park</p> <p>Pubs/clubs</p> <p>Shopping parade</p> <p>No public spaces</p> <p>Not discernible</p> <p>Medical facility/Hospital</p> <p>Allotment Gardens</p>	
Field size	Typical field size within a polygon	Field system	<p>Large</p> <p>Medium</p> <p>Small</p>	<p>>10ha</p> <p>2-10ha</p> <p><2ha</p>
Boundary loss	Denotes degree of loss between 1 st Edition (1861-1865) and OS MasterMap (2011)	Field system	<p>Much</p> <p>Some</p> <p>Little</p>	<p>>40%</p> <p>15%-40%</p> <p><15%</p>
Pattern morphology		Field system	<p>Regular</p> <p>Semi-regular</p> <p>Irregular</p> <p>None</p>	<p>Clear organised structure</p> <p>Mostly regular with some irregularities</p> <p>No regular structure</p>

Boundary morphology	Describes the nature of the boundaries within a polygon	Field system	Curved Straight S-curved Irregular Unknown	Having the form of a curve Near perfect straight (surveyed) Reverse S-curve (typical of strip fields) No regular structure
Building scale	The scale of building units	Commercial; Recreation; Public Services; Industrial; Military; Religious; Utilities	Very large Large Medium Small	>5ha 1.5-5ha 0.1-1.5ha <0.1ha

Appendix 2: *Class Area Percentage for the eight sources used*

	<i>Modern</i>	<i>1980s</i>	<i>1960s</i>	<i>1950s</i>	<i>1938</i>	<i>1921</i>	<i>1899</i>	<i>1862</i>
Coast	0.7	0.6	0.7	0.8	0.8	0.8	0.9	1.1
Commercial	2.8	1.4	0.8	0.6	0.5	0.4	0.3	0.2
Communications	4.4	4.7	4.5	3.8	3.5	3.3	3	2.1
Extractive	1	2	3.4	3.4	3.1	3.1	2.8	2
Field System	30.1	33.5	45	50.5	54.9	62.8	69.1	76.6
Industrial	5.8	6.2	3.3	3	2.9	2.6	2.3	1.6
Military	0.1	0.1	0.4	1	0.8	0.8	0.1	0.04
Open Land	3.1	3.3	3.4	3.6	2.7	2.4	2.3	2.5
Public Services	3.4	3.7	2.1	1.4	1.2	0.8	0.4	0.07
Recreation	10.3	9.2	7	6.7	5.8	5.1	3.7	2.6
Religious	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.2
Settlement	30.2	27.4	22.3	18.1	16.8	10.8	7.9	4.5
Utilities	0.3	0.7	0.4	0.3	0.3	0.3	0.2	0.1
Water	1.4	1.3	1.6	1.7	1.6	1.6	1.8	2
Woodland	4.7	4.2	3.5	3.6	3.7	3.8	3.8	3.8