

# AskAboutIreland Cultural Heritage Project Final Report

Report prepared by Dublin City Council Public Libraries – a pilot project partner

[www.askaboutireland.com](http://www.askaboutireland.com)

Cultural Heritage – a project funded by the Department of the Environment and Local Government and managed by An Chomhairle Leabharlanna.



Library Services

## Final Report

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## Introduction

This is the final report from pilot project partner - Dublin City Council Public Libraries, on the *Ask About Ireland Cultural Heritage Project*. It provides a summary of work completed in each workpackage, lessons learnt and recommendations for future digitisation projects.

Overall this was a work intensive project that contained a sharp learning curve for its participants. It resulted in a net gain and transfer of skills for this team and a positive project outcome in terms of the website content. The *Ask About Ireland Cultural Heritage* project provides a useful model on how libraries, archives and museums can develop local expertise in creating valuable web enabled content for members of the public.

## Summary of each deliverable

This section provides a summary of each workpackage deliverable. In all there were eight workpackages (excluding project management) and eleven deliverables required during the six month project. The project began by selecting material content for digitisation.

## Workpackage 1 - Selection of Material

Selecting appropriate content for digitisation is the first and in many ways the most crucial workpackage activity. Without selection there can be no digitisation or access to material. This partner has developed a set of guidelines recommended for use when considering the selection of material for digitisation. They include:

- Select material using either a format based or thematic approach;
- Select material that meets client needs;
- Select material of value in terms of its intellectual, historic, and artistic content or its physical attributes;
- Select material where access and use is enhanced through the digitisation process;
- Select material that contributes to a national resource;
- Select material where the condition of the original allows for safe digitization, **or** make surrogates, e.g. photographs of originals, and digitise those;
- Select material with regard to technical feasibility so that:
  - it can be digitised once for all purposes;
  - can be digitised without special enhancement;
  - it can be accessed in digital format across platforms and networks at reasonable speed.



## **Selection Outcome**

Operating within the framework of the overall project on the “Big House” theme, DCCPL selected material relating to Bushy Park House, Terenure, once home of Sir Robert Shaw, MP, Lord Mayor of Dublin (1815-1816). Material selected included manuscripts, text, maps and photographs.

## **Practical Tips - Selecting Material**

- When selecting material for inclusion in a digitisation project it is useful to note the following details:
  - format and type;
  - description;
  - individuals named in document;
  - reason for inclusion;
  - scanning and conservation issues;
  - size in cm;
  - copyright status.
- Maintain a database or other system to track material progress and status in terms of digitisation. Begin with fields as listed above that can be developed and modified as the project progresses.



***Bushy Park House***

## Workpackage 2 - Copyright

Copyright, or author's right (droit d'auteur) is an intellectual property right (IPR) that is given to authors, artists, photographers, sound recording producers, film directors, publishers of edited works and others as defined in the *Copyright and Related Rights Act, 2000*. Copyright usually resides with the author, maker or originator. Since copyright is a form of intellectual property it can also be transferred as in the case of author to publisher. Copyright is given for a fixed period of time during which the originators have protection against unauthorised exploitation of their works.

*Copyright issues are amongst the most complex in a digitisation project.*

When selecting material it is necessary to establish copyright status. Given that copyright issues are amongst the most complex activities in a digitisation project it may be necessary to select primarily material that is:

- in the public domain;
- copyright free;
- created by the organisation e.g. sound and video recordings.

**and/or**

Select copyright protected material where permission is securable.

The second copyright task relates to identifying an appropriate mechanism to protect the images from unauthorised copying when made available on, for instance, the worldwide web.

### Copyright Outcome

DCCPL negotiated successful copyright permission with a range of copyright owners including photographers, Society of Authors, the Estate of G. Bernard Shaw, the National Library of Ireland, and the Irish Architectural Archive. DCCPL made a reduced quality image available for web distribution as a means of deterring unauthorised copying and commercial exploitation of the image. In the context of a larger image database digital watermarking would be an appropriate mechanism.

### Practical Tips – Copyright Issues

- Identify the copyright owners. In some instances this may be a single owner; in other instances there may be multiple owners e.g. author and publisher.
- Track the owners and contact them in writing for their permission, providing full details on the digitisation outcome, for example whether it will be available locally or on a network.
- In the case of commissioned work e.g. professional photographer a copyright should be negotiated.
- Maintain a diligence file relating to all copyright correspondence, to include – letters seeking permission, responses, forms of acknowledgement and specified limitations, and details of fees.
- Update the database tracking system in terms of copyright negotiations and status.
- Identify an appropriate copyright protection mechanism and incorporate it in the database.
- Include a copyright notice on the web page.

## Workpackage 3 - Digitisation Requirements

*Manuscript material was the most challenging in terms of pre-scanning treatment, scanning and web delivery.*

This project focused on the research requirements relating to manuscript, text, and photographic material. In terms of DCCPL's material, manuscripts were the most challenging in terms of pre-scanning treatment, digital capture and web delivery.

### Practical Tips – Digitisation Requirements

- Analyse the source material in terms of its condition and format.
- Take appropriate conservation advice in the case of fragile material.
- Identify and carry out pre-capture treatments, e.g. manuscript material - carry out any conservation work and treatments for relaxing the deeds.
- Ensure that staff are suitably trained and competent in the handling of fragile material. (In the case of archival material an archivist will usually perform this function.
- Identify appropriate capture methods in the case of skin, paper and bound material:
  - for skin manuscripts - use digital camera;
  - for bound volumes assess on a case by case basis;
  - for paper manuscripts – scan or digitally photograph dependent on size.
- Set up a digitisation centre for items to be scanned and set up a schedule for items to be transported or digitised in-situ.
- Acquire the necessary digitisation equipment. This includes: digital camera and associated equipment, flatbed (usually A4 or A3) and image processing software such as Photoshop 7.
- Acquire a computer with a minimum hard disk capacity of 40GB and a minimum memory (RAM) capacity of 256 MB. This is the minimum requirement necessary to access and store a limited number of images as in this project.

### Digitisation Requirements Outcome

Hardware already available in the organisation was used for scanning purposes. This included:

- Siemens Fujitsu multimedia pc, this is the standard Dublin City Council issue that was purchased in 2001 at approximate cost of 2,500 Euro. It includes 40GB of hard disk, 256 RAM.
- Epson 1640 XL (A3) model purchased in 2001 at an approximate cost of 3,000 Euro.
- Nikon digital camera D1H 60 mm macro-nikkor lens. This is a professional standard camera purchased for 6,000 Euro in 2002.

The project team used Adobe Photoshop 7 for image manipulation purposes. This was purchased for project use at a cost of 1,000 Euro. Photoshop was selected because it is an industry standard and because some project staff were already familiar with the product. It also contained a metadata element, which although not used in the project would be useful in other contexts.

## Workpackage 4 – Digitisation Requirements

This partner used a range of digital capture methods to digitise selected material. This included:

1. Flatbed scanner (A3 size) for photographic prints, text documents or items in appropriately bound volumes;
2. Digital photography (library staff) for skin and paper manuscripts up to 50x60 cm. While it is possible to reproduce quality images using a digital camera, oversize material manuscripts require digital photography experience to reproduce. Equipment includes digital camera with flat-field lens, tripod, and suitable support cradles;

Digital photography (external photographer) for skin manuscripts over 50x 60 cm.

*While it is possible to reproduce quality digital images using a digital camera, manuscript material such as oversize manuscripts requires digital photography expertise to reproduce. Equipment includes digital camera with flat-field lens, tripod, and suitable support cradles*

### Digitisation Outcome

DCCPL arranged the digitisation of all material selected for inclusion on the pilot project website. The range of items was either digitally photographed by library staff, digitally photographed by an external photographer, or scanned using internal equipment. Despite pre-digitisation conditioning, some manuscripts may not be amenable to digitisation, in that they cannot be flattened sufficiently. In such cases, manuscripts can be treated as three dimensional objects and stored or displayed as images rather than as true facsimiles of the original.

Text versions or elements of text should also be included for the sake of accuracy.

In a few cases, the items were supplied already digitised by external organisations. All files were saved as TIFF (Tagged Image File Format). Total file size is 1016.44 MB contained in two CD-R disks. Total number of files digitised was thirty-four

### Practical Tips - Digitisation

- Research the digitisation requirements to avoid unnecessary mistakes (this is what was done in the Cultural Heritage Project).
- Set up a transportation and digitisation schedule for all items to be digitised.
- Set-up and allow sufficient time for a microclimate to relax skin manuscripts.
- When digitising regular material use the following scanning settings:
- For colour prints use 300 ppi and 24-bit colour;
- For black and white prints use 300 ppi and 8-bit greyscale settings (be aware that 14-bit setting is not supported by many applications);
- For greyscale use 300 dpi and 8-bit greyscale.
- Where possible sample and scan/digitise at different resolutions to check the clarity of the image.
- Save the master copy as a TIFF (Tagged Image File format) - this is a loss-less format - which means there is no loss in original image quality.
- Save working or editing versions of image files (if using *Photoshop* Software) as PSD files because changes made to the image in this format will not result in loss of image quality.
- Save the web delivery file in JPEG (.JPG) (Joint Photographic Experts Group)

## Workpackage 5 - Metadata Application

Metadata is defined as structured data *about* data. In this project a number of metadata structures were researched and the Dublin Core Metadata system was recommended as the most appropriate metadata system. Dublin Core is a set of 15 core elements that can be used to describe electronic resources: title, creator, subject, description, publisher, contributor, date, type, format, identifier, source, language, relation, coverage and rights. It is the standard of choice in most of the literature regarding metadata. The Dublin Core Metadata standard is very user friendly and can be applied by people with or without knowledge of cataloguing.

*At the 'selection of items to be digitised' stage the preferred metadata standard should be established. This allows for the relevant descriptive information for each digitised item to be recorded step by step throughout the digitisation process and also allows for the recording of information about the creator and the project.*

It was also developed for use by the non-specialist searcher.

## Metadata Outcome

The metadata system used on the digital database system was applied to all the items made available on the web site. This system was based on the Dublin Core elements. This partner developed an in-house image management system incorporating metadata. It is developed in an Access database and includes thumbnail versions of the images.

## Practical Tips - Metadata

- At the 'selection of items to be digitised' stage the preferred metadata standard should be established. This allows for the relevant descriptive information for each digitised item to be recorded step by step throughout the digitisation process and also allows for the recording of information about the creator and the project.
- Develop a database recording the metadata content. . For example Dublin City Public Libraries set up an Access database using the Dublin Core 15 Elements Metadata standard.

## Workpackage 6 - Preservation and Storage of the Master Digital Copy

*A digital preservation strategy ensures access to the material when the hardware and software becomes obsolete.*

In the Cultural Heritage Project, material selected for inclusion on the Web site has been digitised as “master copies.” During the workpackage - *WP6 Preservation and Storage of the Digital Master Copy*, this partner considered an appropriate digital preservation strategy to ensure access to the material when the software and hardware becomes obsolete. Given the rapid advances in technology, digital information can become inaccessible as older technology systems become redundant and inoperable in this volatile environment. Clearly, it is an important part of each digitisation project to take appropriate forward planning measures to prevent this occurring.

### Preservation Outcome

DCCPL stored one complete set of images on magnetic hard disk and two additional sets on CD-R stored in separate locations. A future watch on technological advances will be maintained to ensure long-term access to the files. Its preservation strategy known as migration focuses on transferring digital information to new computer platforms or storage media before the earlier platforms become obsolete.

### Practical Tips – Preservation

- Ensure that the files being saved are the correct ones and are a complete record of the project. (Keep both masters and copies).
- Develop an appropriate file naming structure that follows the 8.3 rule (8 characters before the suffix followed by 3 letter format name e.g. Bhimag1a.tif).
- Keep an easily accessible (e.g. as a text file in the same directory as the image files) table of file names against title or description of metadata fields.
- Ensure that the files are saved in an appropriate format (e.g. TIFF) and are uncompressed – that is all the information encoded during the scanning process is retained in full.
- Keep 3 distinct copies of all files on a permanent storage system and keep them in separate locations (known as **replication**).
- **Refresh** or copy the file content from one digital medium to a similar medium. This refreshes the data and increases its preservation prospects. The file naming structure should reflect the refreshing process, for example ‘Bhima1ar.tif’, where the ‘r’ indicates that the files have been refreshed.
- Ensure that the appropriate technical and administrative metadata is maintained to reflect this process. This is maintained on the image management database. The accompanying data (metadata) should be available in plain text.

## Workpackage 7 - Development of content for ASKABOUTIRELAND web site

In advance of web delivery of material it is important to develop a content site map and accompanying narrative for meaningful presentation of material on the web.

The content for the Cultural Heritage Project website at [www.askaboutireland.com](http://www.askaboutireland.com) includes images of manuscripts, photographs, text and a family tree chart. A training session on image manipulation was held and proved useful in preparing images for web delivery. The material was uploaded to the website using Microsoft Front Page Express to amend the page, rename the old file and then upload the new files.

*In advance of web delivery of material it is important to develop a content site map and accompanying narrative for meaningful presentation of material on the web.*

### Development of web content outcome

DCCPL developed a pilot project web content structured around the following themes:

- The Shaw Family of Bushy Park House
- Bushy Park House Demesne
- Estate Deeds
- G.B. Shaw.

The next stage of the project focuses on an evaluation of the website by selected groups and individuals.

### Practical Tips – Preparation of Web Content

- A training session on image manipulation is a useful activity in advance of web delivery.
- Thorough preparation prior to any web page creation is vital. A consistent approach should be taken to structure, layout and method of naming pages, image text and links.
- Web page text should be thoroughly checked prior to creation of pages, especially in terms of names and dates in a historical context. This would minimise time wasted in correcting errors on live pages. Also, as pages are available to the public once uploaded, and older versions may not be refreshed directly, it is important that information is correct.
- In the case of some manuscripts, digitised versions may not be fully legible. Full text or text samples of such documents should be included.
- Photographic Image files should be saved in JPEG (.jpg) format at 72 ppi resolution to ensure reasonable access and download times.
- Line drawings should be saved as GIF (Graphical Interchange Format);
- Pages should be viewed on monitors of various sizes during the initial phase of creation to assess if changes need to be made to minimise user scrolling.
- Where there is a requirement to develop a number of family tree charts it might be useful to investigate specialist packages e.g. [www.legacyfamilytree.com](http://www.legacyfamilytree.com) [www.cf-software.com](http://www.cf-software.com)

## Training and Costs

Working as a team there was a useful development and transfer of skills within the project. The training provided by An Chomhairle Leabharlanna in terms of the templates for uploading images and text to the Internet was appropriately pitched and additional training on image manipulation (organised by DCCPL's staff) supplemented external training. The sessions on *Photoshop Version 7* focused on image manipulation such as sizing, editing and file format requirements and also provided an introduction to scanning. Training specific to digitisation includes:

- Scanning,
- Software for image manipulation,
- Digital photography,
- Material handling,
- Conservation awareness,
- Metadata development,
- Preparing material for Web delivery.

In determining digitisation costs, there are a number of variable elements which can increase costs significantly. The table on the next page provides details of elements in a digitisation project.



**Appendix I - Table of variable cost elements in a digitisation project.**

<b>Element</b>	<b>Reducing Cost Factor</b>	<b>Increasing Cost Factor</b>	<b>Comment</b>
Hardware: <ul style="list-style-type: none"> <li>• PC</li> <li>• Scanner</li> <li>• Digital Camera</li> </ul>	2,500 3,000 6,000		Cost of PCs are reducing
Software: <i>Adobe Photoshop Version7</i>			Industry standard and staff were familiar with it.
Manuscripts	<ul style="list-style-type: none"> <li>• Copyright owned or</li> <li>• Copyright protected</li> <li>• Catalogued</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation requirements</li> <li>• Copyright fees or negotiations</li> <li>• Not catalogued</li> <li>• Oversize – sent to external photographer</li> </ul>	
Photographs	<ul style="list-style-type: none"> <li>• Copyright owned or</li> <li>• Copyright protected</li> <li>• Catalogued</li> </ul>	Copyright fees Cataloguing	
Staff Time: Research	Thematic based projects require research time but format based projects required (generally) more digitisation time.		
Staff Time: Metadata Development	Already catalogued	Cataloguing	
Staff Time; Digitisation:	Regular type material can be digitised quickly and easily	Material with special requirements such as manuscripts more complex	
Staff Time: Web development	Staff who are already skilled in this work		
Training Costs	Internal - group based	Attending external cost is generally 250 Euro per day per	

		participant.	
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### Overall Project Evaluation

This was a very useful project in terms of developing expertise and skills in the digitisation of content for web delivery. The project involved a multidisciplinary team of archivists and librarians from Special Collections, Research and Projects, Development and Systems departments. This resulted in a collaborative team that drew from a range of experiences and expertise. The project management structure resulted in a steady and progressive achievement of work output.

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