

English Heritage Project No. 5447

# **BIRMINGHAM HISTORIC LANDSCAPE CHARACTERISATION (HLC)**

## **Final Project Report**

**(Version 6, July 2015)**

***By Adrian Axinte, HLC Officer, Birmingham City Council***

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## **Project Overview (Executive Summary)**

The Birmingham HLC (Historic Landscape Characterisation) was carried out between Nov 2011 and Dec 2014 by one HLC Officer. The work was funded and monitored by English Heritage (since Apr 2015 Historic England) as part of its nationwide HLC programme, and was supported extensively 'in kind' by the Birmingham City Council, and in particular by its Planning Strategy Team within the Development Directorate. All the HLC data was recorded into the now standard HBSMR (Historic Buildings, Sites and Monuments Record) database – an exeGesIS-developed software now standard in the heritage community – alongside the rest of the HER (Historic Environment Record) contained there. All mapping required by this project was carried out using Pitney Bowes Software Inc.'s MapInfo GIS software.

The area covered by Birmingham HLC amounts to 26,798 ha (66,219 ac) in total; this includes the farmland area lying on the northern and eastern side of Sutton Coldfield (1,550 ha or 3,830 ac), area originally characterised by the Warwickshire HLC. The project resulted in the creation of ca. 8,975 polygons belonging to some 6,974 HLC records (as some records are 'multi-polygon'), which represents ca. 3.8 ha (9.5 ac) per record. For each record, an average of 2.3 previous land use types have also been captured, in addition to its current one. These records have been numbered using the HBMxxxx identifier – or HWAxxxx for the ca. 150 amongst them, which were originally created as part of the Warwickshire HLC. Together they map, describe and date all the past and present uses of every piece of land in the Birmingham area, as far back in time (at least down to 1540), as the existing sources (predominantly maps) have allowed the project to go.

These HLC records were then further aggregated into 111 historic landscape character areas – identified using BCAXxx – each containing an average of 62.8 records and covering ca. 241 ha (595 ac), areas of significantly broader historical character, created as part of a two-tier landscape characterisation process. For each character area, an average of 2.1 previous land use types have also been captured, in addition to its current one.

Birmingham HLC uses 41 broad land use types to describe its records; most of them are either original Black Country HLC types which have been split up, or mixed types created from the combination of two or more pre-existing broad types. These 41 broad types contain in their turn 432 individual types (sub-types), amount deemed necessary in order to ensure that the realities encountered 'on the ground' were described as accurately as possible. Unlike probably most/all other HLCs, the Birmingham HLC also uses 18 broad types and 124 individual types (sub-types) to describe its character areas, all of them

derived from those used for the HLC records, but kept separated from them in the database. Additionally, 29 attributes (containing 207 user-selectable values) are shared amongst all these broad types (up to 8 attributes each), and therefore also by the records and character areas the described by the types.

A useful 'by-product' of this project, has been the creation of a database containing (almost) all the relevant historic maps of this area, all digitised and geo-referenced (which allows them to be digitally overlaid onto modern maps), historic maps that can be used by anyone, without having to access the often large or delicate original maps (or the one-to-one scale copies of them). These maps, alongside their online counterparts (Google Maps and Street View) and a number of very useful websites, represent therefore the main sources of the Birmingham HLC.

The now completed Birmingham HLC database can be used for a variety of purposes such as:

- Planning, regeneration and development support: the area first characterised included the HS2 route and Eastern Growth Corridor, while HLC data was included in the Bordesley Park Area Action Plan (AAP) and other similar documents.
- Historic/landscape research: describing and mapping the land uses of any area – not just of conventionally designated 'historic landscapes' – is a useful research tool in its own right, e.g. by enabling comparisons with other areas.
- Educational: as HLC data is eminently suitable for being visualised, a colourful 'slide show' of an area's land use evolution through time, represents a visually engaging, yet accessible way to promote interest in and understanding of its past.

Dissemination-wise, during the creation of the Birmingham HLC, a number of presentations were given, e.g. during the Birmingham History Day (24 Nov 2012), in a seminar of the Urban Morphology Research Group, University of Birmingham (12 Dec 2012), or more recently for the Sutton Coldfield Archaeological Society (21 Nov 2014). Now completed, the entire Birmingham HLC dataset has been made publicly available in the summer of 2015 on Birmingham City Council's local mapping website, thanks to additional funding from Historic England (English Heritage) to produce a brochure and website, and organise a launch event. This creative and user friendly set of webpages website which will allow users to view and customise 'thematic timeslice' visualisations of the HLC records and character areas for a number of past and present dates, as well as look at historic maps of the Birmingham area and overlay HLC (and HER) data onto them.

## **HLC Method Overview**

*(by Dr. Mike Hodder)*

Historic landscape characterisation is a desk-based analysis of the historic development of the landscape, principally from cartographic sources. It results in the definition of polygons in GIS format identifying land use types at different dates. It is intended that HLC will eventually cover the whole of England. Initially applied to rural areas, HLC projects have recently been undertaken for urban areas including Merseyside and the Black Country. Unlike conservation area appraisals, HLC covers the whole of a given local authority area, not just designated sites or areas. It is comprehensive and non-judgemental, but one outcome might be the identification of areas meriting conservation area status or buildings or structures meriting local or statutory listing.

HLC can be undertaken at different levels of resolution, for example the Black Country HLC at low resolution has been followed by a higher resolution HLC for the Wolverhampton ABCD area. The importance of local character and distinctiveness is stated in policy documents at a national level, such as PPS 3 (Housing) and at a regional level in the West Midlands RSS. In Birmingham, the contribution of the historic environment to distinctiveness and character is highlighted in the Parkinson Visioning Report for the City Centre Masterplan: "it's part of what makes Birmingham Birmingham".

## **The Historic Development of Birmingham**

*(by Dr. Mike Hodder)*

Archaeological remains, including many Bronze Age burnt mounds, a Roman fort and some Roman settlements, indicate extensive prehistoric and Roman activity in the area within the city boundary. Remarkably, Roman land divisions survive as hedgelines in Kings Norton and probably in Sutton Coldfield. The Anglo-Saxon period is represented mainly by environmental evidence indicating woodland clearance and cultivation. There is no evidence of urban development before the 12th century.

The present city contains two medieval market towns (Birmingham and Sutton Coldfield) and there were several villages, hamlets and many isolated dwellings in the medieval period. Medieval industry was almost wholly confined to the centre of Birmingham, the rest of the present city being rural land in agricultural use. Medieval churches and medieval and early post-medieval secular buildings survive, mainly in the present suburbs; many medieval roads are still in use; and medieval land divisions survive, including small areas of burgage plot boundaries in the city centre. The centre of Birmingham expanded from the early 18th century onwards, and in the 19th and 20th centuries villages and hamlets coalesced into suburbs through industrial and residential development on former agricultural land. Administratively, the present unitary authority area results from the gradual absorption of neighbouring authorities into the city up to 1974 and minor boundary changes since then. The present city includes parts of the historic counties of Warwickshire, Staffordshire and Worcestershire.

## **Revealing Historic Landscape Evolutions in Birmingham**

*(See also Appendices 3 - 6)*

While being an in-depth investigation method into past and present land use changes and patterns, an HLC is not a substitute for a detailed urban survey resulting in a building-by-building, plot-by-plot historical description and land use type mapping, but represents a much broader look at landscape evolution, based around mapping, recording and dating the dominant land use type within a larger 'polygon' of land. And this remains generally true, despite an HLC like the Birmingham one possessing quite a few 'single-building' records – and occasionally some quite small ones at that. Overall the purpose of carrying out an HLC remains that of recording broader landscape use changes through space and time, thus revealing patterns of historical character and evolution that can be afterwards visualised, quantified and even compared against similar ones uncovered elsewhere.

It must also be stressed here that in itself, an HLC is unlikely to uncover landscape patterns and historic evolutions, that were previously completely unknown to historians, urban planners and so on, nor does it aim to do so. What the output of an HLC project is best suitable for is mapping, describing, illustrating, quantifying, revealing, visualising such patterns and evolutions already known, in an easily accessible, user friendly way, which is thus ready for a wider dissemination beyond a circle of professionals and dedicated enthusiasts. This holds certainly true in the case of the Birmingham HLC, where a significant number of post-Medieval landscape history evolutions can be illustrated using HLC data – and for some of them this has already happened, the resulting visual output being included in presentations given at various occasions.

The list of these evolutions that can – or in some cases have been – visualised using Birmingham HLC data is long, and the list below does not aim to be comprehensive:

- The demise of Medieval (and Tudor) deer parks and much later on, the similar fate of the country house grounds and parks which served the same function (parts of some of the latter which survive as public parks e.g. Aston Park). One 'exceptional' example in this respect, is Park Hall's New Park (across the Tame from the hall in Minworth), where examination of data from the earliest detailed historic map of the Birmingham area (1583) – and the only one that shows the actual park – combined with field name and boundary information extracted from later maps, enabled the Birmingham HLC to define the boundaries of this deer park (presumed disemparked by 1650) far more accurately than was previously the case.
- The enclosure of open (strip) fields and commons, carried out gradually from the Late Medieval period onwards, process whose final phase often involved a Parliamentary 'Inclosure Act' accompanied by a map. The earliest such formal enclosure arrangement in the Birmingham area, is that of King's Norton commons in 1772, where either the accompanying map is missing, or one was never produced. Using previous reconstruction attempts of the areas enclosed by local historians using documentary sources – attempts resulting in rather small scale maps – the

Birmingham HLC created a separate map layer showing all this land enclosed in 1772, layer used afterwards when drawing the HLC records in this historic parish area.

- The (semi-)dispersed character of the pre-Modern settlement pattern in the Birmingham area has been by-and-large captured by this HLC, mainly through the use of mixed residential-and-fields broad and individual land use types, though it was never the project's intention to even attempt to capture every cottage and smallholding shown on historic maps – attempt impossible in the context of an HLC.
- The expansion of 'industrial water mills' from the 16<sup>th</sup> century onwards (until the 18<sup>th</sup> century), mills which in the Birmingham area were, as expected, predominantly involved in metal working (though paper or rubber mills also existed). Some of these water mills later acquired steam engines and grew into larger industrial premises (surviving well into the 20<sup>th</sup> century), while others disappeared by the mid-19<sup>th</sup> century, leaving behind only their ponds. This evolution can again be illustrated using data from the Birmingham HLC.
- The beginning and subsequent growth and multiplication of larger, 'proper' industrial sites (e.g. glass works, steel and brass 'houses', manufactories, steam flour mills) from the early-to-mid 18<sup>th</sup> century onwards, as part of the industrial revolution – and the impact that the newly developed canal network and its basins had upon it – all this has been captured by the Birmingham HLC and can therefore be visualised using this data.
- The development of working class terraced housing areas throughout the 19<sup>th</sup> century, at first predominantly in the form of courtyard terraces (the 'courts' of back-to-backs) and later on exclusively as tunnel-back terraces (many of which survive to this day). A presentation using HLC data has already been produced which maps the rise and subsequent decline of these two housing types, through the 'slum clearance' started in the inter-war years and completed during the post-war decades, which resulted in the complete elimination of the courtyard terraces, alongside many of the tunnel-back ones that were mixed with the former.
- The contemporary – and equally interesting – development of middle class housing estates of suburban villas and large(r) detached houses and semis, followed in the post-war era by the piecemeal re-development of many of the large house sites into cul-de-sacs of much smaller housing units – for example in the Edgbaston area – this has also been captured well by the Birmingham HLC.
- The growth of large utility facilities (e.g. gasworks) and transport-related 'industrial' premises (sidings, goods yards, engine/wagon sheds, locomotive/coach works) along the newly-built railway lines, most of which arrived in Birmingham around the mid-19<sup>th</sup> century, can also be illustrated in the Birmingham HLC, alongside the subsequent 'fate' of these transport sites as the 'age of steam' came through an end in the post-1960 years through dieselisation and electrification, followed by the

decline and closure of the remaining rolling stock works (the most recent 'casualty' of which was the Metro-Cammell Works in Washwood Heath, closed in 2005).

- Another query carried out on the – back then still incomplete – Birmingham HLC dataset for the purpose of a presentation, resulted in a revealing 'slide show' of the rise and subsequent decline of the entire vehicle manufacturing sector (incl. both rail and road vehicles, and the parts for them) present in Eastern Birmingham during the 20<sup>th</sup> century, where most of it was actually concentrated (except for the Longbridge site).
- The level of detail contained in the Birmingham HLC is more than sufficient to enable it to 'tell the story' of the 'Jewellery Quarter', from its late 18<sup>th</sup> century origins as an attempt to create a middle class residential district, through its transformation by the mid-19<sup>th</sup> century into a predominantly industrial area dominated by the production of small metal objects (incl. jewellery and pens) and associated trades, carried out within small or medium size premises, evolution followed by the post-war decline in manufacturing and its replacement by similarly-focused retailing, and concluded by the post-1980 regeneration of the area.
- A similarly determined and detailed attempt was made to capture the gradual historic character changes, that had resulted in the emergence of today's 'Entertainment District' centred around the Broad Street – Mailbox - Hurst Street area, or the 'Learning Quarter' gradually aggregating in recent years around the existing Aston University campus site. While on the subject of entertainment, the Birmingham HLC is detailed enough to even be able to illustrate the relatively recent phenomenon that has seen large (mainly inter-war) pub sites being replaced with housing or shopping precincts – or at least the pub greens being built over.
- Birmingham HLC data is equally suitable to the task of illustrating the large scale development of municipal housing estates (composed mainly of semis and short terraces) during the inter-war years on 'green sites', and its continuation in the post-war years with a slightly changed emphasis – where 'slum clearance' of the 'Middle Ring' area was as significant as building on former fields, and flats (including high rises) now represented an important component of the newly-built housing stock. Later changes in the housing profile of these areas – such as the demolition of many tower blocks or the increase in the amount of sheltered/care accommodation for the elderly – have also been faithfully captured wherever possible, even if they involved a relatively small area.
- During the production of the Birmingham HLC, a particular attention has been paid to attempting to capture correctly the changes in the post-1970 economic profile of the city, which has seen the gradual reduction of its manufacturing component and the replacement of 'industrial works' by a mixture of business/trading/industrial parks or estates, some built from scratch on the site of earlier (and larger) factories, some re-using existing industrial buildings partitioned into smaller units. A new broad type,

(Mixed) Industrial and Commercial, was created in the Birmingham HLC, in order to capture these changed economic realities, and extensive use of Google Street View was made, in order to 'see' what exactly was going on with these (former) industrial areas and buildings.

- One particular change of economic emphasis occurring during this period, that has attracted the attention of this HLC project – and, minor as it might seem, was nevertheless captured by it – was the increase in the number of logistics warehouses being built here, evolution undoubtedly driven by Birmingham's geographical position and good transport links. Somewhat more surprising proved though to be the number of self-storage (including document management) premises that were encountered, premises which often reused former industrial premises (or transport depots).

While many more land use evolutions, older or newer, that have been captured by the Birmingham HLC in one form or another, could be added to this list, as it stands the list illustrates quite well how this HLC dataset has managed to reflect and reveal centuries of historic evolution within Birmingham's landscape – and what sort of interesting info can be extracted when querying this data.

## **Birmingham HLC Area Coverage (and Integrating the Warwickshire HLC Data)**

*(See also Appendix 1)*

The Birmingham HLC covers 26,798 ha (66,219 ac) in total, which represents 22 ha (54 ac) more than the area actually contained within the city boundaries. This is because any linear HLC records bisected lengthwise by the actual city boundary (e.g. motorways or dual carriageways, railways, canals, the river Tame), have been nevertheless polygonised ‘in full’, rather than split up, in order to preserve the spatial integrity of the HLC records involved – this ‘excess HLC area’ can easily be trimmed back to the exact city boundary using MapInfo, should that be deemed necessary or desirable anytime in the future.

The above total also includes the farmland area lying on the northern and eastern side of Sutton Coldfield (1,550 ha or 3,830 ac), but still within Birmingham’s boundaries. This area was originally covered by the Warwickshire HLC, so for a long time it seemed that all that one had to do, was to import the dataset for this area – as supplied by Warwickshire County Council staff – and then attach it to the Birmingham HLC records. Upon closer inspection though, when the project finally reached this stage in the summer of 2014, it quickly became evident that some serious ‘remedial work’ was required in order to bring this Warwickshire HLC data up to the same level of detail and (especially dating) accuracy as the rest of the Birmingham HLC.

This work (which took over 6 weeks to complete), involved far more than just mapping the Warwickshire HLC types into the Birmingham typeset, or ‘trimming back’ the area covered by the supplied dataset from ca. 1,802 ha (4,453 ac), down to 1,550 ha (3,830 ac), so that it fits within Birmingham’s boundaries. In the process, out of the 162 Warwickshire HLC records imported, only 152 have remained – together with their original HWAxxxx identifiers – but perhaps more significantly in terms of the workload involved and the outcomes achieved, ca. 100 additional records – which use the same HBMxxxx identifiers as the rest of the Birmingham HLC dataset – had to be created within this area.

### **Accuracy of Drawing, Description and Dating**

From its very beginning, the Birmingham HLC aimed for as much ‘triple D’ accuracy (of drawing, description and dating) of the resulting HLC records (and later on, character areas as well), as it could be achieved – and got it in exactly this decreasing order of precision, as it became evident once work got under way.

The drawing of the polygons themselves was carried out as accurately as a (trackball) mouse guided by a human hand and eye could achieve, following closely the plot boundaries marked on the OS MasterMap where applicable, or (for example) running down as close as possible to the middle of any roads chosen to form polygon boundaries. Furthermore, the polygons themselves were checked out repeatedly in MapInfo for any gaps, overlaps and duplications resulting from the drawing process – and any issues found, were dealt with straight away – ultimately resulting in a recordset that is (near-) ‘perfect’, from a GIS perspective.

The description of the freshly-drawn records themselves, while aiming in principle for the same ultimate level of accuracy as the drawing process itself, was obviously more dependent on the subjectivity and experience (with its limits) of the person carrying out the characterisation. Therefore the accuracy of record descriptions has obviously failed to fully match that of polygon drawing, and perhaps the weakest area in this respect is that of past field type/shape descriptions, which hopefully does not represent a catastrophic weakness for what is after all, an overwhelmingly urban HLC.

Nevertheless every effort has been made to ensure that the record description matched the past or present land use realities encountered 'on the ground' as closely as possible, and to this purpose the broad and individual HLC types used have been constantly tweaked and added to, in order to ensure that the 'right' descriptor was available for each polygon (for more on this, see Types below). Another way of ensuring increased description accuracy was the extensive use of Google Earth and especially StreetView, for a 'closer look' at any piece of land whose use was not immediately obvious from the OS MasterMap (e.g. vacant/derelict-looking land, or large former industrial buildings converted to commercial use). Furthermore, the project tried to get hold of any historic maps of whose existence it found out about (and which were not already available at the start of the project), effort which has resulted in the creation of a near-comprehensive database of historic maps of the Birmingham area, all digitised and geo-referenced, (again, please see Sources below for more about this).

The third component of this 'triple D accuracy quest', was dating the past and present land uses observed for any given record. Here, as one would expect, even less precision has been possible than in the case of drawing of describing records, due to the obvious limitations of relevant data that could be extracted from the cartographic sources or 'googled out' quickly from the internet, given that the time pressure factor prevented more in-depth data mining from taking place. A good illustration of this is the (non-)availability of post-war maps, where for many (if not most) areas of the Birmingham HLC, there was often only one map available between the 1947 Land Use map and the 1996 LandLine one. Nevertheless, internet searches and the use of a number of specific websites, often produced valuable dating data – especially about industrial, social, public, recreational and educational premises – thus rescuing the situation to some extent.

It is hoped that, as the Birmingham HLC dataset becomes publicly accessible online, site users more knowledgeable about a specific local area than the person carrying out the characterisation (such as members of local history societies), will kindly suggest corrections or improvements to the description and dates of at least some of the records currently still 'in need of improvement', thus gradually improving the accuracy of this dataset. For this to happen successfully though, someone will have to exist within Birmingham City Council who will be able to implement any suggestions coming from the site users – and in the current economic climate, this is by no means a foregone conclusion.

## **Polygons and Records**

*(See also Appendices 3 - 6)*

The Birmingham HLC contains ca. 8,975 polygons belonging to 6,974 HLC records (as some records are 'multi-polygon'), which represents ca. 3 ha (7.4 ac) per polygon or 3.8 ha (9.5 ac) per record (and 1.3 polygons per record). These records have been numbered using the HBMxxxx identifier – or HWAxxxx for the ca. 150 amongst them, which were originally created in the North-Eastern area as part of the Warwickshire HLC.

Soon after the polygonisation work started, it became quite obvious that a trade-off was needed between ensuring that the newly-created records matched accurately what could be found 'on the ground', and that the project did not end up with too many records to process, given the time and resources available. An ingenious workaround was the use of 'multi-polygon' records (a solution devised independently by the Birmingham HLC, if perhaps not entirely new to the field of HLC), where two or more polygons with (near-) identical land use 'histories' and located close to each other (though obviously not spatially contiguous), became attached to the same newly-created HLC record. As the software used to draw and record data (MapInfo and HBSMR) posed no problem in this respect, the 'multi-polygon' solution was implemented wherever deemed suitable, to the extent that the Birmingham HLC database now contains ca. 2,000 more polygons (8,975) than actual records (6,974).

As for the actual polygon/record creation itself, i.e. deciding what to include in one, the process followed the established HLC route of looking at a given piece of land, and then drawing a polygon around that part of it which shared a predominant common land use type and date (e.g. inter-war semis and terraces). When looking afterwards at the past land uses of the newly created polygon, often different 'histories' emerged (e.g. some of the polygon area originally contained open commons, documented on historic maps, while the rest was land already enclosed by the time of the earliest maps available). This would result then in the original polygon being split further, along the line between the two different past land uses (or as close to it as was sensible), after which everything was 'written down' in HBSMR, the polygons becoming full HLC records in the process.

In reality though, deciding what to include in a polygon/record and what to leave out was not always a straightforward process, as often issues were encountered that complicated the matters. One common such issue was the existence of small(ish) pieces of land (i.e. too small to constitute a record by themselves) within/around the polygon currently being drawn, but different from it (either in character type or date), pieces which therefore could be included either in that polygon, or in a neighbouring one (as 'minor' land use type areas), or even combined with another similar piece of land nearby into a 'multi-polygon' record of their own. The route normally taken in dealing with such pieces of land, was to use them 'strategically' to 'round up' a polygon, either so that it better overlapped a past land use area, or so that its shape becomes less 'convoluted', or so that its size now reached the 'nominal' 1 ha (2.47 ac) inferior limit for HLC records. Sometimes the process also involved

re-assigning the 'troublesome' piece of land to another polygon, as result of a change of mind later on.

Another issue encountered on more than one occasion, was where even attempting to draw along the boundary between two different character types, dates or both, would have resulted in totally unworkable polygon shapes (e.g. a patchwork of interspersed 'mini-polygons' belonging to only two records). In such cases, the solution chosen most often, was to incorporate everything into just one polygon and then use a combined HLC type and/or tweak the period of origin, in order to characterise the area correctly. Nevertheless, the Birmingham HLC's quest for accuracy did occasionally result in the boundaries of some polygons ending up very deeply 'indented' (somewhat reminiscent of Norway's coastlines!).

## Character Areas

*(See also Appendices 1 - 6)*

These 6,974 HLC records (or more specifically the 8,975 polygons they contain), have then been further aggregated into 111 historic landscape character areas, containing in average 62.8 records, 80.8 polygons or 241 ha (595 ac) each, areas of significantly broader historical character, created as part of a two-tier characterisation process. They have been numbered using the BCAXxx (Birmingham Character Area) identifier.

In an innovative departure from the usual procedure, all the data accompanying the newly created Birmingham character area 'districts', has been captured into HBSMR using the same setup and tables that were used for the HLC records themselves. This approach has several advantages, such as:

- The character area data is stored in the same database format as the rest of the HBSMR dataset, to which in fact it belongs (like the HLC records themselves), making it just as easy to access, structure, edit, query and upload to the web afterwards, as the rest of the HLC data.
- Being already stored in a database format could also prove helpful in the future, when character area data from all the HLC projects countrywide will have been assembled together in one place by English Heritage.
- The description of the character areas uses the same two-tier system of broad and individual types as that used for the HLC records – and the actual types used are also similar, though the character area typeset is physically kept separate from the HLC one.
- Birmingham character areas have therefore both a present and one or more past character types, and come 'complete' with periods of origin, attributes, sources, and even a list of HER (historic environment records) contained within their boundaries.
- In visualisation terms, this makes it possible to create a 'slideshow' of the evolution of Birmingham's land use through time (from MapInfo's thematic mapping data) using character areas, just as it was already possible to do using HLC records.

The creation of the character areas mirrored that of the records themselves (and so did any issues encountered throughout this process), except that instead of the areas being drawn, they were aggregated from the existing HLC polygons using MapInfo's re-districting function. The starting point for this 'aggregation' was in most cases (except for some very obvious ones, like Sutton Park), the land use type and date predominating amongst the larger HLC records of a wider area (e.g. inter-war semis and terraces), which represented the 'nucleus' around which the new character area then gradually 'aggregated'. The project's intention from the start, was to achieve an average character area size of 270 ha (667 ac) or above – which would have kept their total number to a maximum of 100 – while at the same time ensuring that their minimum size remained over 100 ha (247 ac). These aspirations soon hit a snag especially around the city boundaries, where large areas of

(especially un-built) land exist – but are nowhere near large enough to approach the 270 ha (667 ac) average – areas which furthermore, due to the constraints of their location, cannot be easily attached to an existing character area nearby. Faced with this situation, realism prevailed and several smaller character areas were created along the city boundaries, just as smaller ones were equally created in the historic centres of Birmingham and other settlements (e.g. Sutton Coldfield, Erdington, Harborne High Street, King's Norton) – see more about this below.

Just like in the case of the HLC records, character area creation turned out to be a highly creative, and therefore inevitably subjective process, during which decisions had to be constantly made (and sometimes unmade and remade) as to what to include in or leave out of any given character area, and this was especially true around its boundaries. And again this decision-making was carried out 'strategically' along the same lines as for the HLC records – except that the 'minimum polygon size constraint' was now over 100 times larger – and again some occasionally convoluted character area shapes could not be avoided. Also from the beginning, the Birmingham HLC aimed to avoid creating any 'multi-polygon' character areas, but again realities 'on the ground' forced 3 of the 111 resulting character areas to have more than one 'district' each, separated though by nothing wider than one row of house plots.

It was therefore just as well that in Birmingham's case, character area creation was free of the additional constraints encountered during the Black Country HLC where, for example, the boundaries between the 4 component local authorities had to be respected and in the case of Dudley, the character areas had to furthermore correspond to the 10 areas already identified through a previous (non-HLC related) characterisation exercise. In any case, it was never in the intention of the Birmingham HLC to 'force' its character areas to follow 'by design' any internal administrative boundaries, modern or historic (such as constituencies, wards, parishes, large former country estates). Where that actually happened, it was driven by historic land use character and evolution alone, which sometimes did change significantly across, for example, an ancient parish boundary.

## Size Matters – Polygons, Records and Character Areas

In terms of polygon/record size, the Birmingham HLC aimed for a minimum individual record size of 1 ha (2.47 ac) – reduced later on during the project delivery to 0.66 ha (1.63 ac) and also for an average size no smaller than 4 ha (9.9 ac); these limits were not formal or prescriptive, but meant to act simply as a ‘reality check’ against excessive HLC record fragmentation. Birmingham HLC’s avowed aim was to accurately describe the past and present realities encountered ‘on the ground’, which meant that record/polygon size was guided to a significant extent by what the maps were showing (or what could be inferred from them). This has resulted in 1,244 (17.9%) of the 6,959 records originally created – their final number is now 6,974 – covering an area below 1 ha (2.47 ac) in size; a quarter of these 1,244 records (306, representing 4.4% of the total) are below 0.66 ha (1.63 ac) each. At 3.8 ha (9.5 ac), the average record size managed to remain within the original expectations – though the average polygon size itself is 25% smaller at 3 ha (7.4 ac).

Despite this higher than originally expected (or desired) number of very small HLC records, this somewhat unexpected outcome was worthwhile in the context of Birmingham HLC’s quest for achieving an accurate characterisation. Furthermore, using small polygons where needed, was the only way this HLC could hope to capture at least some of the character of the predominantly dispersed settlement pattern of pre-modern/pre-industrial Birmingham area’s countryside, where for example even a parish/manor of clear Medieval origin like Edgbaston could lack a ‘proper village centre’ (Good Knaves End being as close as Edgbaston ever came to having one). The innovative use of multi-polygon records also served to significantly counteract any excessive polygon/record fragmentation, without compromising accuracy in the process.

At the opposite end of spectrum of polygon/record size, the largest polygon in the Birmingham HLC can be found as expected, in Sutton Park – its area is a staggering 484 ha (1,196 ac) and together with another 178 ha (440 ac) polygon (separated from it by the railway, without whom the two polygons would have been only one), they form the largest record of this HLC at 662 ha (1,636 ac). There are only two other records above 100 ha (247 ac) in size, one is a 175 ha (432 ac) chunk of the huge inter-war Kingstanding estate (one of the largest municipal council estates in Europe at the time of its building), while the other one of 110 ha (272 ac) contains an area of farmland in the south-easternmost corner of Sutton Coldfield.

These are followed by 3 more HLC records above 90 ha (222 ac):

- a 97 ha (240 ac) one containing most of the inter-war Weoley Castle housing estate;
- a 96 ha (237 ac) one covering a large area of the Woodgate Valley Country Park;
- the Sutton Coldfield Golf Club of 90 ha (222 ac), also within Sutton Park. Drawing it was quite a challenge in itself, as it had to be near-exclusively based on examining several sets of post-1995 aerial photographs including the Google ones (rather than the maps themselves), in an attempt to work out broadly how far the golf club’s

fairways, holes and bunkers actually extend into the park itself. Obviously, without any pre-1995 detailed maps (or aerial photos) of the golf course being available, it is anybody's guess how well the HLC polygon as drawn, corresponds to the earlier extent (and/or likely shape variations) of this golf course, which was set up in 1889.

Another inter-war housing estate in the Billesley - Yardley Wood area is the only record above 80 ha (198 ac), while three Sutton Coldfield farmland areas and four more inter-war housing estates make up the 7 records above 70 ha (173 ac) in size.

All in all, of the 32 HLC records above 50 ha (123 ac), representing 0.45% of the total:

- 15 contain inter-war housing – which indirectly illustrates the scale and ambitions of the inter-war municipal planners and the resources at their disposal;
- 4 cover post-war housing;
- 6 are in the farmland east and north of Sutton Coldfield;
- 3 are country parks (Sutton Park, Woodgate Valley and Hill Top Farm Grasslands);
- 2 are golf courses (Sutton Coldfield and Hatchford Brook);
- 2 are utilities (Minworth Sewage Treatment Works and Bartley Reservoir).

These Birmingham HLC 'giants' are followed by 430 records above 10 ha (24.7 ac) in size (6.2% of the total) and a further 700 (10% of the total) larger than 5 ha (12.3 ac).

Concerning the size of the 111 historic landscape character areas, the Birmingham HLC originally aimed – as already mentioned above – to keep their number below 100, representing an average size of 270 ha (667 ac) or higher, while also ensuring that any character area's minimum size stayed above 100 ha (247 ac). Realities 'on the ground' and the project's desire for accuracy, conspired to thwart these aspirations partially, resulting in 111 character areas instead, some of which also fell below the 100 ha 'lower limit'.

Of these, 6 character areas cover more than 500 ha (1,236 ac):

- BCA1 (Sutton Park) which unsurprisingly came up top again at 933 ha (2,305 ac);
- BCA64 (Acocks Green - Fox Hollies - Hall Green - Yardley Wood) inter-war housing estate of 680 ha (1,680 ac);
- BCA47 (Hodgehill - Northern/Eastern Ward End - Alum Rock - Bordesley Green East Little Bromwich - Yardley Fields), an inter-war housing estate of 672 ha (1,661 ac);
- BCA67 (Springfield - Billesley - Yardley Wood - Warstock - Alcester Road), composed of inter-war and early post-war housing, and covering 670 ha (1,656 ac);
- BCA74 (Selly Park - Edgbaston Park - Calthorpe Park - Moseley Park - Canon Hill Park - Moor Green - Rea Valley - Highbury Park - King's Heath Park) nearby, a

mixture of housing and recreational areas gradually developed between ca. 1860-1930 and totalling 610 ha (1,507 ac);

- BCA79 (Southern World's End - Western Harts Green - California - Woodgate - Bartley Green - Kitwell - Woodcock Hill), a somewhat convolutedly drawn area of post-war housing (because of the need to exclude Woodgate Country Park and Senneleys Park), which covers 515 ha (1,273 ac).

The 8 character areas whose size is between 400 and 500 ha (988 to 1,236 ac) include:

- 2 on the farmland east of Sutton Coldfield: BCA9 of 421 ha (1,040 ac) and BCA13 of 403 ha (996 ac);
- 2 covering the Kingstanding - Perry Beeches inter-war housing estates: BCA22 of 441 ha (1,090 ac) and BCA23 of 471 ha (1,164 ac), divided along the now invisible boundary of the ancient Perry Barr Common (enclosed around 1815), otherwise their combined character area would have matched Sutton Park in size.
- 3 dominated by pre-1915 tunnel-back terraces: firstly, BCA33 of 438 ha or 1,082 ac (Central Handsworth - Handsworth Wood/Park - Church Hill - Birchfield);
- Secondly, BCA61 of 428 ha or 1,058 ac (Sparkhill - Sparkbrook - Northern Hall Green - Showell Green - Southern Balsall Heath - Moseley Village);
- And thirdly, BCA46 of 425 ha or 1,050 ac (Washwood Heath - Saltley - Bordesley Green - Little Bromwich - Small Heath);
- Finally, BCA73 of 442 ha or 1,092 ac (Northern, Eastern and Western Edgbaston), an area where the original 1810-1860 villas and detached houses have been partly replaced since the 1960s by a mixture of further detached houses, alongside semis, terraces and both low- and high-rise flats.

Combined, all 14 character areas larger than 400 ha (988 ac) make up only 12.6% of the total number, while the 16 ones above 300 ha (741 ac) in size, contribute another 14.4%.

At the opposite end of the size spectrum, 13 character areas (11.7% of the total) are smaller than the 100 ha (247 ac) 'limit' originally set:

- 6 of them are located in the Birmingham city centre: BCA98 (the smallest at only 50.7 ha or 125 ac), BCA43, BCA106, BCA71, BCA88 and BCA42;
- 3 in other historic settlement centres: BCA104 King's Norton Village, BCA78 Harborne High Street and BCA70 King's Heath High Street), plus a fourth one also in King's Norton (BCA101);
- 3 around Birmingham's administrative boundaries: BCA110, BCA111 and BCA91.

They are followed by 35 character areas (31.5%) of between 100 and 200 ha (247-494 ac).

## **Broad and Individual Land Use Types**

*(See also Appendices 7, 9 and 10)*

Birmingham HLC uses 41 broad land use types to characterise its records, which is a larger than average number of broad types for an HLC, and this situation was dictated by a number of considerations. Of these 41 types, 21 are 'split' ones formed from the sub-division and/or re-combining of existing broad types 'borrowed' from the Black Country HLC – the original source of the Birmingham HLC typeset – and they include 5 residential types, 4 industrial, 4 farmland and gardens, 2 recreational, 3 public, social and utilities, 3 transport. 'Splitting' these inherited types was deemed necessary in order to:

- Improve the analysis and visualisation (through MapInfo thematic mapping) of the records belonging to these types, e.g. by taking out the Educational and Medical types out of the Social and Public one, which was then combined with the Utilities broad type. Splitting Recreational out into Indoor Entertainment and Outdoor Recreation enables one to bring together on a map all the areas of un-built land in Birmingham, by showing the latter broad type alongside those related to farmland, gardens and vacant/derelict land.
- Make easier the management of the ever-increasing number of individual types contained by some very large broad types e.g. Residential and Industrial; in addition to that, splitting up the most common current broad type of all, Residential (or Settlement), into Detached and Semis, Terraces and Flats and so on, also helped significantly when aggregating polygons into character areas.
- Allow better tailoring of the attributes attached to the broad types: e.g. making Farms a broad type in its own right (from Residential) enabled Birmingham HLC to preserve the attributes already attached by the Warwickshire HLC to the farms located in the northern and eastern area of Sutton Coldfield, farms characterised using types and attributes derived from the Historic Farmsteads Characterisation Project.

Of the remaining Birmingham HLC broad types, 13 are mixed types, resulting from the combination of two or more existing broad types (e.g. Residential and Industrial, Commercial and Industrial, Fields and Outdoor Recreation etc.). Soon after starting work on creating the Birmingham HLC, it became evident that the typeset inherited from the Black Country HLC was unable to describe accurately some situations encountered 'on the ground' – and especially past ones, such as the combination of Victorian terraces and small works common in many parts of the city before the extensive post-war re-developments, or the combination of cottages, houses, smallholdings, alongside their closes and gardens, characteristic of the (semi-)dispersed settlement pattern of the pre-industrial era. The only sensible solution to this conundrum – and which also eliminated having to agonise over, for example, whether a group of terraces is more 'dominant' than the small works located amongst them or vice versa – was to create mixed broad types (and the individual types contained by them), thus allowing reality to guide typology, rather than shoe-horning facts

into types. On the Birmingham City Council local mapping website displaying the HLC data, these 41 broad types have been slightly reduced down to 39, in order to enhance clarity and simplicity for the user.

While all this profusion of broad and individual types may seem unnecessary complex and perhaps too finely detailed, this was necessary in order to describe the realities 'on the ground' as accurately as possible, especially given that this HLC is more than likely going to remain for the foreseeable future, the only time such an in-depth look at the past and present historic landscape of Birmingham will have been carried out. Given such an unique opportunity to capture this land use data, this HLC had to include as much detail as it was sensible to, as once completed, it is relatively easy afterwards to simplify the typeset by re-combining broad and/or narrow types as and when desired, while the reverse operation – of adding detail info where none was originally captured – is obviously a lot more time and resource consuming, as it would involve re-examining the original sources.

Also, while HLCs of predominantly rural areas have tended to rely more heavily on the use of attributes to describe very important features of their land use types, such as field shape, size or boundary – this is certainly the case for the counties surrounding the West Midlands metropolitan area – the Birmingham HLC has incorporated similarly important descriptors for its predominantly urban land use types, into the type name itself, arrangement which has further contributed to the increase in the number of HLC individual types (sub-types) used. This was not a deliberate choice on our part to start with, but more of an indirect consequence of using the typology inherited from the Black Country HLC as the starting point for the Birmingham one. While ultimately resulting in the creation of over 400 'individual' HLC sub-types, incorporating (most of) the important descriptors into the type name itself, also proved to be an inspired choice when it came to querying the HLC database, in order to produce visualisations of HLC data (e.g. MapInfo thematic maps by type and/or period), as by not including attributes into such queries, this HLC managed to avoid some of the technical problems encountered by our 'rural HLC neighbours', when they attempted to do the same.

The 41 broad types used by the Birmingham HLC contain 432 individual types (sub-types), an average of 10.5 sub-types each, figure which perhaps also represents a large number for an HLC, but again they were deemed necessary for more or less the same reasons as the broad types sitting above them, in order to ensure maximum accuracy of description within an one-off citywide historic land use characterisation project. This was especially the case as more often than not, an actual polygon contained more than one dominant individual type of land use, and these sub-types could moreover belong originally to more than one original broad type as well: e.g. Tunnel-back terraces and works, originally separate sub-types within the Residential and the Industrial broad types, and later joined together as a mixed sub-type within a mixed broad type. Realities encountered 'on the ground', as shown on (or reasonably inferred from) modern or historic maps, aerial photos and Google StreetViews, or otherwise gauged from other sources (e.g. websites, existing HER data), have been allowed to 'dictate' the choice of descriptor type for the polygon being characterised, and so new individual sub-types were created 'on the fly' as and when

needed during the HLC record creation process, ultimately far surpassing in number any sub-types originally inherited from the Black Country HLC.

Additionally, as a consequence of the level and quality of GIS and databases support available, the Birmingham HLC has managed to dispense with the need to use sub-type names containing a date indication (e.g. 'Pre-1880 tunnel-back terraces'), which have been previously used by the Black Country HLC in order to aid querying the dataset. By using sub-types named in this way, HLC database queries aiming to produce a land use map for a given year, can avoid having to also incorporate Period of Origin data. Incidentally, the fact that HBSMR uses a Period of Origin-based dating system for its records, instead of an actual 'period of existence' of the land use type captured, does actually complicate the writing of HLC database queries. When attempting to produce a thematic map for a specific year, as past (broad or individual) HLC types assigned to records do not include their end dates, any such database query has to determine the 'end dates' of any types by looking at the start dates for the type immediately succeeding them.

Birmingham HLC type names are therefore (almost) exclusively based on describing the actual 'look' of that particular land use, and as a rule do not include any other factors, like date or type of ownership. Furthermore, the choice of type names used has tried to be as clear and self-explanatory as possible, largely eliminating the need for users to have to refer to any additional explanations as to what the scope of one type or another might actually include. Within HBSMR itself, achieving this aim has been somewhat hampered by the built-in limitation in the number of characters permitted for the fields containing broad and individual type names – which also resulted in the project having to use more abbreviations than initially intended. HLC type names were afterwards slightly expanded where necessary for the list contained in this report, and these 'expanded' names will also be used in the forthcoming public website disseminating the Birmingham HLC.

Despite all this, some HLC type name choices used by the Birmingham HLC might still potentially confuse some users, so a few quick clarifications are perhaps necessary. The first clarification concerns names used for terraced housing, past and present, area which caused the project itself some dilemmas terminology-wise. In the end, 'courtyard terraces' was used to describe all 19<sup>th</sup> century working-class terraces which lacked (or appeared to lack) private front and/or back gardens; this included back-to-back or blind back terraces grouped in courtyards, as well as similar housing located nearby along the street fronts. 'Tunnel-back' was used to describe 19<sup>th</sup> and early 20<sup>th</sup> century houses with an offset extension at the rear of the main body (resulting in an L-shaped building); tunnel-backs are predominantly terraced houses, but a significant amount of semis was also built in this style, and even some detached houses. All this left the Birmingham HLC with the somewhat unexpected dilemma about how to call the rest of the semis and terraces, predominantly post-1920 in date and representing the majority of these housing types, especially when present alongside their 'tunnel-back' counterparts: calling them 'standard' or 'typical' seemed a rather vague descriptor, so in the end the designation 'straight-back' was used for the sake of clarity and consistency.

Another clarification refers to the use of the 'Water mill' type: this has been used in the Birmingham HLC only where and when the mill in cause was documented to have been a corn-grinding mill, or when the type of 'milling' carried out there was unknown or unclear. Otherwise the mill site was characterised according to the nature of industrial activity known to have been carried out there, which in Birmingham's case was mainly metal working e.g. blade/edge grinding, rolling, slitting, wire drawing, forging (but could also include fulling, paper making), on the assumption that what took place in a mill is more important from a characterisation viewpoint, than the type of motive power source used, source which moreover could also change throughout the lifetime of a mill, such as when a steam engine was added to the water-powered mechanism or even replaced it altogether, and some of these 16<sup>th</sup>-18<sup>th</sup> century water mills grew during the 19<sup>th</sup>-20<sup>th</sup> century into 'proper' factories.

As Birmingham is a built-up urban area, whose only surviving farm fields in the north-east had already been characterised by the Warwickshire HLC prior to the Birmingham HLC even starting, it is quite probable that the typology used to describe past farm/open land use pre-dating today's city, is not as detailed, varied or accurate as that of an HLC area which is still predominantly rural. The Birmingham HLC has nevertheless expended a great deal of effort into capturing (in the way its polygons have been drawn) any identifiable areas of past unenclosed commons and open strip fields, attempting to squeeze as much information available in this respect as possible from old maps or historical research, effort resulting in what is probably the first citywide mapping of such areas. Furthermore, where historic maps and any associated data (e.g. tithe map apportionments) provided easily accessible information on the type of agricultural land use itself (such as differentiating between meadow, pasture or arable land), HLC polygons have also been drawn to accommodate this, for example in King's Norton case, on the understanding that by doing so, a compromise was made by effectively extrapolating farmland use type data from the 1840 tithe map and apportionment, back into earlier periods.

Birmingham HLC has also, unlike the Black Country one, characterised all the motorways and dual-carriageway roads within its boundaries, the rationale being that these roads are at least as physically wide and historically important – if not even wider and older in many cases – as the railways and canals already included in other HLCs (and of course in the Birmingham one as well). To prevent excessive record fragmentation and unsustainable workload increase, the Birmingham HLC has only chosen to polygonise dual carriageways from amongst the major (non-motorway) roads, and their dating was based around the time when these roads (were presumed to have) first appeared following the current route, even if only as a country lane at first. Additionally, one river alone has been polygonised, almost as an exercise in doing it – the Tame, including its course changes through time, where known – on the logical basis that not only it is the largest natural waterway running through the Birmingham area, but also because its width is hardly inferior to that of a manmade canal (despite the Tame not being navigable).

Regarding the broad and narrow types used to describe its historic landscape character areas, the Birmingham HLC uses 18 broad types and 124 individual types (sub-types) for this purpose, all of them derived from those used for the HLC records, but kept 'physically'

separate from them – though for the time being, broad and individual HLC types used for both character areas and records, share their respective database tables, just as the actual character area and record data, current and past, also share the same respective tables. This was necessary in order to be able to use the ‘standard’ HLC user interface within HBSMR to also record character area data, and moreover to be also able to attach any existing attributes and sources used for the HLC records, to the character areas as well. Unlike in the case of HLC record types, many if not most of the individual types used for the 111 character areas are ‘single use types’, created purposely for accurately describing that character area alone – and in particular its current dominant land use – though of course the project has aimed to ‘re-use’ individual types as much as possible, both for its records and character areas. Of the 18 character area broad types used, 11 are mixed types, and all 18 of them have attributes inherited directly from their HLC counterparts.

### **Attributes – and their Values**

*(See also Appendices 7 and 8)*

The Birmingham HLC uses 29 different sets of attributes, up to 8 of which can be attached to any broad type in HBSMR – and therefore for any record or character area using that particular broad type as its current land use type, a number of attribute values have also been captured. All but 3 of these attributes have been inherited either from the Warwickshire (16), Black Country (7) or the South Yorkshire HLC (3), but the actual values available within each attribute set has been sometimes tweaked or added to, in order to reflect the ‘needs’ of the Birmingham HLC. The 16 Warwickshire HLC attributes ‘arrived’ as part of the database containing the characterisation of the farm fields on the northern and eastern fringes of Sutton Coldfield – and illustrate the reliance of rural HLCs on using type attributes – exercise carried out previously by Warwickshire County Council. Broadly half of these attributes relate to field morphology, while the rest – used for farm layout descriptions – have been derived from the Historic Farmsteads Characterisation Project (2008).

The 7 attributes inherited directly from the Black Country HLC capture a mixture of data types, of which perhaps the most useful is the street pattern type of residential areas. The 3 attributes ‘copied’ from the South Yorkshire HLC – and very useful to have for the Birmingham HLC – measure the survival (legibility) of road patterns, field boundaries and buildings or structures from a previous land use type into the current one. And finally, of the 3 attributes created specifically for the Birmingham HLC, one attempts to capture the average footprint size of residential buildings – estimated rather than actually measured, due to lack of time – while a second one looks at whether a record contains important historic road(s) or only minor (but ancient) country lanes.

These 29 attribute sets contain between them 207 user-selectable values, and while every broad type can have up to 8 attributes attached to it, not all have all 8 attribute ‘slots’ filled (some may only have a couple of attributes), and of those that use their full ‘allowance’, some use the same attribute set more than once (e.g. Housing area components or Sports ground type), in order to allow multiple choice attribute values to be attached to an HLC record.

## Dating the Records – the ‘Period of Origin’

In this respect, one must bear in mind that in Birmingham HLC’s quest for accuracy of drawing, description and dating, the latter is almost ‘by default’ a fair few steps behind the former two, due to significant limitations of and gaps in the sources available to date land use changes accurately. Also it must be pointed out here that, despite the project’s sustained efforts in this respect, not every single historic map known of – and suspected that it was likely to be useful – was actually available to the Birmingham HLC, the most obvious case being that of the post-war OS ‘master maps’: only a selection of them was available to this project, situation which resulted in a very piecemeal coverage in both geographical and chronological terms.

All HLC records and character areas have been dated using HBSMR’s “Period of Origin” system, where a start date range – varying from one up to several hundred years (in the case of HLC) – is assigned to when the land use change represented by the HLC type used for a given record (or character area), is likely to have occurred. There is no ‘end date’ as such being captured for that land use type (if it is a past one), this is in effect represented by the ‘period of origin’ of the newer type replacing it.

The accuracy of dating the ‘period of origin’ can vary enormously, depending on the accuracy of the sources, cartographic or not, available. For some types of HLC records, an (almost) exact ‘foundation year’ is available if searched hard enough – which does not mean that it is always easy to find online. These include:

- Schools – the foundation year of those currently operating is very rarely mentioned on their website, but can be found on Victoria County History for schools founded before ca. 1960 (with the exception of the special schools).
- Churches – though not many of them are surrounded by large enough churchyards to be able to constitute an HLC record on their own.
- Other public, social, sporting and cultural buildings and facilities (e.g. stadia, parks university campuses or sports grounds) large enough to constitute an HLC record.
- Some utilities e.g. gas works, reservoirs, power stations.
- Transport facilities: canals, railways, motorways, train and bus stations, some transport-related depots or yards.
- Some larger industrial premises, especially those listed in Grace’s Guide to British Industrial History or whose website has a ‘company history’ page – though the year of foundation or incorporation is not always the year when a company acquired its (new/current) premises.
- Some shopping malls, supermarkets, business estates and large office premises – though such data is hard to find, unless they have a Wikipedia entry.

- Some residential buildings like almshouses and care homes – or tower blocks whose building date can sometimes be found on Wikimapia.
- And finally, even land that was the subject of a parliamentary ‘inclosure act’ – the year this was passed serves as a convenient ‘fixed date’ for the land use type change from open commons or fields to enclosed land.

Having a precise ‘start year’ for an HLC type within a record represents only half the dating story ‘saga’ though, as on more than one occasion when an ‘end year’ for that record type was also found (e.g. when a school closed down or a company went bankrupt) or an ‘end date’ range suspected, it was nevertheless difficult to work out (i.e. describe and date) what happened afterwards with the site or premises concerned. That was the case at least until the next available map or aerial photo showed some clear change, such as visible dereliction, site clearance through demolition, re-use of existing building or the presence of new one in its place, all possible ‘fates’ for premises – industrial or otherwise – left behind by their original occupants. For the majority of the HLC records though – as well as for all the much larger character areas – an exact year or accurate date range are not available, or are too difficult to find in the time allocated for completing the HLC, which means that a wider (and vaguer) ‘start date’ range of years must be used to define their ‘period of origin’. Some of the ‘rules’ observed in this respect were:

- The HBSMR ‘conventions’ have been used for either one or both years making up the ‘period of origin’ of an HLC record, when more accurate dates were not available due to lack of maps or other sources. This includes dating everything known to be ‘generically’ Medieval between 1066 and 1539, or if ‘post-Medieval’ from 1540 onwards until shortly before the date of the first existing map showing that record.
- A useful ‘side effect’ of following these ‘conventions’ is that every record or character area in the Birmingham HLC starts chronologically from at least 1540, if not earlier in some cases – though a thematic map showing land use in 1540 will be inevitably full of inaccuracies.
- For most of the past and current records though, the ‘period of origin’ date range is effectively the time gap between the last map (chronologically speaking) not showing a particular land use type, and the next one that shows it.

This start date range varies in size according to the gap between the maps available for that particular area; for example, it is overall much narrower for central Birmingham – for which maps are available every 20-25 years during the 18<sup>th</sup> century and then virtually every decade or so during the 19<sup>th</sup> century – than for the rural parishes surrounding the town, for some of which (e.g. Northfield, King’s Norton or Minworth) only one detailed map (usually a tithe map) is available before the 1880s, when the first edition of historic Ordnance Survey (OS) maps is published. From this point onwards, the ‘date range gap’ disappears between the centre of Birmingham and the outlying areas being gradually incorporated into the city, and the average map-derived ‘period of origin’ stabilizes at around 10-20 years.

After the time span covered by the four editions of historic OS maps (between the 1880s and the 1930s), dating Birmingham's many post-war land use changes continued to rely primarily on the newer detailed OS maps, surveyed and published regularly, but only in a piecemeal fashion – as and when needed to document changes in a particular area. Unfortunately many of these post-war maps have not been digitised – and working from large paper maps was never feasible for the Birmingham HLC due to time constraints – situation which has resulted in some post-war HLC record 'periods of origin' spanning a time gap as large as 40 years. From the mid-1990s onwards though, a combination of citywide maps and available digital/digitised aerial photos, has ensured that the 'period of origin' shrunk back to 2-3 years in average.

Quite a few of the 'period of origin' dates used for the Birmingham HLC range 'from' a year ending in 1 'to' a year ending in 9 – for example 1701-1799 is used instead of 1700-1800, 1881-1899 instead of 1880-1900, 1961-1979 instead of 1960-1980 and so on. This was done on purpose, in order to avoid any risk of date ranges overlapping accidentally, such as 1880-1900 with 1900-1915, which would then cause problems to a database query run for the year 1900. Another consequence of this 'period of origin' system – and also of the availability and dates of historic maps – is that, while the HLC dataset can obviously be queried to show land use for any given year, choosing some particular years over others will result in the land use types displayed having a higher likelihood of actually having been in place by the year of the query. For example, while every record in the Birmingham HLC includes an (overwhelmingly previous) land use type whose period of origin starts at least in 1540 – the conventional beginning of the Modern period in the HER, and used as such by this HLC for anything lacking a more accurate start date, but deemed to be post-Medieval – running a query for this year (or the decades following it) will display land use types, many (if not most) of which have only a small chance of having actually been in place by 1540. Given also the availability limitations of the historical maps – they only start from the 1700s – an HLC dataset query for the years 1700 or 1750 instead, while producing largely the same results as the 1540 one, will in fact be a significantly more accurate query, as the land use types displayed are far more likely to have actually been in place by the 18<sup>th</sup> century.

Basically, the closer a year chosen to query an HLC dataset is to the date when many of the records queried are likely to have undergone another land use change – or for it to be documented by a map, which are one and the same thing for the purpose of HLC dating – the higher the likelihood that the land use type displayed was actually in place by that year. E.g. queries carried out for years such as 1800, 1830, 1850, 1880, 1900, 1915, 1940, 1960 or 1995 (or those immediately preceding them), are quite likely to produce more accurate results than queries ran either for years much earlier than the above ones, or for those following them immediately (almost yearly aerial photos are available though after 1995).

The Birmingham HLC hopes that some of its future (website) users who are especially knowledgeable about the detailed history of a particular site or area, and thus able to correct some of the dates or narrow down the 'period of origin' date ranges, will pass on their suggested corrections to the person within Birmingham City Council looking after the Birmingham HLC dataset, thus helping to improve its overall dating accuracy.

## Sources – Cartographic and Online

*(See also Appendices 3 - 6 and 11)*

Given the very nature of HLC as a landscape history research method, it is unsurprising that its main bibliographic sources are cartographic, namely maps and aerial imagery, historic and current. In the case of the Birmingham HLC, all these sources have been converted to a digital format (through scanning or photographing) and then geo-referenced (geo-rectified), enabling them to be viewed on a screen as GIS (MapInfo) layers that could also be overlaid on top of one another. Overlaying historic and current maps proved an especially useful procedure, as it allows one to see exactly where a map feature that has long since disappeared, would have been located. While all the post-1880 maps (and the post-1930 aerial photos) had already been digitised and geo-referenced by the time the Birmingham HLC started – as they were used by the Birmingham City Council for heritage protection and planning control purposes – a lot, if not most of the detailed pre-1860 maps of the current Birmingham area known to have existed, were not yet available in a format suitable for GIS usage, and therefore had to be found, scanned or photographed, and then geo-referenced, before they could be used in the HLC.

Carrying out this activity was a 'sub-project' in its own right, and it involved repeated visits by the HLC Officer to Birmingham's Central Library and its branch in Sutton Coldfield, during which maps were searched, viewed and photographed or photocopied – or sent to the Council's Central Scanning Services for professional scanning when possible. It also involved contacting some members of local history societies – such as those in Sutton Coldfield, King's Norton, Frankley and Handsworth – for additional known historic maps that the societies possessed decent copies of, and then copying these maps in a digital format. The end result of this 'mapping sub-project' – and a useful 'by-product' of the Birmingham HLC itself – was a database containing (almost) all the relevant historic maps of this area, all digitised and geo-referenced, and therefore now ready for further use and investigation by anyone, without having the need to access the often large or delicate originals (or the one-to-one scale copies of them).

Broadly speaking, the cartographic sources used by the Birmingham HLC fall into the following categories:

- Estate, parish or manor maps from the 18<sup>th</sup> and early 19<sup>th</sup> centuries – they vary in cartographic accuracy and detail rendition, though the Birmingham HLC has even managed to extract useful information from the 1583 map of Park Hall's New Park across the Tame in Minworth (the earliest detailed map of anywhere within the Birmingham area). Also some historic parishes/manors do not possess any pre-1800 detailed maps covering their entire area (e.g. Northfield, King's Norton, Yardley, Sutton Coldfield, Minworth).
- Town plans of Birmingham and Sutton Coldfield from the 18<sup>th</sup> and 19<sup>th</sup> centuries (from 1731 for Birmingham and 1760 for Sutton). They also include earlier plans drawn by historians from documentary sources (such as Demidowicz's 1344 and

Hill's 1553 plans of Birmingham), as well as Pigott Smith's remarkably detailed plans of Birmingham from 1828 (surveyed in 1825) and 1855. This latter plan displays a level of detail comparable to the later OS maps and could be used as a 'de facto' earlier version of them for the Birmingham town, if it could be professionally scanned.

- Enclosure maps of the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, accompanying parliamentary 'inclosure acts' of remaining parish commons and open fields – unfortunately the earliest such act for the Birmingham area (the King's Norton enclosure of ca. 1774) did not come with a map (or the map did not survive), but its extent has been mapped out by later historians and was used by the Birmingham HLC. Also, some Birmingham parishes never had an 'inclosure act' issued for them (e.g. Edgbaston, Harborne, Northfield).
- Tithe maps (accompanied by apportionments) are a common presence in the second quarter of the 19<sup>th</sup> century, and every parish in this HLC area (including Birmingham itself) had one produced – in some cases the tithe map represents the earliest detailed map of that area (e.g. Northfield, King's Norton). In King's Norton case, where the 1840 tithe map apportionment was re-arranged and re-published in a format that also lists fields in the order of their numbers shown on the map – and gives land use type (meadow, pasture or arable) for each field – it was then possible to further split the HLC polygons by past (1840) land use type, between arable and meadow/pasture. Performing this operation was a rather slow and painstaking exercise, not repeated afterwards for any other historic parishes, whose tithe apportionments had not in any case been re-arranged in a format suitable for that purpose.
- Regional maps – these include the 17<sup>th</sup> and 18<sup>th</sup> century county maps, their natural 'successor' the Ordnance Surveyor's drawings of ca. 1815 (scale of 2 inches to the mile), as well as Blood's 1857 Map of Birmingham and Its Environs (twice more detailed, at a scale of 1 inch to one quarter of a mile). Used somewhat 'sparingly' (especially the county ones), due to limitations in the level of detail they offer in comparison to the other maps listed above, these regional maps (and in particular the 19<sup>th</sup> c. ones) did nevertheless offer a significant amount of usable information, especially for those areas which lacked other more detailed maps, earlier or contemporary.
- The four editions of Ordnance Survey Landmark maps, each published at two scales, 1:2,500 and 1:10,000, between the 1880s and the 1930s – they were in many ways the 'mainstay' of Birmingham HLC historic cartographic sources, due to their level of detail, mapping accuracy and complete coverage of this area. The small scale version of these maps – while appearing at first to be just some less detailed duplications of their large scale counterparts – did in fact prove its usefulness on certain occasions, where one of the large scale map tiles was missing for a particular

area, or even when map data was deliberately removed from the 1930s 4<sup>th</sup> edition 1:2,500s map for 'national security' reasons.

- Post-war mapping available to the Birmingham HLC starts with the incredibly useful 1947 land use map of Birmingham, essentially an updated and colourised version of the 1930s map mentioned above, showing in great detail the land use in the city at the end of World War Two, complete with bombed-out areas, pre-fabricated houses, extensive wartime allotments, planned slum clearance, unfinished 1930s housing estates – work on which was soon to be re-started – and so on. Additionally, this map gives out the company name and business type of most industrial premises above a certain size – its usefulness to the Birmingham HLC cannot be emphasized enough.
- The bulk of the post-war mapping is represented by a series of detailed OS maps – chronologically their coverage ranges between 1949 and 1991, but spatially this is done in a largely piecemeal and haphazard fashion. Not only were these post-war map tiles produced originally on an 'as and when required' basis – rather than aiming for the blanket coverage of their pre-war predecessors – but of the map tiles that had been produced, the only ones digitised and geo-referenced (and thus available for the Birmingham HLC) were those that happened to be needed in the recent past by the Council for planning control purposes. The consequence of this, was that every HLC record 'benefitted' from the availability of between one and three map tiles of this period, the date(s) of which could vary anywhere within this 40-year timespan – this played havoc with the dating accuracy, which often sunk below the level that was available for the pre-war years. Nevertheless, this situation was still preferable to not having had these post-war map tiles available at all, as it had been the case for the Black Country HLC.
- A series of aerial photos dating from 1995-96 to 2012 (with ca. 2.5 years in average between each of them) carries on the chronological coverage sequence forwards, bringing it virtually up to date. In addition to them, one set of earlier, black-and-white aerial photos from the 1930s-1940s was also available and proved useful at times, though their graininess combined with the lack of a precise date for each individual photograph in the set, did somewhat limit their usefulness.
- The aerial photos were complemented by a series of recent maps, such as the 1996 OS LandLine map, a 2001 coloured Land Classification map and finally the current OS MasterMap – updated every year during the production of the Birmingham HLC – and its four progressively smaller scale counterparts (ranging between 1:10,000 to 1:250,000).
- Last but definitely not least, the Birmingham HLC used extensively any available online cartographic sources such as Google Maps, Earth and Street View, as well as WikiMapia to a lesser extent. In particular, Street View proved extremely useful by allowing the project to have a 'closer look from the ground' at anything that did not

seem clear enough from the most recent maps or aerial photos, and thus made a more accurate description possible. For example, Street View confirmed the state of (semi-) dereliction of certain premises or sites, or provided the current name (and by 'googling' it afterwards, also the nature) of many commercial and industrial businesses included in the Birmingham HLC.

Chief amongst the non-cartographic sources of the Birmingham HLC were Internet searches and some extremely useful websites; it can thus truly be stated that producing the Birmingham HLC had been an almost exclusively 'digital' operation, carried out in front of a computer and involving only a minimal amount of desk-cluttering 'paperwork'. Google searches were carried out for any desired piece of information that could not be extracted from the maps or from the most commonly used websites; given the time pressure on delivering this HLC, if the search results did not yield the desired result within a couple of minutes or so of browsing through them, then in most cases the project had to then 'make do' with using whatever info was available from the maps alone, and then carry on to the next record. While playing the 'online landscape history detective' could be rewarding at times, it could prove equally fruitless, frustrating and time consuming – but the fact that such 'cold' Internet searches did bear fruit more often than not, is a testament to the huge amount of useful data that is present nowadays on the web – and which can be 'mined out' with a well-aimed search.

While useful data for the Birmingham HLC came from many websites either recommended to the project early on, or uncovered through repeated web searches, some of these online sources (saved at the time in a Google Favourites folder) deserve a special mention (in no particular order):

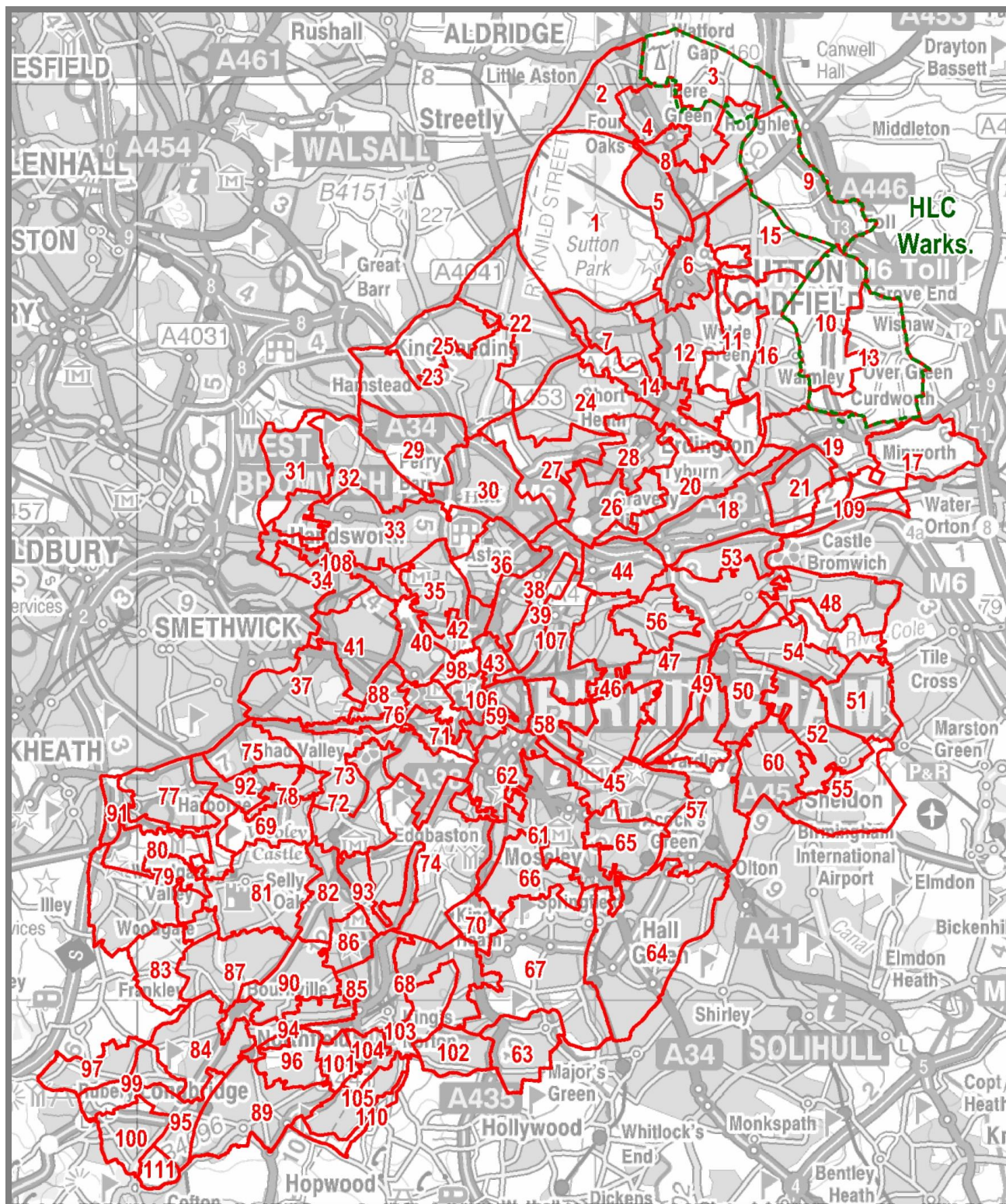
- William Dargue's "A History of Birmingham Places & Placenames ...from A to Y";
- British History Online's "Victoria County History";
- BGFL (Birmingham Grid for Learning)'s local history resources for teachers;
- Birmingham.....B14 Kings Heath & District History;
- Pubs and Breweries of the Midlands: Past and Present;
- Digital Handsworth and Handsworth History;
- Connecting Histories – Children's Homes;
- Grace's Guide to British Industrial History;
- Wikipedia;
- History of Sutton Coldfield A to Z;
- Perry Barr and Beyond;
- Rail Around Birmingham & the West Midlands;
- Ladywood Past and Present;
- Birmingham Canal Navigation Society's website (Archive section);
- Aston Brook through Aston Manor;
- Acocks Green History Society's website.

This represents by no means an exhaustive list of the online sources used for producing the Birmingham HLC, only a selection of those used more often. Printed publications were also used to complement these online resources and wherever possible, at least one carefully selected parish history monograph was read by the HLC Officer prior to the HLC reaching the boundaries of that historic parish – and if possible kept at hand while carrying out the actual characterisation. For example, in Sutton Coldfield’s case (the last Birmingham area to be characterised), the titles constantly referred to for information, have been Roger Lea’s “The Story of Sutton Coldfield” and Michael Hodder’s “The Archaeology of Sutton Park”.

## APPENDICES

### Appendix 1 – Map of Birmingham Historic Landscape Character Areas (BCA1 – BCA111)

(Birmingham farmland area covered by the Warwickshire HLC is shown in **green**)



## Appendix 2 – List of Birmingham Historic Landscape Character Areas (BCA1 – BCA111)

ID	CHARACTER AREA Name	Broad Type	Individual Type (Sub-Type)	Period of Origin (From/To)			Area (Ha)
BCA1	Sutton Park	Outdoor Recreation/Leisure/Sport	Country park, nature reserve	1840	1880		932.8
BCA2	Four Oaks Common - Hook Hill	Residential	Detached houses and (straight-back) semis	1950	1990		219.0
BCA3	Hill Wood - Roughley	Enclosed Fields	Parliamentary/regular enclosed commons/parkland	1824	1825		335.5
BCA4	Hill - Little Sutton	Residential	Detached houses and (straight-back) semis	1920	1960		245.2
BCA5	Four Oaks Estate - Tudor Hill	Residential	Mainly detached houses, some (straight-back) semis	1890	1915		168.0
BCA6	Sutton Coldfield Centre - Maney	Residential and Commercial (incl. Social/Public)	Detached houses, semis, terraces and shops, offices, amenities	1860	1900		157.3
BCA7	Boldmere	Residential	Detached houses and (straight-back) semis	1920	1960		206.3
BCA8	Four Oaks - Ley Hill - Mere Green - Doe Bank - Moor Hall - Roughley	Residential	Detached houses and (straight-back) semis	1920	1960		273.3
BCA9	Slade Farm - Fox Hill - Ashfurlong Hall - Wheatmoor - High Heath - Withy Hill - Langley Pools	Enclosed Fields	Re-organised field enclosure	1950	1980		421.7
BCA10	Brookhouse Farm - Langley Hall/Heath - Signal Hayes - Peddimore Hall	Enclosed Fields	Re-organised field enclosure	1930	1980		366.0
BCA11	Plantsbrook (Ebrook) Valley	Outdoor Recreation/Leisure/Sport	Mixed sports and recreation facilities/grounds	1902	2005		312.4
BCA12	Maney Hill - Wylde Green - Eastern Green Lanes	Residential	Detached houses and (straight-back) semis	1920	1960		328.5
BCA13	Ox Leys - Grove End - Over Green - Wiggins Hill - Hurst Green - Walmley Ash	Enclosed Fields	Re-organised field enclosure	1950	1980		403.3
BCA14	Chester Road (Beggar's Bush - Green Lanes - New Oscott - Southern Boldmere - Berwood/Hollyfast)	Residential	Mainly detached houses/semis, some terraces/flats	1920	1990		205.5
BCA15	Whitehouse Common - Boot Hill - Reddicap Hill/Heath - Falcon Lodge	Residential	Mainly detached houses/semis, some terraces/flats	1920	1960		300.9
BCA16	New Hall (Manor) Estates - Froggatt's Farm - Signal Hayes - Thimble End - Walmley	Residential	Detached houses and (straight-back) semis/terraces	1950	2000		340.4
BCA17	Minworth Sewage Treatment Works	Residential/Non-Residential and Vacant/Derelict	Sewage plant and contaminated/reclaimed land	1960	1990		287.9
BCA18	Jaguar Castle Bromwich Plant - Fort Dunlop Estate - The Fort Shopping Park - Bromford Lane	Industrial and Commercial	Automotive/other engineering and industrial/trading/retail park/estate	1985	2005		317.9
BCA19	Minworth - Walmley Ash	Residential, Industrial and Commercial	Houses, amenities and industrial/trading/retail estates/parks	1970	1998		256.2
BCA20	Tyburn - Eastern Moor End Green - Jollyfields - Woodlands	Residential	Detached houses and (straight-back) semis	1911	1939		302.4
BCA21	Castle Vale Estate (Berwood)	Residential	Semis, (straight-back) terraces and flats	1964	1969		165.9
BCA22	North-Eastern Kingstanding Estate - Western Perry Common	Residential	(Straight-back) semis and terraces	1930	1960		440.9

ID	CHARACTER AREA Name	Broad Type	Individual Type (Sub-Type)	Period of Origin (From/To)			Area (Ha)
BCA23	South-Western Kingstanding Estate - Perry Beeches	Residential	(Straight-back) semis and terraces	1930	1940		471.5
BCA24	Perry Common - Witton Lodge - Western Short Heath	Residential	Mainly semis/terraces, some detached houses/flats	1960	2010		321.6
BCA25	Old Oscott - Queslett	Residential/Non-Residential and Vacant/Derelict	Houses, trading/industrial estates/parks, recreation grounds/facilities and vacant/(semi-)derelict land	1950	1980		211.9
BCA26	Gravelly Hill - Erdington Slade - Wood End - Birches Green	Residential	Mixed straight-/tunnel-back semis and terraces	1875	1915		219.8
BCA27	(Upper) Witton - Stockland Green - Brookvale - Bleak Hills - Marsh Lane	Residential	Mainly semis/terraces, some detached houses/flats	1920	1939		269.4
BCA28	Erdington Village	Residential and Commercial (incl. Social/Public)	Mainly tunnel-back terraces, also shops, amenities	1860	1915		190.2
BCA29	Hamstead Village - Tower Hill Estate - Perry Village - Perry Hall Playing Fields - Perry Park	Residential/Non-Residential and Recreational	Mainly semis, other housing and recreation/sports grounds/facilities	1970	2000		273.2
BCA30	Perry Barr - (Lower) Witton	Industrial and Commercial	Industrial/trading/retail premises, some houses/amenities	1970	2010		314.3
BCA31	Handsworth & Hilltop Golf Courses - Hill Top Farm Grasslands - Handsworth Cemetery	Outdoor Recreation and Enclosed/Open Fields	Golf course, recreation grounds and enclosed fields	1970	1990		227.5
BCA32	The Austins - Farcroft - Hamstead - Brown's Green - Cherry Orchard - Handsworth Wood - Western Church Hill - Heathfield	Residential	Mainly detached houses/semis, some terraces/flats	1930	1960		321.2
BCA33	Central Handsworth - Handsworth Wood - Church Hill - Handsworth Park - Birchfield	Residential	Tunnel-back terraces and contemporary/later detached houses/semis	1875	?	1915	437.7
BCA34	South Handsworth - North-Western Winson Green	Residential	Tunnel-back terraces and later semis/terraces/flats	1860	1915		134.5
BCA35	Lozells - Newtown	Residential	Tunnel-back terraces and later semis/terraces/flats	1960	1980		187.2
BCA36	Central & Western Aston - Western Duddeston - Aston Park	Residential/Non-Residential and Recreational	Tunnel-back semis/terraces, later housing and recreation/sports grounds/facilities	1960	1990		197.4
BCA37	Rotton Park - Eastern Bearwood	Residential	Tunnel-back semis/terraces and later detached houses/semis	1875	1935		300.0
BCA38	Eastern & Northern Aston - Northern Nechells	Industrial and Commercial	Industrial/trading/retail premises, some houses/amenities	1970	2000		193.7
BCA39	Ashted - Duddeston - Nechells Green - Nechells Park	Residential	Mainly (straight-back) terraces and flats, some semis/tunnel-back terraces	1960	1980		123.5
BCA40	Jewellery Quarter' (Warstone - Hockley - Sandpits)	Residential, Industrial and Commercial	Jewellery/small metalware (and related/unrelated trades) manufacture/wholesale/retail, also incl. housing, offices, amenities	1990	2010		136.3
BCA41	Winson Green - Eastern Gib Heath - Brookfields - All Saints - Icknield Loop/Port - Dudley Road - Edgbaston Reservoir	Residential, Industrial and Commercial	Terraces, semis, flats, shops/amenities and industrial/trading estates/parks	1960	2000		272.4
BCA42	Central Birmingham's 'Gun Quarter' - New Town Row	Industrial and Commercial	Industrial/trading/retail premises, some houses/amenities	1970	2000		90.7

ID	CHARACTER AREA Name	Broad Type	Individual Type (Sub-Type)	Period of Origin (From/To)			Area (Ha)
BCA43	Central Birmingham's 'Learning Quarter'	Public/Social Institutions/Services/Utilities	University/college (incl. campus) and shops, amenities	2001	2015		55.9
BCA44	Western Nechells - Northern Washwood Heath	Residential/Non-Residential and Vacant/Derelict	Industrial/trading estates/parks and vacant/(semi-)derelict land	2005	2010		185.9
BCA45	Hay Mills/Hall - Red Hill - North Tyseley - South East Small Heath	Industrial and Commercial	Industrial/trading/retail premises, some houses/amenities	1970	2000		260.5
BCA46	Western Washwood Heath - Saltley - Bordesley Green - Southern Little Bromwich - Small Heath	Residential	Tunnel-back terraced houses	1855	1915		425.6
BCA47	Hodgehill - North & East Ward End - Alum Rock - Little Bromwich - Bordesley Green East - Yardley Fields	Residential	(Straight-back) semis and terraces	1920	1940		672.3
BCA48	Buckland End - Shard End - Southern Castle Bromwich	Residential	Semis, (straight-back) terraces and flats	1947	1965		247.2
BCA49	Kingfisher (Cole Valley) Country Park	Outdoor Recreation/Leisure/Sport	Country park, nature reserve	1985	2004		232.7
BCA50	Yardley Village - Stechford	Residential	Mainly detached houses/semis, some terraces/flats	1920	1970		204.8
BCA51	Tile Cross - Eastern Kitt's Green - Mackadown Lane	Residential, Industrial and Commercial	Terraces, semis, flats, shops/amenities and industrial/trading estates/parks	1935	1960		231.0
BCA52	Northern Sheldon Village - Radleys - Garrett's Green - Meadway - Lea Hall	Residential	(Straight-back) semis and terraces	1935	1955		272.2
BCA53	North Hodge Hill - Bromford Estate	Residential	Semis, (straight-back) terraces and flats	1947	1970		147.6
BCA54	Glebe Farm - Lea Hall - Kitts Green	Residential	(Straight-back) semis and terraces	1930	1940		182.7
BCA55	Sheldon Village - Lyndon End - Wells Green - Hatchford Brook Golf Course - Sheldon Country Park	Residential/Non-Residential and Recreational	Mainly semis, other housing and recreation/sports grounds/facilities	1930	1970		285.3
BCA56	Alum Rock - Ward End - Eastern Washwood Heath	Residential	Tunnel-back terraces and later semis/terraces/flats	1895	1935		160.4
BCA57	South Yardley - Stockfield - Coventry Road - Acocks Green	Residential and Commercial (incl. Social/Public)	Detached houses, semis, terraces and shops, offices, amenities	1875	1935		355.2
BCA58	Bordesley - Western Small Heath	Residential	Mainly (straight-back) terraces and flats, some semis/tunnel-back terraces	1970	1990		142.2
BCA59	Digbeth/Deritend (excl. High St.) - West Bordesley	Industrial and Commercial	Industrial/trading/retail premises, some amenities/utilities	1960	2000		118.7
BCA60	Eastern Yardley Village - Cockshut Hill - Lyndon Green - Gilbertstones - Western Lyndon End	Residential	Mainly semis, some detached houses and flats	1920	1940		244.6
BCA61	Sparkhill - Sparkbrook - Northern Hall Green - Showell Green - Southern Balsall Heath - Central Moseley Village	Residential	Tunnel-back terraced houses	1850	1915		428.5
BCA62	Highgate - Balsall Heath	Residential, Industrial and Commercial	Terraces, semis, flats, shops/amenities and industrial/trading estates/parks	1960	1980		203.2
BCA63	Highter's Heath - Warstock - Maypole - Hollywood	Residential	Mainly semis/terraces, some detached houses/flats	1930	1965		205.1

ID	CHARACTER AREA Name	Broad Type	Individual Type (Sub-Type)	Period of Origin (From/To)			Area (Ha)
BCA64	Southern Acock's Green - Fox Hollies - Hall Green - Eastern Yardley Wood	Residential	Mainly semis/terraces, some detached houses/flats	1920	1940		680.4
BCA65	Tyseley - Greet - Shaftmoor Lane	Residential, Industrial and Commercial	Semis, straight-/tunnel-back terraces and industrial/trading estates/parks	1980	2010		186.8
BCA66	Eastern Moseley - Wake Green	Residential	Detached houses and straight/tunnel-back semis/terraces	1870	1910		220.5
BCA67	Springfield/Sarehole - Billesley - Billesley Common - Western Yardley Wood - Eastern Warstock - Alcester Road	Residential/Non-Residential and Recreational	Detached houses, semis, terraces and recreation/sports grounds/facilities	1920	1960		670.5
BCA68	Alcester Lane's End - Southern King's Heath - Eastern Brandwood End - Hazelwell	Residential	Mainly semis/terraces, some detached houses/flats	1875	1935		235.0
BCA69	Harborne Village ('Town') - South Harborne	Residential/Non-Residential and Recreational	Detached houses, semis, terraces, flats and recreation/sports grounds/facilities	1950	1970		161.4
BCA70	King's Heath High Street	Residential and Commercial (incl. Social/Public)	Mainly tunnel-back terraces, also shops, amenities	1860	1890		86.5
BCA71	Tennant Street - Lee Bank - Sherlock Street	Residential	Short/long (straight-back) terraces and low-/high-rise flats	1960	1980		85.7
BCA72	Birmingham University - Queen Elizabeth Hospital	Public/Social Institutions/Services/Utilities	University/school (incl. campus) and hospital, amenities	1909	1948		237.0
BCA73	Northern, Eastern & Western Edgbaston (Calthorpe Fields - Bristol/Pershore Rd. - Hagley Rd.)	Residential	Mainly detached houses, also semis, terraces and flats	1955	1995		441.9
BCA74	Selly Park - Edgbaston Golf Course - Calthorpe Park - Moseley Park - Canon Hill Park - Moor Green - Rea Valley - Highbury Park - King's Heath Park	Residential/Non-Residential and Recreational	Detached houses, semis and recreation/sports grounds/facilities	1860	1930		610.7
BCA75	Beech Lanes - Lordswood - Ravenhurst	Residential	Mainly detached houses, also semis, terraces and flats	1960	1970		159.1
BCA76	Central Birmingham's 'Entertainment District'	Commercial incl. Offices, Entertainment	Mainly entertainment/culture/events-related premises, also incl. offices/shops/hotels	1970	2000		147.7
BCA77	East Quinton - Ridgacre - World's End	Residential	(Straight-back) semis and terraces	1920	1940		229.2
BCA78	Harborne High Street - Harborne Heath	Residential and Commercial (incl. Social/Public)	Mainly tunnel-back terraces, also shops, amenities	1850	1910		66.2
BCA79	Southern World's End - Western Harts Green - California - Woodgate - Bartley Green - Kitwell - Woodcock Hill	Residential	Mainly semis, terraces and flats, some detached houses	1950	1980		515.1
BCA80	Woodgate Valley Country Park	Outdoor Recreation/Leisure/Sport	Country park, nature reserve	1970	1984		155.9
BCA81	Lodge Hill - Weoley Castle - Selly Oak	Residential	(Straight-back) semis and terraces	1920	1940		387.2
BCA82	Selly Oak Village - Harborne Lane - Griffin's Hill	Residential and Commercial (incl. Social/Public)	Detached houses, semis, terraces and shops, offices, amenities	1990	2017		181.2

ID	CHARACTER AREA Name	Broad Type	Individual Type (Sub-Type)	Period of Origin (From/To)			Area (Ha)
BCA83	Frankley Reservoir/Water Treatment Works - Bartley Green Reservoir - Senneleys Park	Residential/Non-Residential and Recreational	Reservoir/water works and recreation/sports grounds/facilities	1928	1970		217.7
BCA84	South-Western Northfield - Northern Longbridge	Residential	Mainly detached houses/semis, some terraces/flats	1920	1940		327.6
BCA85	Stirchley - Cotteridge - Breedon Cross - Lifford	Residential, Industrial and Commercial	Mainly tunnel-back terraces, some later housing and industrial/trading estates/parks	1960	1990		280.1
BCA86	Cadbury's Bournville Works & Bournville Model Village	Residential and Industrial	Straight-/tunnel-back semis/terraces and food factory	1895	1915		114.8
BCA87	Shenley Fields - Ley Hill - Northfield Manor	Residential/Non-Residential and Recreational	Semis, terraces, flats and recreation/sports grounds/facilities	1950	1970		290.3
BCA88	Ladywood	Residential	Short/long (straight-back) terraces and low-/high-rise flats	1955	1975		86.3
BCA89	Eastern Longbridge (inc. Austin Village) - Turves Green - Coombes Farm - Northern Cofton Common - West Heath	Residential	Mainly detached houses, semis and terraces, some prefabs and flats	1917	1970		381.6
BCA90	Griffin's Brook - Row Heath - Hay Green - Northern Northfield	Residential	Mainly detached houses/semis, some terraces/flats	1950	1980		214.9
BCA91	Quinton Village - Southern Quinton	Residential/Non-Residential and Recreational	Detached houses, semis, terraces and recreation/sports grounds/facilities	1960	2005		82.2
BCA92	Court Oak - Queen's Park - Harts Green - Moorcroft	Residential	Detached houses and straight/tunnel-back semis/terraces	1890	1930		143.3
BCA93	Bournbrook - Ten Acres	Residential	Tunnel-back terraced houses	1870	1910		130.0
BCA94	Northfield Village/Commercial Centre/Station - Middleton Hall - Western Cotteridge	Residential	Mainly semis, terraces and flats, some detached houses	1950	1970		158.9
BCA95	Longbridge Town (former Austin/Rover Longbridge Motor Works)	Residential, Industrial and Commercial	Houses, amenities and industrial/trading/retail estates/parks	2005	2016	?	179.6
BCA96	Western King's Norton	Residential/Non-Residential and Recreational	Detached houses, semis, terraces, flats and recreation/sports grounds/facilities	1950	1980		134.8
BCA97	New Frankley in Birmingham	Residential	Semis, (straight-back) terraces and flats	1970	1980		149.8
BCA98	Central Birmingham's 'Civic & Business District'	Public/Social Institutions/Services/Utilities	Civic/public buildings and offices, some shops/amenities	1950	1980		50.7
BCA99	Rubery - Hollymoor - Frankley Beeches	Residential	Mainly semis/terraces, some detached houses/flats	1996	2003		137.2
BCA100	Rednal - Rednal Hill - Leach Green/Heath - Colmer's Farm	Residential	Mainly semis/terraces, some detached houses/flats	1920	1960		172.9
BCA101	New House Farm Estate - South-Western King's Norton	Residential	Mainly detached houses, some (straight-back) semis	1900	1940		75.4
BCA102	Druids Heath - Monyhull - Maypole	Residential	Mainly semis, terraces and low-/high-rise flats, some detached houses	2004	2006		136.9
BCA103	Brandwood - Lindsworth/Broad Meadow - Northern Walker's Heath - Masshouse Farm	Residential	Mainly semis/terraces, some detached houses/flats	1920	1970		236.8
BCA104	King's Norton Village Green - Wharf Road - King's Norton Park	Residential/Non-Residential and Recreational	Historic settlement centre and recreation/sports grounds/facilities	1920	1921		59.1

ID	CHARACTER AREA Name	Broad Type	Individual Type (Sub-Type)	Period of Origin (From/To)			Area (Ha)
BCA105	King's Norton Tree Estates (Hawkesley - Pool Farm - Primrose Hill) - Western Walker's Heath	Residential	Mainly semis, terraces and low-/high-rise flats, some detached houses	1950		1980	156.4
BCA106	Central Birmingham's Commercial & Historic Core	Commercial incl. Offices, Entertainment	Mainly shops/malls/markets, also incl. train/coach stations, offices, amenities	1960		1980	80.6
BCA107	Eastern Nechells, Duddeston & Vauxhall/Ashted - Western Saltley - Northern Bordesley Green	Industrial and Commercial	Industrial/trading/retail premises, some amenities/utilities	1970		2000	244.0
BCA108	Middlemore Rd. - Holyhead Rd. - Soho Hill/Rd. - Villa Rd. - Hunters Rd.	Residential, Industrial and Commercial	Terraces, semis, flats, shops/amenities and industrial/trading estates/parks	1850		1900	137.4
BCA109	Park Hall Nature Reserve - Vale Football Ground - Castle Vale Equestrian Centre	Outdoor Recreation/Leisure/Sport	Mixed sports and recreation facilities/grounds	1965		1975	116.3
BCA110	Wast Hills Golf Centre - Red Hill - Longdales Rd. - Walker's Heath Farm - Western Moundsley Park	Outdoor Recreation and Enclosed/Open Fields	Golf course, recreation grounds and enclosed fields	1950		1970	61.5
BCA111	Cofton Park	Outdoor Recreation/Leisure/Sport	Country park, nature reserve	1933		1933	67.1



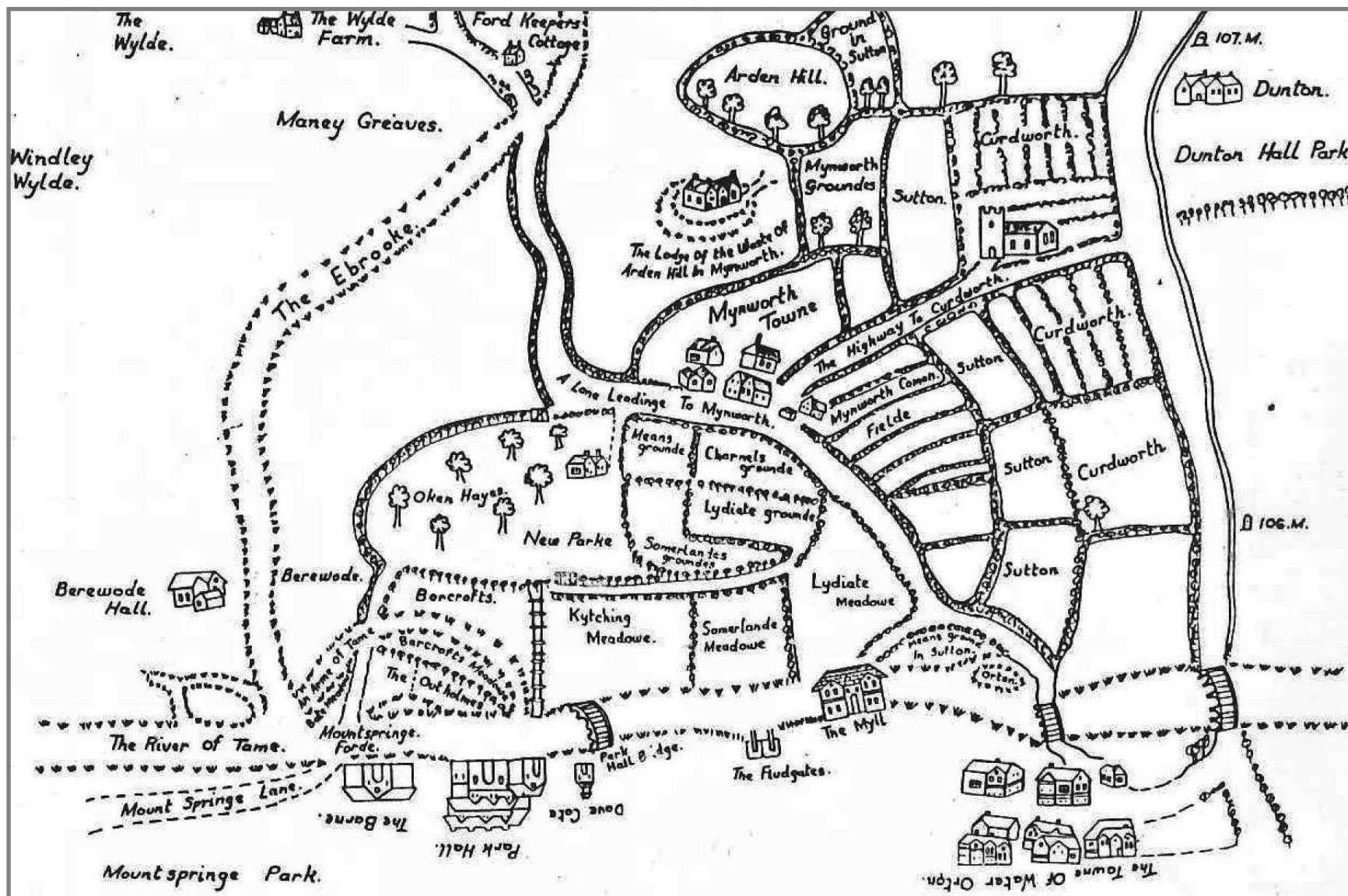
### Appendix 3b – Map of the Recently Built Kingstanding Estate in 1947

(This shows how the HLC polygons were drawn in **aqua** – and then aggregated into character areas in **blue** – in the largest municipal estate in Europe when built in the 1930s, using the 1947 Birmingham Land Use Map as background; character area BCA25 was still undeveloped then.)



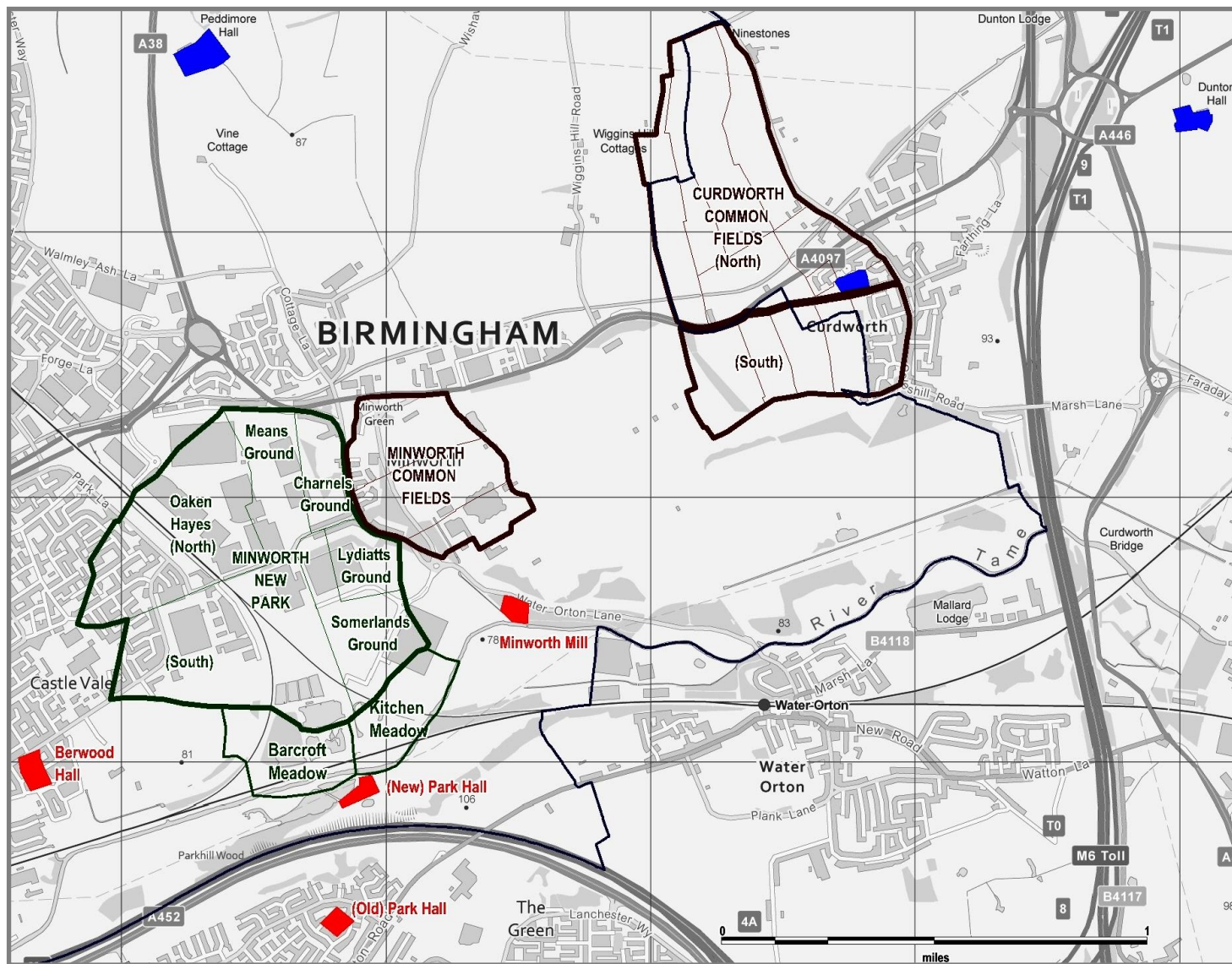
## Appendix 4a – Map of the Minworth Area in 1583

(This, the earliest detailed map of anywhere within today's Birmingham area, was drawn on the occasion of the confiscation of the ancestral estates of the Arden family of Park Hall by the Crown, following the execution of Edward Arden for treason in 1583 as a – presumed – participant in a plot to murder Queen Elizabeth. This map – re-traced by Norman Granville Evans in 1971 from the 1583 original – shows some landscape features long disappeared, such as Park Hall's 'New Park' across the Tame in Minworth, the 'Minworth Common Fields' and the similar Medieval strip fields of Curdworth. The map has not been surveyed and drawn nowhere near accurately enough to enable it to be digitised, georectified and then used directly for historic landscape research, as its perspective is heavily distorted and compressed.)



## Appendix 4b – The GIS Map Layer ‘Retrieved’ from of the 1583 Minworth Map

(The Birmingham HLC was nevertheless able to reconstruct some of the landscape features included in the 1583 map – the New Park (in **green**) and the open fields of Curdworth and Minworth (in **brown**) – as a ‘bespoke’ GIS map layer, and then use it when creating HLC records in this area. The layer’s contours were recreated using field boundaries and names shown on John Snape’s 1765 map of the Barcroft Meadow and in the first edition of the historic OS maps from the 1880s. The New Park, a deer park only ever shown on the 1583 map and presumed disemparked soon after 1600, was created sometimes after 1530 to accompany the new Park Hall, built in the 16<sup>th</sup> c. – and surviving until c. 1970 – close to its Medieval moated predecessor, which originated itself in the 13<sup>th</sup> c. as the lodge of an earlier deer park – hence the ‘New Park’. The map layer also shows in **red** the location of four buildings depicted on the 1583 map and now gone: the two Park Halls, alongside Berwood Hall beneath today’s Castle Vale estate and Minworth Mill on the Tame between Minworth and Water Orton. Towards the top of the picture, away from the urban sprawl and the sewage works, structures still surviving have been marked in **blue**: Peddimore Hall, referred to in 1583 as ‘the lodge in the waste of Arden Hill in Minworth’, Dunton Hall and the Curdworth parish church. Birmingham’s administrative boundary is also marked in blue.)



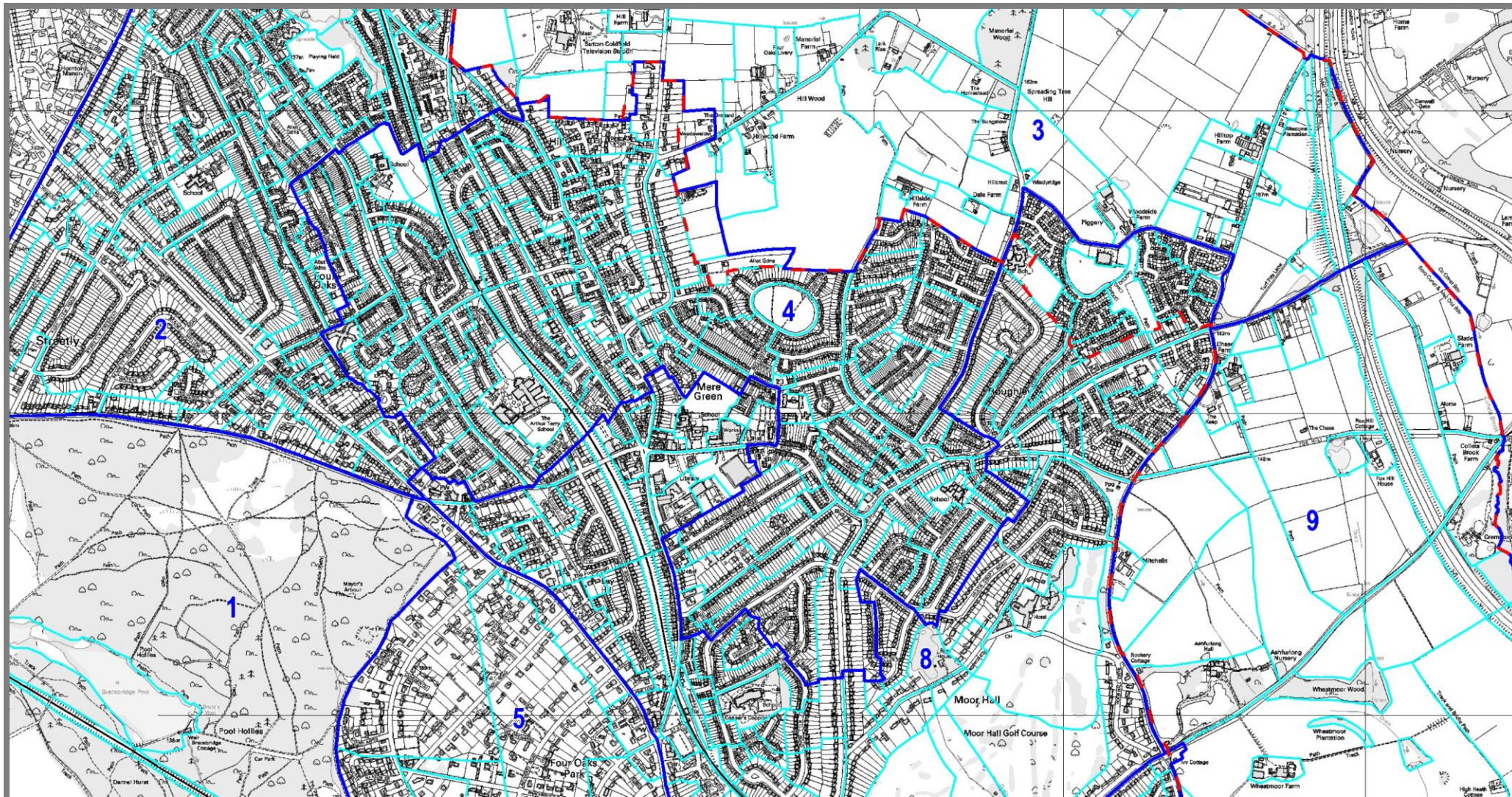
## Appendix 5a – Inclosure Map of North-Eastern Sutton Coldfield (1824)

(Areas of commons – and some strip fields – to be enclosed are shaded in **pink**, character area boundaries are **blue**, and the Warwickshire HLC area is a dashed **green** line. The residential BCA4 was 'cut out' from BCA8 purely in order to include the open strip fields of Hill and Little Sutton – enclosed well before 1824, but reconstructed by historians. Also residential, BCA5 – based around the Four Oaks Hall and Park – is different in both current and past character from BCA4 and BCA8. Farmland character areas BCA3 and BCA9 were both mainly commons before 1824, but differ today as BCA9's fields have been largely re-organised/amalgamated after 1950, while BCA3 has kept most of its 1824 field boundaries.)



## Appendix 5b – Current Map of North-Eastern Sutton Coldfield (2013)

(Character area boundaries are shown in **blue**, HLC records in **aqua** and the Warwickshire HLC area by a dashed **red** line. The differences in housing type, street layout and plot size between the residential character area BCA5 Four Oaks Park and its neighbours BCA8, BCA4 and BCA2 are quite obvious. Also obvious are the similarities between the current character of these three latter areas, separated in the HLC mainly because of their past land use history: BCA2 area was predominantly parliamentary enclosed commons, BCA4 was open fields already enclosed during the late and post-Medieval periods, while BCA8 was a mixture of pre-1800 enclosures and the Moor Hall grounds and parkland.)



## Appendix 6 – Enclosed Former Commons and Subsequent Development in the Old Parishes of Kings Norton and Yardley (1947)

(Areas of former commons are hashed in **yellow**, using vertical lines for Yardley's commons enclosed in 1833, horizontal for Kings Norton's ones enclosed in 1772, and crossed lines for Haunch Heath enclosed even earlier. Character areas are in **blue** and HLC polygons in **aqua**, using the 1947 Birmingham Land Use Map as a background. This area was almost completely built up by 1940 – except for north-eastern Haunch Heath and land north of Brandwood Hall – while parts of some former commons survived as public recreational areas – especially Billesley Common – school/sports grounds or allotments. Also, while HLC polygons have managed to almost always follow the boundaries of the ancient commons, this was not possible here for the character areas – with the exception of BCA70 – due to the nature of their current historical character.)



## Appendix 7 – List of Broad Types (incl. their Attributes) Used for Historic Landscape CHARACTER AREAS and RECORDS

*(The attributes attached to each broad type are listed only once per broad type)*

Broad Types Used for CHARACTER AREAS	Type Origin	Attributes							
Residential	Birmingham HLC	Surviving road pattern	Street pattern type	Building footprint size	Housing area components	Surviving field bound.	Surviving buildings	Important historic road	
Commercial incl. Offices, Entertainment	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Water body type	Over infilled canal		
Industrial	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Outdoor Recreation/Leisure/Sport	Birmingham HLC	Surviving buildings	Surviving field bound.	Important historic road	Surviving road pattern				
Enclosed Fields	Birmingham HLC	Predominant Field Size	Field Shape	Primary Morphology	Secondary Morphology	Internal Morphology	External Morphology	Field Loss (Since OS 1st Ed )	Boundary Loss
Open Commons/Waste/Strip Fields	Birmingham HLC	Surviving road pattern	Water body type	Over infilled canal	Important historic road				
Public/Social Institutions/Services/Utilities	Birmingham HLC	Surviving road pattern	Sports ground type	Sports ground type	Surviving field bound.	Surviving buildings	Important historic road	Water body type	Over infilled canal
Residential and Commercial (incl. Social/Public)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Street pattern type	Building footprint size	Housing area components	Important historic road	
Residential and Industrial	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Housing area components			
Residential, Industrial and Commercial	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Housing area components			
Residential, Industrial and Social/Public	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Housing area components			
Residential/Non-Residential and Recreational	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Residential/Non-Residential and Vacant/Derelict	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Residential and Enclosed Fields	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Over infilled canal	Important historic road			
Industrial and Commercial	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Industrial and Social/Public Services/Utilities	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Housing area components			
Utilities/Services/Extractive and Enclosed Fields	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Outdoor Recreation and Enclosed/Open Fields	Birmingham HLC	Predominant Field Size	Field Shape	Primary Morphology	Secondary Morphology	Internal Morphology	External Morphology	Field Loss (Since OS 1st Ed)	Boundary Loss

Broad Types Used for HLC RECORDS									
Residential - Non-Estate/Other Housing	Black Country HLC	Surviving road pattern	Street pattern type	Building footprint size	Housing area components	Surviving field bound.	Surviving buildings	Important historic road	
Residential - Detached and Semi-Detached Houses	Birmingham HLC	Surviving road pattern	Street pattern type	Building footprint size	Housing area components	Surviving field bound.	Surviving buildings	Important historic road	
Residential - Flats and Terraced Houses	Birmingham HLC	Surviving road pattern	Street pattern type	Building footprint size	Housing area components	Surviving field bound.	Surviving buildings	Important historic road	
Residential - Mixed Detached/Semis/Terraces/Flats	Birmingham HLC	Surviving road pattern	Street pattern type	Building footprint size	Housing area components	Surviving field bound.	Surviving buildings	Important historic road	
Residential - Farms	Warwickshire HLC	Farm Secondary Attribute	Farm Plan Primary	Farm Plan Secondary	Farm Plan Tertiary	Farmhouse Position	Farmhouse Location	Farmstead Survival	Farmstead Shed
Commercial (incl. Offices, Retail, Wholesale)	Black Country HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Water body type	Over infilled canal		
Industrial - Metal Working (incl. Related Manufacturing)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Industrial - Engineering (incl. Automotive/Trains)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Industrial - Other (Non-Engineering/Metal Working-Related)	Black Country HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Industrial - Mixed/Generic/Unknown Type	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Fields - Enclosed Farmland (excl. Former Commons)	Warwickshire HLC	Predominant Field Size	Field Shape	Primary Morphology	Secondary Morphology	Internal Morphology	External Morphology	Field Loss (Since OS 1st Ed)	Boundary Loss
Fields - Horticultural	Warwickshire HLC	Surviving road pattern	Surviving field bound.	Water body type	Important historic road				
Fields - Enclosed Former Commons/Waste/Open Fields	Birmingham HLC	Surviving road pattern	Surviving field bound.	Water body type	Important historic road				
Fields - Open Commons/Waste/Strip Fields	Black Country HLC	Surviving road pattern	Water body type	Over infilled canal	Important historic road				
Outdoor Recreation/Leisure/Sport	Birmingham HLC	Surviving road pattern	Sports ground type	Sports ground type	Surviving field bound.	Surviving buildings	Important historic road	Water body type	Over infilled canal
Indoor Entertainment/Leisure/Culture/Sport	Birmingham HLC	Surviving buildings	Important historic road						
Educational	Birmingham HLC	Surviving buildings	Water body type	Over infilled canal	Important historic road				
Medical/Social Care/Internment	Birmingham HLC	Surviving buildings	Water body type	Over infilled canal	Important historic road				
Public/Social Institutions/Services/Utilities	Black Country HLC	Surviving buildings	Surviv. field boundaries	Important historic road	Surviving road pattern				
Vacant/(Semi-)Derelict/Disused Land/Buildings	Birmingham HLC	Surviving road pattern	Water body type	Over infilled canal	Important historic road				

Roads (incl. Road Transport)	Birmingham HLC	Water body type	Over infilled canal	Important historic road					
Railways (incl. Rail Transport)	Black Country HLC								
Canals and Manmade Waters (incl. Canal Transport)	Birmingham HLC	Over infilled canal							
Natural Inland Waters	Birmingham HLC	Human intervention							
Religious	Black Country HLC	Surviving buildings	Ancillary religious bldg.	Important historic road					
Woodland	Black Country HLC	Surviving road pattern	Surviving field bound.	Water body type	Important historic road	Primary Morphology			
Military	Black Country HLC	Surviving buildings	Water body type	Over infilled canal	Historic road				
Extractive	Black Country HLC	Surviving road pattern	Water body type	Over infilled canal	Important historic road				
Residential and Mixed/Other Industrial (Non-Engineering/Metal Working-Related)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Street pattern type	Building footprint size	Housing area components	Important historic road	
Residential and Metal Working (incl. Related Manufacturing)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Street pattern type	Building footprint size	Housing area components	Important historic road	
Residential and Engineering (incl. Automotive/Trains)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Street pattern type	Building footprint size	Housing area components	Important historic road	
Residential and Commercial	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road	Housing area components			
Residential and Social/Public/Services/Religious	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Residential and Allotments/Enclosed Fields (excl. Former Commons/Open Fields)	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Residential and Enclosed/Open Commons/Strip Fields	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Residential/Commercial/Industrial and Outdoor Recreation	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Commercial/Industrial/Social and Enclosed Fields	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Important historic road				
Industrial and Commercial	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Residential/Non-Residential and Vacant/(Semi-) Derelict/Disused	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings		Over infilled canal	Important historic road		
Transport and Industrial/Commercial/Extractive	Birmingham HLC	Surviving road pattern	Surviving field bound.	Surviving buildings	Water body type	Over infilled canal	Important historic road		
Enclosed/Open Fields and Outdoor Recreation	Birmingham HLC	Predominant Field Size	Field Shape	Primary Morphology	Secondary Morphology	Internal Morphology	External Morphology	Field Loss (Since OS 1st Ed)	Boundary Loss

## Appendix 8 – List of Attribute Values Attached to HLC Broad Types

Attribute	Attribute Value	Attribute Origin	Attribute	Attribute Value	Attribute Origin
Street pattern type	Regular/straight pattern	Black Country HLC	Sports ground type	Football stadium	Black Country HLC
	Regular/straight pattern, contemporary with houses	Black Country HLC		Football pitch	Black Country HLC
	Regular/straight pattern, predates houses	Black Country HLC		Cricket pitches	Black Country HLC
	Irregular pattern	Black Country HLC		Bowling green	Black Country HLC
	Geometrical pattern, contemporary with houses	Black Country HLC		Horse riding/racing	Black Country HLC
	Cul-de-sac, contemporary with houses	Black Country HLC		Greyhound racing	Black Country HLC
	Multi-headed cul-de-sacs, contemporary with houses	Black Country HLC		Mixed sporting activities (min. 4)	Black Country HLC
	Isolated housing (farms/cottages)	Black Country HLC		Running track	Black Country HLC
	Single road, contemporary with houses	Black Country HLC		Playground	Black Country HLC
	None/not applicable	Black Country HLC		Swimming	Black Country HLC
Important historic road	Important historic road	Birmingham HLC		Tennis court	Black Country HLC
	Ancient country lane	Birmingham HLC		Golf course	Birmingham HLC
	None/not applicable	Birmingham HLC		Other	Black Country HLC
Housing area components	Church, chapel, meeting house	Birmingham HLC		Not specified	Black Country HLC
	Mosque, synagogue, temple	Birmingham HLC		None/not applicable	Black Country HLC
	Public house	Black Country HLC	Water body type	Natural watercourse	Black country HLC
	School, nursery	Black Country HLC		Natural lake	Black Country HLC
	Community centre/social club	Black Country HLC		Ornamental canal	Black Country HLC
	Play ground	Black Country HLC		Ornamental lake	Black Country HLC
	Surgey/medical centre	Black Country HLC		Millpond/leat	Birmingham HLC
	Shops/offices/businesses	Black Country HLC		Pond	Black Country HLC
	None/not applicable	Black Country HLC		Paddling pool	Black Country HLC
				Other	Black Country HLC
Building footprint size	Small houses (below 50 sqm footprint)	Birmingham HLC		None/not applicable	Black Country HLC
	Medium-size houses (50-100 sqm footprint)	Birmingham HLC	Over infilled/covered/ culverted water body	Over infilled/culverted canal, basin, river, pond	Black Country HLC
	Large houses (above 100 sqm footprint)	Birmingham HLC		None/not applicable	Black Country HLC
Ancillary religious buildings	Vicarage	Black Country HLC	Reservoir type	Covered reservoir	Black Country HLC
	Meeting hall	Black Country HLC		Open reservoir	Black Country HLC
	Cemetery lodge	Black Country HLC		None/not applicable	Black Country HLC
	Crematorium	Black Country HLC	Human intervention	Straightened river course	Birmingham HLC
	Mortuary chapel	Black Country HLC		Natural river course	Birmingham HLC
	Sunday school	Black Country HLC		Converted/flooded quarry pit	Birmingham HLC
	None present	Black Country HLC		None/unknown	Birmingham HLC

Attribute	Attribute Value	Attribute Origin
Surviving road/street pattern	Significant	South Yorks HLC
	Partial	South Yorks HLC
	(Almost) invisible	South Yorks HLC
Surviving field pattern/ boundaries	Significant	South Yorks HLC
	Partial	South Yorks HLC
	(Almost) invisible	South Yorks HLC
Surviving buildings/ structures	Significant	South Yorks HLC
	Partial	South Yorks HLC
	(Almost) invisible	South Yorks HLC
Field shape	Rectilinear	Warwickshire HLC
	Irregular	Warwickshire HLC
Predominant field size	Small (below 2 ha)	Warwickshire HLC
	Medium (between 2-8 ha)	Warwickshire HLC
	Large (between 8-15 ha)	Warwickshire HLC
	Very large (above 15 ha)	Warwickshire HLC
External field boundary morphology	Sinuous	Warwickshire HLC
	Following settlement edge	Warwickshire HLC
	Following line of transportation	Warwickshire HLC
	Woodland	Warwickshire HLC
	Following administrative boundary	Warwickshire HLC
	Following water course	Warwickshire HLC
	None	Warwickshire HLC
	Unknown/not measured	Birmingham HLC
Internal field boundary morphology	Dog-leg	Warwickshire HLC
	Reverse S-curve	Warwickshire HLC
	Following water course	Warwickshire HLC
	Co-axial	Warwickshire HLC
	None	Warwickshire HLC
Predominant primary field boundary morphology	Curvilinear	Warwickshire HLC
	Straight	Warwickshire HLC
	Sinuous	Warwickshire HLC
Predominant secondary field boundary morphology	Straight	Warwickshire HLC
	Sinuous	Warwickshire HLC
	Curvilinear	Warwickshire HLC
	None	Warwickshire HLC

Attribute	Attribute Value	Attribute Origin
Percentage of field boundary loss	0%	Warwickshire HLC
	10%	Warwickshire HLC
	20%	Warwickshire HLC
	25%	Warwickshire HLC
	30%	Warwickshire HLC
	40%	Warwickshire HLC
	50%	Warwickshire HLC
	60%	Warwickshire HLC
	70%	Warwickshire HLC
	75%	Warwickshire HLC
	80%	Warwickshire HLC
	90%	Warwickshire HLC
	100%	Warwickshire HLC
	Gain	Warwickshire HLC
	Unknown/not measured	Birmingham HLC
Percentage of fields lost since 1880s	0%	Warwickshire HLC
	10%	Warwickshire HLC
	20%	Warwickshire HLC
	25%	Warwickshire HLC
	30%	Warwickshire HLC
	40%	Warwickshire HLC
	50%	Warwickshire HLC
	60%	Warwickshire HLC
	70%	Warwickshire HLC
	75%	Warwickshire HLC
	80%	Warwickshire HLC
	90%	Warwickshire HLC
	100%	Warwickshire HLC
	Gain	Warwickshire HLC
	Unknown/not measured	Birmingham HLC

Attribute	Attribute Value	Attribute Origin
<b>Farmhouse location primary attribute</b>	Village location	Warwickshire HLC
	Hamlet location	Warwickshire HLC
	Loose farmstead cluster	Warwickshire HLC
	Isolated position	Warwickshire HLC
	Located within a park	Warwickshire HLC
	Shrunken village site	Warwickshire HLC
	Church and manor farm group (or other high status)	Warwickshire HLC
	Urban	Warwickshire HLC
<b>Farmstead secondary attribute</b>	Farmstead identified as a home farm of an estate	Warwickshire HLC
	Farm buildings associated with a mill	Warwickshire HLC
	Farm buildings associated with a manor	Warwickshire HLC
	Farm buildings associated with a rectory	Warwickshire HLC
	Farm buildings associated with the church	Warwickshire HLC
	Farm buildings associated with a public house	Warwickshire HLC
	None known	Warwickshire HLC
<b>Farmhouse position</b>	Attached to agricultural range	Warwickshire HLC
	Detached side on to yard	Warwickshire HLC
	Detached gable on to yard	Warwickshire HLC
	Farmhouse set away from yard	Warwickshire HLC
	Attached to agricultural range - central position	Warwickshire HLC
	Detached farmhouse - central position	Warwickshire HLC
	Uncertain (cannot identify which is farmhouse)	Warwickshire HLC
<b>Farmstead shed</b>	Large modern sheds on site of historic farmstead	Warwickshire HLC
	Large modern sheds to side of historic farmstead	Warwickshire HLC
<b>Farmstead plan type primary attribute</b>	Farm - dispersed plan	Warwickshire HLC
	Farm - loose courtyard	Warwickshire HLC
	Farm - linear	Warwickshire HLC
	Farm - L-plan (attached house)	Warwickshire HLC
	Farm - parallel	Warwickshire HLC
	Farm - regular courtyard	Warwickshire HLC
	Farm - row plan	Warwickshire HLC
	Farm - uncertain	Warwickshire HLC
<b>Farmstead survival</b>	Significant loss - more than 50% change	Warwickshire HLC
	Partial loss - less than 50% change	Warwickshire HLC
	Extant - no apparent alteration	Warwickshire HLC
	Total change - farm survives, complete alteration	Warwickshire HLC
	Farmhouse only survives	Warwickshire HLC
	Farmstead/outfarm/field barn totally demolished	Warwickshire HLC

Attribute	Attribute Value	Attribute Origin
<b>Farmstead plan type secondary attribute</b>	1 side to loose courtyard from farm buildings	Warwickshire HLC
	2 sides to loose courtyard from farm buildings	Warwickshire HLC
	3 sides to loose courtyard from farm buildings	Warwickshire HLC
	4 sides to loose courtyard from farm buildings	Warwickshire HLC
	L3 - L-plan with detached building to third side	Warwickshire HLC
	L4 - L-plan with detached building to fourth side	Warwickshire HLC
	L-plan - regular courtyard	Warwickshire HLC
	U-plan - regular courtyard	Warwickshire HLC
	E-plan - regular courtyard	Warwickshire HLC
	F-plan - regular courtyard	Warwickshire HLC
	H-plan - regular courtyard	Warwickshire HLC
	T-plan - regular courtyard	Warwickshire HLC
	Z-plan - regular courtyard	Warwickshire HLC
	Cluster (dispersed plan)	Warwickshire HLC
	Driftway (dispersed plan)	Warwickshire HLC
	Multiyard (dispersed or regular courtyard)	Warwickshire HLC
	Covered yard	Warwickshire HLC
	Additional detached elements to main plan	Warwickshire HLC
	Presence of small second yard with one main yard	Warwickshire HLC
<b>Farmstead plan type tertiary attribute</b>	L-plan with detached building to third side	Warwickshire HLC
	U-plan - regular courtyard	Warwickshire HLC
	E-plan - regular courtyard	Warwickshire HLC
	F-plan - regular courtyard	Warwickshire HLC
	H-plan - regular courtyard	Warwickshire HLC
	T-plan - regular courtyard	Warwickshire HLC
	Z-plan - regular courtyard	Warwickshire HLC
	Cluster (dispersed plan)	Warwickshire HLC
	Driftway (dispersed plan)	Warwickshire HLC
	Multiyard (dispersed or regular courtyard)	Warwickshire HLC
	Covered yard	Warwickshire HLC
	Additional detached elements to main plan	Warwickshire HLC
	Presence of small second yard with one main yard	Warwickshire HLC
	L-plan with detached building to third side	Warwickshire HLC
	L-plan - regular courtyard	Warwickshire HLC
	1 side to loose courtyard from farm buildings	Warwickshire HLC
	2 sides to loose courtyard from farm buildings	Warwickshire HLC
	3 sides to loose courtyard from farm buildings	Warwickshire HLC
	4 sides to loose courtyard from farm buildings	Warwickshire HLC
	Linear	Warwickshire HLC

## Appendix 9 – List of Individual Types (Sub-Types) Used for Historic Landscape CHARACTER AREAS

Broad Types	CHARACTER AREA Individual Types (Sub-Types)	Type Origin
<b>Residential</b>	Detached houses and (straight-back) semis	Birmingham HLC
	Mainly detached houses, some (straight-back) semis	Birmingham HLC
	Detached houses and tunnel-back semis/terraces	Birmingham HLC
	Detached houses and (straight-back) semis/terraces	Birmingham HLC
	(Straight-back) semis and terraces	Birmingham HLC
	Mainly detached houses/semis, some terraces/flats	Birmingham HLC
	Mainly semis/terraces, some detached houses/flats	Birmingham HLC
	Mixed straight-/tunnel-back semis and terraces	Birmingham HLC
	Tunnel-back terraces and contemporary/later detached houses/semis	Birmingham HLC
	Tunnel-back terraces and later semis/terraces/flats	Birmingham HLC
	Tunnel-back and courtyard (incl. back-to-back) terraces	Birmingham HLC
	Tunnel-back semis/terraces and later detached houses/semis	Birmingham HLC
	Mainly (straight-back) terraces and flats, some semis/tunnel-back terraces	Birmingham HLC
	Semis, (straight-back) terraces and flats	Birmingham HLC
	Mainly semis, some detached houses and flats	Birmingham HLC
	Tunnel-back terraced houses	Birmingham HLC
	Detached houses and straight/tunnel-back semis/terraces	Birmingham HLC
	Mainly detached houses, also semis, terraces and flats	Birmingham HLC
	Villas, detached houses and straight-/tunnel-back semis	Birmingham HLC
	Short/long (straight-back) terraces and low-/high-rise flats	Birmingham HLC
	Mainly semis, terraces and flats, some detached houses	Birmingham HLC
	Mainly detached houses, semis and terraces, some prefabs and flats	Birmingham HLC
	Mainly semis, terraces and low-/high-rise flats, some detached houses	Birmingham HLC
<b>Commercial incl. Offices, Entertainment</b>	Mainly entertainment/culture/events-related premises, also incl. offices/shops/hotels	Birmingham HLC
	Mainly shops/malls/markets, also incl. train/coach stations, offices, amenities	Birmingham HLC
<b>Industrial</b>	Rail/road vehicle manufacture (incl. parts) and other engineering/metal working premises	Birmingham HLC
	Arms/ammunitions manufacture and electrical/other engineering premises	Birmingham HLC
	Arms/vehicles manufacture (incl. parts) and other engineering/metal working premises	Birmingham HLC
<b>Outdoor Recreation/ Leisure/Sport</b>	Mixed sports and recreation facilities/grounds	Birmingham HLC
	Country park, nature reserve	Birmingham HLC
	Medieval deer park	Birmingham HLC
	Rabbit warren (coneygre) and other private grounds	Birmingham HLC
	Private grounds/parkland	Birmingham HLC
<b>Enclosed Fields</b>	Parliamentary/regular enclosed commons/parkland	Birmingham HLC
	Piecemeal enclosed open (strip) fields	Birmingham HLC
	Mixed enclosed and still open commons/waste	Birmingham HLC
	Piecemeal enclosed commons/waste	Birmingham HLC
	Mixed enclosed and open commons/waste/strip fields	Birmingham HLC
	Re-organised field enclosure	Birmingham HLC
	Irregular/piecemeal field enclosure	Birmingham HLC
	Mixed older and newer closes (incl. commons/open fields)	Birmingham HLC
	Mixed regular and irregular enclosed fields	Birmingham HLC
<b>Open Commons/ Waste/Strip Fields</b>	Allotments/gardens and enclosed fields	Birmingham HLC
	Open commons (incl. greens/moors/heaths/waste)	Birmingham HLC
	Open Medieval strip fields	Birmingham HLC
<b>Public/Social Institutions/ Services/Utilities</b>	Open commons/waste and strip fields	Birmingham HLC
	Sewage (treatment) farm/works/plant	Birmingham HLC
	University/college (incl. campus) and shops, amenities	Birmingham HLC
	University/school (incl. campus) and hospital, amenities	Birmingham HLC
	Civic/public buildings and offices, some shops/amenities	Birmingham HLC
<b>Residential and Industrial</b>	Military/dual use airfield/aerodrome	Birmingham HLC
	Courtyard terraces and jewellery/small metalware/(un-)related manufacture (incl. tooling)	Birmingham HLC
	Tunnel-/back-to-back terraces and engineering/metal working premises	Birmingham HLC
	Courtyard (incl. back-to-back) terraces and engineering/metal working premises	Birmingham HLC
	Courtyard (incl. back-to-back) terraces and brick works	Birmingham HLC
	Tunnel-back terraces and engineering/metal working premises	Birmingham HLC
	Semis, straight-/tunnel-back terraces and engineering/metal working premises	Birmingham HLC
	Semis, straight-/tunnel-back terraces and food factory	Birmingham HLC
<b>Residential and Industrial</b>	Courtyard (incl. back-to-back) terraces, offices/amenities and engineering/metal working premises	Birmingham HLC

<b>Residential and Commercial (incl. Social/Public)</b>	Mainly tunnel-back terraces, also shops, amenities	Birmingham HLC
	Detached houses, semis, terraces and shops, offices, amenities	Birmingham HLC
	Semis, terraces, flats and large hospital	Birmingham HLC
<b>Residential, Industrial and Commercial</b>	Houses, amenities and industrial/trading/retail estates/parks	Birmingham HLC
	Mainly tunnel-back terraces, some later housing and industrial/trading estates/parks	Birmingham HLC
	Terraces, semis, flats, shops/amenities and industrial/trading estates/parks	Birmingham HLC
	Jewellery/small metalware/(un-)related manufacture/wholesale/retail, incl. housing, offices, amenities	Birmingham HLC
	Straight-/tunnel-back terraces, flats and industrial/trading estates/parks	Birmingham HLC
	Semis, straight-/tunnel-back terraces and industrial/trading estates/parks	Birmingham HLC
	Tunnel-back terraces, detached houses, semis and works, shops, amenities	Birmingham HLC
	Tunnel-/back-to-back terraces, other housing and works, shops, amenities	Birmingham HLC
	Courtyard (incl. back-to-back) terraces and works, shops, transport, amenities	Birmingham HLC
<b>Residential, Industrial and Social/Public</b>	Tunnel-/back-to-back terraces and works, hospital and prison	Birmingham HLC
	Tunnel-/back-to-back terraces and gas, brick, engineering and railway works	Birmingham HLC
	Tunnel-/back-to-back terraces and gas, water, metal, engineering and railway works	Birmingham HLC
<b>Residential/Non-Residential and Recreational</b>	Semis, terraces, flats and recreation/sports grounds/facilities	Birmingham HLC
	Mainly semis, other housing and recreation/sports grounds/facilities	Birmingham HLC
	Mainly semis, some terraces, industrial premises and recreation/sports grounds/facilities	Birmingham HLC
	Tunnel-back semis/terraces, later housing and recreation/sports grounds/facilities	Birmingham HLC
	Tunnel-back/courtyard terraces and recreation/sports grounds/facilities	Birmingham HLC
	Detached houses, semis, terraces and recreation/sports grounds/facilities	Birmingham HLC
	Detached houses, semis and recreation/sports grounds/facilities	Birmingham HLC
	Reservoir/water works and recreation/sports grounds/facilities	Birmingham HLC
	Detached houses and recreation/sports grounds/facilities	Birmingham HLC
	Detached houses and private parkland	Birmingham HLC
	Detached houses, semis, terraces, flats and recreation/sports grounds/facilities	Birmingham HLC
	Housing, closes/gardens, private parkland and recreation/sports grounds/facilities	Birmingham HLC
	Villas, semis, terraces, closes/gardens and recreation/sports grounds/facilities	Birmingham HLC
	Historic settlement centre and recreation/sports grounds/facilities	Birmingham HLC
	Medieval priory/hospital (incl. grounds) and rabbit warren (coneygre)	Birmingham HLC
<b>Residential/Non-Residential and Vacant/Derelict</b>	Sewage plant and contaminated/reclaimed land	Birmingham HLC
	Houses, trading/industrial estates/parks, recreation grounds/facilities and vacant/(semi-)derelict land	Birmingham HLC
	Industrial/trading estates/parks and vacant/(semi-)derelict land	Birmingham HLC
<b>Residential and Enclosed Fields</b>	Large houses/villas, some cottages and enclosed fields	Birmingham HLC
	Semis, (straight-back) terraces and enclosed fields	Birmingham HLC
	Houses/cottages and open/enclosed fields/commons	Birmingham HLC
	Houses/cottages and enclosed commons/open fields	Birmingham HLC
	Settlement centre and surrounding enclosed fields	Birmingham HLC
	Detached houses, tunnel-back semis/terraces and enclosed fields	Birmingham HLC
	Detached houses, semis and allotments/gardens/closes	Birmingham HLC
	Houses, cottages, terraces and allotments/gardens/closes	Birmingham HLC
	Villas, houses, terraces, works/workshops and allotments/gardens/closes	Birmingham HLC
	Courtyard/back-to-back terraces and allotments/gardens/closes	Birmingham HLC
	Houses, terraces, shops, workshops and allotments/gardens/closes	Birmingham HLC
	Detached houses and allotments/gardens/closes	Birmingham HLC
	Detached houses, semis, terraces and allotments/gardens/closes	Birmingham HLC
	Country house (incl. grounds) and allotments/gardens/closes	Birmingham HLC
	Settlement centre, deer park and enclosed fields	Birmingham HLC
<b>Industrial and Commercial</b>	Town centre (incl. houses, amenities, shops, offices, works, workshops)	Birmingham HLC
	Automotive/other engineering and industrial/trading/retail park/estate	Birmingham HLC
	Industrial/trading/retail premises, some amenities/utilities	Birmingham HLC
	Industrial/trading/retail premises, some houses/amenities	Birmingham HLC
<b>Industrial and Social/ Public Services/ Utilities</b>	Industrial premises and university/college	Birmingham HLC
	Rail/road vehicle manufacturing premises and sewage/gas works	Birmingham HLC
	Civic/public buildings, offices, industrial premises, some shops, amenities	Birmingham HLC
<b>Utilities/Services/ Extractive and Enclosed Fields</b>	Sand/clay/stone quarry and closes/gardens	Birmingham HLC
	Sewage farm and closes/gardens	Birmingham HLC
	Sewage farm, recreation/sports ground and closes/gardens	Birmingham HLC
	Large hospital/asylum and closes/gardens	Birmingham HLC
	Prefabs, large hospital/asylum and closes/gardens	Birmingham HLC
<b>Outdoor Recreation and Enclosed/Open Fields</b>	Private grounds/parkland and mixed enclosed/open land	Birmingham HLC
	Private grounds/parkland and irregular/piecemeal enclosure	Birmingham HLC
	Sports/recreation ground and enclosed fields	Birmingham HLC
	Racecourse, golf course and enclosed fields	Birmingham HLC
	Golf course, recreation grounds and enclosed fields	Birmingham HLC

## Appendix 10 – List of Individual Types (Sub-Types) Used for HLC RECORDS

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
<b>Residential - Non-Estate/ Other Housing</b>	Historic village/hamlet core	Birmingham HLC
	Cottages (single/terrace), vernacular houses	Black Country HLC
	Country house/suburban villa incl. grounds/parkland	Black Country HLC
	(Originally) moated house/hall/farm	Birmingham HLC
	Urban artisans' dwellings	Birmingham HLC
	Sheltered/residential care housing, almshouses	Birmingham HLC
	Prefabricated houses (prefabs)	Birmingham HLC
	Student (incl. nurses) accommodation	Birmingham HLC
	Back gardens (built-on later)	Birmingham HLC
	Caravan/mobile home site (permanent)	Black Country HLC
<b>Residential - Detached and Semi-Detached Houses</b>	Detached houses/bungalows	Birmingham HLC
	Large (detached) house, small villa (incl. grounds)	Birmingham HLC
	(Straight-back) semi-detached houses (incl. bungalows)	Birmingham HLC
	Tunnel-back semi-detached houses	Birmingham HLC
	Straight-/tunnel-back semi-detached houses	Birmingham HLC
	Detached and (straight-back) semi-detached houses	Birmingham HLC
	Detached and tunnel-back semi-detached houses	Birmingham HLC
	Detached houses/semis and large house/small villa	Birmingham HLC
	(Straight-back) semi-detached houses and terraces	Birmingham HLC
	Detached houses and tunnel-back semis/terraces	Birmingham HLC
	Detached houses and straight-back semis/terraces	Birmingham HLC
	Detached houses and straight-/tunnel-back semis	Birmingham HLC
	Detached houses/semis and sheltered/residential care housing	Birmingham HLC
	Detached houses/semis and prefabricated houses	Birmingham HLC
	Detached houses/semis and cottages/vernacular houses	Birmingham HLC
	Farm and detached houses/semis/cottages	Birmingham HLC
<b>Residential - Flats and Terraced Houses</b>	Short rows of (straight-back) terraced houses	Birmingham HLC
	Long rows of (straight-back) terraced houses	Birmingham HLC
	Short/long rows of (straight-back) terraced houses	Birmingham HLC
	Tunnel-back terraced houses	Black Country HLC
	Straight- and tunnel-back terraced houses	Birmingham HLC
	Upmarket terraced houses	Birmingham HLC
	Courtyard/street-facing terraces (incl. back-to-backs)	Black Country HLC
	Street-facing, courtyard and tunnel-back terraces	Birmingham HLC
	Tunnel-back semis and terraces	Birmingham HLC
	Tunnel-back terraces and cottages/vernacular houses	Birmingham HLC
	Mixed/courtyard/tunnel-back terraces and prefabricated houses	Birmingham HLC
	(Straight-back) terraces and sheltered/residential care housing	Birmingham HLC
	Courtyard/street-facing terraces and sheltered/residential care housing	Birmingham HLC
	Mixed/tunnel-back terraces and sheltered/residential care housing	Birmingham HLC
	Low-rise flats (incl. maisonettes)	Black Country HLC
	High-rise flats (incl. tower blocks)	Black Country HLC
	Mixed high and low-rise flats (incl. maisonettes)	Birmingham HLC
	(Straight-back) terraces and low-rise flats (incl. maisonettes)	Birmingham HLC
	(Straight-back) terraces and high-rise flats	Black Country HLC
	(Straight-back) terraces and high-/low-rise flats	Birmingham HLC
	(Straight-back) semis/terraces and low-rise flats	Birmingham HLC
	(Straight-back) semis/terraces and high/low-rise flats	Birmingham HLC
	Straight-/tunnel-back terraces and low-rise flats	Birmingham HLC
	Straight-/tunnel-back semis/terraces and low-rise flats	Birmingham HLC
	Tunnel-back terraces and low-rise flats	Birmingham HLC
	Flats (incl. maisonettes) and sheltered/residential care housing	Birmingham HLC
	(Straight-back) terraces/flats and prefabs	Birmingham HLC
	Flats (incl. maisonettes) and cottages/vernacular houses	Birmingham HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
<b>Residential - Mixed Detached/Semis/Terraces/ Flats</b>	Detached and (straight-back) terraced houses	Black Country HLC
	Detached and tunnel-back terraced houses	Birmingham HLC
	Detached and straight-/tunnel-back terraced houses	Birmingham HLC
	Detached houses and flats (incl. maisonettes)	Birmingham HLC
	Detached houses, semis and tunnel-back terraces	Birmingham HLC
	Detached houses, semis and low-rise flats (incl. maisonettes)	Birmingham HLC
	Detached houses, semis, terraces and flats	Birmingham HLC
	Detached houses, (straight-back) terraces and flats	Birmingham HLC
	Detached houses, tunnel-back terraces and flats	Birmingham HLC
	Large house/small villa and tunnel-back terraces	Birmingham HLC
	Large house/small villa and mixed houses/cottages	Birmingham HLC
	(Straight-back) semis and courtyard/tunnel-back terraces	Birmingham HLC
	(Straight-back) semis and tunnel-back terraces	Birmingham HLC
	(Straight-back) semis and low-rise flats (incl. maisonettes)	Birmingham HLC
	(Straight-back) semis and high-/low-rise flats	Birmingham HLC
	Straight-/tunnel-back semis and terraces	Birmingham HLC
	Tunnel-back semis and (straight-back) terraces	Birmingham HLC
	Mixed/non-tunnel-back semis/terraces and sheltered/residential care housing	Birmingham HLC
<b>Residential - Farms</b>	Farm complex - Complete (incl. grounds/cottages)	Black Country HLC
	Farm complex - Outfarm	Warwickshire HLC
	Farm complex - Field Barn	Warwickshire HLC
	Farm complex - Smallholding	Warwickshire HLC
	Converted farm house/buildings	Birmingham HLC
<b>Commercial (incl. Offices, Retail, Wholesale)</b>	Shops, offices, workshops (incl. houses, amenities)	Birmingham HLC
	Shops, offices, workshops, amenities/entertainment	Birmingham HLC
	Shops, amenities/entertainment	Birmingham HLC
	Shopping centre/mall	Black Country HLC
	Large retail/wholesale premises (incl. supermarket)	Black Country HLC
	Large retail/wholesale premises (partly-)converted	Birmingham HLC
	Retail park	Black Country HLC
	Offices, amenities/entertainment	Black Country HLC
	Offices and hotel/inn	Birmingham HLC
	Hotel, inn, small conference centre	Birmingham HLC
	Large conference centre, exhibition hall	Birmingham HLC
	Vehicle hire/sales (incl. car showroom)	Birmingham HLC
	Vehicle repairs/refuel (garage, petrol station)	Birmingham HLC
	Builders yard/merchant, DIY store, tool/plant hire	Birmingham HLC
	Market	Black Country HLC
	Plant/tree nursery, garden centre	Black Country HLC
	Shopping precinct/area (within housing estate)	Birmingham HLC
	Creative, design and media (studios, galleries etc.)	Birmingham HLC
	Document management, (self-)storage depot	Birmingham HLC
	Haulage, logistics, removals, distribution centre	Birmingham HLC
	Commercial laundry, linen hire	Birmingham HLC
	Other commercial site	Black Country HLC
<b>Industrial - Metal Working (incl. Related Manufacturing)</b>	Metal works (mixed/generic/unknown)	Black Country HLC
	Brass/bronze/nickel works/foundry/forge	Birmingham HLC
	Iron works/foundry/forge	Birmingham HLC
	Steel plant	Birmingham HLC
	Aluminium/titanium plant	Birmingham HLC
	Rolling mill, tube/sheet metal works	Birmingham HLC
	Wire drawing, slitting mill	Birmingham HLC
	Edge/blade/spade/grinding mill/works	Birmingham HLC
	Presswork, drop stamping/forging	Birmingham HLC
	Nails, nuts, bolts, screws, fasteners, pins	Birmingham HLC
	Ball/roller bearings	Birmingham HLC
	Jewellery/pens/buttons/coins and related manufacturing (incl. tooling)	Birmingham HLC
	Extruding works	Birmingham HLC
	Metal surface coatings, electroplating works	Birmingham HLC
	Metal recycling site, scrapyard	Black Country HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
<b>Industrial - Engineering (incl. Rail/Road Vehicle Manufacture)</b>	Engineering (mixed/generic/unknown type)	Black Country HLC
	Mixed engineering and metal works	Birmingham HLC
	Mechanical/hydraulic engineering	Birmingham HLC
	Electrical/electronic engineering	Birmingham HLC
	Machine/power/hand tools manufacture	Birmingham HLC
	Precision engineering	Birmingham HLC
	Pumps/engines/boilers/compressors manufacture	Birmingham HLC
	Locks/safes manufacturing	Black Country HLC
	House/garden appliances	Birmingham HLC
	Arms, ammunitions, explosives (incl. fireworks)	Birmingham HLC
	Arms/ammunitions and other engineering/metalworking	Birmingham HLC
	Arms/ammunitions and bicycles/motorcycles	Birmingham HLC
	Refrigeration equipment	Birmingham HLC
	Car/bus/truck manufacturing/repair	Birmingham HLC
	Railway engine/carriage manufacturing/repair	Birmingham HLC
	Motorbike/bicycle manufacturing/repair	Birmingham HLC
	Aviation/aerospace (incl. parts/components/tooling)	Birmingham HLC
	Automotive components/accessories	Birmingham HLC
<b>Industrial - Other (Non-Engineering/Metal Working-Related)</b>	Chemicals (incl. paint/glue/varnish/size/soap/acid)	Black Country HLC
	Plastics	Birmingham HLC
	Rubber/tyre factory	Black Country HLC
	Medical, pharmaceutical and optical (incl. equipment)	Birmingham HLC
	Food/drinks manufacture (excl. brewery/malting/water mill)	Birmingham HLC
	Beer/vinegar brewery, maltings, cider maker	Black Country HLC
	Water mill (corn/flour/unknown use, incl. millpond)	Birmingham HLC
	Clothing, textiles (incl. medical), fulling mill	Black Country HLC
	Leather manufacturing (incl. tannery)	Black Country HLC
	Rope, hemp, brush works	Black Country HLC
	Paper/cardboard/packaging manufacturing/recycling	Birmingham HLC
	Printing/publishing works	Birmingham HLC
	Sports goods manufacturing	Birmingham HLC
	Glass works	Black Country HLC
	Brick/tile works (incl. associated clay pits/kilns)	Black Country HLC
	Cement/concrete/asphalt factory	Black Country HLC
	Lime/calcium carbonate (PCC) works	Black Country HLC
	Timber yard, saw mill, joinery, furniture works	Black Country HLC
	Construction incl. (shop)fitting/builders' compound	Birmingham HLC
	Coal yard/dump	Birmingham HLC
	Industrial storage facility/depot/yard	Birmingham HLC
<b>Industrial - Mixed/Generic/Unknown Type</b>	Works, warehouse, depot, trading (mixed/generic)	Black Country HLC
	Workshops	Black Country HLC
	Early industrial site (unspecified)	Black Country HLC
<b>Fields - Enclosed Farmland (excl. Former Commons)</b>	Irregular/piecemeal enclosure (incl. confirmed arable)	Black Country HLC
	Regular/planned enclosure (incl. confirmed arable)	Black Country HLC
	Enclosed meadow/pasture/floodplain (incl. confirmed land use)	Birmingham HLC
	Re-organised irregular/rectilinear field enclosure	Warwickshire HLC
	Crofts, paddocks, closes (incl. squatter enclosure)	Black Country HLC
	Burgages, other small regular house/garden plots	Birmingham HLC
	Demesne/glebe (where mapped)	Birmingham HLC
	Other/unknown field enclosure type	Black Country HLC
<b>Fields - Horticultural</b>	Allotments, small gardens	Birmingham HLC
	Orchards	Black Country HLC
	Allotments/gardens and irregular/piecemeal enclosure	Birmingham HLC
	Allotments/gardens/closes and woodland	Birmingham HLC
	Allotments/gardens/closes and sports/recreation field	Birmingham HLC
<b>Fields - Enclosed Former Commons/Waste/Open Fields</b>	Parliamentary/regular enclosed commons/greens	Birmingham HLC
	Parliamentary/regular enclosed open strip fields	Birmingham HLC
	Piecemeal/irregular enclosed commons	Birmingham HLC
	Piecemeal/irregular enclosed open fields	Birmingham HLC
	Waste/woodland clearance (assarts)	Warwickshire HLC
	Mixed enclosed and open commons/waste	Birmingham HLC
	Fully enclosed former commons and strip fields	Birmingham HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
<b>Fields - Open Commons/ Waste/Strip Fields</b>	Ancient commons (incl. greens/moors/heaths)	Black Country HLC
	Open (strip) fields	Black Country HLC
	Mixed open (strip) fields and commons/waste	Birmingham HLC
<b>Outdoor Recreation/Leisure/Sport</b>	Recreation ground (incl. other public green spaces)	Birmingham HLC
	Sports ground/club/facility, playing fields	Black Country HLC
	Mixed sports and recreation facilities/grounds	Birmingham HLC
	Sports stadium/arena	Black Country HLC
	Public park	Black Country HLC
	Public garden/square	Black Country HLC
	Country park, nature reserve	Black Country HLC
	Adventure/amusement park, pleasure grounds	Birmingham HLC
	Equestrian facility (racecourse, riding school, livery)	Black Country HLC
	Golf course	Black Country HLC
	Open air swimming pool (lido)	Birmingham HLC
	Botanical garden, zoo	Black Country HLC
	Open air museum, historical site	Birmingham HLC
	Urban farm	Birmingham HLC
	Private (landscaped) grounds, parkland	Black Country HLC
	Deer park, rabbit warren (coneygre), fox covert	Black Country HLC
<b>Enclosed/Open Fields and Outdoor Recreation</b>	Sports/recreation field and enclosed fields	Birmingham HLC
	Private grounds/parkland and enclosed/open land	Birmingham HLC
<b>Indoor Entertainment/ Leisure/Culture/Sport</b>	Indoor entertainment area/district/complex	Birmingham HLC
	Community centre, social club, meeting hall	Black Country HLC
	Indoor arena, large hall	Birmingham HLC
	Leisure/sports centre	Black Country HLC
	Cinema	Black Country HLC
	Theatre, concert hall, large night club	Black Country HLC
	Museum, art gallery	Birmingham HLC
	Library	Black Country HLC
	Pub, inn, restaurant	Black Country HLC
	Swimming pool, public baths	Birmingham HLC
	Other indoor entertainment site	Birmingham HLC
<b>Educational</b>	School, academy, sixth form college	Black Country HLC
	University, polytechnic school, higher education college	Black Country HLC
	School/college and church/chapel/convent	Birmingham HLC
	Day nursery	Birmingham HLC
<b>Medical/Social Care/Internment</b>	Hospital, sanatorium, asylum	Birmingham HLC
	Medical/health/day centre/clinic/practice	Birmingham HLC
	Workhouse, orphanage, refuge, home, probation hostel	Black Country HLC
<b>Public/Social Institutions/ Services/Utilities</b>	Mixed public/social/educational/entertainment/religious facilities	Black Country HLC
	(Local) government buildings/offices (incl. town hall)	Black Country HLC
	Town hall and museum/school/art gallery	Birmingham HLC
	Council/Corporation yard/depot/store/wharf	Birmingham HLC
	Courts building (incl. shops, entertainment)	Black Country HLC
	Police/fire/ambulance station	Black Country HLC
	Prison	Birmingham HLC
	Royal Mail depot, sorting office, office building	Birmingham HLC
	Telecommunications (incl. telephone/radio/TV)	Black Country HLC
	Gas works/holder	Black Country HLC
	Water works, pumping station, covered reservoir	Birmingham HLC
	Sewage farm/works/plant	Birmingham HLC
	Electricity power/sub-station	Black Country HLC
	Waste/rubble disposal/recycling (incl. refuse tip)	Birmingham HLC
	Utility maintenance/servicing/administrative facilities	Birmingham HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
Vacant/(Semi-)Derelict/ Disused Land/Buildings	Rough grass/scrubland (with/without trees)	Black Country HLC
	Vacant plot (incl. back gardens built on later)	Black Country HLC
	Disused/derelict site (with/without buildings/vegetation)	Black Country HLC
	Disused/derelict industrial site (with buildings)	Birmingham HLC
	Disused/derelict non-industrial buildings	Birmingham HLC
	Vacant/derelict farm/country house buildings/site	Birmingham HLC
	Disused clay/gravel/sand/stone quarry/pit	Black Country HLC
	Disused/derelict brick/tile works (incl. clay pits)	Birmingham HLC
	Disused colliery	Black Country HLC
	Contaminated land previously used for sewage treatment	Birmingham HLC
	Disused/derelict railway station/tracks/sidings	Black Country HLC
	Disused canal	Black Country HLC
Roads (incl. Road Transport)	Dual carriageway, motorway (incl. pre-existing road)	Birmingham HLC
	Major roundabout/junction	Black Country HLC
	Car park	Black Country HLC
	Public transport station/terminus	Black Country HLC
	Public transport depot	Black Country HLC
	Service station, road maintenance depot	Black Country HLC
	Important historic road	Birmingham HLC
Railways (incl. Rail Transport)	Railway line	Black Country HLC
	Combined railway/tramway (metro) line	Birmingham HLC
	Railway sidings	Black Country HLC
	Railway shed and service buildings	Birmingham HLC
	Train station	Black Country HLC
	Goods station, freight terminal	Birmingham HLC
	Goods station/sidings/shed and canal wharf	Birmingham HLC
Canals and Manmade Waters (incl. Canal Transport)	Canal	Black Country HLC
	Canal basin/wharf/marina	Birmingham HLC
	Reservoir, pond, pool (incl. banks)	Black Country HLC
	Reservoir/pond/pool and enclosed meadow/pasture/moor	Birmingham HLC
	Reservoir/pond/pool and open common/heath/moor	Birmingham HLC
Natural Inland Waters	River (wider, incl. banks/floodplain)	Birmingham HLC
	Natural lake, pond, pool (incl. banks)	Birmingham HLC
	Marsh	Black Country HLC
Religious	Anglican church, chapel, cathedral	Black Country HLC
	Other religious buildings (vicarage, church hall)	Birmingham HLC
	Non-conformist church, chapel	Black Country HLC
	Roman Catholic church, chapel, cathedral	Black Country HLC
	Eastern Orthodox church, chapel	Birmingham HLC
	Abbey, priory, convent, monastery, nunnery	Black Country HLC
	Hindu temple (incl. Hindu-derived)	Black Country HLC
	Islamic mosque	Black Country HLC
	Jewish synagogue	Black Country HLC
	Sikh temple	Black Country HLC
	Cemetery, crematorium, graveyard extension	Black Country HLC
	Cemetery & quarry/pit	Birmingham HLC
Woodland	Woodland (unspecified)	Birmingham HLC
	Deciduous woodland	Black Country HLC
	Plantation (incl. for screening)	Black Country HLC
	Mixed woodland	Black Country HLC
	Ancient woodland	Black Country HLC
	Osier bed	Black Country HLC
Military	Military barracks/camp/depot	Birmingham HLC
	Military/dual use airfield, RAF base	Black Country HLC
	Territorial Army, sea/air cadets centre	Black Country HLC
	Rifle range	Black Country HLC
	Fortification, castle (in military use)	Birmingham HLC
Extractive	Clay/gravel/sand quarry/pit	Black Country HLC
	Colliery	Black Country HLC
	Mine	Black Country HLC
	(Stone) quarry	Black Country HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
<b>Residential and Mixed/ Other Industrial (Non-Engineering/ Metal Working-Related)</b>	Courtyard terraces (incl. shops) and mixed industry	Birmingham HLC
	Tunnel-back terraces (incl. shops) and mixed industry	Birmingham HLC
	Courtyard/tunnel-back terraces (incl. shops) and mixed industry	Birmingham HLC
	Mixed/non-terraced housing and mixed industry	Birmingham HLC
	Courtyard terraces and brickworks/quarry/pit	Birmingham HLC
	Tunnel-back terraces and brickworks/quarry/pit	Birmingham HLC
	Courtyard/tunnel-back terraces and brickworks/quarry/pit	Birmingham HLC
	Cottages/houses/farm and brickworks/quarry/pit	Birmingham HLC
	Courtyard terraces and brewery/malthouse	Birmingham HLC
	Tunnel-back semis/terraces and brewery/malthouse	Birmingham HLC
	Courtyard/tunnel-back terraces and brewery/malthouse	Birmingham HLC
	Mixed/non-terraced housing and brewery/malthouse	Birmingham HLC
	Courtyard terraces and chemical/plastics factory	Birmingham HLC
	Tunnel-back terraces and chemical/plastics factory	Birmingham HLC
	Courtyard/tunnel-back terraces and chemical/plastics factory	Birmingham HLC
	Mixed/non-terraced housing and chemical/plastics factory	Birmingham HLC
	Courtyard terraces and food/drinks factory	Birmingham HLC
	Tunnel-back terraces and food/drinks factory	Birmingham HLC
	Courtyard/tunnel-back terraces and food/drink works	Birmingham HLC
	Mixed/non-terraced housing and food/drink works	Birmingham HLC
	Courtyard terraces and sawmill/joinery works	Birmingham HLC
	Tunnel-back terraces and sawmill/joinery works	Birmingham HLC
	Courtyard/tunnel-back terraces and sawmill/joinery works	Birmingham HLC
	Mixed/non-terraced housing and sawmill/joinery works	Birmingham HLC
	Tunnel-back terraces and glass works	Birmingham HLC
	Courtyard/tunnel-back terraces and glass works	Birmingham HLC
	Tunnel-back terraces and rope walk	Birmingham HLC
<b>Residential and Metal Working (incl. Related Manufacturing)</b>	Courtyard terraces and mixed metal works	Birmingham HLC
	Tunnel-back semis/terraces and mixed metal works	Birmingham HLC
	Courtyard/tunnel-back terraces and mixed metal works	Birmingham HLC
	Courtyard terraces, shops and jewellery/small metalware manufacture	Birmingham HLC
	Tunnel-back terraces, shops and jewellery/small metalware manufacture	Birmingham HLC
	Courtyard/tunnel-back terraces and jewellery/small metalware manufacture	Birmingham HLC
	Courtyard terraces and brass works/foundry	Birmingham HLC
	Tunnel-back terraces and brass works/foundry	Birmingham HLC
	Courtyard/tunnel-back terraces and brass works/foundry	Birmingham HLC
	Courtyard terraces and iron works/foundry	Birmingham HLC
	Tunnel-back terraces and iron works/foundry	Birmingham HLC
	Courtyard terraces and plating/galvanising works	Birmingham HLC
	Country house/villa and rolling/wire/boring mill	Birmingham HLC
	Courtyard terraces and rolling/wire/screw mill	Birmingham HLC
	Tunnel-back terraces and rolling/wire/screw mill	Birmingham HLC
	Courtyard/tunnel-back terraces and rolling/wire/screw mill	Birmingham HLC
	Courtyard/tunnel-back terraces and pressworks	Birmingham HLC
	Tunnel-back terraces and scrapyards	Birmingham HLC
<b>Residential and Engineering (incl. Rail/Road Vehicle Manufacture)</b>	Courtyard terraces and generic/mixed engineering	Birmingham HLC
	Tunnel-back terraces and generic/mixed engineering	Birmingham HLC
	Courtyard/tunnel-back terraces and generic/mixed engineering	Birmingham HLC
	Detached houses/semis/terraces/flats and generic/mixed engineering	Birmingham HLC
	Courtyard terraces and arms/ammunitions factory	Birmingham HLC
	Tunnel-back terraces and arms/ammunitions factory	Birmingham HLC
	Courtyard/tunnel-back terraces and arms/ammunitions factory	Birmingham HLC
	Courtyard (incl. back-to-back) terraces and rail/road vehicle manufacture (incl. parts)	Birmingham HLC
	Tunnel-back terraces and rail/road vehicles manufacture (incl. parts/accessories)	Birmingham HLC
	Courtyard/tunnel-back terraces and rail/road vehicle manufacture (incl. parts/accessories)	Birmingham HLC
	Courtyard/tunnel-back terraces and lock works	Birmingham HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
<b>Residential and Commercial</b>	Historic urban core incl. houses/shops/workshops	Birmingham HLC
	Detached houses/semis and shops/workshops/amenities	Birmingham HLC
	Detached houses/semis and offices/amenities	Birmingham HLC
	(Straight-back) terraces and shops/workshops/amenities	Birmingham HLC
	Courtyard/street-facing terraces and shops/workshops/amenities	Birmingham HLC
	Tunnel-back terraces and shops/workshops/amenities	Birmingham HLC
	(Straight-back) terraces, flats and shops/workshops/amenities	Birmingham HLC
	High-/low-rise flats and shops/offices/amenities/entertainment	Birmingham HLC
	Mixed/other houses and shops/workshops/offices/amenities	Birmingham HLC
	Straight-/tunnel-back terraces and industrial laundry	Birmingham HLC
	Detached houses/semis and garden/tree nursery	Birmingham HLC
	Tunnel-back/street-facing terraces and garden/tree nursery	Birmingham HLC
	Mixed/other houses and garden/tree nursery	Birmingham HLC
	Housing and pub/inn/restaurant/hotel	Birmingham HLC
	Student housing and warehouse/works/offices	Birmingham HLC
	Courtyard/tunnel-back terraces and transport depot	Birmingham HLC
	Tunnel-back semis/terraces and railway sidings/goods station	Birmingham HLC
	Courtyard/tunnel-back terraces, canal wharf and works/warehouse	Birmingham HLC
<b>Residential and Social/ Public/Services/Religious</b>	Housing and Council/Corporation offices/depot/yard/wharf	Birmingham HLC
	Housing and medical centre	Birmingham HLC
	Courtyard/tunnel-back terraces and school/college	Birmingham HLC
	Detached houses/semis/(straight-back) terraces and school/college	Birmingham HLC
	High-/low-rise flats and school/college	Birmingham HLC
	Housing and church/chapel	Birmingham HLC
<b>Residential and Allotments/ Enclosed Fields (excl. Former Commons/ Open Fields)</b>	Cottages/houses and irregular/piecemeal enclosed fields	Birmingham HLC
	Cottages/houses and enclosed meadow/pasture/moor/heath	Birmingham HLC
	Cottages/houses and regular/planned enclosed fields	Birmingham HLC
	Cottages/houses and crofts/closes/allotments/gardens	Birmingham HLC
	Cottages/houses/farm and woodland	Birmingham HLC
	Farm and irregular/piecemeal enclosed fields	Birmingham HLC
	Farm and regular/planned enclosed fields	Birmingham HLC
	Farm and enclosed meadow/pasture/moor/heath	Birmingham HLC
	Country house/large villa (incl. grounds) and allotments/gardens/closes	Birmingham HLC
	Large house/small villa and allotments/gardens/closes	Birmingham HLC
	Detached houses/semis and allotments/gardens/closes	Birmingham HLC
	(Straight-back) semis/terraces and allotments/gardens/closes	Birmingham HLC
	Tunnel-back semis/terraces and allotments/gardens/closes	Birmingham HLC
	Straight-/tunnel-back terraces and allotments/gardens/closes	Birmingham HLC
	Courtyard/street-facing terraces and allotments/gardens/closes	Birmingham HLC
	Almshouses and allotments/gardens/closes	Birmingham HLC
	Prefabs and allotments/gardens/closes	Birmingham HLC
<b>Residential and Enclosed/ Open Commons/Strip Fields</b>	Cottages/houses and enclosed commons/greens	Birmingham HLC
	Cottages/houses and enclosed former open fields	Birmingham HLC
	Cottages/houses/farm and open commons	Birmingham HLC
	Cottages/houses/farm and open (strip) fields	Birmingham HLC
	Farm and enclosed former open (strip) fields	Birmingham HLC
	Farm and enclosed commons/greens	Birmingham HLC
	Country house, enclosed fields and open commons	Birmingham HLC
<b>Residential/Commercial/ Industrial and Outdoor Recreation</b>	Housing and outdoor sports/recreation facilities	Birmingham HLC
	Straight/tunnel-back terraces and sports/recreation facilities	Birmingham HLC
	Prefabs and sports/recreation facilities	Birmingham HLC
	Mixed/generic industry and sports/recreation facilities	Birmingham HLC
	Tunnel-back terraces, industry and sports/recreation facilities	Birmingham HLC
	Cottages/houses and private grounds/parkland	Birmingham HLC
	Pub/restaurant/inn and town/country park	Birmingham HLC
<b>Commercial/Industrial/ Social and Enclosed Fields</b>	Sand/clay/stone quarry and allotments/gardens/closes	Birmingham HLC
	Church/chapel and enclosed field/meadow/pasture	Birmingham HLC
	School and enclosed field/meadow/pasture	Birmingham HLC
	Pub/malthouse/inn/shops and allotments/gardens/closes	Birmingham HLC
	Tree/garden nursery and allotments/gardens/closes	Birmingham HLC
	Goods station/sidings/shed and allotments/gardens	Birmingham HLC

Broad Types	HLC RECORD Individual Types (Sub-Types)	Type Origin
Industrial and Commercial	Business/trading/industrial estate (mixed units)	Black Country HLC
	Business/trading/industrial estate (regular units)	Birmingham HLC
	Business/trading/industrial estate (converted)	Birmingham HLC
	Printing, publishing (incl. associated trades)	Birmingham HLC
	Research/technology/business park	Birmingham HLC
	Shops, offices, works, warehouse (incl. amenities)	Birmingham HLC
	Jewellery/small metalwork/(un-)related workshops/offices (incl. amenities, excl. shops)	Birmingham HLC
	Jewellery/small metalwork/(un-)related shops/workshops/offices (incl. amenities)	Birmingham HLC
	Offices, works, warehouse, trading (mixed/generic)	Birmingham HLC
Residential/Non-Residential and Vacant/(Semi-)Derelict/Disused	Works/warehouse/depot and vacant/(semi-)derelict land	Birmingham HLC
	Shops/houses/amenities and vacant/(semi-)derelict land	Birmingham HLC
	Offices/social/amenities and vacant/(semi-)derelict land	Birmingham HLC
	Shops/offices/amenities and vacant/(semi-)derelict land	Birmingham HLC
	Straight-/tunnel-back terraces and vacant/(semi-)derelict land	Birmingham HLC
	Detached houses/semis/flats and vacant/(semi-)derelict land	Birmingham HLC
Transport and Industrial/Commercial/Extractive	Works/warehouse/depot/trading and canal wharf	Birmingham HLC
	Metal works (mixed/generic) and canal wharf	Birmingham HLC
	Rolling mill/tube works and canal wharf	Birmingham HLC
	Wire works/slitting mill and canal wharf	Birmingham HLC
	Electroplating works and canal wharf	Birmingham HLC
	Clay/gravel/sand quarry/pit and canal wharf	Birmingham HLC
	Industrial premises and railway line/sidings	Birmingham HLC
	Commercial premises (offices/shops/hotel) and train station	Birmingham HLC
	Major roundabout/junction, offices and car park	Birmingham HLC

## Appendix 11 – List of Early (Pre-1880) Historic Maps and Plans Used

*(The list only includes earlier maps – and just the most useful ones – as the maps from the 1<sup>st</sup> Edition OS onwards are discussed at length in the main body of this report)*

Type	Date	Area Covered	Map Author	Notes
County maps	1682	Staffordshire	Browne	
	1725	Warwickshire	Beighton	
	1772	Worcestershire	Taylor	
	1775	Staffordshire	Yates	
	1793	Warwickshire	Yates	
	1820	Warwickshire	Greenwood	
	1820	Worcestershire	Greenwood	
Estate/ manor/ parish maps	Medieval	Birmingham	George Demidowicz	Historical reconstruction.
	1583	Minworth	Re-traced by Normal Granville evans in 1971.	Too inaccurate to geo-reference itself, but field contours saved (and used) as separate GIS layer.
	1701	Edgbaston	William Deeley	
	1718	Edgbaston	Humphrey Sparry	
	1758	Aston	John Tomlinson	
	1758	Duddeston	John Tomlinson	Incl. Nechells.
	1759	Little Bromwich	John Tomlinson	Incl. Ward End & Alum Rock.
	1760	Bordesley	John Tomlinson	
	1760	Erdington	John Tomlinson	
	1760	Saltley	John Tomlinson	Incl. Washwood Heath.
	1760	Witton	John Tomlinson	
	1765	Barcroft Meadow (Minworth)	John Snape	Adderley/Bridgeman estates.
	1765	Sutton Coldfield	John Snape	Farms and lands of Andrews Hacket.
	c.1770	Moseley		
	1779	Birmingham	John Snape	
	1790	Harborne	James Sheriff	
	1794	Handsworth and Perry Barr	Samuel Botham	Separate maps for Handsworth and Perry Barr.
	1795	Perry Barr	Samuel Botham	Perry Barr Manor Estates.
	c. 1800	Handsworth	Samuel Botham	Handsworth Manor Estates.
	1802	Castle Bromwich	Hitchcock	
	1806	Sutton Coldfield		Digby estates.
	c.1805	Soho Heath (Handsworth)		
	1810	Minworth		
	1810	Birmingham	John Kempson	
	1813	West Birchfield (Handsworth)	Ebenezer Robins	Land West of Birchfield Rd. and South of Tame, to be sold off in lots.
	1824	Sutton Coldfield		Corn rent map.
	1827	Edgbaston		
	1835	Selly Hall		Produced when estate was sold off in lots.
	1838	Lea Hall		Produced when estate was sold off in lots.
	1840	Curdworth (incl. surroundings)		"Estates in the Parishes of Curdworth & Sutton Coldfield and in the Hamlets of Water Orton and Castle Bromwich".

Type	Date	Area Covered	Map Author	Notes
Enclosure maps	1792	Handsworth Heath	Samuel Botham	Two separate maps.
	1798	Birmingham	John Snape	
	1805	Erdington	Thomas Hunt	Incl. Witton.
	1813	Sheldon		Enclosure contours saved as separate GIS layer.
	1817	Saltley		Incl. Washwood Heath. Enclosure marked on 1833 tithe map.
	1818	Aldridge		Little Aston Common area.
	1828	Cofton Hackett/Common		
	1847	Yardley (parish)		Actual enclosure carried out ca. 1832-33.
	1851	Sutton Coldfield		Actual enclosure carried out ca. 1825-26.
Tithe maps	1833	Aston (parish)	William Fowler	
	1839	Bickenhill		
	1839	Cofton Hackett	John Walker	
	1840	King's Norton	John Walker	
	1840	Northfield	Oates & Perrens	
	1840	Sheldon		
	1842	Frankley		
	1842	Harborne		
	1843	Handsworth and Perry Barr		Separate maps for Handsworth and Perry Barr.
	1843	Yardley (parish)		
	1844-45	Quinton		Separate maps for Ridgacre and Warley Wigorn manors.
	1845	Birmingham		For St. Martin & St. George parishes.
	1848	Aston (parish)	John Walker	Used 1833 map instead.
	1857	Edgbaston		Library of Birmingham original too fragile to scan.
	1857	Sutton Coldfield	Spooner	Valuation map.
Town/village plans	1296, 1344	Birmingham	George Demidowicz	Historical reconstructions. 1344 version used.
	1553	Birmingham	James Hill	Historical reconstruction.
	1731	Birmingham	William Westley	
	1750	Birmingham	Samuel Bradford	
	c. 1760	Sutton Coldfield	James Hill	Historical reconstruction.
	1778	Birmingham	Thomas Hanson	
	1795	Birmingham	Charles Pye	
	1805	Birmingham	James Sheriff	
	1808	Birmingham	John Kempson	
	1819, 1825	Birmingham	James Drake	1819 original in black & white, 1825 in colour.
	1825	Birmingham	John Pigott Smith	Surveyed in 1824-25, published in 1828 by Beilby & Knott.
	1831-32	Birmingham	Robert Dawson	Published by Underwood & Hill.
	1832	Birmingham	Reform Map	
	1834	Harborne	John Newey	2 maps, village centre by Newey.
	1839	Birmingham		Published by the Society for the Diffusion of Useful Knowledge.
	1851	Birmingham	John Tallis	
	1855	Birmingham	John Pigott Smith	Incomplete scan coverage.
	1860	Sutton Coldfield		
	1866	Birmingham	Archibold Fullarton	
Other maps	1779	Sutton Park	John Snape	
	1808	Birmingham	James Sheriff	Moats area plan.
	c. 1810	Plantsbrook (Minworth)		
	1815-17	OS Surveyors' Drawings (1 in)		
	1857	Birmingham and Its Environs	Charles H. Blood	
	1886	Tame Valley Sewage Farms		Published by the Birmingham, Tame and Rea District Drainage Board.