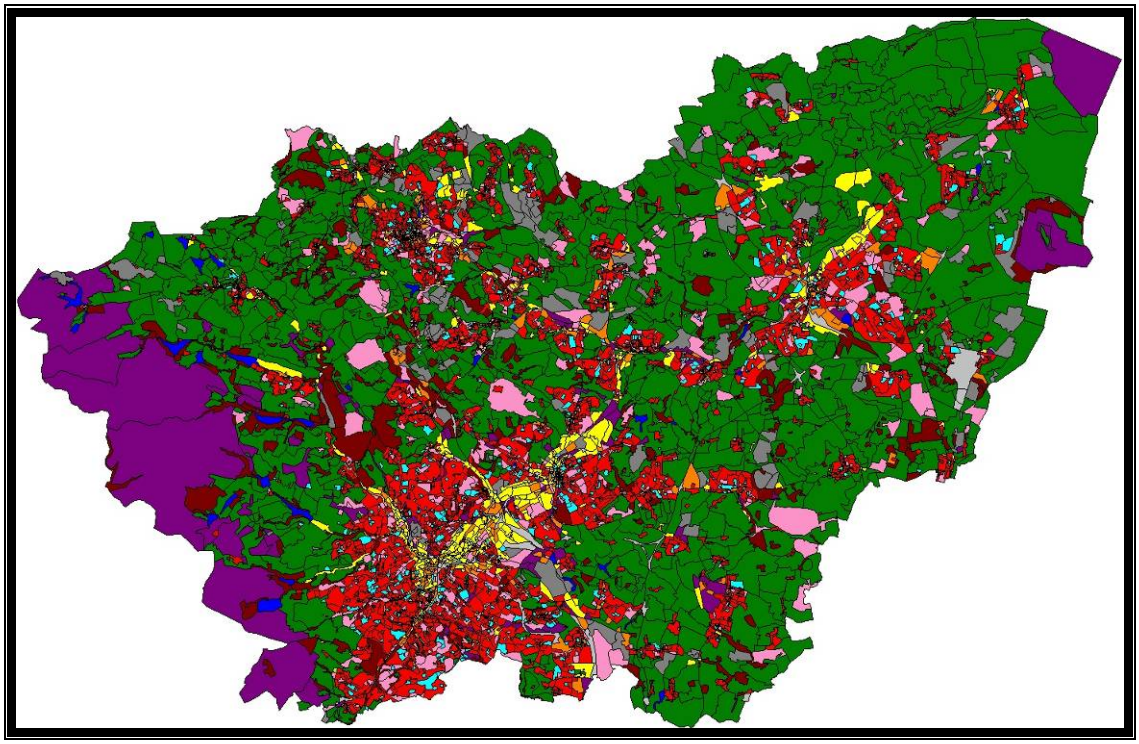
South Yorkshire
Historic Environment Characterisation



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South Yorkshire Archaeology Service & English Heritage

South Yorkshire Archaeology Service

ENGLISH HERITAGE

South Yorkshire Historic Environment Characterisation

Final Report
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Part I: Introduction

Summary

South Yorkshire has a rich history of settlement, farming, industry, recreation and commerce. These activities have all influenced the way the landscape has developed and the physical evidence of these human actions can be seen across the county. The South Yorkshire Historic Environment Characterisation project was undertaken between 2004 and 2008 to map this evidence, to try to understand the historic processes that had formed it and to develop strategies for the future protection and enhancement of the historic environment identified. This project was undertaken by the South Yorkshire Archaeology Service with funding from English Heritage.

As part of the project, a vast amount of data was collected to produce a complete picture of the current landscape of South Yorkshire and an understanding of how these landscapes and townscapes have changed through time. This data was then used to identify trends of historic development across the county. The resulting analysis can be found within this document and also makes up a significant part of the output made easily available to the public through an interactive website (www.sytimescapes.org.uk). This public output was developed alongside a digital resource made available to the four local authorities within South Yorkshire: Barnsley, Doncaster, Rotherham and Sheffield. This should assist with forward planning exercises, the production of Design Guides and numerous other activities that could impact upon the historic environment.

Background to Characterisation

English Heritage has been funding a nationwide programme of Historic Landscape Characterisation (HLC) since 1992. These studies have been run alongside a programme of Extensive Urban Surveys (EUS) looking at urban locations.

Characterisation aims to record the modern landscape and show how aspects of the past still exist around us. One of the guiding principles of this process is the need to work on all parts of the landscape not just those areas considered to be 'special'. This is a move away from understanding and protecting specific sites or buildings, to considering the wider historic environment.

Our surroundings are dynamically changing; these changes are part of a long history of human influence on the landscape. In order to manage these changes it is important to have a good understanding of the evolution of the landscape that surrounds us. Characterisation is not about trying to prevent change but about ensuring that decisions are made on an informed basis, ensuring that areas retain their local distinctiveness. It can be used alongside other systems of heritage management, such as Listing and Scheduling of sites and buildings. It gives a background to such sites and buildings, drawing them into a wider landscape perspective.

In 2001 the government acknowledged the value of characterisation for the management of change in the historic environment in its policy statement, *The Historic Environment: a Force for our Future* (DCMS/DTLR 2001).

In South Yorkshire the decision was made to combine HLC and EUS into one unified project known as Historic *Environment* Characterisation (HEC). This combined approach removes the artificial divide between rural and urban landscapes. An advantage of this approach is that it allows rural industrial and agricultural activities to be assessed alongside the development of the towns where the industrial work force lived.

The South Yorkshire Historic Environment Characterisation project aims to be a key resource that is accessible to a wide variety of different users. GIS technologies and databases make the project highly flexible and also make it possible for the project to be further developed after the end of this phase of work in 2008.

Topography and Geology of Project Area

South Yorkshire (Figure 1) covers four administrative districts (Barnsley MBC, Doncaster MBC, Rotherham MBC and Sheffield CC) and covers approximately 160,000 hectares (roughly 70km east-west by 45 km north-south). The majority of the area was part of the former West Riding of Yorkshire, but includes small areas formerly in Derbyshire and Nottinghamshire. The western fringe of South Yorkshire lies within the Peak District National Park, which has recently completed its own Historic Landscape Characterisation project (Barnatt, 2003).

Largely rural until the industrial revolution, much of South Yorkshire has in fact remained as such, with several of South Yorkshire's towns continuing as small market towns, e.g. Penistone, Tickhill and Bradfield. However, others, notably Barnsley, Doncaster, Rotherham and Sheffield, expanded considerably – giving the predominantly urban character of South Yorkshire today.

The topography of South Yorkshire is diverse, ranging from the highlands of the edge of the Peak District National Park, to the low peat-lands of the edge of Lincolnshire/Humberside. The Countryside Commission's Countryside Character volume 3 'Yorkshire and the Humber' (1998) describes five main Character Areas within the study area: the Dark Peak, the Yorkshire Southern Pennine Fringe, the Notts/Derby/Yorks Coalfield, the Southern Magnesian Limestone and the Humberhead Levels.

The report's treatment of these areas can be summarised as follows, from west to east:

Dark Peak – This character area has a '*wild and remote semi-natural character created by blanket bog, dwarf shrub heath and heather moorland with rough grazing and a lack of habitation*'. The area has a '*dramatic character created by sharply defined, elevated and vast plateaux with 'gritstone ridges' and edges and long uninterrupted views'*.

Yorkshire Southern Pennine Fringe – This area lies on the eastern slopes of the Pennines, where character has been determined by *'extensive urban influences from a matrix of large and small towns'*, including the development of industry and associated settlement along river valleys. Vernacular building is in the local gritstone.

Nottinghamshire, Derbyshire and Yorkshire **Coalfield** - The characterisation describes a *'complex mix of built-up areas, industrial land, dereliction and farmed open country'* within *'rolling landforms with hills, escarpments and broad valleys'* - heavily influenced by the underlying Coal Measures. The characterisation notes evidence for wealth in earlier times, resulting in the endowment of *'large country houses, parks and estates'* and *'grandiose …19th century Town and Civic Halls, Schools, Museums and Art Galleries'.* This is juxtaposed with the presently *'fragmented and downgraded landscape… a*

landscape of neglect' - the result of the decline of traditional heavy industries.

Southern Magnesian Limestone – This character area reflects the *'narrow [elevated] ridge… [that] acts as a distinct barrier between the industrial coalfields to the west, and the lowland vales to the east'*. Fertile soil combined with the presence of *'a large number of country houses and estates'* has created a *'generally large scale, open landscape…'* where *'woodlands [combine] with open arable land to create a wooded farmland landscape'*. The area contains the *'main transport corridor of the A1'*. Vernacular building uses *'creamy white Magnesian Limestone… often combined with red clay pantile roofing'*.

Humberhead Levels – This character area is similar to the low-lying Somerset Levels and the Fens. *'Field trees and hedgerows are generally few and far between and views are often long and unbroken to distant horizons, with the sky playing an important part'*. Drainage has affected the character of this area, but *'around Fishlake and Sykehouse… the traditional pattern of small, thickly hedged fields, hedgerow trees, green lanes, networks of dikes and ditches... still remains'*. The area includes the *'remnant raised mire'* of Thorne and Hatfield Moors. Industrial and transport influences are seen as playing their part, with influences from the Selby coalfield and accompanying power stations, as well as from railways, major motorways and the canal.

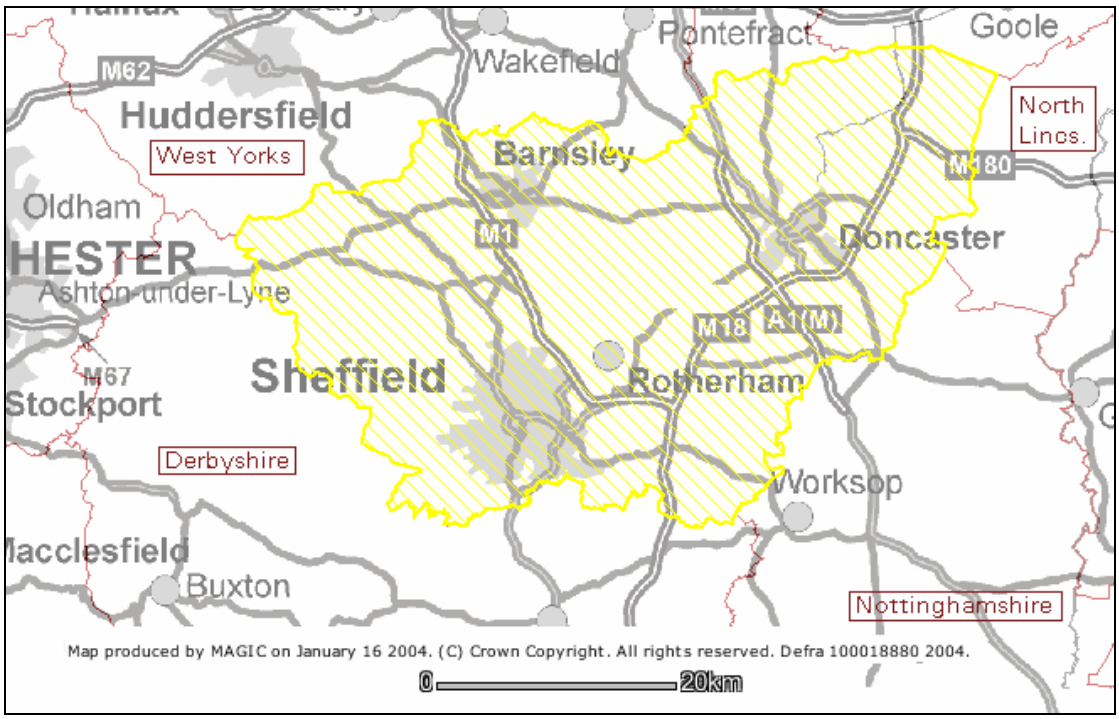


Figure 1: South Yorkshire location map

Part II: Methodology

Overview

South Yorkshire is an area of diverse landscape character including open moorlands, agricultural countryside, medieval villages, market towns, and the expanding metropolitan centres of Barnsley, Doncaster, Rotherham and Sheffield. The methodology developed for this project allowed the varied scales of these activities to be recorded and set within the context of the surrounding landscape. This methodology was initially based upon the accepted best practice defined by the 2001-2 national HLC Method Review (Aldred & Fairclough 2003) and also through consideration of existing HLC and EUS projects. The methodology was later refined as part of the pilot phase on the project in 2004.

The characterisation and mapping phase of the project used MapInfo Professional v7.5 to create a GIS layer of the historic environment of South Yorkshire. The GIS was supported by a database using the Historic Landscape Character module of HBSMR v3.03 from exeGesIS Spatial Data Management.

This produced a generalised picture of the landscape, taking a 'broad brush' approach. Areas of land with common characteristics were identified and recorded as polygons within the GIS, with associated information on the current and past character of the landscape recorded within the database.

Sources of information

The project was primarily desk-based, utilising current mapping, historical mapping and vertical aerial photos. Modern digital mapping from the Ordnance Survey was provided by Sheffield City Council. Digital historic mapping from the Landmark Information Group joint historic mapping project was supplied under licence by English Heritage and rectified aerial photography was provided by the four South Yorkshire authorities. These sources were found to be far easier to use than traditional paper mapping as they made it possible to overlay maps of different ages upon one another and upon the aerial photographs.

The key digital historic maps utilised were Ordnance Survey Epochs 1-4 at 1:2500 and 1:10560 scales. Each map tile had different surveying and publication dates; the general date of each map is listed below (more specific dates can be found in the Map Bibliography at the end of this report).

OS 1:10560; Epoch 1 - c.1850
Epoch 2 - c.1890
Epoch 3 - c.1915
Epoch 4 – c.1940

OS 1:2500; Epoch 1 – c.1880
Epoch 2 – c.1900
Epoch 3 – c.1920
Epoch 4 – c.1940

Many map tiles were actually surveyed across a number of years with minor revisions made right up to the publication date. The project, therefore, mainly referred to the date of publication rather than survey dates. The publication date for each map tile came from metadata supplied by English Heritage.

The time gap between the Landmark digital maps and modern digital OS maps was largely covered by a set of OS paper maps at 1:10,000 published between 1971 and 1990, held by South Yorkshire Archaeology Service. As these maps were undigitised, comparison with other mapping was slower, but they did fill an important gap in the historic mapping. There were no smaller-scale maps, equivalent to the 1:2500 series, available for this date range, so less detail could be recorded for this time period. The more modern maps also tended to include less information about industrial processes, compared with 19th and early 20th century mapping. Industrial sites were more regularly described merely as 'works'.

Mapping resources predating the Ordnance Survey coverage were largely restricted to occasional paper mapping sourced from archives. These were a mix of estate maps, tithe maps and Enclosure maps. These sources could not be referred to for the whole of South Yorkshire but proved valuable when specific questions needed to be addressed.

Written sources consulted as part of the project included local history books, archive documents, archaeological excavation reports and the South Yorkshire Sites and Monument Record (SMR). The excavation reports and other data held within the Sites and Monument Record were useful for the background historic and archaeological information they contained. These sources were readily available as the Historic Environment Characterisation project was undertaken by the South Yorkshire Archaeology Service, who maintain the South Yorkshire SMR.

Where there was little documentary or map evidence for previous landscapes, it was necessary to make decisions based on comparisons with similar, better documented landscapes. When available, Enclosure maps were useful in verifying these interpretations, where enclosure processes had been inferred by the morphological analysis of field patterns.

Digitisation Methodology

Broad Types and Historic Environment Types: As indicated above, the characterisation process begins by identifying physical patterns in the present landscape - from maps, plans and aerial photographs. GIS polygons are then drawn around areas with common characteristics; examples might include a large stand of ancient woodland, or an area of countryside featuring the characteristic straight boundaries of parliamentary enclosure. In urban environments each polygon may record a different type of housing layout, or a phase of industrial expansion. Each unique polygon is then allocated a 'broad' character type, as shown in Table 1. These 12 Broad Types can each then be subdivided into more specific Historic Environment Types, as shown in Table 2. A complete list of Broad Types and their Historic Environment Types, with scope notes, is found in Appendix I at the end of this report. These lists evolved from the types stated in the initial project design, as further categories were found to be necessary in the early stages of the project.

Broad Types	Description
Commercial	Business areas including retail and office units.
Communications	Main communication nodes. Linear features such as roads and canals are not generally marked, but the main features linking these are. Records areas such as train stations, transport interchanges, airports etc.
Enclosed Land	Land that has been demarcated and enclosed, particularly fields.
Extractive	Areas involved with the extraction of commodities and minerals such as fuel or building materials.
Horticulture	Area used for market garden, garden centres, orchards etc.
Industrial	Areas concerned with industrial processes and manufacturing.
Institutional	Areas (with or without buildings) connected to large establishments, associations and organizations.
Ornamental, Parkland and Recreational	Designed landscapes and open spaces used for recreational purposes.
Residential	Areas where people live. Ranges from large individual houses to housing estates.
Unenclosed Land	Unimproved land, open land, moorland, etc.
Water Bodies	Large water bodies including reservoirs and lakes. Does not include millponds.
Woodland	Land with dense concentrations of trees.

Table 1: Broad Historic Environment Types

Broad Type	Historic Environment Types		
Residential  © SYAS	•Farm Complex •Elite Residence •Back-To-Back / Courtyard Houses •Prefabs •Semi-Detached Housing	•Burgage Plots •Estate Village •Villas/ Detached Housing •High Rise Flats •Planned Estate (Social Housing)	•Vernacular Cottages •Terraced Housing •Private Housing Estate •Low Rise Flats
Enclosed Land  © SYAS	•Open Fields •Agglomerated Fields •Piecemeal Enclosure •Surveyed Enclosure (Parliamentary/ Private) •Cropmark Field Systems	•Strip Fields •Assarts •Valley Floor Meadows	•Crofts •Drained Wetlands
Unenclosed land  © Richard Webb	•Moorland •Commons and Greens •Regenerated Scrubland		
Communications  © David Hitchborne	•Tram Depot •Train Station •Train Depot / Sidings •Transport Interchange •Viaduct/ Aqueduct	•Bus Depot •Car Park •Ring Road •Canal Lock Ladder System •Motorway & Trunk Road Junctions	•Canal Wharf •Motorway Services •Airport
Commercial  © SYAS	•Distribution Centre •Business Park •Retail Park •Commercial Core – Urban •Commercial Core – Suburban	•Warehousing •Markets •Entertainment Complex	•Shopping Centre •Offices
Woodland  © SYAS	•Ancient Woodland •Wet Wood •Spring Wood	•Semi-Natural Woodland •Wood Pasture •Plantation	

Broad Type	Historic Environment Types		
Industrial  © Nigel Cox	•Water Powered Site •Tannery/ Abattoirs •Textile Trade •Metal Trades (Light) •Metal Trades (Heavy)	•Craft Industry •Potteries •Glassworks •Metal Trades – Support	•Chemical •Utilities •Other Industry
Extractive  © Steve Fareham	•Spoil Heap •Open Cast Coal Mine •Landfill •Refractory Material Mine & Works •Other Mineral Extraction & Processing	•Clay Pits/ Brickworks •Deep Shaft Coal Mine •Annular Spoil Heap (Bell Pit earthworks)	•Peat Extraction •Quarry
Ornamental, Parkland & Recreational  © Paul Store	•Private Parkland •Public Park •Leisure Centre •Tourist Attraction •Zoo	•Deer Park •Playing Fields •Sports Ground •Golf Course	•Walled Garden •Allotments •Racecourse •Inner City Farm
Institutional  © SYAS	•Military Airfield •Hospital Complex •University/ College •Religious (Worship) •Religious (Other) •Military (Other)	•Workhouse •Prison •Barracks •School •Civil & Municipal Buildings •Nursing Home/ Almshouse	•Asylum •Cemetery •Fortified Site •Municipal Depot
Water Bodies  © Steve Fareham	•Reservoirs •Lakes		
Horticulture 	•Orchards •Nurseries		

Table 2: Historic Environment Types

Where a proposed present-day polygon would cover an area with more than one previous historic environment type, two or more polygons were actually drawn, to allow this difference to be highlighted. As the current historic character is the same, these polygons will have the same Broad Type and Historic Environment Type but the database will record the variation in past character. An example of where this might happen is when a large 'private housing estate' covers land that had previously been 'terraced housing' and 'allotments'; in these circumstances two polygons will have been drawn. The first polygon will have a current Historic Environment Type of 'private housing estate' with a previous Historic Environment Type of 'terraced housing'. The second polygon will have a present type of 'private housing estate' and a previous type of 'allotments'.

Throughout the project, the *confidence* of decisions made about the historic character of each area has been recorded using the scale: *certain, probable*, *possible*. This has brought a degree of transparency into the characterisation process and allows general interpretations to be assessed on their likelihood.

Date of Origin: Each current character type and past character type recorded within the database is allocated a date of origin. With 19th and 20th century landscapes this will generally correspond to the earliest mapping that that character type is recorded on. Dates prior to the first edition OS mapping (c.1850) will have been given a specific date where this is known but will otherwise have been allocated a general date, depending upon the type of landscape involved. The dates 1066 and 1540 are typically used as the date of origin of medieval and post-medieval landscapes respectively; 1750 is often used for surveyed enclosure landscapes where no enclosure award data is known. These decisions were made based upon the specialist knowledge of the project officers. Where generalised dates are used, a measure of confidence in the dates should have been included; uncertain date ranges are qualified with a '?'. The inclusion of these generalised dates within the database allows 'estimated' pictures of past landscapes to be mapped. See Figure 2, below, for an example of such a map from the medieval period.

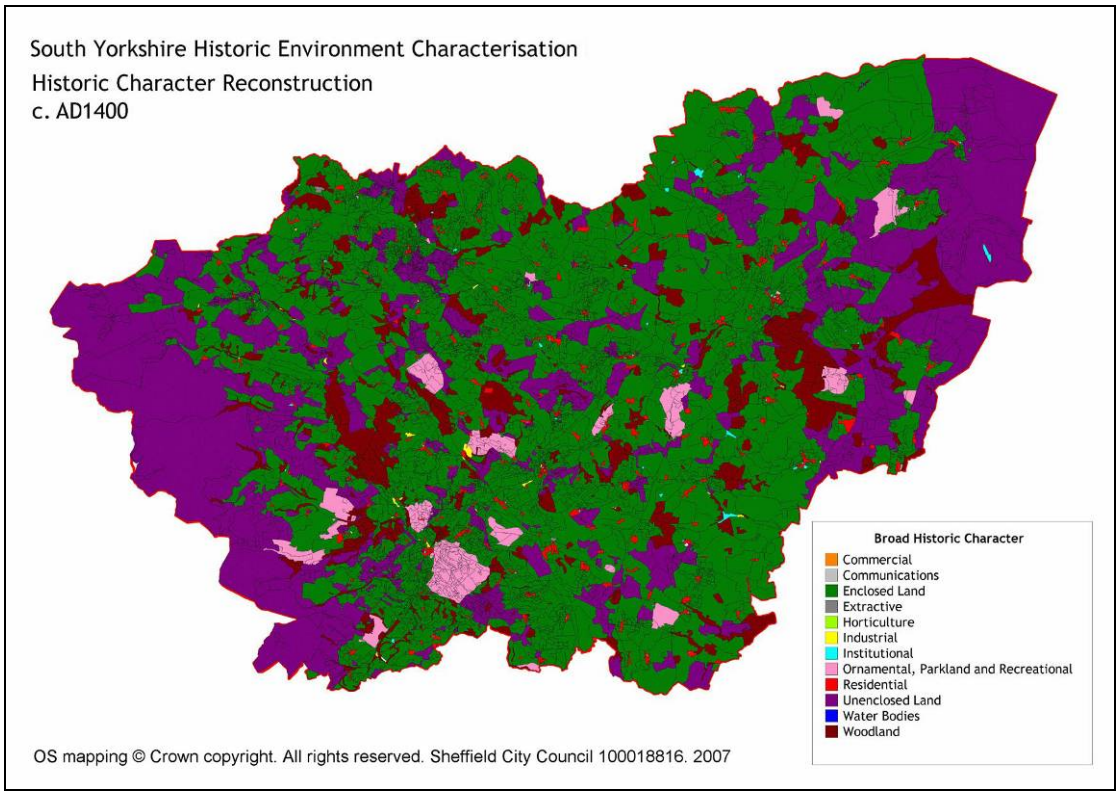


Figure 2: Generalised thematic map of South Yorkshire in AD 1400 (coloured by Broad Character Type)

Attribute Data: By using an integrated database and GIS it has been possible to attach a variety of attribute data to each polygon, allowing a variety of consistent attributes to be recorded quickly. Each Broad Type will have a different selection of attributes, e.g. for 'Residential' Broad Types the following attributes are recorded: *Housing Density, Layout Pattern, Private Open Space, Public Spaces, Status,* and *Legibility; for* 'Unenclosed' Broad Types, the attributes recorded are: *Elevation* and *Legibility.* The attributes recorded for each Broad Type are detailed in Appendix I and a full list of attributes, with scope notes, can be found in Appendix II.

Of the various attributes recorded within the project database, perhaps the most important to discuss in detail is *Legibility*. This attribute was developed specifically for the South Yorkshire project, as a way to describe how much of a former landscape survives, and can be read, within the present landscape. Examples might include former field boundaries preserved as garden boundaries within a housing estate, or industrial features, such as spoil heaps, surviving within an area now dominated by public recreational use. The extent of such legibility is recorded as *Significant*, *Partial*, *Fragmentary* or *Invisible*, depending on the ease with which such remains can be read in the modern landscape. Legibility refers to former historic character types recorded within the database for an individual polygon; details on the previous character type referred to should be documented within the database's description field.

Working methods: For most of the project, two characterisation officers worked within the same district of South Yorkshire simultaneously. This was done to facilitate informed discussion on similarities and differences in perceived local character and to allow for the sharing of information. The project officers worked (approximately) in adjacent 10km grid squares. Barnsley, the final district to be characterised, was treated differently – the result of a change in project officers. It was decided that the new project officer should complete the remaining polygonisation of this district, whilst the other project officer went ahead with the analysis phase for areas they were already familiar with.

During the project the results of the ongoing characterisation were verified by making a number of rapid area visits. The aim of these field visits were to check the accuracy of attribute recording and descriptions on the ground.

Digitisation Rates

Testing during the pilot study showed that the polygon size necessary to define distinct character units varied according to the complexity and frequency of human action within a particular location. The pilot study indicated that in urbanised areas typical polygon sizes would be within the range of 5-10 hectares. In contrast, agricultural areas (typically various types of enclosed land) required polygons of, on average, 90 hectares. The mapping scales needed to record such units also varied. Where polygons are small, i.e. within urban areas, historic 1:2,500 or modern 1:2,500 'Landline' data sources were required. For rural areas, the historic 1:10,560 or modern 1:10,000 series mapping was sufficient. The flexible zooming and overlay capabilities of the GIS allowed these scales to be varied according to individual circumstances.

Working from the available data, South Yorkshire was considered to be sub-divided into 128,590 hectares of rural land and 31,410 hectares of urban land. These figures were based upon the urban datasets available (derived from OS data) that included settlements with over 1,000 inhabitants. Following the initial pilot study, it was assumed that in rural areas character units would have an average area of 100 hectares and in urban areas an average of 7 hectares. This would have resulted in 1286 rural polygons and 4487 urban polygons – a total of 5773 polygons for the whole of South Yorkshire.

These early results also indicated that around 11 polygons a working day could be completed by each project officer, allowing for field tests, meetings and administration. This, in turn, suggested a digitisation period of 265 working days. With an allowance made for annual leave, sickness, etc. this meant the characterisation would take just under 15 months.

Part way through the project it was seen that these polygonisation rates were inadequate. On completion of the project (assuming 220 working days per year per project officer, to allow for holiday and weekends) the

polygonisation phase was calculated to have taken approx 1110 working person days. This gives a rate of polygonisation of **7.23** polygons (and an average area covered of 139.42 ha) per project officer per day.

Table 3 shows the actual number of polygons digitised, separating urban and rural units according to the urban dataset used to produce the original rates (in the pilot stage). Table 4 shows the breakdown based upon the types of Broad Type recorded for each polygon. This shows that the original urban dataset underestimated the amount of urban land within South Yorkshire.

	Area (ha)	**Polygons**	**Average area per polygon (ha)**
Urban	31,872.61	5104	6.24
Rural	122,878.39	2928	41.97
Total	154,751.8	8032	

Table 3: Polygonisation rates, where urban = settlement with population above 1000.

	Area (ha)	**Polygons**	**Average area per polygon (ha)**
Urban	37,536.07	5986	6.27
Rural	117,215.73	2046	57.29
Total	154,751.8	8032	

Table 4: Polygonisation rates, area of urban land based on Broad types.
(**Urban area** = Residential/Commercial/Communictions/Horticulture/Industrial/Institutional and rural Broad Types where they fall within towns)

Polygonisation rates can be further broken down by Broad Type, as shown below (Table 5).

Broad Type	**Area (ha)**	**Polygons**	**Average area per polygon (Ha)**
Commercial	2602.76	507	5.13
Communications	1347.03	136	9.90
Enclosed	78791.72	922	85.46
Extractive	5961.76	178	33.49
Horticulture	64.82	25	2.59
Industrial	4470.88	659	6.78
Institutional	3065.26	1040	2.95
Ornamental, Parkland and Recreation	8984.61	769	11.68
Residential	22886.51	3181	7.19
Unenclosed Land	16348.88	192	85.15
Water bodies	939.29	50	18.79
Woodland	9246.15	373	24.79
	154709.67	8032	

Table 5: Polygonisation rates by Broad Type

The key difference between the original polygonisation estimates and the final polygonisation results is in the degree of complexity in rural areas. The average polygon size for rural broad types is nearly half as small as was initially projected.

Analysis Methodology

In the later stages of the project, individual character units were grouped together into larger areas, so that similar historic developments could be described. The analysis phase of the project was undertaken district by district, so that the individual unitary authorities within South Yorkshire could receive appropriate local information.

Sheffield was the first district to be analysed. This work began with a bottom up approach, grouping individual polygons into Character Areas. These areas drew together associated units, generally of contiguous polygons. As a result, Character Areas will include polygons with different Broad Character Types, e.g. terraced housing will be grouped with contemporary allotments, schools and churches.

The defined Character Areas were then considered for similarities that could be grouped at a higher level. This led to the development of Character Zones that represent broad themes of landscape development.

This bottom up approach was found to be highly time consuming. It was then decided that a better approach would be to use the project officers' specialist knowledge of the landscapes of South Yorkshire - allowing them to develop a list of relevant Character Zones and then define Character Areas to match these (automatically assigning individual character units accordingly). By keeping the initial list of Zones flexible for each district this approach was found to work well. Zones could be added or removed to a district discussion, as themes of landscape development for that district were recognised.

Critique of the Methodology

The process of characterisation is inevitably one of subjective decisions. The European Landscape Convention, which was ratified by the UK government in 2006, states that "[l]andscape means an area, *as perceived by people*, whose character is the result of the action and interaction of natural and/or human factors" (*our emphasis*). Human perception provides a very personal view. Throughout this project it has been the intention to characterise the historic environment in terms of how an average person would perceive the character. This is in line with the guiding principals of characterisation (Clark *et al* 2004, 6). However, specialist knowledge may have led to the characterisation of some landscapes that would not be well understood by

members of the public. Where to generalise and where to go into detail, with smaller polygons, was also a subjective choice made by the project officers – using their knowledge and experience.

Such subjective choices can never be entirely removed from the characterisation process. This makes it important to document the decision making processes followed, allowing users or future developers of the database to judge the validity of our decisions, based on future knowledge.

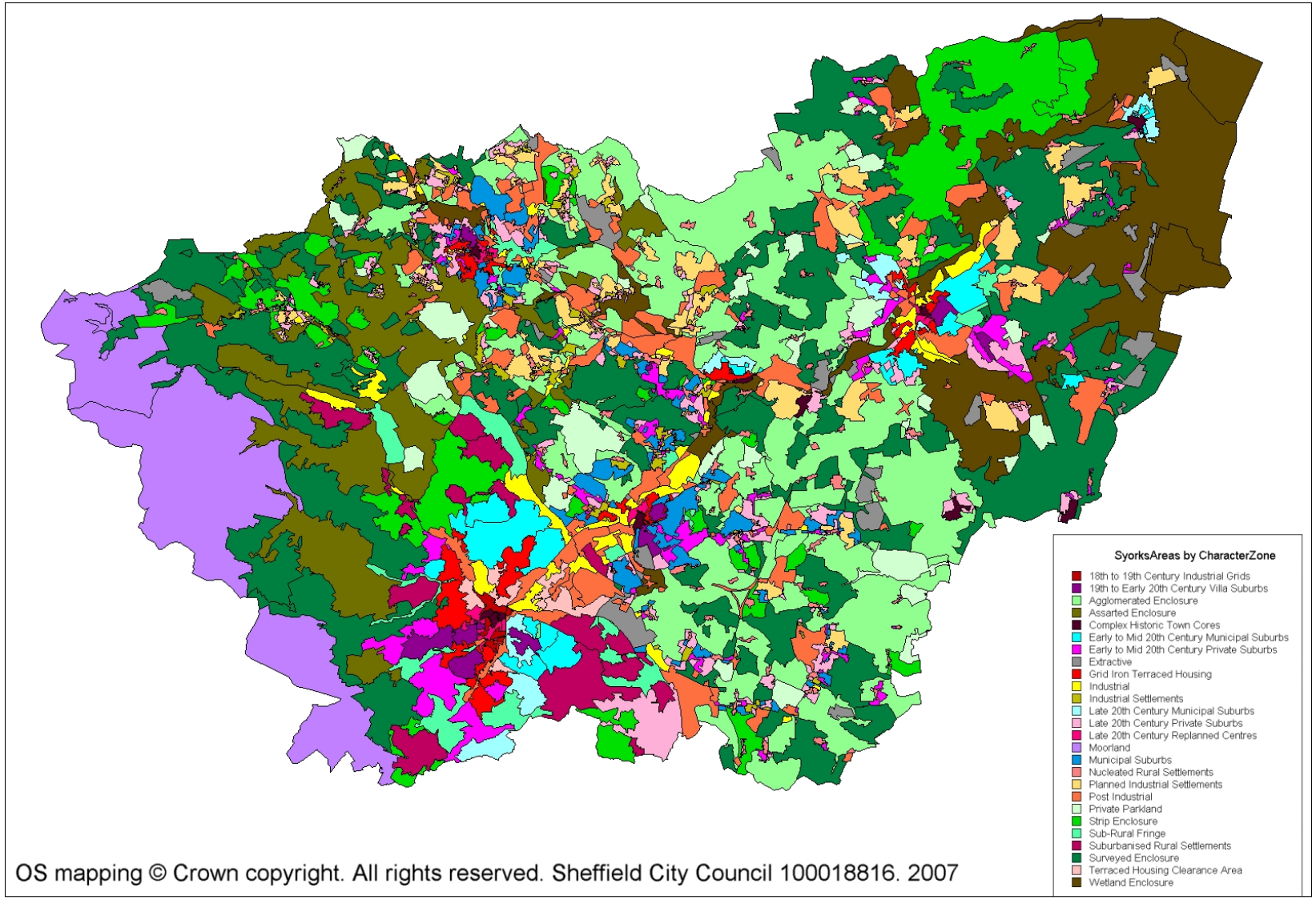
Historic Environment Types: Early use of the data from the South Yorkshire Historic Environment Characterisation project has indicated some difficulties with the Historic Environment Types. Some types overlap, making it difficult to pull all the relevant data from the GIS tables in a single query. An example of this is 'low rise flats'; these may either have been privately built or have been built as part of an area of social housing. In retrospect, it would have been more appropriate to make 'high rise flats' or 'low rise flats' an attribute within the *Private Housing* and *Planned Estate (Social Housing)* types, or for private or public to be recorded as attributes for *Low Rise Flats* and *High Rise Flats*. This detail could be added in as part of the future development of the database, if it was found to be useful.

Software: The South Yorkshire Historic Environment Characterisation project was one of the first projects to make use of the HLC module of the Exegesis HBSMR database (this database already held the Sites and Monuments Record for South Yorkshire prior to initiation of the project). The structure of the database system was, therefore, relatively untested. Through work on the project and analysis of project data some limitations in the system have become evident. One of the primary difficulties with the database is over the ability to export large amounts of data, for use by people outside of the Archaeology Service. The main difficulty comes with the exportation of attribute data, as the structure of the tables does not allocate a unique column position to each attribute type.

A feature that would be beneficial in future versions of the database would be the ability to score *Legibility* for each former landscape character, rather than having just one overall score. This would enable a user to pick out areas where a particular former character type is legible, e.g. areas of medieval open fields.

Despite the limitations outlined above, there have been benefits in using HBSMR, particularly in the seamless integration of project data with the existing SMR. This enables SYAS to easily put recorded sites into their landscape context.

Part III: Themed Results



Zones: Historic Developments within South Yorkshire

This project grouped South Yorkshire into 26 different Character Zones, which focus on the key historic developments that have left their mark on the landscape, as outlined within the Analysis Methodology above.

Character Zone	Overview
Moorland  © SYAS	This zone lies on the western edge of South Yorkshire in the **Barnsley** and **Sheffield** districts. Much of the zone lies within the Peak District National Park and has a wild and open character of blanket bog and heather moorland. Although seemingly *natural* in character this landscape is a product of human actions. The low vegetation has been maintained by sheep grazing and burning of the heather. Much of the land was divided up with long, straight, drystone walls in the 19th century to indicate ownership. Some areas are still actively managed for grouse shooting.
Assarted Enclosure  © Wendy North. Creative Commons License http://www.geograph.org.uk/reuse.php?id=890154	This zone is made up of ancient woodlands and ancient irregular enclosure patterns. The key characteristics of these enclosures are small, sinuous or rounded fields, with mainly hedged boundaries. Fields were often *assarted* from a wooded landscape at an early date; many fields date to the medieval period. Very little of the land was formerly part of a medieval open field system. The zone mostly lies across the lower and middle coal measures in **Sheffield** and **Barnsley** and the northern edge of **Rotherham** district. Alternating bands of shales, sandstone and coal seams have weathered to produce a rolling hilly landscape with steeper scarps in the west of the zone and where the River Don cuts through the area. Areas of woodland have often survived on these steeper slopes.

Character Zone	Overview
Strip Enclosure  Aerial Photos Cities Revealed aerial photography © the GeoInformation Group, 2002	This zone is located in the west of the districts of **Sheffield** and **Barnsley**, with a small scattering near the historic settlements in **Rotherham**. In **Doncaster** district the zone is found to the north of the River Don, in the Humberhead Levels Landscape Character Area. The landscape contains long thin curving fields often with reverse 's' shaped boundaries. These fields developed from the gradual enclosure of medieval town fields, from the late medieval period onwards. Field boundaries are a mix of drystone walls and hedges containing mature trees.
Wetland Enclosure  © Ken McCann. Creative commons Licence: www.geograph.org.uk/reuse.php?id=673854	This zone is predominantly found in the east of **Doncaster** district, taking in the wetland moors at Thorne and Hatfield and the surrounding drained enclosures. Also included are the river floor valleys in Doncaster, **Barnsley** and **Rotherham** districts. The enclosure patterns generally consist of regular, straight boundaries of hedges and ditches.
Private Parkland  © SYAS	This zone is scattered throughout the districts of **Barnsley**, **Doncaster** and **Rotherham**. It is found predominantly in a band running north south through the centre of South Yorkshire. The defining characteristic of this zone is the use of land as ornamental parkland from the 17th to the early 19th centuries. These areas of parkland often have clearly defined boundaries, separating them from the surrounding countryside - circuit walls or plantation woodlands that provide screening and enclosure. Most of the larger parks originated as deer parks and some, therefore, date back to the medieval period. The park landscape consists of a variety of permanent grassland maintained as pasture, or land managed for arable cultivation, and there are often plantation woodlands.

Character Zone	Overview
	The focal point of many of these parks is a large elite residence and related home farm complex, sometimes on the fringe of an older village. Design features are generally intended to emphasise the high status of their owners. Such features can include ornate gateways and lodges; tree lined avenues and curving driveways; architectural follies, statuary, fountains and summerhouses; artificial lakes and ponds; formal gardens; and kitchen gardens.
Surveyed Enclosure  © SYAS	In **Sheffield** and **Barnsley** districts this zone is concentrated in the west. The land here was often enclosed from open moorland in the 18th and 19th centuries, often under the authority of a Parliamentary Award. Within the districts of **Doncaster** and **Rotherham** the zone is more dispersed and takes in former moorland, commons and medieval open town fields. Surveyed enclosure landscapes are characterised by straight sided enclosures with hedged or drystone wall boundaries. There are often contemporary straight roads running through these field systems. The landscape is punctuated by dispersed farmsteads that are often contemporary with the enclosure.
Agglomerated Enclosure  © Nigel Homer. Creative Commons License: www.geograph.org.uk/reuse.php?id=116884	This zone is found in the districts of **Barnsley**, **Rotherham** and **Doncaster** and runs in a strip southeast to northwest across the centre of the county. Fields within the zone are predominantly used for large-scale intensive arable farming. This has been the cause of a significant loss of field boundaries in the late 20th century, as former divisions were removed to create larger, agglomerated fields. The remaining field boundaries are a mix of hedgerows and fence lines, sometimes with fences supplementing gaps in poorly maintained hedged boundaries. Despite this boundary loss, closer examination of this zone reveals an agricultural landscape largely planned in the medieval period and formerly part of the medieval open field system. Evidence for this earlier history

Character Zone	Overview
	includes field boundaries and road patterns that exhibit the characteristic sinuous curves of former open field systems.
Sub-Rural Fringe  © Mark Morton. Creative Commons License: www.geograph.org.uk/reuse.php?id=41661	The historic character of this zone is defined by a landscape with strong rural indicators, such as open space, relict field boundaries, high levels of woodland and a general absence of housing or active industry. Nevertheless, the influence of nearby or surrounding urban settlement has fundamentally altered the character. These landscapes may previously have had an agricultural or industrial character (sometimes both), but their current management is generally concerned with maintaining their amenity value as green spaces, whilst encouraging opportunities for recreation and biodiversity. This zone is found within all four districts of South Yorkshire and is generally located on the edge of the major settlements of **Barnsley**, **Sheffield**, **Doncaster** and **Rotherham**, but is also found near Chapletown and Stocksbridge.
Nucleated Rural Settlements  © SYAS	This zone is widely distributed across **Barnsley**, **Doncaster** and **Rotherham**. Similar settlements within the Sheffield district have been considered as part of the surrounding countryside or within other urban zones. These settlements often date back to the medieval period and contain many buildings dating back to at least the 18th century. Road and property boundary patterns have altered little since they were first recorded in the 19th century and in many cases will date back to the medieval period. Some settlements retain a rural setting whilst others have been surrounded by later housing.

Character Zone	Overview
Complex Historic Town Cores  © Richard Bird. Creative Commons License: www.geograph.org.uk/reuse.php?id=639358	This zone takes in the urban centre of the city of **Sheffield** and the towns of **Barnsley**, **Rotherham** and **Doncaster**; in Doncaster district this zone also includes the historic cores of Bawtry, Conisbrough, Mexborough, Thorne and Tickhill. These historic settlements are similar in many ways to the Nucleated Rural Settlements, but they have a higher level of complexity. This complexity generally includes the presence of market places, castles and multi-phase planned layouts, all of which constitute evidence for deliberate acts of medieval planning. Buildings within this zone are often early in date, with many examples dating to at least the 18th century. Road and property division patterns tend to have altered little since they were first recorded in the 19th century.
Industrial Settlements  © Steve Fareham. Creative Commons License: www.geograph.org.uk/reuse.php?id=785160	Industrial settlements are found across the districts of **Barnsley** and **Rotherham**. Within the district of Sheffield this type of settlement was considered within the Suburbanised Rural Settlement zone. Industrial Settlements are often irregular in layout and are positioned along a road or on an area of former common. Housing largely consists of terraced housing. This type of settlement is generally associated with early coal mining. However, they are also associated with other industries characteristic of the region, such as iron, steel and brass working, glass making, ceramic production, brick making and the railway trades. These settlements have not been recorded within Doncaster as here many industrial villages were established at a later date, when settlements were more highly planned (see Planned Industrial Settlements Zone).

Character Zone	Overview
18th to 19th Century Industrial Grids  © SYAS	This zone has been considered separately to other industrial zones within **Sheffield** because of the significant impact these early industrial developments had on the development of the city and the impact that the layout of their streets still has on the current townscape. Typical early development included both mixed-use light industrial buildings, typically connected with cutlery and tool making - often built as workshop ranges around rectangular central courtyards, and high density residential properties - often built back-to-back around domestic courts. Many of these domestic buildings were cleared in the early 20th century.
19th to Early 20th Century Villa Suburbs  © SYAS	This zone is found in the districts of **Sheffield**, **Barnsley**, **Doncaster** and **Rotherham** and generally lies on the edge of the principal urban centres. The housing here developed in the 19th century, as middle class suburban developments away from the industrial and commercial city centres, which were becoming increasingly densely developed. These suburbs consist of detached and semi-detached houses, which tend to be fairly well spaced, and roads are often lined with mature trees.
Industrial  © Alan Murray-Rust. Creative Commons License: www.geograph.org.uk/reuse.php?id=799149	Industry formed a very important part of the history of South Yorkshire, focussing on the river valleys of **Barnsley**, **Doncaster**, **Rotherham** and **Sheffield** from the medieval period onwards. This zone consists of a mix of late 18th or 19th century (largely disused) industrial sites and modern factories. The industries range from small water-powered mills to large industrial complexes housed in long metal sheds. Not all current industry is included within this zone as many modern industrial units are sited on mixed business and industrial parks and so have been considered within the Post Industrial zone.

Character Zone	Overview
Grid Iron Terraced Housing  © SYAS	This zone is found extensively in the city of **Sheffield**. It is also concentrated around the principal urban centres of **Doncaster**, **Barnsley**, **Rotherham** and Mexborough. The rate at which many of these areas of housing were built shows the rapid growth of the industrial populations of South Yorkshire. Terraced housing was being built before the establishment of many of these grids, in the mid 19th and early 20th centuries, but generally not on the large scales of these areas or with a grid street pattern. Houses are often very uniform, due to the development of bylaws that controlled housing size. Houses often still have their outside toilets, which were either accessed by a back lane running along the rear of the housing or by alleyways running through the terrace at intervals.
Terraced Housing Clearance Areas  © SYAS	This zone is located predominantly on the northern edge of **Sheffield** city centre. The landscape is characterised by large areas cleared of 19th century terraced housing during the middle to late 20th century. Most of these areas now feature late 20th century municipal housing, often system built estates constructed in materials new in the 1950s and 60s; from the mid 1970s onwards more traditional estates of low rise housing have been common developments. However, many 19th century elements survive, such as street patterns, institutional buildings, public houses and some housing.
Extractive  © Alan Murray-Rust. Creative Commons License: www.geograph.org.uk/reuse.php?id=293145	This zone is predominantly found across the coal measures in the districts of **Barnsley**, **Rotherham** and **Doncaster**, with outlying areas on Doncaster's gravels and sandstones. In the recent past extractive industries dominated many landscapes of South Yorkshire. This zone represents the collieries and large quarries still active in 2003, or former extractive areas as yet unreclaimed. These sites often contain large spoil heaps, winding gear and other surface structures.

Character Zone	Overview
Planned Industrial Settlements  Aerial Photos Cities Revealed aerial photography © the GeoInformation Group, 2002	Planned industrial settlements are found within **Barnsley**, **Rotherham** and **Doncaster** districts. Within Sheffield, this settlement type has been considered within the Suburbanised Rural Settlement zone. Like Industrial Settlements, housing within this zone has a highly significant connection with industry, particularly with coal mining. These settlements tend to have a geometric plan with green spaces at the centre of circular road layouts. The houses are generally semi-detached or built in short rows. These types of settlements were originally established in the early 20th century although many went on to expand further in the later half of the century. Examples further east often have the most complete planned layout because they were new settlements specifically built for the early 20th century exploitation of deep coal seams. Further west many were expansions of existing industrial settlements, developed at an earlier stage to exploit the shallower coal seams that runs through South Yorkshire's coal measures. These developments predate the 'garden suburb' design ideas of the early 20th century.
Early to Mid 20th Century Private Suburbs  © Mike Fowkes. Creative Commons License: www.geograph.org.uk/reuse.php?id=128910	This zone is found within the districts of **Barnsley**, **Doncaster**, **Sheffield** and **Rotherham**. This zone is characterised chiefly of small areas of housing developed speculatively between 1914 and 1945 in small estates or as areas of ribbon development on the edges of existing settlements. These types of suburbs are often located on the edges of larger settlements and are particularly large on the western limits of Sheffield. Stylistically, developments in South Yorkshire during this period have much in common with areas developed in the Municipal Suburbs and Planned Industrial Settlements zones. Differences are likely to include larger housing units with more variety of housing types along individual streets, and an increased number of status differentiating features such as hung tiles, bay windows, stained glass and street trees.

Character Zone	Overview
Early to Mid 20th Century Municipal Suburbs  © SYAS	This zone is found within **Sheffield** and **Doncaster** where early municipal housing developments have been considered separately from those established in these districts in the late 20th century. This differs to the discussion of zones of municipal housing in the rest of South Yorkshire, primarily because of the larger numbers of municipal suburbs built on the edges of Sheffield and the clear differences between the early and later developments in Sheffield and Doncaster. Housing within this zone tends to be built in radial patterns with semi-detached properties or short row terraces, patterns that have much in common with the Planned Industrial Settlements found across South Yorkshire. There are also many similarities with contemporary private housing developments.
Municipal Suburbs  © Steve Fareham. Creative Commons License: www.geograph.org.uk/reuse.php?id=583235	This municipal housing zone is found within the districts of **Barnsley** and **Rotherham**. Within Sheffield and Doncaster the zone has been separated into early and late municipal suburbs. Early 20th century estates tend to be built in radial patterns with housing consisting of semi-detached properties or short row terraces; in Rotherham and Barnsley this pattern of housing tends to continue into the late 20th century. There are significantly fewer examples of large system built concrete blocks of flats in these districts, compared with Sheffield and Doncaster.
Late 20th Century Municipal Suburbs  © Incurable hippie. http://creativecommons.org/licenses/by-nc/2.0/deed.en_GB	This zone is located in **Sheffield** and **Doncaster** and consists of areas of concrete blocks of flats. Those within Sheffield tend to be built on a larger scale, because of the higher population within the city. There are significant differences between many municipal and private developments built during this period, with municipal housing developments showing a shift in emphasis from enclosed private gardens to unenclosed communal spaces - accompanied by the increasing segregation of pedestrian routes from road systems.

Character Zone	Overview
Late 20th Century Replanned Centres  © SYAS	This zone is found near the urban cores of the towns of **Doncaster**, **Barnsley, Rotherham** and the city of **Sheffield**. The land in this zone generally underwent a fundamental character change in the period 1945-1977. The dominant theme of this change was urban renewal, with areas generally cleared wholesale of earlier buildings and street patterns. Concrete office blocks, underpasses, large duel carriageways and new commercial developments are key features of this zone.
Late 20th Century Private Suburbs  © SYAS	This zone is widely dispersed across the districts of **Barnsley**, **Doncaster**, **Rotherham** and **Sheffield** and is found within nearly all settlements, often located on their edges. In rural areas these developments are often built for modern commuters, but suburban expansion of larger urban settlements is also found. Houses tend to be semi-detached or detached with most properties having their own drive; road patterns are generally cul-de-sacs. Housing styles are similar across the region.
Suburbanised Rural Settlements  © SYAS	This zone is located in the district of **Sheffield**. Similar settlement types with Barnsley, Doncaster and Rotherham have generally been separated into the Industrial Settlements and Planned Industrial Settlements zones. These settlements often began as small rural villages that greatly expanded from the mid 19th century onwards. Later developments around the historic core are often built in geometric patterns with green spaces at the centre of circular road layouts. The houses are generally semi-detached or built in short rows. There are, however, quite diverse housing styles with terraces and vernacular cottages.

Character Zone	Overview
Post Industrial  © Steve Fareham. Creative Commons: www.geograph.org.uk/reuse.php?id=523275	This zone is located in the districts of **Barnsley**, **Rotherham**, **Sheffield** and **Doncaster**. The zone is generally found along the river valleys on land that was formerly used by industry or coal extraction. There are also concentrations of this zone near to the main roads and motorway junctions across South Yorkshire. The zone is dominated by late 20th century landscapes of retail, distribution, leisure, light industry and transport. This is an expanding zone of very modern character but one that often retains influences of past landscape types.