

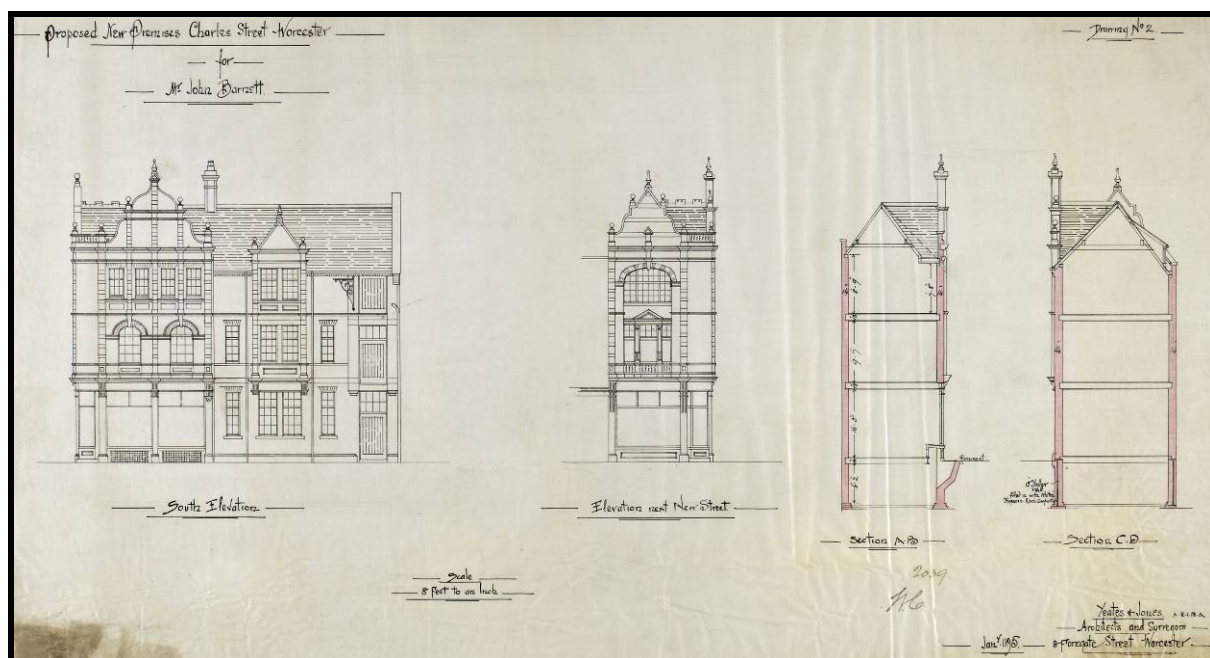
# HER21: Worcester City Historic Buildings Data

EH project 6004

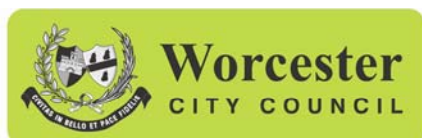
## Project Report

James Dinn, Archaeological Officer, Worcester City Council  
Sheena Payne-Lunn, HER Officer, Worcester City Council

Version 3: March 2011



Worcester City Historic Environment Record  
Heritage and Design  
Development Management Service  
Worcester City Council  
Orchard House  
Farrier Street  
Worcester  
WR1 3BB



<b>Version</b>	<b>Description</b>	<b>Date</b>
1	First draft submission to English Heritage	28/1/11
2	Second draft submission to English Heritage following EH comments on ver 1	4/3/11
3	Final report	14/3/11

**Front cover image**

**Building application 2039: Proposed New Business Premises,  
Charles Street 28<sup>th</sup> January 1895 (Now a locally-listed  
building)**

**Yeates and Jones, Worcester**

# Contents

	<b><i>Summary</i></b>	<b>1</b>
<b>1</b>	<b><i>Introduction</i></b>	<b>2</b>
1.1	Context	2
1.2	The HER21 programme	3
1.3	Aims and objectives of the Worcester Historic Buildings Data project	3
<b>2</b>	<b><i>The data source</i></b>	<b>5</b>
2.1	The national context	5
2.2	History of the Worcester records	8
2.3	Dates, scope and area coverage; history of building control in Worcester	9
2.4	The contents of the building applications	10
2.5	Copyright and ownership	12
<b>3</b>	<b><i>Method</i></b>	<b>16</b>
3.1	Data cataloguing and collection	16
3.2	Sampling	17
3.3	Photography	18
3.4	Assimilation into HER and analysis	19
3.5	Field checking	21
<b>4</b>	<b><i>Assessment of method and results</i></b>	<b>22</b>
4.1	Introduction	22
4.2	The original records	25
4.3	The HER and data management	25
4.4	Using the resource	27
4.5	Working practices	31
4.6	Costs and benefits assessment	32
<b>5</b>	<b><i>Conclusions and recommendations</i></b>	<b>34</b>
	<b><i>Bibliography</i></b>	<b>36</b>
	<b><i>Appendices</i></b>	

## **HER21: Worcester City Historic Buildings Data Project (EH Project 6004)**

### **Summary**

The Worcester City Historic Buildings Data Project aimed to digitally capture historic building application records for Worcester, dating from 1865-1948, and assimilate them into the Worcester City Historic Environment Record. This was to enable fully-searchable (GIS-based) access to an important but under-used dataset to be provided to a broad spectrum of users. It will allow local authority conservation, archaeological and planning officers to develop an enhanced understanding of Worcester's historic built fabric, further enabling its informed and intelligent management through plan-making and development management.

3000 groups of records, many of them very fragile, were digitally preserved, and the need to use the original documents removed. The methodology was documented, to assist others considering the capture and integration of building control plans elsewhere, and the costs, uses and benefits of the project assessed, alongside such issues as copyright. A series of recommendations are made to further the use and assimilation of historic building application records.

The project builds on datasets currently held by WCHER to provide an enhanced level of historic buildings data for all heritage assets: listed buildings, buildings within (and making a positive contribution to) conservation areas, buildings of local significance, and undesignated buildings. The evidence base will also support the eventual implementation of HPR.

The project team included the City Council's HER Officer, Archaeological Officer and a Conservation Officer, as well as Worcestershire Record Office's Digitisation Officer. An advisory panel forming the regular external point of consultation for the project (principally consisting of local government partners and English Heritage) also included Worcester City Council's Planning Manager and Worcestershire Record Office's Archives Manager. Volunteer input was important, both in the initial collation and validation of building application indexes, and in developing and implementing a fieldwork programme to assess building survival.

# **1 Introduction**

## **1.1 Context**

This report describes the results of the Worcester City Historic Buildings Data project, which took place in 2010-11. The project formed part of the HER21 scheme, developed and funded by English Heritage, and was commissioned to explore issues related to a particular dataset, the historic building applications for Worcester. The project was managed by Worcester City Council. Project work was undertaken by Worcester City Council's Heritage and Design Team (mapping, database creation and linking of records to HER, analysis, report writing), the Worcestershire County Record Office (digital photography of documents), and a volunteer group from Worcestershire Industrial Archaeology and Local History Society (enhancement of indexes, checking survival of buildings).

The dataset comprises over 8000 applications made to Worcester City Council and predecessor bodies under the provision of various Acts and Bye-laws of the late 19<sup>th</sup> and early 20<sup>th</sup> century for new buildings and alterations to existing buildings. These cover the period from 1865 up to the coming into force of the Town and Country Planning Act in 1948. The applications document the rapid growth of Worcester in this period, which has not been studied in such detail as earlier periods. Nearly every building erected in Worcester during this period is recorded. Many of the estimated 15-20,000 individual buildings covered by the applications are still standing, and they form an integral part of the character of the city and its neighbourhoods, though few are designated assets. The records are described more fully in section 2.

Other key data sources exist from this period, in particular mapping (tithe maps – 1840s, Board of Health mapping – 1867-71, Ordnance Survey large-scale mapping – 1880s), trade directories, and City Council committee minute books). The maps have been used to assist in location, and the City Council's Streets Committee minutes have been used to add information on the outcomes of applications to the database. Many other plans exist in deeds and other documents. However, these are not consistently accessible and have not been used for this project; in any case such plans tend to be lacking in the detail which is such a characteristic of the building plans (room details, elevations, sections, technical details).

The building applications have been relatively inaccessible until now and consequently they have remained poorly used. Many of the documents are in a poor physical state, and they are not suited to repeated handling, or in some cases any handling. For some

drawings the handling required for digital copying has resulted in their effective destruction and plans are underway to ensure that the availability of a digital alternative is flagged up within the Record Office catalogue.

## **1.2 The HER21 programme**

The HER21 programme in 2010-11 forms part of English Heritage's strategy for HPR-compliant HERs. It aims to equip HERs to serve the whole historic environment sector, as well as strengthening links with policy planners, development management planners and the voluntary sector. Four strategic projects were commissioned through Strand 1 (directed mode); these cover some fundamental issues relating to HER working practices, software and data standards, and interoperability of systems.

This project is one of 11 Strand 2 (responsive mode) projects, providing case studies covering a variety of issues, including working practices and relationships, capture of and access to information, and perceptions of the value of different types of evidence and information. Most but not all of these projects focus on information relating to buildings, working with building-related datasets and the use of HERs by conservation officers. There is a common understanding that buildings have traditionally been less well covered by HERs than other heritage assets, and the wider HPR process, including PPS5, has added to the urgency of addressing this.

## **1.3 Aims and objectives of the Worcester Historic Buildings Data project**

The following principal aims were set out in the project design and work on these has formed the core of the project programme:

- To create a full and validated digital catalogue (spatially searchable) for all pre-1948 building applications within the present (2010) boundaries of Worcester
- To create a full digital archive record of all historic building applications for the period 1865-1885 (digital preservation)
- To create a sample digital record of historic building applications from the period 1886-1948, focusing on the more significant applications

- To enhance existing HER data on historic buildings, both designated and undesignated, for use by conservation and planning officers, archaeologists, local historians and the general public
- To enhance datasets associated with HLC for Worcester
- To enhance WCHER as the core evidence base for plan-making and development management within the historic environment
- To develop and document an effective method for use by other local authorities, and to report the project's findings for wider dissemination

More detail on the project's objectives and proposed outcomes was given in the business case section of the project design. These have to a degree been refined during the project implementation. The achievement of these objectives and outcomes is set out in Table 1, where they are mapped against the project aims.

Many of the project outcomes, in particular relating to the use of the project's results, cannot adequately be quantified at this early stage. The project programme was too short and concentrated to allow for the completed record to be brought into full use during the lifetime of the project. While digital photography has been a more time-consuming process than had first been envisaged, the Record Office have committed the additional resources needed to complete digitisation of all records contained within the sample lists.

Consequently it has been necessary to develop a series of proxy indicators, which aim to quantify the value of the data, for instance in relation to designated and other assets, character areas and other datasets. Indicators, processes and outcomes are assessed in section 4.

## 2 The data source

### 2.1 The national context

Building control plans are increasingly recognised as an important source for matters related to urban growth in the mid-late 19<sup>th</sup> and early 20<sup>th</sup> centuries (Manco, nd, a). A number of guides to this resource have been published. Gaskell (1983) covers the legislative and administrative background to the early development of building control, while the adoption of the various acts and bye-laws is charted by Harper (1985). By 1868 some 568 places in England had adopted the building control provisions in the Local Government Act 1858. Most new buildings in these places can be expected to fall within the scope of building control. By the end of the 19<sup>th</sup> century building control coverage had been greatly extended. Further coverage of this resource and its relation to other data sources for the period is given in a number of published works (including Kenney 1990, Rodger 1995, Ley 2000).

However the individual plans, where they survive (in some places the records are believed to have been destroyed), are not usually easily accessible. Typically they have been accessioned into record office collections in bulk, as part of bulk deposits of local authority records. These are often only searchable through typed or hand-written registers, and not readily reachable through A2A or other online searches.

Manco (nd, b) lists only three datasets which are accessible through online indexes (Cardiff, Dumfries and Plymouth). To assess the availability of other indexes online, a number of searches were made as part of the project; however these should not in any way be considered exhaustive.

Google searches for 'historic building application' and 'historic building application index' were made, but did not result in any additional online indexes being discovered (rapid search of the first 100 results, carried out 17/1/11). A rapid search of A2A (<http://www.nationalarchives.gov.uk/a2a/>), using 'building control application' (first 100 results, 17/1/11), did suggest that other indexes are available online, though only one was in fact found (Hastings Borough Council and predecessor bodies, records for 1851-1948, DH/C/6/1 and DH/C/6/2). Interestingly this search did not find the Cardiff or Plymouth records. Further searches of A2A were then made on 'building application Cardiff' and 'building application Plymouth', but neither returned the records which are indexed online within the first 100 results.



One further record (Essex) had been identified at the project design stage as being accessible through an online index, but in practice only a small number of records have been indexed.

### **Cardiff**

Around 40,000 records were indexed as part of the *Cardiff: the building of a capital* project. The applications are searchable through an online search form. A small number of the documents have been photographed. There is no GIS link.

'In February 2002 the Heritage Lottery Fund awarded the Glamorgan Record Office £48 600 towards the cost of Cardiff the Building of a Capital. This project has:

- Catalogued the plans so that they can be searched over the internet.
- Repaired a large number of damaged items so that they can be used by the public.
- Repackaged all of the plans in special archival materials.
- Mounted information on the Record Office web site to promote the use of the plans and other resources on Cardiff's built heritage.'

<http://www.glamro.gov.uk/check/Building%20of%20a%20Capital%202/project.html>

### **Dumfries**

Over 20,000 plans were submitted to the Dumfries Dean of Guild. These 'are being sorted and catalogued by a team from the Friends of the Archives of Dumfries and Galloway' (along with several other categories of records). 3655 building application records (March 2011) are searchable through an online search form. Photography does not form part of the project. There is no GIS link.

### **Plymouth**

Plymouth and West Devon Record Office have made over 17000 records (March 2011) accessible through an online index. The index is still being added to. Original records can be consulted at the Record Office and photocopies are available 'for the purposes of private study or research for non-commercial purposes'. A small number of the documents have been photographed. There is no GIS link.

The Plymouth project 'has been made possible thanks to a grant of £49,800 from the Heritage Lottery Fund made in July 2005. This has enabled:

- The cataloguing of the first 16,000 applications. Project assistants were employed to record the key details of the plans on Plymouth and West Devon Record Office's (PWDRO) new CALM database.
- Repackaging of the plans in protective acid-free wallets and boxes.
- Conservation work on some of the plans which had been damaged through exposure to damp and strong natural light. These plans, numbering over a hundred were flattened, repaired and encapsulated in order to assist in their long term preservation.
- Outreach work to schools and community groups [to] encourage the use of this wonderful resource has taken place through the Museum's Museum in Transit service.'

<http://www.plymouth.gov.uk/homepage/leisureandtourism/archives/plymouthsarchitecturalheritage.htm>

The applications have also been used as the focus of outreach work to try to collect memories and experiences associated with the buildings.

### ***Hastings***

Building application records for the Hastings area are individually indexed on the East Sussex County Record Office system and can be searched through an online search form. These records have not been treated differently from any other records in the Record Office collection.

### ***Essex***

A small number of building application records are individually indexed on the Essex County Record Office system and can be searched through an online search form. These records have not been treated differently from any other records in the Record Office collection.

In other places, datasets have been fully or partly indexed, with the results available for consultation at record offices or elsewhere. No instances are known where images of the records themselves are available online in any significant numbers. Additionally, no instances are known where the records are searchable through a spatial interface, such as GIS.

The result of this poor accessibility is that these records are significantly under-used. It may well be quite cost-effective to search historic building plans in bulk; for instance, the recent revision of the Pevsner Buildings of England volume for Worcestershire (Brooks and Pevsner 2007) makes good use of these

records, while a number of theses and dissertations have also used them (Attwood 1997, Dunleavy 2000, 2004). However the lack of accessibility is a major obstacle to using the records singly, for instance for development casework.

## 2.2 History of the Worcester records

The Worcester records consist of two collections, deposited on indefinite loan with the Worcestershire Record Office by Worcester City Council, on 10 July 1991 (BA 10465) and 19 May 1993 (BA 10827). The WCRO accession registers describe the records as planning applications, and the deposits do indeed include a very small number of post-Town and Country Planning Act applications, but the vast majority are building applications under earlier Acts.

<b>Authority</b>	<b>Dates covered</b>	<b>Accession no</b>
Worcester City	Apr 1882 - 30 Jun 1948 (with some dating to 1948-49)	BA 10465 ref b496.5
Worcester City	Dec 1865 - 1946	BA 10827 ref b496.5
Claines Local Board	Oct 1882 - Jul 1885	BA 10827 ref b496.5
Worcester Union Rural Sanitary Authority	Sep 1882 - Aug 1885	BA 10827 ref b496.5

The applications were in many cases still working documents at the time of deposit. Partly for this reason, many were missing, though some of these have since been found and deposited. 540 were noted as missing from the first deposit, though over 30 of these were found and included in the second deposit; some others have been retrieved since.

Both deposits form part of the Worcester City archive, which comprises one of the largest collections held by the WCRO. Prior to deposition with the Record Office, very little of this had been catalogued, and until recently it had only been possible to produce a rudimentary typescript handlist. Starting in 2008, the Worcester Archive Source Project (WASP) has been indexing the Worcester City archive and undertaking activities to promote its use and encourage public access, with a grant from HLF. Unfortunately when the WASP project design was being produced, the building application collection was not given a high priority, and cataloguing these records was not included in the project.

Two ledgers containing handwritten indexes to the records (covering the years 1885-1927, and 1927-1953; there is no known index for the earliest records) were retained by Building Control at Worcester City Council. These index the records by the first letter of the street name, and give the application number, street name (and sometimes address), applicant and the nature of the application. Later on, application dates were included. A final column includes comments, including the outcome where applications were disallowed, and cross-references to other applications. The ledgers have now been deposited with the Record Office.

In the 1990s the WCRO started to prepare a catalogue of the applications (work done by David Attwood). At that time they were unaware of the existence of the ledgers, and the catalogue was created using the details given on the application packets, supplemented by details from Streets Committee minute books. An initial handlist was produced, covering records 1-3115 (1865-1902) and the CLB and WURSA records. A second handlist extended this index to record 3532 (1902-05), and was produced by Attwood in 2007. Also in 2007, Worcester City HER produced a spreadsheet with a draft index covering all subsequent entries in both Building Control ledgers. This has been checked, validated and enhanced by Attwood as part of this project (volunteer input). The full catalogue is to be consolidated as part of the HER, with a copy deposited at the WCRO.

### **2.3 Dates, scope and area coverage; history of building control in Worcester**

Although Worcester is famous in building control circles as one of a small number of places to adopt some building controls in the late medieval period (the city ordinances of 1476; Manco, nd, a), the city was not an early adopter of bye-laws for building control. A survey of the early growth of Worcester's suburbs is given by Whitehead (1989).

Worcester's first building bye-laws were made in 1860, under powers included in the Local Government Act 1858, and following several years after the publication of the city's Board of Health report (Clark 1849). However the first application was not registered until the end of 1865.

In the 1880s the city was growing beyond its administrative boundaries. For the period 1882-85 a number of plans were deposited with two other authorities (Claines Local Board and

Worcester Union Rural Sanitary Authority). The boundaries of the city were extended in 1885, and new bye-laws issued in 1888.

The boundaries of the city were extended twice more during the period covered by the building plans, in 1914 and 1931. New bye-laws were issued in 1891, 1892, 1924 and 1939. Only buildings within the city boundaries and covered by the scope of the bye-laws in force at the relevant time have plans.

The 1888 bye-laws are based on the Model Bye-laws published in 1877, and cover the following broad areas:

- Level of new streets (1 clause)
- Width and construction of new streets (5 clauses)
- Structure of walls, foundations, roofs and chimneys (for purposes of stability, prevention of fires, and health) (44 clauses)
- Space around buildings, and ventilation (7 clauses)
- Drainage (7 clauses)
- Waterclosets, earthclosets, privies, ashpits and cesspools, in connexion with buildings (23 clauses)
- Closing of buildings unfit for human habitation (1 clause)

A further set of clauses provide for the giving of notice, deposit of plans and sections, inspection powers of the Sanitary Authority, and the power to 'remove, alter or pull down any work begun or done in contravention of the byelaws'.

The list of exemptions makes it clear that applications were not required for all buildings; the scope of the application regime was rather different from modern planning permission. The following classes of buildings were exempt:

- Crown buildings (in Her Majesty's possession or used in Her Majesty's service)
- Lunatic asylums, session houses, buildings occupied by justices of the peace
- Gaols, prisons etc and prison officers' houses
- Buildings associated with canals (except dwelling houses)
- Buildings associated with mines (except dwelling houses)
- Buildings approved under land improvement acts
- Buildings approved under statutory provisions by Government
- Garden buildings
- Buildings under 30' in height and under 125000 cubic feet volume, where at least 8' from street and 30' from nearest building and from property boundary

- Buildings over 30' in height and over 125000 cubic feet volume, where at least 30' from street and 60' from nearest building and from property boundary
- Temporary hospital buildings

## **2.4 The contents of the building applications**

The building applications themselves are typically made up of two or three parts.

The first part is the packet, which gives administrative information about the application, including the application number, the address or name of the property, the name of the owner and the date of approval or refusal. These have not been copied for this project, but the details on the envelope have been added to the database.

The second part of the application consists of the plans. Plans, elevations and sections show what is to be built, which may include schematic details of foundations and construction, and the names of rooms. The drawings may also give the names of the architect, builder or developer, and owner. There may be numerous separate drawings for each application. All drawings have been copied for this project.

The third part is a written document giving notice of the application; this is only sometimes present and may be only a short letter. Often, however, this includes significant detail of materials and constructional techniques, with instructions for the different craftsmen involved. All written documents have been copied for this project.

A street address is usually given, but house numbers only rarely. In a few cases no locational information is given and the building may be unidentifiable. Location maps are absent from the earliest plans, though some form of location or context plan does become more frequent from the 1870s – 1880s.

The position with regard to revised applications is not always clear, though this and other questions can often be clarified by reference to the Streets Committee minute books. Ongoing research by David Attwood is allowing this information to be added to the database.

A survey of the different materials used for the documents is not offered here. Most of the documents are relatively stable and can be handled without damage. The early drawings on tracing paper were identified as a problem at the project design stage and have proved

to be a problem elsewhere. Study of the Cardiff plans suggested that this paper was 'made by coating thin paper with linseed oil. The oil has aged, turning the paper brown and making it very brittle.'  
<http://www.glamro.gov.uk/check/Building%20of%20a%20Capital%20202/pres.html>

## **2.5 Copyright and ownership**

The pre-1948 building application documents were deposited with Worcester City Council in fulfilment of requirements relating to the local bye-laws and building acts in force at the time of application. Subsequently they were deposited with WCRO along with a large number of other Worcester City Council documents. Ownership of the Worcester City archive as a whole has never been formally established, though in practice Worcester City Council and Worcestershire County Council have adopted a cooperative approach to the use of these records. Both authorities are successor bodies to the County Borough which administered Worcester before 1974; should it be necessary to formally determine ownership it would be reasonable to argue that the ownership of documents would be related to the functions of the authorities, and that the ownership of documents submitted for building control or planning purposes would lie with the City Council. The cooperative approach extends to the digital photography of the records, which it has been agreed will not alter the position of the two local authorities.

Copyright in all the documents submitted with building applications is held by the original authors, or the client where this was specifically agreed (though it would be extremely difficult to establish this in most cases). The copyright is therefore most likely to reside with building firms or architects' practices, or (more probably) with the principal architect, whose signature often appears on the documents. However it may potentially reside with individual employees, or other individuals. The legal basis for all consideration of copyright is the Copyright Designs and Patents Act 1988 (as amended). The material contained in the applications is classified as literary (written documents including specifications etc) and artistic (drawings), though some documents contain elements of both.

The length of copyright protection for both drawings and written material is normally 70 years from the end of the year in which the author died. If the authorship cannot be established, then copyright expires

- (a) at the end of the period of 70 years from the end of the calendar year in which the work was made, or
- (b) if during that period the work is made available to the public, at the end of the period of 70 years from the end of the calendar year in which it is first so made available.

It is considered that the act of submission of the documents as part of an application is equivalent to publication (being 'made available to the public'), as they were put into the public domain at that point. Because of this, it is also considered that the copying carried out during this project does not confer publication right on the WCRO or anyone else involved.

In theory, even the oldest application documents could still be in copyright – a drawing produced by a 20-year-old in 1865, who died at age 100 (in 1945), would still be in copyright until the end of 2015. At the other extreme, some documents produced in 1941 could now be out of copyright. Technically it would be possible to apply an actuarial and statistical approach to this problem, though it is unlikely to be worthwhile.

Copying by archivists for digital preservation is allowed by the Copyright Designs & Patents Act 1988 (section 42). This does not affect the rights of the original copyright holder.

A 'risk assessment' approach to other copyright questions is advocated by record offices. The first consideration is to establish whether a document is definitely in or out of copyright, or whether the position is uncertain. There are then a series of further considerations which should inform how material is treated, based on the rights of a copyright holder.

<b>Rights of copyright holder</b>	<b>Proposed response</b>
Financial gain from use of material	It is considered that the documents have negligible financial value. It is important to ensure that no charges are made for these documents (though charges can be made for the work required to make copies).
Reputation	Users undertake not to use copyright material in a derogatory way.
Restriction of use	All reasonable attempts should be made to contact copyright holders and seek permission before any publication (as opposed to any 'fair dealing' copies).



Acknowledgement	In principle the originators of images used will <u>always</u> be acknowledged, even if the material is known to be out of copyright.
-----------------	---

The HER has developed the following position as regards copyright of written and drawn material in the historic building application collection:

- **internal use by WCC to inform planning and conservation** is considered to be within the original purpose of the documents and their retention, and should be unrestricted, to include publication of derived information in print or on the Internet. Images of original material will only be included where they are known or reasonably thought to be out of copyright, or where the consent of the copyright holder has been obtained.
- **commissioned work such as conservation area appraisals** – the use of in-copyright documents to inform this work should be allowed, but images of original material will only be included where they are known or reasonably thought to be out of copyright, or where the consent of the copyright holder has been obtained. A watermark may be applied to the image.
- **work required to fulfil requirements of the planning application process**, including supporting data for applications or mitigation recording – copies may be supplied for information. The users will be informed of potential copyright restrictions, and that they may not use images in reporting without addressing copyright issues, including making reasonable attempts to locate copyright holders and seek any necessary permissions. A watermark may be applied to the image.
- single copies will be supplied on request for **private research** (under the 'fair dealing' provisions). A watermark may be applied to the image.
- images of material which may be in copyright will not normally be included on **Worcester City Council's website**. If there is a particular need to use such images, all reasonable attempts will be made to locate copyright holders and seek any necessary permissions. Images may be presented at low resolutions and a watermark may be applied.

No charge will be made by the HER for the supply of images from this collection, though there may be related HER searches which will be chargeable.

Enquiries for commercial use unrelated to planning or conservation (eg inclusion within a book) will be referred to WCRO.

## **3 Method**

### **3.1 Data cataloguing and collection**

In preparation for this project, the project team consulted with local historians who have worked on cataloguing, indexing and using the Worcester City building records. As described in Section 2, David Attwood (a former Worcestershire Record Office staff member) had created validated indexes for the period up to 1905. Subsequently, HER staff transcribed the manuscript ledgers to cover the later period (1906-53).

Validation of the index transcribed from the ledgers has formed an ongoing part of the present project. Initially this was done by consultation of contemporary Streets Committee minute books, but the digital images of the building applications were also used, especially where geographical location was not clear. This final phase of validation formed part of the process to assimilate the collection into the HER (see 3.4 below). Validation of the records has only been undertaken for the period up to 1948 (the transcription from the ledgers runs to 1953), as this project only covers the pre-1947 Act building applications held by Worcestershire Record Office. Planning applications from 1948 on have been archived on to microfiche (now held off-site), and the original paper records no longer exist. These are being indexed, and their locations and extents digitised, as a business transformation project. Details of Worcester City Council's digital planning application programme, and a protocol for capturing current planning application material, are included in Appendices A and B.

The pre-existing indexes of building applications had been undertaken in several phases, covering the years 1865-1901, 1901-05, and 1906-53. These have been amalgamated to form a single consolidated index (stored as a Microsoft Excel spreadsheet). The full index is included as Appendix C.

During the project design preparation, the project team were able to establish, in a broad sense, what the collection consists of, in terms of quantity, content and condition. The Record Office Bulk Accession register details two separate deposits by Worcester City Council, one of c.8000 applications and a later deposit of 1080 applications. The register also notes that a proportion of the applications were missing at the time of deposition as well as giving an indication of condition. Consultation with members of the project team and local historians established the type of material contained within the packets and a presumed average number of items within them. Due to the extremely fragile nature of some of the collection

it was not possible to physically examine a sample of the collection in advance, as removal from the packets would have caused damage.

### 3.2 Sampling

The full collection of surviving building applications is made up of over 8000 individual records, mostly held within paper envelopes. These were estimated at the beginning of the project to contain around 4 items each. This would therefore equate to over 35000 separate photographic images if all the records were copied. Given the limited timescale of the project and the available budget it was not possible to process such a large quantity. A sampling strategy was developed to focus resources on records of higher potential or, in the case of the earlier applications, at highest risk of deterioration.

The following table gives the percentages and numbers sampled.

Dates	No of applications	Sampling percentage	No proposed to be sampled	No sampled
1865-85	885	100%	883	885
1886-1905	2486	40%	995	879
1906-27	1773	30%	532	532
1927-48	2969	18%	534	534
CLB & WURSA 1882-85	64	100%	64	64
<b>TOTAL</b>	<b>8177</b>		<b>3008</b>	<b>2894</b>

Note: the sampled figure for 1865-85 is higher because of the rediscovery of some lost plans. The figure for 1886-1905 is considerably lower because a large number of plans are missing.

All surviving records (apart from any known to have been refused building consent) from 1865-1885 were scanned, due to their deteriorating condition and to their importance as records pre-dating the first detailed Ordnance Survey maps in Worcester City. Where only a sample of records was to be copied, they were first sifted on a judgmental basis, according to their perceived value. The following categories were prioritised:

- New build – listed buildings
- Alterations to listed buildings

- New build – buildings of local significance
- Alterations or new build affecting scheduled ancient monuments
- New build – industrial and commercial buildings
- New build – civic and other public buildings
- New build – houses and other residential buildings (larger numbers will usually be prioritised)

The draft sample lists were reviewed by all members of the project team. A final sample list was then produced for use by the Digitisation team at Worcestershire Record Office.

### **3.3 Photography**

Around 3000 building applications (approximately 12000 images) have been digitally photographed by staff from Worcestershire Record Office's digitisation team (this work still in progress). Exact numbers were uncertain as the time taken to photograph individual documents is very dependent on their condition. Images are captured as high resolution TIFF files (300 ppi resolution) to provide an archival quality copy for long term preservation, and as a lower (but still high quality) resolution TIFF file for transfer to the HER. The archival copies will be held by Worcestershire Record Office. An automated metadata structure was employed by the digitisation team during image capture, a copy of which is included in Appendix D - this is in accordance with recognised national standards. Images were produced using a camera mounted at right angles on a column over a glass bed, giving a 'single-shot' rather than scanned image. Full details of technical specifications and the Record Office's darkroom operations are given in Appendix E.

A basic file-naming protocol was employed, stating the application number (eg. 801). Where an application is made up of several items, the application number is followed by a running number, separated by a hyphen (eg. 801-1). Where a single item is made up of several pages the number is followed by Roman numerals (eg. 801-2i). In the case of larger plans that have required capture in sections a letter follows the number (eg. 801-3a).

Where damage had occurred to a document, digitisation staff used their best judgement to reconstruct the fragments on the glass bed prior to a photograph being taken. Where this damage was more extensive an image was still obtained, on the basis that it may be possible at a later stage to reconstruct the document using digital imaging software. The digitisation team have maintained a running log of issues, stating where records are missing, fragmentary or in

some cases, destroyed. This log is included in Appendix F and also includes examples of the sort of damage sustained by the documents. It is unlikely that physical conservation of the documents will be given priority in the near future, given the sheer quantity of material and the prohibitive costs involved. The process of photographing these documents therefore constitutes their preservation by digitisation (see also section 4.5), with the log providing a useful assessment of condition should further conservation become a priority at a later stage.

### **3.4 Assimilation into HER and analysis**

Images were collected from the Record Office on a regular basis in order to begin the process of assimilation into the HER. Data was copied to one of two external hard drives (the use of two ensured that HER staff could be working on one set of data while the Record Office could upload to the other drive as work progressed) and collected on a regular basis. Images were loaded onto the Worcester City Council server and rapidly viewed by HER staff to ensure safe transfer and correct file-naming. A number of steps are then taken to analyse and assimilate the data.

#### **Initial georeferencing**

In order to make the building application index available to search spatially, it was necessary to attribute an accurate grid reference to each individual application. A grid reference was initially attributed in a fairly rapid way, to a point central to the street, and recorded within the amalgamated index. This was accompanied by a confidence / accuracy level of, medium or low, where medium relates to a point allocated with reasonable certainty at street level, and low where the street location could not be ascertained. A more accurate location was attributed at a later stage. The index, complete with initial grid references, was uploaded as a new overlay to Worcester City Council's GIS. A screenshot illustrating this overlay is shown as Appendix G and indicates the distribution of building applications within the city area

#### **Character area source creation**

Once the index was available spatially, a series of source records were created. In order to ensure that all records are available via the HER in a usable and relevant form, building applications were compiled into a number of sources based on the HLC character area that they fall into. This was done by running a search for each character block, and exporting the building application records that were highlighted within it, resulting in a list of records. Each list was split into four time periods, based on those used in the sampling

process, and formed the contents pages for the source. All building applications listed were then converted to PDF and compiled as a source report. An example of a character area source report is included in Appendix H. The TIFF file remains as a high resolution version should this be required.

During the process of compilation any additional issues with the indexes and images were addressed. This mainly related to building applications that had been misfiled historically and could be identified and re-filed as a result. All changes to the digital filing have been recorded and will be notified to the Record Office in conclusion of the project.

### **Validation of location and identification of heritage assets**

Identifying building applications relating to listed buildings, buildings of local significance and HER monuments was completed alongside the validation process (the full lists of building applications relating to designated buildings and locally listed are included in Appendices I and J). The HER Officer used the GIS to systematically cover the City street by street, working through the street-located points and where possible, locating them more accurately by identifying the building that the record relates to. Particular attention was given to streets containing heritage assets and HER monument records, and this information was overlaid with the building application overlay. Building applications which have not been sampled were not a high priority for more accurately locating. Where a building could not be identified from the description alone, the digital image of that record was consulted. The amalgamated index was updated with the new grid reference, and where appropriate the level of confidence / accuracy changed to 'high'. At this stage, applications relating to heritage assets and HER monuments were also identified when their new fixed location corresponded with a listed building or locally-listed building polygon or an HER monument point. Two further columns in the index were used to record the HER number and any building designations.

### **Creation of monument record sources**

For those building applications identified with a specific HER monument (all Listed and Locally-listed buildings have an HER monument record), an individual source record was created so that it can be linked directly to the monument record. The index was consulted for a list of monument record numbers and the application to which these corresponded was compiled as a separate source, in addition to the character area sources, and given its unique HER source number.

### **3.5 Field checking**

A number of volunteers affiliated with the Worcestershire Industrial Archaeology and Local History Society are involved with a further stage in the project, and have, in consultation with the Project Team, established a small pilot area within which to begin a programme of field checking. This stage is expected to be an ongoing partnership whereby the HER will provide the source data for a given character area, along with location maps, enabling the group to walk around the study area, recording level of survival, accurate location where this has not been established and any features of note. It has also been suggested that the group may put forward nominations, based on field evidence, for local listing. The volunteer group have felt that field-checking rather than a paper-based exercise is a more worthwhile exercise, and better suits the aims of the group. It is possible that a paper-based method could be explored in the future, making use of work undertaken by the Worcestershire Historic Environment and Archaeology Service as part of the Historic Buildings of Worcestershire project. As part of this project, surviving buildings shown on the first edition Ordnance Survey mapping were identified and photographed – this source could certainly be used alongside building application data for the period up to 1885.



## **4 Assessment of method and results**

### **4.1 Introduction**

This project aimed to digitally capture Worcester City Council's historic building application records dating from 1865-1948 and assimilate them into the Worcester City Historic Environment Record. In so doing a full and validated, spatially-searchable, digital catalogue of all existing pre-1948 applications was created, along with a full digital archive record of all applications for the period 1865-1885, and a sample digital record of historic building applications from the period 1886-1948. Existing HER data on historic buildings, both designated and undesignated, has been enhanced with links to the newly created digital source material, and all geographically-locatable building applications have been cross-referenced with HLC areas, and compiled into source records relating to each area. An assessment of the results of this project against the aims stated in the project design is included in Appendix K. A suggested methodology/ project plan is also included in Appendix L.

#### **Achievements of the project**

The scope of the project and its broad method were, on the whole, successful. As will be discussed in 4.4, the resulting products have a wide range of uses and have succeeded in enhancing the HER as the key evidence base for plan-making in the historic environment. As an example of the application of this dataset, of the 47 listed buildings that were newly built in the post-1865 period, 27 were successfully linked with their original building application while a further 14 were exempt from the application process. Just over 79% of post-1865 listed buildings for which a building application would have been required, have been identified with their original plans. Two further applications were found to relate to listed buildings that were previously considered to be pre-1865. Overall, 288 HER monument records have been enhanced, including 220 listed buildings (30.2% of listings – note that many of these cover more than one buildings) and 34 buildings of local significance (20.1% of all buildings of local significance).

The quality of photographic material has proved to be extremely high. Upon advice from the Record Office Digitisation team, the lower resolution versions obtained for use by the HER were transferred as TIFF files rather than JPG format, to ensure that the files will remain 'lossless' and will not deteriorate over time. While these are still large files (around 15-20Mb each), they are of a size that is usable on most computers, should a good quality image need to be consulted. Conversion to PDF (on average around 4-500kb per

image) did not unduly affect the quality of images and has been found to be quite sufficient for day to day use of the records, as well as producing files small enough to be emailed. The high-resolution master TIFF files (each around 60Mb+) have been retained by the Record Office to provide 'digital preservation' of the records, particularly in light of the near destruction, and in some cases, complete destruction of some early records during the digitisation process. This can also be viewed as a success of the project – by the mere act of removal from their envelopes, some records were severely damaged, and would surely not have survived for future use had they not been digitally photographed.

Linkage of the dataset to the HER has been undertaken successfully, with 495 building applications found to relate to 288 individual HER monuments (just over 11% of the current number of monument records). Of these, 9 monument records were newly created as a result of identification via this project and it is anticipated that many more HER monuments may be identified as the resource is used, especially as a result of field-checking. It was recognised at an early stage that this would be the case and that identification of all potential monuments or existing monuments would not be possible from the index alone. A total of 580 new source records have been created within the HER database.

As a result of this project, the historic building applications dataset will be available, for the first time, in a spatially-searchable form. While indexing had been undertaken in the past, this was not consistent for all periods, and was in need of validation, as well as cross-checking of the later periods. While some of the detail is still in the process of being completed by volunteers, the index itself contains a complete and validated list of all existing pre-1948 building applications, with 98.5% of these having been successfully georeferenced to a minimum of street level. This is now available to all Conservation and Planning Officers within the authority via GIS. All source records relating to HLC and source records linked to monuments will be linked to the new joint Worcester City and Worcestershire Historic Environment Record software platform (an enhanced version of HBSMR) when the two HERs migrate over to this later in 2011. They have been created in such a way as to be easy to migrate to the new system, consisting of simple point data and pdf source files. At that point, not only will officers be able to search the full set of records, but a direct link to the image (where available) will be provided from the GIS. This facility will also be available to HER users in the new Worcester Library and History Centre.

## **Lessons**

While the project has been broadly successful in achieving its aims, a number of lessons can be learnt.

### ***Programming***

One of the most difficult issues to overcome with the project was the limited timescale. A clear separation between the photography phase and the collation phase with opportunity to review the process at each stage would have been beneficial, as discussed in 4.3. These issues could be addressed by undertaking a pilot study which would give a clearer idea of the state of the original records and give a better idea of necessary programming stages.

### ***Sampling***

A sampling strategy was employed for the photographic stage of this project. The process of developing a valid sampling list was in itself quite difficult in that, the initial catalogue of building applications could go only so far towards identifying what each plan contained. A judgment had to be made as to whether an application related met the criteria set out in the strategy, and while this was mostly clear, there was some potential for missing applications where the address details were less precise. It is considered that the sampling strategy was robust in itself and that the approach of prioritising certain categories of building application, a useful one. While there may be an argument for digitising all material, not least because of the risk that the unphotographed material may never be revisited, the sampling method does inevitably score on cost-effectiveness and reduces the requirement for active data management.

Sampling the data in this way can prove to be less efficient for the process of photography, as the officer is required to sift through material rather than work systematically through one document at a time. The other problem with this method, recognised during the photography stage, is that it does not enable all misfiled building applications to be picked up. There were several instances during the course of photography where documents that had been marked as missing in the first instance, turned up in envelopes with other building applications, and were subsequently re-housed in the correct place. It is inevitable that there will be further documents that were misfiled historically that are still considered to be missing.

## **4.2 The original records**

### **Digital preservation**

One of the key aims of this project was to ensure that the most vulnerable documents held within this collection were preserved digitally. For this reason, a 100% sample of the earliest and most fragile records was taken. The condition of this early sample was in many cases far worse than originally anticipated and therefore far more time-consuming to photograph. Each plan was reconstructed on the photography bed as accurately as could be ascertained. This was largely successful, despite the extremely fragmentary state of some of the plans. Around 90 plans are recorded as being in a very poor state, with a proportion of these having been destroyed through the process of photography, and even just through removing them from their envelopes. Despite their fragmentary state these were still pieced together for photography and therefore survive to some degree as a digital record. It is considered that the quality of images captured during this project is extremely high, and that they effectively constitute the preservation of at least the majority of information contained by these records. As discussed previously, the cost of full conservation for many of the most damaged records would be prohibitively expensive, and may not even be possible given the brittle nature of the medium and the extent of decay. Their digital preservation should be considered to be the next best thing, and in terms of accessibility, a constructive and cost effective use of resources. The Record Office have retained the high resolution TIFF files as the master archive, and lower resolution images will be available for use within the searchroom. 'Preservation by digital record' however, is really only appropriate in cases of catastrophic failure of the materials of the original document (eg the tracing paper) and would not in principle be an acceptable way to treat documents.

## **4.3 The HER and data management**

### **Data management and information collation**

The process of data management and information collation throughout this project has been complex. At the photography stage, it was necessary for Record Office staff to maintain a series of notes that were fed through to the HER alongside the digital photographs. These recorded issues such as condition, misfiled documents and documents that were missing. It was a simple process to keep an up-to-date record of these data issues within the main index, as they were fed back. Most importantly though, this provided a useful assessment for the Record Office of the condition and contents of this collection.

Assimilation into the HER was less straightforward. This was largely due to a number of stages running alongside each other and in particular, the process of photography being far more time consuming than first envisaged. A clear separation between the photography phase and the collation phase would have been beneficial, with time for reflection at each stage.

One of the most difficult issues to overcome with the project was the limited timescale. It became clear at various stages that a much longer timeframe, with opportunity to review the process at each stage would have been beneficial. It was clear that while many of the stages ran alongside each other, there needed to be a clear distinction between each. For a variety of reasons (not least the extremely poor condition of many of the earliest records), the digital photography has been much more time-consuming than first envisaged. It would have been useful to have access to the complete digital dataset before commencing with validation of the indexing, especially when attempting to georeference with a greater degree of accuracy. Having the digital image available to quickly cross-refer to, is also very useful in identifying listed and other designated buildings. Similarly, as validation was taking place alongside the compilation of character area sources, there were times when it was found that records relating to one character area should have been located in another area, which necessitated additional work to alter the source file. There were also instances where records were found to have been misfiled historically and therefore appeared under the wrong application number within the index. These were corrected within the index, and the related record also had to be renamed.

Overall, the method employed has resulted in a very useful product which is fully integrated with existing HER tools, and has been produced in such a way as to be easy to migrate to the new HER software. HLC source reports will be linked to the characterisation module of HBSMR, providing a strong evidence base for the character of each identified HLC area. This will be further enhanced by the work undertaken by volunteers during the process of field-checking. As discussed previously, a total of 520 new sources have been added to the HER database, and 288 monument records updated. The HER has therefore been greatly enhanced by this approach, and the resource should be easy to maintain. Additional cross-references from the HER database to building applications may be identified in the future.

## 4.4 Using the resource

The dataset has uses throughout the planning process, from policy planning to mitigation of impact on individual developments. Easy access to this and other datasets should ensure that proposals and conservation advice are well informed and that processes are efficient and cost-effective. Improved public engagement in planning is also a significant issue. The records have an important part to play in this regard, and should help to improve common understanding and relationships between heritage professionals, developers, and other interested parties. Many other uses of the records can be envisaged.

A simple user guide has been created and is included as Appendix M.

### 4.4.1 Policy planning

The building plans themselves would not be expected to make a direct contribution to policy planning. However the use of this dataset is making a significant contribution to the confidence attached to various datasets which inform policy. The dataset also enhances HER coverage and gives a greater credibility to the HER as the main source for historic environment information including coverage of the later post-medieval and recent periods.

Specifically, the following areas are strengthened by the incorporation of this dataset:

**characterisation evidence base** – the building applications provide key evidence for the understanding of character areas which either developed or changed during the later 19<sup>th</sup> and early 20<sup>th</sup> centuries; these will be drawn upon in a planned public consultation pilot, consulting with local people on a given character area.

**evidence for designations of individual heritage assets** – newly built or altered between 1865 and 1948

**evidence base for conservation areas and other area designations** – enhanced understanding of the development of conservation areas, the integrity of their boundaries and overall definition, and the definition of positive and negative elements

**working with data** – using the most complete dataset available, and linking extensive data sources, in particular mapping, with individual sites; increasing confidence in judgments; linking historic environment and other datasets (for instance through Greenspace survey)

Benefits for:

**policy planners** – quality assurance due to improved understanding

**local residents and community groups** – improved opportunities for engagement with policy planning

**conservation officers and archaeologists** – historic environment input into policy planning and links with natural environment strengthened

**development management officers** – better understanding of implications of policy planning and site allocations on historic environment

**applicants** – improved understanding gives greater certainty

#### **4.4.2 Casework and development management**

Because of the short project timescale it has not been possible to review the use of the dataset resulting from the project in real time.

To cover this aspect, development management casework during 2010 has been reviewed to assess what use was made of the building plans, and what use would have been feasible if the resource had been fully available.

101 cases were identified where it appeared that checking the building plans would have been of benefit to the development management process, if only to discount a potentially valuable source of information. The plans were in fact used in 21 of these cases, 14 of these during pre-application or the application process, and 7 associated with mitigation. Anecdotally, these figures are an increase on previous years due to increased awareness of these records.

The improved availability of the records results in a dramatic reduction in the time needed to consult them. To check a paper file at the Record Office would typically take between 1 and 1.5 hours, while to check a digital record can be expected to take 5-10 minutes. On the basis of the 2010 figures, it is estimated that the time spent checking 21 records at the Record Office totals over 26 hours, while to check 101 records on the HER would take about 12.5 hours. Alongside the greatly increased use of the data, this gives a modest efficiency saving.

There are benefits in the following areas:

**Throughout process** – business process (efficiency and speed); confidence and quality of advice and decision making, using the full range of evidence in support

**Early understanding** – ability to check rapidly whether plans will make useful contribution

**Pre-application** – ability to assess the contribution of improved understanding of the asset and to include this in pre-application discussions, potentially avoiding wasted work on proposals which may be contrary to policy

**Application information** – HER to provide access to plans and other data sources as part of service for data requests for Statements of significance / Heritage statements; confidence and quality of decision making

**Retention, preservation and enhancement** – whole buildings and individual features, including identification of features which no longer exist

**Recording** – fully informed and able to take account of former states of the building, including initial design and construction and/or major alterations, and linking to other datasets

Benefits for:

**development management officers** – streamlined process and more targeted consultation responses

**applicants** – improved understanding at an early stage in the process gives greater certainty

**conservation officers and archaeologists** – confidence and quality of advice, giving more likelihood that recommendations will be incorporated into development management decision making

**local residents and community groups** – greater prominence given to local heritage assets

**policy planners** – improved consistency of application of policy in development management

#### **4.4.3 Planning for protection**

New designations and reviews of existing designations increasingly require a robust evidence base in justification. The building plans form an important part of this, to be used in conjunction with other datasets, such as historic mapping.

**evidence for designations of individual heritage assets** – newly built or altered between 1865 and 1948; reviewing existing designations and proposing new ones; ancillary features and curtilage structures

**evidence base for conservation areas and other area designations** – enhanced understanding of the development of conservation areas, the integrity of their boundaries and overall definition, and the definition of positive and negative elements; using the HER as a spatial link between this and other data sources



### ***indicators***

no of designated and other assets with building plans  
potential new designations (buildings)

Benefits for:

**local residents and community groups** – improved protection for local heritage assets and greater involvement for non-professionals in designation process; accessibility of supporting evidence

**conservation officers and archaeologists** – improved evidence base providing better quality assessments of significance and streamlined process for new designations

**policy planners** – existing and new designations supported by more robust evidence

**development management officers** – existing and new designations supported by more robust evidence

**applicants** – greater certainty

#### **4.4.4 Property care and site management**

Improved understanding of a building or other asset's history, including original construction and alterations, should have significant benefits for its conservation.

Benefits for:

**owners and occupiers** – improved understanding of their assets and how they can best be cared for, including through asset management plans. Good understanding using this and other datasets should allow understanding to lead proposals and avoid wasted time and money developing proposals incompatible with an asset's significance.

**conservation officers and archaeologists** – improved understanding of the characteristics and features of individual buildings should lead to strategically managed and targeted repair programmes and a reduction in conservation backlog.

**conservation architects and craftsmen** – improved understanding of methods and materials used (given in written specifications) should save time in research and improve quality of work.

#### **4.4.5 Public and localism**

Benefits include an improved understanding of local character and the way in which individual assets, in particular relatively recent ones, contribute to it.

Benefits for:

**local residents and community groups** – greater involvement in understanding of character, designation of

local and other assets, and informed engagement in neighbourhood planning; house history  
**conservation officers and archaeologists** – wider public support can be expected with clearly articulated statements of significance  
**policy planners** – more informed public engagement in policy development  
**development management officers** – more informed public engagement in development management process  
**applicants** – sensitive treatment of heritage assets should lead to wider public support for development schemes

#### **4.4.6 Research**

The building application data can have benefits for both site- or building-specific and thematic research, including research across different towns or localities.

Benefits for:

**researchers** – better access to key dataset, allowing more time to be spent on researching linked data and undertaking analysis  
**conservation officers and archaeologists** – improved understanding of 19<sup>th</sup> and early 20<sup>th</sup> century development, contributing to improved casework handling and conservation planning

#### **4.4.7 New uses for old data**

Because of the comprehensive way in which the index has been developed, including information from linked sources such as committee minutes, developing new uses for the material should be relatively straightforward. The sampling of post-1885 records will provide a barrier to comprehensive use of later material, though the sampling criteria are believed to be robust enough for the most significant records to have been copied.

### **4.5 Working practices**

This project has been a useful exercise in building working relationships with the partners and project team members. The project coincided with the formation of a Heritage and Design Team, within Worcester's Development Management Service, combining archaeological and conservation advisers as well as other specialist staff. While archaeologists have worked effectively alongside conservation officers over a number of years in Worcester, this has been a useful opportunity to build a project that addresses the needs of all heritage staff.

The project has provided an opportunity to work closely in partnership with Worcestershire Record Office to achieve outcomes desired by both parties. While the digital capture of this source has been more time-consuming than was originally anticipated, the benefit of preserving this important resource has been enough of a priority for digitisation staff to continue to work through the full sample list based on the original estimate of cost, despite the additional time that this took. The project has further demonstrated the benefits of this kind of digitisation project and has helped in justifying the purchase of a second high specification digital camera to increase the capacity to undertake this kind of work in the future. Worcestershire Record Office staff are keen to receive training on the Historic Environment Record and the outcomes of this project, and it is felt that this will be a particularly useful case-study in demonstrating the benefits of making digital copies of archive material available, especially in a spatially-searchable way.

This project has been very fortunate to benefit from the support of a number of volunteers. An informal presentation was given to a volunteer group from the Worcestershire Industrial Archaeology and Local History Society part way through the project, to demonstrate the ways in which the building applications data is going to be used and how it can be used alongside other information sources to better understand the historic built environment. This group was particularly interested in being involved with field-checking of the data, and in consultation with the project team they have agreed a pilot area to compare building applications data with buildings survival. It is important to be able to provide sufficient support to voluntary groups in order to undertake this kind of work, and balance this with agreement with group members to particular tasks. The experience of the project team is that voluntary groups are keen to be offered specific project tasks that can be adapted to fit the time-table of group members, as many are involved with a variety of other activities.

#### **4.6 Costs and benefits assessment**

It is difficult to foresee all of the costs, and in particular the benefits, of this project, and certainly too early to measure them. As shown in 4.2-4.5 above, there are multiple potential uses and users for the project outputs. All of these contribute to the benefits side of the equation, though only some translate directly into cashable benefits.

Costs fall under the following headings:

Project development	Required for any project, but cost reduced if the guidance in this report is followed
Indexing	Estimated to be between 10-20% of project costs, but potential to work with volunteers
Digital copying	Estimated to be between 30-50% of project costs
GIS and HER linking	Estimated to be between 30-50% of project costs, with some potential to work with volunteers
Digital storage	Setting up and maintenance / backup costs
Making the records available	Considered to be <i>de minimis</i> as the greater efficiency of digital data supply should offset the expected higher demand
Document conservation	Not considered in detail, but the urgency of document conservation is reduced by reducing handling of original documents by members of the public

To allow a broad consideration of costs and benefits, a number of scenarios have been considered, from doing nothing to creating a full digital index and copy. The possibility of outsourcing the provision of images has also been considered. The strengths and weaknesses of each approach are set out in Appendix N.

Each of the six options presented has strengths and weaknesses. Not all have been put into practice for this dataset.

**Option 1** (do nothing) is effectively the option in place across most of the UK. Pursuing this option means, most significantly, that the records continue to be inaccessible or hard to access, with no benefits realisable. Continuing with this option does have significant costs in loss of efficiency and effectiveness, and can be expected to result in the loss of some assets whose value has not been fully understood.

**Option 2** (index only) is in operation at Cardiff, Dumfries, Plymouth and East Sussex. This provides easier access to the material, in that the presence or absence of a record can be established remotely. Although this is not the case at any of the record offices surveyed, this option could be developed alongside the use of GIS, which would significantly reduce search times. There is still a substantial cost in acquiring copies of documents for casework or other use.

**Option 3** (sample digitisation, with index and GIS) is the option adopted at Worcester. This gives a broad balance between cost and the various benefits, though there are ongoing costs attached to operating a two-tier system where some records have been copied but others not.

**Option 4** (full digitisation, with index and GIS) would clearly be preferable if unlimited funds were available. This is by far the most expensive option, but provides the most benefits and should be efficient in use.

**Option 5** (private / commercial provision) is the option pursued for many of the large datasets used by family historians. It seems unlikely that provision of this dataset would be commercially viable, and the benefits of integrating this data with other sources would be hard to achieve. Notwithstanding the limitations and longer term costs of this option, it does have the initial attraction that there would be no cost to the public purse.

**Option 6** (digital copies only) meets principally the needs of archive management. The provision of a full index is assumed, and this will provide public access to the records. However this would not be an efficient solution and would fail to secure the benefits of using this dataset alongside others for the management of historic environment assets, and would perpetuate inefficiencies.

## **5 Conclusions and recommendations**

The project has indicated significant benefits from the accessibility and use of the building plans, for the Record Office, the HER, and a wide spectrum of service users. The latter include planners, specialist advisers, architects and other professionals, and the public, both through engagement in neighbourhood planning and for research and general interest. To derive maximum benefit it is suggested that some wider information collection is needed, and that careful targeting of resources should be based on a broad understanding of the national picture.

The principal recommendations of the project are:

- English Heritage and MLA (and its successor bodies) should consider commissioning a project to locate and quantify historic building records across England, and consider their existing accessibility and the work needed to provide access, working with partners such as RTPi and HLF

- English Heritage should champion the use and further development of the model project design presented here
- Locally, HERs should identify the potential and priorities for enriching the information they hold for this period, including building plans but also other resources
- HERs should undertake building plan data acquisition projects in partnership with record offices and others, and work to maximise the benefits of partnership working
- Project designs should allow sufficient time for slippage and for modification of the project programme dependent on results
- Where building records are accessible, digitally or otherwise, HERs and record offices should actively promote their use
- Local authority archaeological advisers and conservation officers should use the building records where available, and promote their use as part of a wider spectrum of information where relevant, including specifying the use of particular datasets in briefs
- There may be a need for training for archaeologists and historic buildings specialists in the nature, availability and use of 19<sup>th</sup> and early 20<sup>th</sup> century records
- Worcestershire County Record Office and Worcester City HER should document the use of the Worcester historic building records and review this regularly

## Bibliography

- Attwood, D A, 1997 *The growth of 19<sup>th</sup> century Worcester: a study of the development and growth of Worcester city and its suburban estates*, unpub BA dissertation, Worcester College of Higher Education
- Brooks, A, & Pevsner, N, 2007 *The buildings of England: Worcestershire* (2<sup>nd</sup> edn)
- Clark, G T, 1849 *Report to the General Board of Health on a preliminary inquiry into the sewerage, drainage, and supply of water, and the sanitary condition of the inhabitants of the city of Worcester*
- Dunleavey, J W, 2000 *Worcester and Gloucester: a comparative study of urban expansion in two provincial cities between 1870 and 1939*, unpublished PhD thesis, University of Birmingham
- Dunleavey, J W, 2004 Suburban residential development in Worcester during the Bye-law period, 1866-1939, *Trans Worcestershire Archaeological Soc* **19**, 175-199
- Gaskell, S M, 1983 *Building control: national legislation and the introduction of local bye-laws in Victorian England. National statutes and the local community*
- Harper, R H, 1985 *Victorian building regulations: summary tables of the principal English Building Acts and Model By-laws, 1840-1914*
- Kenney, A, 1990 Sources for the history of housing in English provincial towns in the eighteenth and nineteenth centuries, *Construction History* **6**, 63-74
- Ley, A J, 2000 *A history of building control in England and Wales, 1840-1990*
- Manco, J, nd, a *Researching Historic Buildings in the British Isles: History of Building Regulations*  
<http://www.buildinghistory.org/regulations.shtml> (accessed 10/1/11)
- Manco, J, nd, b *Finding aids for historic images of buildings in the UK and Ireland* <http://www.buildinghistory.org/images2.shtml> (accessed 17/1/11)

Rodger, R, 1995 *Housing in urban Britain 1780-1914*, updated edn, Cambridge

Whitehead, D, 1989 *Urban renewal and suburban growth*, Worcestershire Historical Society Occasional Paper, Worcester

Worcester City Council, 1888 *Byelaws made by the Mayor, aldermen and citizens of the City of Worcester, acting by the council as the Urban Sanitary Authority, with respect to new streets and buildings in the City of Worcester*, Worcester

### Online plans indexes

**Cardiff:** the building of a capital (online search)

<http://www.glamro.gov.uk/check/Building%20of%20a%20Capital%202/enter.html> (accessed 17/1/11)

**Dumfries:** Dean of Guild plans index (online search)

<http://www.dgcommunity.net/historicalindexes/deanofguild.aspx> (accessed 17/1/11)

**Plymouth:** Plymouth's architectural heritage (online search)

<http://www.plymouth.gov.uk/homepage/leisureandtourism/archives/plymouthsarchitecturalheritage.htm> (accessed 17/1/11)

### Abbreviations

CLB	Claines Local Board
GIS	Geographic Information System
HER	Historic Environment Record
HBSMR	Historic Buildings, Sites & Monuments Record
HLC	Historic Landscape Characterisation
HLF	Heritage Lottery Fund
PDF	Portable Document File
TIFF	Tagged Image Format File
WCC	Worcester City Council
WCHER	Worcester City Historic Environment Record
WCRO	Worcestershire County Record Office
WURSA	Worcester Union Rural Sanitary Authority