



Old Town Hall, St. Augustine Street, Dungarvan, Co. Waterford, Ireland
Phone: 058 45960 • Website: www.waterfordcountymuseum.org

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About Waterford County Museum

Waterford County Museum is a non-profit voluntary organisation based at St. Augustine Street, Dungarvan, County Waterford. 4 trainees from an Fás Community Employment training scheme currently staff the museum. Each works 20 hours per week. Waterford County Council provide us with a premises rent free and also pay our utility bills. Our annual budget is approximately €6000 to €7000 per annum.

The aims of the museum are:

1. To preserve the history of County Waterford.
2. To acquire and preserve individual items or collections of local interest.
3. To educate the public about Waterford local history.
4. To publish various books and pamphlets on items of historical and local interest.

In recent years we have been at the forefront of technological innovation in the Irish museum sector. In 2002 our web site [www.dungarvanmuseum.org now www.waterfordcountymuseum.org] was short-listed among the top five research museum web sites in the world at the sixth annual Museums and the Web conference in Boston. It followed up this success by being awarded Best Publication for Visitors at the Irish Museum Of The Year Awards 2002.

More recently the museum has revamped and rebuilt their web site (with Heritage Council grant aid) to include a version of the site for the visually impaired. Other enhancements include improved accessibility and navigation on the web site for visitors with the addition of a 'related articles' feature and the ability to select articles by time period

Introduction To The Image Management Project

What is most remarkable about this project considering its scale is the fact that it was created at no cost to Waterford County Museum by mainly volunteer effort. The Image Management Software was written free of charge by Déise Design [www.deisedesign.com]. Fás provided a C.E. worker to input the images. Waterford County Library provided us with free server space. We applied for grant aid to The Heritage Council Of Ireland for €2800 worth of computer equipment and scanners.

With 1 worker working a 20-hour week we have the capacity to add 2000 images per annum. The system has been designed for 10's of thousands of images. This web site [Image Management System] will benefit Waterford County Museum in 5 ways:-

To allow the public to have greater access to the photos/images. The photographs will be disseminated worldwide encouraging further image donation and specialists (e.g. military, coin collectors) will be able to comment on images increasing our knowledge. With the new Leaving Cert history syllabus incorporating course work there will be an opportunity for students to utilise the material in the archive in their examinations.



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Images can be searched for more easily - for example using the search facility on the Image Management Software we could find every image of sport from the Lismore area. Creating the hierarchical tree for the image subjects took a lot of research and work.

To preserve the images/photos for future generations. Each image is scanned at 600 DPI and algorithms are then used to resize and watermark the image automatically. We store a digitally (almost) perfect copy of the original image in our archive. In the event of fire etc. we can reproduce images off of the multiple copies of the digital archive that we keep.

Information about each image can be stored more easily and the Image Management System is a catalogue of our offline assets, allowing museum staff to locate images and photos quickly. As a voluntary organisation we were vulnerable to key personnel dying or departing. The image management system allows us to electronically archive our knowledge and make the museum less dependent on individuals.

The web site is fundamental to our history outreach programme that we set up to collect photographs/images throughout County Waterford. We already have collectors in 10 villages around Waterford collecting on our behalf. The archive drives our history outreach programme as collectors can see an immediate return on their work as the image goes online.

Project Budget

As we are a voluntary body with an annual budget of approximately €6000 per annum we knew we were going to have to beg and borrow to get the project up and running.

The software for this project was developed and provided free of charge by Déise Design [www.deisedesign.com]. Waterford County Library Service provide ongoing hosting facilities free of charge. The Heritage Council Of Ireland provided us with €2794.58 - our total budget spent on the project over a two-year period. This money was used to install a small wireless network in the museum, purchase a scanner and a local server for testing/storage. Fás provide a Community Employment trainee to staff the archive on a part time basis.



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Planning The Image Archive Implementation

Why Create An Image Management System?

We wanted to implement an Image Management System for 4 reasons: -

- Access - To allow the public to have greater access to historic photos/images.
- Preservation - To preserve the images/photos for future generations. Information about each image can be stored more easily. We wanted to future proof the images and information we had collected over the years.
- Utility - To use the Image Management System as a catalogue of our offline assets.
- Encourage Participation – By putting our image assets online we should find that we would encourage the donation of further images from the public.

Access To Images

As we are a small organisation with a very limited budget, dependent on voluntary labour and our Fás CE scheme we must seek to play to our strengths if we are to maximise our contribution towards preserving County Waterford history. We knew from our work on the Waterford County Museum web site that the Internet was a very effective way of reaching large numbers of people at little cost. Our web site gets 104,000 different visitors per annum from around the globe. For specialist / minority interest publications the Internet has considerable advantages over traditional print media. We would have distribution difficulties with a book and it would tie up large quantities of Museum capital while we attempted to sell it. A book would also be limited in size.

Preservation Of Images And Knowledge

It is quite easy to publish an image on the web. We had a much greater aim. We wanted to electronically archive the image thus preserving the image in the event of a fire, photo degradation etc. We would store as perfect an electronic copy of each image as technology would allow. Publishing the image online would only be one element of this project.

Like many small organisations we are very dependent on a small core of individuals. In the event of a sudden death or departure from our organisation we are conscious that we would suddenly lose a lot of irreplaceable knowledge. In an extreme case this could result in the organisation going into a decline or ceasing. By preserving the information associated with each image electronically we can future proof the research that has been done by individuals around the county. It is not good enough that any organisation should have mission critical information stored in the head of an individual.

We should also be able to reduce the amount of handling of original artefacts. Most of the time staff and visitors will be able to work with the electronic version of images.



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Provide Museum Staff With A Useful Tool

The image archive will allow museum staff to locate images and photos quickly for exhibitions and visitors. Images can be searched for more easily - for example using the search facility on the Image Management Software we could find every image of sport from the Lismore area. Assembling exhibitions will become easier and less dependent on someone remembering that we have a great photo somewhere in our archive. It will also allow us to better meet visitor demands for photographs and information when they visit the museum. This will lead to an improved visitor experience and reduce the time demands on museum staff answering queries.

Encourage Participation By Local People

This project has two main elements to it, the technological element and the outreach element. We have set up / are setting up a network of individuals to collect images countywide. We are also building partnerships with organisations that are already collecting images. By publishing the images collected by these groups / individuals we give a very public end result to the work of these groups.

We also anticipate that when the archive goes online that members of the public will realise that the photographs in their possession may have historical value. This should result in increased levels of image donations to the museum.



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Effects Of The Project On The Museum

Increased Demand For Manpower

The project would increase time demands on an organisation dependent on voluntary labour. We felt that we could cope with the demands of creating the software in-house. More problematical was the ongoing labour requirement of populating the database with images and photos on a daily basis. We decided to source additional workers for our Fás CE scheme. A worker was going to be allocated on a fulltime basis to the image archive.

Museum Skills Deficit

The museum staff did not have the skills required to scan images to archival standard. It was also felt that they needed instruction in image categorisation and writing descriptions. Déise Design agreed to train staff prior to the launch of the project.

Financial Cost

It was anticipated that additional photos would be donated to the museum as a result of the project going live. In addition it was decided to improve the standard of conservation and cataloguing of the collection. As the photos are entered into the database we were going to re-catalogue them and use proper conservation standard plastic sleeves and photo boxes. This was going to have a substantial cost implication for our small organisation.

Raise The Museum Profile

This type of project will generate a certain level of newspaper interest. We will be publishing information of interest to wide range of people and should get large visitor numbers on the web site. As we have no advertising budget we are dependent on local newspaper coverage and word of mouth to publicise our work.

Expand Our Geographic Area

At the moment Waterford County Museum is going through a transitional phase. We have recently undergone a name change. For some time we have been active in preserving and recording history throughout Waterford County and changing our name from Dungarvan Museum Society to Waterford County Museum reflects the new scope and range of our activities. This archive allows us to exhibit in every parish in the county, material relating to each parish.

Network With Local Historians & Groups

Much valuable work is being done around Waterford County by individuals working on their own attempting to preserve the history of their locality. Our project will allow these local historians to have an audience for their research / collecting efforts. In addition our project would allow their work and knowledge to live on after them.

Encourage Image Donation

With this archive when someone donates an image they will see a fairly immediate end product. A donor's photo will be made publicly available online within days of the donation. It has been our experience that donors often do not



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understand the space constraints on small museums and can be disillusioned when a treasured family heirloom does not go on public display immediately. Another barrier to donations can be that people don't realise the type of photographs or images we are collecting. They are afraid of appearing foolish if they offer material to the museum that is not required. By having the complete archive online - not just the important photos - visitors to the archive can see the photos and images we are interested in. This should encourage them to donate.



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Building The Image Archive

When we commenced the project we anticipated that we would buy in a software system. After intensive research over a 3 month period towards the end of 2003 we finally opted for the ToadView Image Management System (www.oxarchdigital.com). It appeared to have many of the features we required. We also wanted to completely avoid systems that involved annual licence fees. We would not be able to afford the online version of the software (£5000 sterling) but we felt that even having an offline digital image archive would be useful.

While initially the price, metadata support and future proofing of the software appeared to be what we required, once we started to discuss costs in detail a different story unfolded.

In common with most high-end software solutions no such thing as an actual price exists. Companies apply a pricing structure (pricing matrix/grid) designed to maximise their revenue. You pay what you can afford. As the Museum could not afford very much ToadView proposed turning off many of the features that made the software attractive to us. They wouldn't allow us to alter the interface appearance, wished to limit the number of images in the database and turn off the ability to put the database online at some future point (without substantial additional payment). We felt that this wasn't acceptable to us so we decided to write our own software from scratch. This should not be taken as a criticism of Oxford ArchDigital Limited. They were very facilitating towards us and in reality we were probably trying to do the impossible with the budget we had.

Writing our own software would give us many advantages. We would have complete control over it; we could add features and modules as we required them. We would have no licence fees to pay. Best of all we could write the software so that the archive could be deployed online at no extra cost (bar a server hosting cost). It took over 10 months of spare time coding and research before the software was ready to beta level. By late September 2004 the software was finally written and we were ready to test it.

Other areas of research that occupied a lot of our time at this stage were the:

- Dublin Core Metadata Initiative
- Scanning Standards



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Software Features

Comprehensive Scaleable Content

The Image Archive Software can support a large volume of images. We estimate that 100,000 plus images can easily be accommodated within the SQL database used.

Collectors And Trusted Users Get Additional Functionality

There is support for giving collectors and trusted users password protected access to the archive. Different passwords will allow different privileges. A collector's password generates an additional collectors field on the search bar. This means they can search for all images they have collected. We put this feature into the software because we felt it would act as an incentive for the collectors. At a higher level the curator / museum staff gets access to downloads of the original high resolution un-watermarked versions of the images.

New Images Are Easily Added to The Archive

Authorised museum staff are able to easily add images to the archive. After 2 months of operation we calculate that a single staff member can add approximately 50 images every 20 hours.

Appearance Will Be Dynamic

We have made certain aspects of the home page dynamic. This means that the picture on the home page changes automatically every week. We can change this time period if required. We also rotate the featured photographer on the front of the site. This ensures that the site's appearance will not become stale for a person who visits the site regularly. It also allows us to push information at a visitor to our site rather than waiting for them to browse to it.

Monitor The Images Published To The Site

The nature of the Fás CE work force is that they are trainees on work placement, we have been very lucky with our workforce and their dedication has gone a long way to making the image archive a success. It is however important that the work of any trainee is monitored, especially if the archive expands and we have multiple trainees publishing images to the archive. When a sub-editor publishes an image to the archive (depending on their level of trust) we can publish the image to the archive directly or park the image pending editorial approval. The editor of the site is emailed when any sub-editor publishes an image to the archive, the editor can then review and correct any errors. Each image on the site also stores an editorial history of who and when it was published and edited.

Multiple Ways Of Viewing Search Results

1. **Thumbnail View:** The standard way for people to view the search results. Multiple small images are put up on the results page.
2. **Listing View:** Useful for people who want a text listing of the images. For instance the Curator could print out this page of search results and bring it with him as he walks around the actual archive searching for photos for an



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exhibition. This page on the site has a link to a “printable version of the page”. These printer friendly pages are generated automatically and remove all of the menu bars and background graphics from the page being printed.

3. Serial View: This method allows people to make a slideshow out of their search results.

Site Is Easily Searched For Images

As we anticipate the archive to grow to a very large size it was important that the search facility should be robust. We had to ensure that people could find images easily and narrow searches if they got too many results. The simplest search is to search the site by keyword or phrases. You can also narrow your search results in 5 ways:

1. Photographer: You can search for photographs by the major photographers in the history of Waterford County. Only photographers with a substantial presence in the archive are listed.
2. Image Format: Black & White Photos to Colour Postcards. This field may eventually include maps and billheads.
3. Location: We chose to use the ecclesiastical parish as the geographic building block for the archive. Townlands would have been too plentiful. Civil parishes are rarely used.
4. Subjects: This was the field we put most effort into. We wanted our project to conform to international best practice and standards as much as possible. We created a sophisticated tool to manage the branches of the subject tree. We can add spilt and delete subject branches as appropriate. We found that the subject tree needed to be managed dynamically. You don't want to add a subject branch for 1 photo of the Fire Brigade but if the archive discovers 20 photos of the Fire Brigade we require the flexibility to add a Fire Brigade subject branch to the tree.
5. Between Dates: You can select a from and a to date. The search will return results between the years specified.



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Future Proofing The Archive

The single biggest challenge to keeping the archive running will probably not be the technological challenges that face it. Rather it will be the manpower required to manage the donor system as it grows. We have used Java to write the image management system. This gives us some critical advantages. The system is platform independent. We can deploy it on a Linux or Windows Server. Java is an object-oriented programming language. This allows you to create modular programs and reusable code. Put simply if we need to write a new feature for the image archive software we won't need to worry about the new module breaking any of the existing code.

Building Partnerships To Overcome Difficulties

The annual cost of deploying the archive online and making it available to the public would be approx. €2500 per annum. This type of ongoing cost was way too much for us to bear. Both Waterford County Museum and Déise Design have a good ongoing relationship with Waterford County Library. We approached Donal Brady the County Librarian and he recognised the importance of the project. The County Library Service agreed to give us space on their web servers. In return we agreed to acknowledge their contribution on the web site.

At the commencement of the project staffing levels in the museum comprised 1 full time curator and 3 part time Fás CE trainees. As each of the CE workers work a 20 hour week this was barely enough to meet our front of house staffing requirement. We approached the local Fás development officer luckily he saw the value of the archive and allocated us an additional worker for 20 hours per week. We were fortunate enough to secure the services of a CE worker with some technological experience, this made the training element of the project less of a burden on Déise Design.



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Populating The Archive

History Outreach Programme

Our history outreach programme is designed to offer people with an interest in the history of their local area an opportunity to preserve this history before it is lost for good. The programme currently takes in the towns/townlands of Abbeyside, Aglish, Ballymacarbry, Bonmahon, Cappoquin, Clashmore, Kilmanahan, Ring / Old Parish, Stradbally and Tallow.

The contact person or persons in each village collect old photographs, postcards, billheads and documents for scanning by museum staff. The original document can then be either donated to the museum or returned to the owner. The electronic copy will be added to our archives preserving it for posterity.

We hope to preserve the historical records of all areas in County Waterford. At the moment these records are vanishing and being destroyed on an almost daily basis. Once we have a collection of photos assembled from an area we would hope to have a travelling exhibition visit each of that village / locality displaying the donations from the area. This local image archive would be a valuable resource for history teachers, school children, local history researchers and the general population of the area. The images can also be accessed online.

The museum also offers outreach programme volunteers:

- Advice on conserving photographs and documents.
- Digital repair of damaged photographs.
- Assistance in transferring old cine film to video.
- Online publishing of articles, photographs and documents.
- Assistance and guidance in research projects.

To find the name of an outreach volunteer in your area of County Waterford please contact the museum at history@waterfordcountymuseum.org or phone +353 (0)58 45970 .

Local Groups

We will approach local sports clubs, organisations and societies and request that they loan us material to display in the archive. To reduce the workload on the museum society we may approach umbrella organisations to help us contact each group rather than approaching each group individually e.g. use Waterford Sports Partnership to contact the counties sporting organisations. By contributing to the archive an organisation can ensure that it's photographic history is secure for future generations.

Local Historians & Genealogists

The county has many local historians, some are well known and produce articles for academic journals, some operate only in their locality and do not produce a printed record of their work. We will contact all of the historians we are aware of and encourage them to contribute images to the archive. We will also make contact with genealogists (many of whom are living abroad) via online genealogy mailing lists. Many photographs of Waterford interest are to be found outside the



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island of Ireland, emigrants had mementos of their homeland posted to them or brought them with them when they left Ireland.

Books, Magazines & Prints

The museum has an extensive collection of out of copyright printed material. Many of these items contain illustrations that are of Waterford interest and we intend adding them to the image archive.



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Documents Used By The Project

Guide For Editors

The editor is the person who has to input the images into the database. The latest guide we issue to editors to help them fill out the entry for each photo can be found at:

www.waterfordcountymuseum.org/imagemanager/editordocument.pdf

Guide For Collectors

The collector is the person who collects the image off of the donor. The latest guide we issue to collectors to help them fill out the donation sheet for each photo can be found at:

www.waterfordcountymuseum.org/imagemanager/collectordocument.pdf

Donation Sheet For Collectors

The latest donation sheet that must be filled out by the collector as each image is being donated to the museum can be found at:

www.waterfordcountymuseum.org/imagemanager/donationsheet.pdf



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Credits

Project Management & Software - Déise Design [Martin Whelan & Willie Whelan]

Image Archivist – Alan Healy

Waterford County Museum Curator – Willie Fraher

Waterford County Librarian – Donald Brady