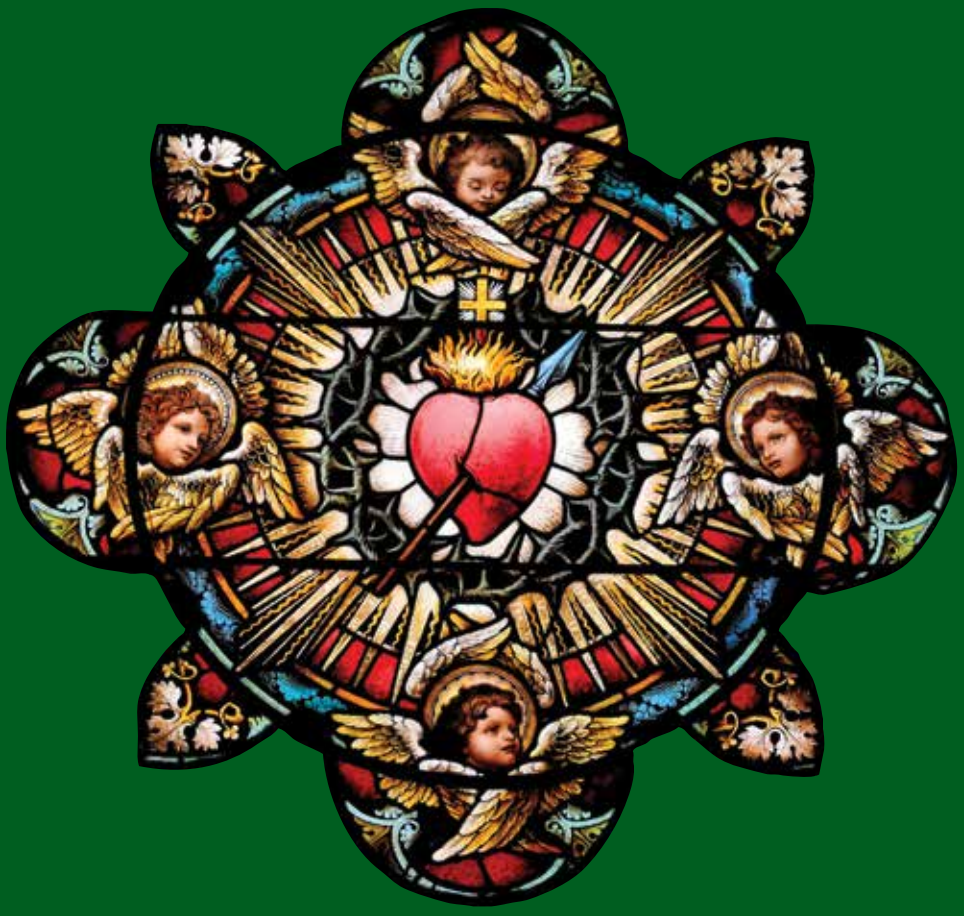
HISTORIC BUILDINGS COUNCIL
for Northern Ireland
2010-2013



18th Report

'No-one will protect what they first do not care about' (Lord Richard Attenborough)

HISTORIC BUILDINGS COUNCIL
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Front cover: Sacred Heart window, Church of the Immaculate Conception, Strabane;
Back cover and above: Architectural details from historic properties in Northern Ireland

Contents

Members 2010-2013

CHAIRMAN	Mr Frank Robinson			
MEMBERS	Ms Iona Erskine Andrews	Mr Joe Diamond	Ms Ursula O'Hare	Mr Michael Martin
	Mr Brian Banks	Prof. Joseph Fitzgerald	Dr Paul Harron	Mr Robert Miles
	Mr Ken Boston	Mr Brian Green	Ms Noelle Houston	Mrs Agnes Peacocke
	Mr Cathal Crimmins	Mr Pat McGuigan	Mr Alistair Lindsay	Dr Patricia Warke

Left-right: Michael Martin, Brian Green, Brian Banks, Cathal Crimmins, Frank Robinson, Joseph Fitzgerald, Ken Boston, Agnes Peacocke, Joe Diamond, Patricia Warke, Robert Miles, Noelle Houston, Alistair Lindsay.

Iona Erskine Andrews

Paul Harron

Ursula O'Hare

Pat McGuigan

Functions

Former Officers' Mess, Ebrington Barracks, Londonderry

The Council is required to be consulted:

1 under Article 42(3) of the Planning (Northern Ireland) Order 1991 on the listing of buildings of special architectural or historic interest (or amendment of lists so compiled);

2 under Article 50(3) of the Planning (Northern Ireland) Order 1991 on the designating of Conservation areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance;

3 under Article 105(2)(a) of the Planning (Northern Ireland) Order 1991 to keep under review, and from time to time report to the Department on the general state of preservation of listed buildings;

4 under Article 105(2)(b) of the Planning(Northern Ireland) Order 1991 to advise the Department of such matters relating to the preservation of buildings of special architectural or historic interest as the Department may refer to it;

5 under Article 105(2)(c) of the Planning (Northern Ireland) Order 1991 such other functions as are conferred on it by any statutory provision;

6 on applications for the exemption of listed buildings from Capital Transfer Tax, under Part IV of the Finance Act 1976;

7 under Article 43(3) of the Planning (Northern Ireland) Order 1991 on the issue of certificates stating that buildings are not intended to be listed.

Editors' Preface

Paul Harron and Agnes Peacocke

This 18th Report of the Historic Buildings Council presents a diverse range of articles from the members of the Council on areas of both interest and concern relating to the protection, enhancement and greater appreciation of the historic built environment in Northern Ireland in this second decade of the twenty-first century. Members were given an open brief to raise topics of current interest and the result is a collection of short articles which range from the informative to the cautionary to the celebratory. It is a 'snapshot' of the types of things which those who are and have been actively engaged in advising the Department of the Environment on the built heritage, feel are worth considering. It is hoped that the publication will prove useful in widening debate and increasing an actively engaged public who wish to respect and treasure all that makes the historic built environment in Northern Ireland unique and distinctive.

Complementing the contributions from members are essays by the professional staff of the Northern Ireland Environment Agency which provide helpful insights into: the development of traditional buildings skills; an update on the Second Survey; and the history and future of European Heritage Open Days (EHODs). On the latter subject, as Manus Deery writes, this focus on the opening up and enjoyment of the built heritage could not be more timely as that great walled, historic city of Derry~Londonderry enjoys its status in 2013 as UK Capital of Culture.

The EHOD theme is also picked up by Dr Paul Harron in his article on Belfast walking tours and on one Victorian built curiosity in particular, the Thompson Memorial Fountain. Iona Erskine Andrews also focuses on the simple visual attraction of built curiosities, namely follies – structures which 'aim to please'; she also draws attention to the energetic work of the Follies Trust across the island of Ireland and, in Northern Ireland, mausolea at Knockbreda cemetery and Gothick estate structures at Tollymore, Co. Down. Other members focus very specifically on legacy structures and materials: Robert Miles and Alistair Lindsay provide detailed accounts of the history of Ulster lock-keepers' cottages and on the story of lime (both lime kilns and the use of lime mortar over time) in Ireland respectively.

One theme which underlies much of the report is the sense in which an appreciation and knowledge of architectural history can reap rich rewards. Cathal Crimmins in looking at the challenges involved in assessing contemporary architecture in Irish historic settings (and in so doing providing a good overview of relevant international charters, conventions and resolutions) reiterates English Heritage's guidelines which state that there is a need for architects to *'know more architectural history and be trained to appraise the character of historic areas and to produce higher quality design'*. He concludes by arguing that *'fitting new buildings within historic contexts requires a dynamic process between planners, architects and developers to ensure that any new schemes fit into their surroundings'*. This is also something which chimes with Professor Joe Fitzgerald's observations from his longstanding experience in serving on HBC (and not least as a champion of good Modernist designs) when he says that *'preservation of a listed building keeps our history and culture alive and we learn much from the methods and practices of those who came before us'*.

The report also provides contributions with strongly practical advice. Kenneth Boston asserts the argument for the retention of original sliding sash windows which can make a significant contribution to the overall integrity of our historic buildings and provides scientifically tested reasons as to why their replacement need not always be a necessity. Dr Patricia Warke presents fascinating findings on the 'greening' of

buildings as a result of climate change and how caution is required in the adoption of certain stone-cleaning methods.

On the cautionary side, Brian Banks' article on 'Enabling Development' is as instructive as it is a valuable overview of the history of the concept, arguing that Planning Service should *'seek to limit the application of this policy to cases where genuine public benefit is the major component'*. Michael Martin, meanwhile, focuses on the impact of heritage crime in Northern Ireland, an issue to which Minister Attwood gave a robust response during 2011 and 2012 with a summit and follow-up work with relevant agencies and interested parties.

Finally, the protection of the built environment – as both HBC Chairman, Frank Robinson, and JCIH Chairman, Bill Darby make clear in their Introductions – is not about *'pickling objects in aspic'* but about recognising and using our best assets in dynamic ways today and into the future. This is echoed by Noelle Houston who argues that respecting and re-using our historic environment *'as a key to regeneration achieves sustainability, reinforces a sense of place and contributes to a high quality of life'*. She provides a range of examples from across the UK and Ireland which have achieved recognised success over a period of time and have contributed to best practice. Houston also makes the point that understanding how places change, what makes them distinctive and the significance of their history is the key to regeneration and notes that The Titanic Quarter, Europe's largest brownfield site, has a strong brand identity but while the £97m Titanic Belfast Visitor Centre provides a striking feature and tourist attraction it is still sad to see the continuing dereliction of the adjacent Harland and Wolff Drawing Offices.

This report, therefore, offers much 'food for thought'.

Carlisle Memorial Methodist Church, Belfast

The editors wish to thank Mr Raymond Allen of the Statutory Advisory Councils Secretariat for his valuable help in co-ordinating the compilation of this report.

Chairman's Report 2010-2013

Frank Robinson

On 19 March 2010 the incoming Historic Buildings Council (HBC) for Northern Ireland held its first meeting in the Water Management Unit conference room in Lisburn. The Council members had been selected following public advertisements and an interview procedure. This was the first occasion on which no member was allowed to apply to serve for a third term due to new arrangements for public appointments. Six members and the Chairman returned to serve a second term while eleven new members joined them following an induction course on 15th March 2010 in Clarence Court.

The seventeen members plus the Chairman come from a wide variety of backgrounds, forming a well-balanced Council: in no particular order, six architects; a structural engineer with a particular bias towards historic buildings; four surveyors; a town planner; a conservation consultant; a university lecturer, a retired civil servant, a member of the legal profession and an architectural historian. All are dedicated to the protection and preservation of the historic built environment and give freely of their time and expertise to further this end.

Accepting the chair for a second term was a great privilege for me, not so much a new broom sweeping clean, but an old one who knew where the problems were hiding. The unforeseen new problems were to manifest themselves very quickly – finance drove the Council's Secretariat to find meeting rooms free of cost in any of the Government's Departmental buildings; two-course lunches were reduced to sandwiches; scones with morning coffee disappeared; the Secretariat was replaced by in-house Department of the Environment (DOE) personnel; and visits to sites, which were the subject of ongoing planning applications which could impinge on listed buildings, were discouraged for cost reasons. The whole operation developed a 'private sector' scenario. For the first time (certainly in my fifteen years involvement), a monthly meeting was cancelled due to lack of information caused by a reduction in the Second Survey Contractor's work.

As a Statutory Advisory Council, HBC is tasked, by Statute, to advise the Department of Environment on matters concerning listing of buildings deemed to be of special architectural or historic interest, and on designated Conservation Areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance, and to report to the Department on the general state of Listed Buildings. (Articles 50 and 105 of the Planning (NI) Order 1991)

It was of some concern to the Council that the Second Survey was almost stopped in 2011, mainly due to the financial restrictions imposed across all the Departments of Government in Northern Ireland. The aspiration of the Northern Ireland Environment Agency (NIEA) to finish the Second Survey by 2020 is very unlikely to be achieved unless the necessary funding continues to be made available to NIEA. Council was pleased to hear, that in November 2012, the Department made a commitment to the N I Public Accounts Committee that there would be a stable funding stream in place to allow completion of the Survey by 2020. One contractor is still employed by the NIEA working on the Second Survey, and its role is to visit the previously listed buildings from the First Survey carried out in the l970s, enhancing the original details (usually a single photograph of the front facade) with more photographs and sketch plans. Staff are required to undertake thorough research and record the history of the building, its architect, first owners, alterations and additions carried out over its lifetime. They are also tasked with finding buildings missed out during the First Survey which are occasionally found, sometimes hidden gems locked in a

'time warp', and many without the burden of 'modernisation' detracting from their historic character.

All the contractor's reports are initially presented to the NIEA Architects who assess the revisited buildings for continued listing or delisting status. Those buildings being kept on the list are not usually brought to HBC, but the 'new-found' buildings and existing listed buildings considered by the architects as unsuitable to keep listed, are presented to HBC for its considered opinion. The varied professional backgrounds of HBC members contribute to the Council's recommendations which help to enhance the architects' views. The Council views a 'power point' presentation of the building/structure together with a written report as prepared by the contractor. Discussion, often extending into a vigorous debate, follows and usually ends in a majority recommendation being given to NIEA architects. Only rarely does the Chairman have to use his casting vote, and quite often the recommendations are unanimous.

Conservation Areas, the responsibility of DoE-Planning, still give the Council cause for concern, particularly the lack of protection of older buildings from demolition. Many of these buildings were considered 'safe' as they lay within a Conservation Area and therefore did not need any kind of listing status. However, any request for demolition or partial demolition of a building within a Conservation Area requires planning permission, as opposed to demolitions outside a Conservation Area. Unfortunately DoE-Planning does not always consult HBC in significant cases which could protect some of the more important unlisted buildings within an area. After all, the advice is free and does not have to be taken. A presentation to Council on Conservation Areas by a representative of the Department did not entirely allay Council's concerns.

In January 2011, seven members of HBC including the Chairman, visited the Malone Conservation Area with representatives from DoE-Planning in order to consider proposed alterations to the existing boundary of the area. The Council provided nine specific recommendations most of which were included in the new area boundary. The design guide and the new boundary have now been issued.

Following our meeting in September 2011, which was hosted by Armagh City and District Council, members of the HBC met with representatives of DoE-Planning in the village of Tynan to consider the proposal that the village should become a new Conservation Area. After a thorough walk through the village which has a very large percentage of listed buildings, our recommendation, reluctantly, was not to create a Conservation Area in Tynan since many of its buildings were already protected.

Listed as consultees to Government bodies, HBC members spent many hours responding to draft manuscripts most of which have now been issued as working documents.

- Design guides to Magee, Historic City and Clarendon Street Conservation Areas in Derry City
- Belfast Integrated Strategic Tourism Framework 2010-2014
- DETI Tourism Strategy for N Ireland 2020
- Planning Policy Statement (PPS) 21 – Sustainable Development in the Countryside (PPS) 23 – Enabling Development (PPS) 24 – Economic Considerations
- Criteria for listing
- Belfast City Council Heritage Stakeholders
- Some members, including the Chair, attended numerous workshops and meetings with the Northern Ireland Tourist Board, encouraging the 'tourism' approach to our built heritage.

Chairman's Report 2010-2013

Frank Robinson

In May 2011, Alex Attwood MLA succeeded Edwin Poots MLA as Minister for the Department of the Environment. It was around that time that a study was commissioned entitled 'The Economic Value of Northern Ireland's Historic Heritage'. The aim of the study is to demonstrate the full economic and social importance of the historic environment to local communities and to Northern Ireland as a whole, through quantitative economic research and a range of qualitative examples. The report was launched in June 2012 after much discussion with all the stakeholders, including HBC, and produced some challenging recommendations. It has identified as a first priority, the need for an overarching and coherent strategy for future investment in the historic environment. Council applauds these findings and hopes that action will be taken to implement these visions and that the report is not allowed to be left to gather dust.

In August 2011, the Minister convened an urgent summit on Heritage Crime held in the Hillsborough Courthouse which was attended by the Chairman and some members of Council. In the previous twelve months, some eleven listed buildings had been damaged by fire compared with a maximum of three per annum in earlier years. The conference drew together representatives from District Councils, the PSNI, the Fire and Rescue Service, the voluntary sector, owners, developers and Government Agencies. Twelve key issues and agreed actions were discussed and two further meetings were convened in October 2011 and April 2012. Council is very supportive of this initiative.

In April 2012, NIEA in partnership with the Armagh City and District Council and the Prince's Regeneration Trust organised a conference in the Armagh Planetarium entitled 'Opening Doors to the Future' which I attended. The event explored the links between regenerating our historic built environment and social and community development. Local and national speakers demonstrated how the built heritage can and does contribute to sustainable economic development, and also how young people and local communities can become engaged with our historic environment; respect, value, 'own' and endorse it. At lunchtime the conference was joined by HRH the Prince of Wales, who is well known for his interest in the historic built environment. Following a short address, Prince Charles awarded prizes to the NIEA- organised schools' competition 'Engaging Young People with Historic Buildings'. Schools were encouraged to research an historic building or site near their school and present it in any medium they chose. Some very interesting results emerged, and the winning submissions were displayed on the day. When the DOE Minister asked Prince Charles "if the scale, wonder and beauty of the natural, built archaeological and Christian heritage here (in Northern Ireland) was unsurpassed in any part of these islands" Prince Charles agreed.

In June 2012, the Minister launched a new Protocol for the Care of the Government Historic Estate. This Protocol commits Government to setting a good example for the care of its historic estate and explains how Departments and Agencies will put this commitment into practice. Council welcomed this document which includes an asset report to be completed by each Department's Heritage Officer.

The Council was delighted to hear that Minister Attwood awarded £400,000 assistance to Carlisle Memorial Methodist Church to stabilise the building, which is on the World Monument Watch List making it one of the one hundred most endangered historic buildings in the world. The Minister also raised the cap on grant aid from £50,000 to £150,000 in January 2012. This had been suspended in 2010 and

Interior of Crumlin Road Gaol, Belfast

reintroduced at £50,000 in 2011. In November 2012, i.e. the 2012/13 financial year, the rate available to most types of listed buildings was increased from 35% to 45% and the cap increased to £500,000. Council applauded these financial uplifts, not only from the building owners' point of view but also the construction industry which is struggling in the present commercial climate.

At the Council's October 2012 meeting, which was held in the newly completed Crumlin Road Gaol, Minister Attwood joined the meeting for part of the morning session and lunch. This was followed by a tour of the refurbished entrance block, guided by the Architects involved in the scheme. Council was very pleased that the Minister took time out of his very busy schedule to join the meeting. Council was also very impressed by the overall scheme, which was almost complete. Minister Attwood is promoting the built heritage and monuments as sources of tourist revenue. This gaol, which will soon be open to the public, is a fine example of re-use of our heritage without loss of historic character. The re-use of the 'Crum' was an initiative from the Office of First Minister and Deputy First Minister, and Council congratulates OFMDFM on its achievement. However, looking across the Crumlin Road at the now derelict Courthouse, which is in the private sector, Council members were less than impressed – public sector forty, private sector 'love'.

During the three-year term, HBC members visited three sites to gain further understanding of proposed developments and how they might impinge on the adjacent listed buildings. These schemes had been presented at a monthly meeting by developers and their professional teams. These were at Belcoo, Co. Fermanagh; Linenhall Street, Belfast and at the University of Ulster's proposed Belfast city centre campus. Our

Chairman's Report 2010-2013

Frank Robinson

Rear of refurbished Gatehouse, Crumlin Road Gaol, Belfast

deliberations and advice were forwarded to the NIEA and DoE-Planning

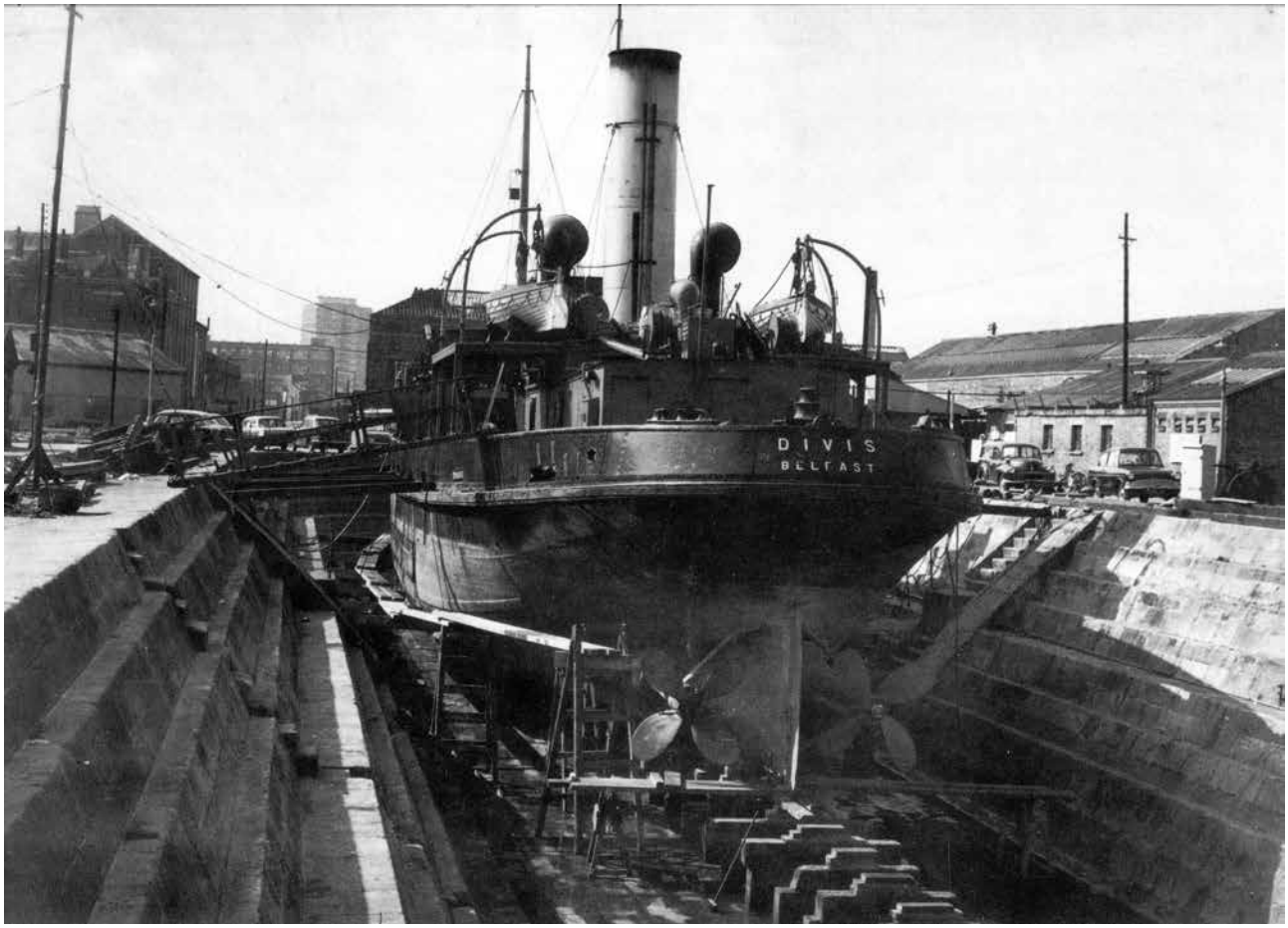
In the three-year term under consideration, the number of 'Buildings at Risk' recorded rose by sixty-four, with only forty-four being removed. Since removal records were kept – 2004/5 to 2011/12 – 178 buildings have been removed and 110 have been added. The economic downturn has reduced the expected removal rate and as a result NIEA has been looking at initiatives to increase support in this area as part of the current grant aid review. Six Urgent Work Notices and twenty-two Building Preservation Notices were issued during the same period, as were six prosecutions against those who violate or destroy these buildings.

European Heritage Open Days, instigated by HBC some fifteen years ago, have continued to gain in popularity from the 12,500 visitors at the beginning to 56,600 in 2010; 59,000 in 2011 and 61,000 this year. These events have opened doors in both private and Government buildings which normally would be closed to public access, raising awareness of our Built Heritage. The Council was very much encouraged by the massive effort made by NIEA staff to promote this venture.

At the end of the out-going Council's life, I would like to thank all members of NIEA in Hill Street, Belfast for their help and encouragement over the last three years, the DoE Planning representative at our meetings, and finally but most importantly the members of Council who give selflessly of their time and expertise advising the Agency as it strives to promote the Built Heritage Directive Strategic Plan highlighting the need to 'Value, Understand, Protect and Care for and Enjoy' our built heritage.

Joint Committee for Industrial Heritage

William R Darby
Chairman JCIH



The Clarendon Dock, Belfast with Divis in situ

The Joint Committee for Industrial Heritage (JCIH) was formed in 1992 because of the need to give special attention to the recording and protection of Northern Ireland's rich industrial heritage. Protection of industrial heritage can be achieved by Listing, as provided for under the Planning Order (NI) 1991, or by Scheduling under the Historic Monuments and Archaeological Objects (NI) Order 1995. The Historic Buildings Council (HBC) and Historic Monuments Council (HMC), established under these two Orders, normally refer industrial heritage matters to JCIH for detailed consideration. Industrial heritage issues encompass the remnants of the industrial fabric which are of historical, technological, social, architectural or scientific value.

During the 2009-2012 period of this report, I chaired JCIH supported by a committee comprising the Chairs of HBC and HMC and a selection of members of each Council, these members having a particular interest or experience in some aspect of industrial heritage. Although JCIH deals largely with issues referred to it by the Northern Ireland Environment Agency or by one of the statutory Councils it often raises and considers matters arising directly from the knowledge or experience of committee members. These cover a broad range of heritage concerns encompassing manufacturing industry, transport infrastructure, water supply and other utilities, where it considers action may be required or of which notice is to be taken. A frequent topic for continuing discussion at JCIH meetings has been the choice between Listing

Joint Committee for Industrial Heritage

William R Darby
Chairman JCIH

and Scheduling as the more appropriate means for providing statutory protection for particular heritage sites.

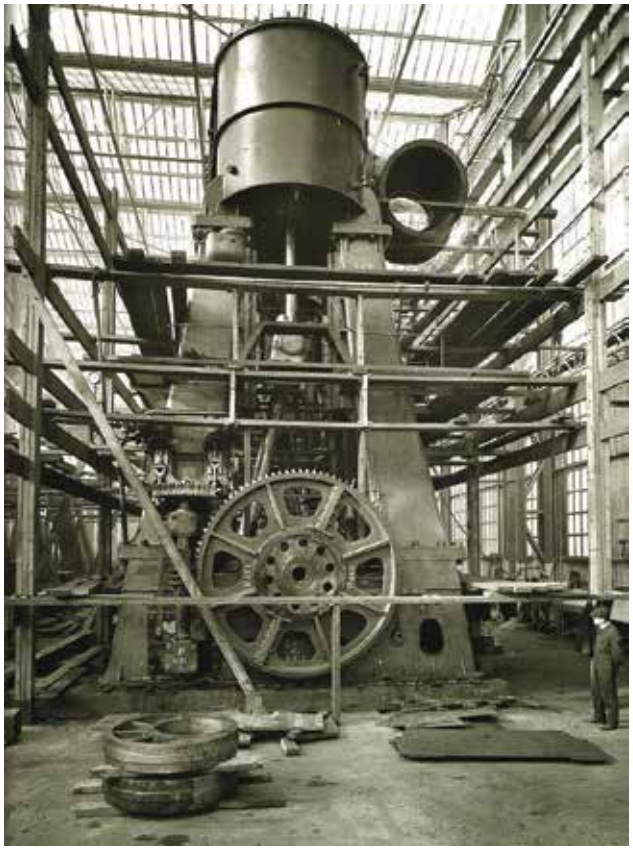
Northern Ireland has a rich industrial history and though much of the history has been well documented a great deal of the hard evidence has been lost. Typically the pace of technological change in the nineteenth and twentieth centuries was such that processes, equipment and buildings became obsolete at an accelerating rate and so much was lost as the pressure for new land uses and clearance of old equipment grew. In many cases the loss went unremarked and enthusiasm was concentrated on the new anticipated uses for the former industrial sites. One thinks of the former Harland and Wolff slipways and engine works, much of these already lost as the whole method of shipbuilding changed in the 1960s and 1970s, or of the obsolete spinning mills, tobacco factories, glassworks, engineering works, foundries etc. where, although a few buildings may remain, little of functioning equipment has been preserved. Even where equipment has been preserved it is often no longer accessible or on display.

Divis engine, now stored in Dublin

Similarly, improving standards and expectations have brought major changes to transport and water supply with items such as bridges, railway stations and open service reservoirs often redundant with the threat to their existence as heritage, recreational or landscape items. The liaison between NIEA and Roads Service to ensure best practice for the repair of historic masonry bridges has been encouraged by JCIH.

In the period covered by this report JCIH has had a continuing interest in the development of former shipyard land at Titanic Quarter. JCIH pressed with some success over a number of years for a coherent plan for redevelopment in accordance with the NIEA Titanic Quarter Phase 2 Conservation Statement. Of the Scheduled monuments and Listed buildings remaining at Titanic Quarter, many are, or were, in need of repair, restoration and modification for new uses and display and the Committee has frequently given advice on the acceptability (or otherwise) of some of the many proposals. This has been particularly so in the case of the work carried out to the White Star slipways in preparation for the *Titanic* commemoration and on work to the Hamilton dock as a permanent berth for the *Nomadic*. Members of the committee also gave advice on the broader regional industrial heritage to those planning the displays for the Titanic Signature Building.

Consideration was also given to the need for radical repairs to the leaking dock gate at the Thompson dry dock and although members



RMS Titanic engine picture in situ at Harland & Wolff

expressed reservations about the irreversibility of the repair scheme finally chosen, compromise was inevitable in the circumstances where sealing is essential.

HMS Caroline lies at the nearby Alexandra Dock and the ship was decommissioned as a training centre during the period of this report. There is much interest in securing the future of the ship as a heritage attraction at its present location, given its long term association with Northern Ireland. JCIH has monitored these developments and members have maintained links with others concerned about *HMS Caroline's* future and have given support where possible. These have borne fruit and there is now a prospect of material support and funding for some of the maintenance work essential to ensure that *HMS Caroline* remains in place as a heritage attraction, reminding us of naval technology of the 1914-18 period and of the generations of naval reservists who trained on her.

Another aspect of the Titanic redevelopment which has exercised the committee has been the outworking of the decision to relocate the Belfast Metropolitan College main campus to the Titanic Quarter. This has led to the abandonment of the Belfast Technical College building at College Square to an uncertain future. The old 'Tech' building, which is Listed, played an important part in the history of education in the Belfast area during the manufacturing heyday. It has many interesting features, both architectural and functional including an early air conditioning system complete with Musgrave steam engine. The opportunity cost associated with the decision to relocate the functions to Titanic Quarter is likely to be considerable now that there seems such an uncertain future for the old building.

Members of JCIH did some further work on the history of the Gilnahirk Listening Station and found it was well documented as the site of an important Second World War radio signal interceptor and direction finding station, which played an important part in the battle of the Atlantic. In the event the decision not to List the remaining post-war buildings was considered to be acceptable. This is yet another example of an important site where, because of later uses and development, nothing of the original historic fabric remains for preservation.

The subject of disused canals has been given attention from time to time and various schemes and potential problems associated with re-watering of some of the long-disused canals have been noted. Comment was provided on the role of Waterways Ireland though it should be noted that the remit of that body is confined principally to the operation of functioning canals. No substantive canal re-watering scheme

Joint Committee for Industrial Heritage

William R Darby
Chairman JCIH

came before JCIH in the period of this report.

JCIH retained its interest in the story of aviation particularly in the Second World War context. This took the form of continuing interest in the use of the two listed hangars at Long Kesh former airfield. JCIH was pleased to note the successful relocation of the Ulster Aviation Society historic collection and archive, from Langford Lodge to these hangars. Links with the Ulster Aviation Society continue to prove useful as a source of historic information and we hope that the Society can be given an opportunity to function successfully at the new location in the longer term. Our wider interest in the future use of the former airfield and prison site continues given its important Second World War history.

Titanic's propelling machinery was a combination arrangement of two reciprocating steam engines and a low-pressure steam turbine. Here, in May 1911, her port-side reciprocating engine is nearing completion in the Engine Works erecting shop. The massive size of the machinery is indicated by the workman standing alongside. The engine bedplate weighs 195 tons, the columns 21 tons each and the heaviest of the four cylinders 50 tons. Soon the engine will be dismantled and the components taken to the fitting-out wharf for re-erection in *Titanic*'s engine room. (H1711)

On railway infrastructure little was brought to JCIH during the report period save for the almost unique features at Castlerock station and signalling systems. We did, however, note the expansionist plans for Northern Ireland Railways and alerted ourselves and others to the possibility that some of the fine old stations and other infrastructure could be lost as the planned 'Railway Renaissance' unfolds over the next decade. Over the years listing has been applied to a number of important but now disused stations, both on functioning lines and where lines no longer exist. Many of these old stations face an uncertain future and are a cause for continuing concern.

On several occasions JCIH noted the possible effects of climate change on heritage items. Aspects noted included the effects of storms of increasing severity, including heavier rainfall with greater risk of flood damage, increased wind speeds with greater risk of structural damage and erosion of sand dunes and rising sea levels and coastal erosion. Any or all of these would adversely affect the natural, archaeological and built environments and the ever present problems of maintaining old buildings are likely to be exacerbated.

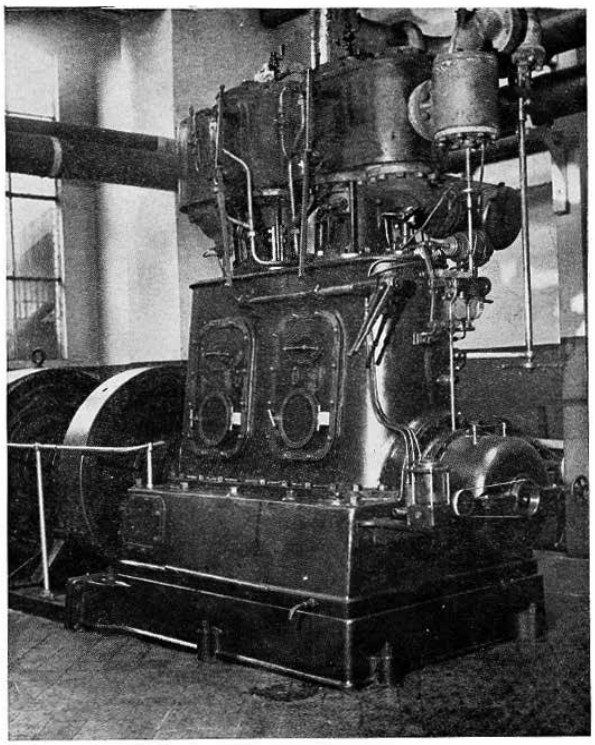
Northern Ireland's ubiquitous disused lime kilns continued to crop up from time to time, either as candidates for listing or removal. Consideration was given to the earlier thematic survey work and it was agreed that a fresh survey was not necessary. Other recurring items as candidates for statutory protection included old water pumps, milestones (including some in Irish miles) and Belfast roof trusses.

JCIH has a particular interest in ensuring that an appropriate evaluation is carried out on items of historic industrial plant. Steam driven plant was often the prime mover of factories, belt-driving machines through pulley systems in the nineteenth and early twentieth centuries, and almost all of it has been lost. One of our greatest disappointments was the loss, some time in 2011, from a Listed mill building, of the long-redundant c.1910 steam engines and the d.c. generators they drove. Although these were fixtures and thereby protected by the listing of the building they were removed, apparently mistakenly, and destroyed as scrap. At Caledon we noted that the interesting Scheduled beam engine and surrounding structure at the old mill site still await major work to, at least,

secure what is left of it. The Committee also commented on the Department's proposal to recommence generation of electricity at the Roe Valley Country Park. Fears were expressed that the proposed project could lead to the loss of important heritage items at the Dog Leap site of the original 1896 Ritter scheme.

Northern Ireland's inventory of historic plant is very limited and consequently the items still existing are of great historic value. We have been assured that the three steam engines and other industrial plant, removed from display to allow for the refurbishment of the Ulster Museum, are in safe storage. We regret that it has not been possible for the museum to make them again available for display. The engines appear to be the same three engines listed in W. A. McCutcheon's *The Industrial Archaeology of Northern Ireland* and include an engine by John Rowan, the foundry owner who is elsewhere recorded as having built a steam-propelled road coach and demonstrated it in 1836 to large crowds in Belfast. There is an apparent continuing problem in finding space to display heritage plant items here, for example the redundant fog signalling equipment from the Listed Mew Island lighthouse at the entrance to Belfast Lough, on which JCIH was consulted, being sent to Wales for safe retention and display.

Finally, JCIH had been involved in providing consultation inputs on a number of Departmental and wider Government issues including DOE budget draft proposals, PPS23 (Enabling Development) and PPS24 (Economic Considerations), Reform of Public Administration and the effects of climate change on heritage items such as buildings, monuments and archaeological sites. PPS23 and PPS24 arise in considering proposals for historic and industrial sites such as Clark's Mill at Upperlands and the Barbour Mill at Hilden. In such cases the test is often whether the opportunity to ensure preservation of important heritage items justifies acceptance of proposals that would be otherwise unacceptable.



Enclosed high-speed steam engine by James Howden & Co. of Glasgow (1911) at Upperlands, Co. Londonderry

It is to be hoped that the recent Titanic centenary commemoration activity will lead to a re-evaluation and renewed public interest in Northern Ireland's industrial heritage and to the better preservation and presentation of such artefacts and other evidence as remain. The current bleak economic climate has reduced the pressure for redevelopment, with its potential for loss of heritage items or sites, but it is a matter for regret that it has also led to a big reduction in the resources available for heritage protection activity.

Enabling Development

Brian Banks

Clark's Mill, Upperlands, Co. Londonderry

In January 2011 the Department of the Environment (DOE) made available for public consultation Draft Planning Policy Statement (PPS) 23 'Enabling Development'. One of the bodies consulted as part of this consultation was the Historic Buildings Council (HBC). The purpose of Draft PPS23 was to put in place policies for assessing proposals for enabling development. Enabling development was defined as:

A development proposal that is contrary to established planning policy and in its own right might not be permitted. Such a proposal may, however, be allowed where it will secure a proposal for the long-term future of a place of heritage significance, or scheme of significant regional or sub-regional public benefit (the principal proposal), and may also be acceptable to secure the future of a non-listed building of local significance.

The draft document stated that the justification for allowing the enabling development lies in the overriding public benefit to be derived from the implementation of the principal proposal which otherwise would have little prospect of being carried out.

In England PPS5 'Planning for the Historic Environment', published in March 2010, also makes provision for enabling development. In that document enabling development was defined as:

Development that would be unacceptable in planning terms but for the fact that it would bring heritage benefits sufficient to justify it being carried out, and which could not otherwise be achieved.

PPS5 has been replaced by the National Planning Policy Framework (NPPF), which came into effect in March 2012. The NPPF includes the principle of enabling development,

but not the specific criteria set out in PPS5 on the historic environment, so that local Councils now have a wider scope to exercise discretion in determining this type of application. As an example of this more flexible approach Suffolk Coastal District Council recently permitted nine houses as enabling development for the restoration of the walled garden and historic landscape of Sudbourne House which is located within the Suffolk Coast and Heath Area of Outstanding Natural Beauty (AONB).

The concept of a proposed development that is contrary to planning policy and in its own right might not be permitted but for other material benefits, is not new to the determination of planning proposals. Planning authorities and the courts in reaching a decision on a proposal will always weigh up all the issues before coming to a decision and on occasions permission has been granted because it brings public benefits which have been demonstrated to outweigh the harm that could be caused. On occasions these decisions have been contrary to planning policy as set out in the development plan and other published planning guidance. I have set out a few examples of this approach in the following paragraphs.

In 1975 the courts granted permission for the use of a house in a residential area for residential accommodation and offices because this would lead to the restoration of a Listed Building.
In 1979 the courts held that in relation to an application to develop part of an area of school land and to spend the profits on school buildings, that the proposal was acceptable in that it was proper to take into account that the granting of planning permission would result in planning benefits elsewhere.

In relation to the principle of enabling development it is my view that the core legal case, held in the Court of Appeal, was *R v Westminster City Council, ex parte Monaghan 1989*. This was a proposal for office accommodation, which was a departure from the development plan. The planning authority granted planning permission for the entirety of the proposed development on the basis that the desirable improvements to the Royal Opera House, a Listed Building, situated in Covent Garden, London, could not be financed unless the offices were permitted. The objective was to extend and improve the Opera House by reconstruction and modernisation to bring it up to international standards and to develop the surrounding area consistent with that project. The Court of Appeal held that financial considerations which fairly and reasonably relate to the development were capable of being material considerations which could be taken into account in reaching that determination, and that the local planning authority had been entitled, in deciding to grant planning permission for the erection of the offices, to balance the fact that the improvements to the Opera House would not be financially viable if the permission for the offices was not granted, against the fact that the office development was contrary to the development plan.

In Northern Ireland the Planning Appeals Commission (PAC) has reflected the approach set out above in a number of its decisions, on occasions granting planning permission where the accepted benefits outweighed planning policy. In the 1990s the PAC granted planning permission for two dwellings in the Greater Belfast Green Belt, even though the dwellings were contrary to Green Belt policy. This was because the two dwellings were to replace an unsightly scrap yard which was located in a prominent position in the countryside on top of a drumlin. Here the environmental and visual benefits were judged to outweigh Green Belt policy.

Enabling Development

Brian Banks

In a more recent case, determined in 2006, the PAC allowed an appeal for five detached dwellings in the Green Belt in North Down. Green Belt policy would not normally have permitted these dwellings. In this case it was accepted that the erection of five dwellings was necessary to secure the repair of an historic asset and its restoration to beneficial use. The heritage asset was Craigdarragh House, also known as St Columbanus, designed by Sir Charles Lanyon and a building listed as B1 in 1975. One of the conditions of the permission required that none of the approved dwellings should be occupied until the works to restore Craigdarragh House had been completed in accordance with the approved plans.

A proposal currently before the DOE, which involves enabling development, is a proposal for housing development at Clark's Mill, Upperlands, Co Londonderry. The application proposes, amongst other things, the restoration of seven Listed Buildings, conversion of one building to twenty-one residential units, the restoration and conversion of vernacular buildings to forty-five residential units and the construction of 161 residential units. As the site is located outside the development limit for Upperlands as defined in the recently adopted Magherafelt Area Plan 2015, permission would not normally be granted for the proposed 161 residential units. However, the proposition is that in order to protect and restore the Listed Buildings on the site enabling development is required and that would justify granting consent to the proposed residential units. HBC has been fully consulted on this proposal and is updated monthly on the progress of the application which, at the time of writing, has not as yet been determined.

In response to the DOE's consultation of Draft PPS23, HBC indicated that it welcomed this draft policy document as an additional means of securing the preservation of the built heritage through the retention and refurbishment of Listed Buildings. HBC had some reservations about some of the definitions in the document, such as 'principal development', 'regional', 'sub-regional' and 'significant place' and felt that clearer definitions should be set out. There was also a concern that the instances in which enabling development might be considered was too wide and would benefit from tighter descriptions. HBC supported the use of pre-application discussion with developers and supported the intended use of Article 40 agreements in appropriate cases. HBC expressed its concern about the potential costs to the Department of enabling development cases, in terms of manpower and budget, as it will involve the assessment and scrutiny of potentially complicated applications requiring input from a diverse range of professions. It, therefore, suggested that Planning Service should seek to limit the application of this policy to cases where genuine public benefit is the major component.

Support for the retention of sliding sash windows in historic buildings

Kenneth Boston

All too often, buildings presented to the Historic Buildings Council for recommendation for listing as part of the Second Survey, while of considerable merit in terms of architectural style, plan form, proportion and any number of the listing criteria set out in Annex C of Planning Policy Statement 6: Planning, Archaeology and The Built Heritage, have been compromised by inappropriate intervention to windows, detracting from the original fenestration. This can range from the enlargement of window openings, the adoption of the incorrect style of window to the most ridiculed use of the incongruous uPVC 'replacement' window.

Buildings within our built heritage, from the grand 'big house' to the modest urban vernacular terraced dwelling are readily identifiable in terms of age, style and opulence by the size, position and configuration of windows. Windows are 'the eyes of the building in which you see in and from which you see out'. While a building may not normally be delisted or considered inappropriate for listing solely on the merit of window design it can make the argument to protect the building through listing, much more difficult.

Unfortunately the problem is not unique to the unlisted building and unfortunately is commonplace in Conservation Areas where no Article 4 control was provided to protect the architectural integrity of the building. On a positive note, window replacement generally, except for the horrendous works carried out in the most extreme of cases, is within the main tenets of conservation philosophy in that it is 'reversible' with future intervention returning the building to its former glory. It is not uncommon to see buildings from the 1970s' First Survey greatly enriched in the intervening years through thoughtful remediation making an endorsement of the listing or upgrading of a listing, possible.

Examples of such remediation include dwellings within the Hillsborough Conservation Area where the second survey revealed substantial improvements in the fenestration of dwellings initially surveyed as part of the first survey.

20 Main Street, Hillsborough
Improvement in window design since first survey, albeit delisted in 2012

Shore Road, Whiteabbey
Extended window opening, inappropriate size and configuration with redundant soldier course lintels over openings

Support for the retention of sliding sash windows in historic buildings

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How can the otherwise well-meaning building owner be convinced that the decisions around window replacement are not to be left to double glazing salesman with the well-worn 'lifetime maintenance-free, energy-efficient' patter? The answer probably lies in the explanation of the alternatives readily available. The basic complaint supporting replacement often centres on the misconceived idea that sliding sash windows are 'old, draughty, beyond repair and don't keep the heat in' and that the only resolution is to provide a new window with all of the perceived benefits.

Buttermarket, Fivemiletown
Sliding sash windows replaced with top hung casement windows (replete with 'ornate' horns to upper casement sash!)

In reality, sliding sash windows can provide effective levels of ventilation and the quality of the original timber is such that repairs can often be made to the existing sashes. Draught proofing and even the adoption of thermal enhancement techniques, including double glazing of existing windows, albeit problematic in certain situations, are possible.

Repairs to sashes and frame

The assembly of sliding sash windows allows most parts, including sashes, staff beads, shutters etc. to be removed for repair, albeit that many repairs may be carried out in-situ. Substantial repairs such as the replacement of sill members or splicing repairs to components may be best carried out in workshop conditions.

Alternatively, proprietary resin repair techniques may be used. However, where possible, only the minimum amount of the historic fabric should be removed and quality timber used in renewal or partial replacement of components.

Draught proofing

Undoubtedly the level of natural air infiltration brought about by air leakage through the tolerance of sashes within frames can present a problem within many windows, particularly at the junction of the parting bead and the sash and at the top sash meeting rail and the bottom sash meeting rail junction.

Tests carried out in order to assess the level of air permeability (as defined by *BS EN 1026, Window and Doors – Air Permeability – Test Method)*, accurately determine the level of air infiltration at a range of pressures and clearly indicate that, compared to alternative forms of modern window, traditional sliding sash windows are 'draughty'. The fitting of discrete proprietary separating beads with a profile aimed at reducing the 'gap' between the bead and sash, and rebated

Repairs to outer linings and sill

draught excluding profiles to sashes substantially reduce air infiltration. Despite this, many conservationists argue that the natural level of air infiltration is an essential characteristic of many traditional buildings in providing background ventilation. It is interesting to note that modern buildings must have a level of natural infiltration by way of trickle ventilators positioned in window frames and in many respects, in the case of our historic buildings, 'draughts' provide a necessary level of ventilation and in so doing help regulate the environment within the building to a level required to help reduce the incidence of condensation.

Tests undertaken on a traditional sliding sash window revealed that air leakage was reduced by up to 60% by the addition of proprietary seals. Similar tests carried out by Glasgow Caledonian University on behalf of English Heritage (2009) reported a reduction in air infiltration by approximately 85 % at a pressure of 50 Pa.

Such figures are impressive in terms of draught proofing and in bringing about a greater level of comfort within the dwelling, but at the expense of reducing the natural level of ventilation to the building.

Thermal enhancement of window

The obvious thermal enhancement of the window would involve the installation of a double glazed unit. However, from a practical point of view, difficulties may be encountered in terms of fitting a heavier and much thicker form of glazing. Given that historic glass may be in region of 3-4mm in thickness, rebates within existing sashes and glazing bars may be of insufficient depth to accommodate double glazed units, ranging from the most slender vacuum double glazed unit in the region of 6mm in thickness to the traditional unit in excess of 12mm in thickness. Cost of vacuum units may also make such an option prohibitive, although the U-value achieved may be reduced from approximately 5.5 W/m²K (single glazing) to 1.7 W/ m²K.

Removal of historic glass with its inherent imperfections would also be a loss to the originality of the building, albeit, modern float glass suitably distressed during production can provide some degree of apparent authenticity.

Alternative measures to provide thermal enhancement through the introduction of secondary elements such as shutters, secondary glazing of various types, and various thermal linings may in some cases be a more practical option.

Considering that the U-value of a traditional non-enhanced sash window is in the region of 4.5 W/m²K compared to the requirement

Testing upgraded window in air infiltration test rig
Note: position of patent parting bead (University of Ulster)

Support for the retention of sliding sash windows in historic buildings

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Original Window undergoing test within guarded hot box *(University of Ulster)*

Window with 'shutters' within guarded hot box *(University of Ulster)*

of the current Building Regulation (Part F, October 2012) being as low as 1.6 W/ m²K, any enhancement is desirable.

Guarded hot box testing undertaken at the University of Ulster revealed significant improvement in the thermal characteristics of a sliding sash test window was possible by simply providing a simulated shutter arrangement; the U-value being improved from 4.5 W/m²K to approximately 2.0 W/m²K, representing an improvement of approximately 55%.

Extensive testing reported on behalf of Historic Scotland by Dr Paul Baker (Glasgow Caledonian University 2008) clearly indicates a range of thermal enhancement measures that can be carried out in a cost effective manner while being least invasive in terms of detracting from the historic fabric of the actual sash window. Results indicate that U-values as low as 1.0 W/ m²K were achieved without the introduction of double glazing.

Conclusion

Retention of original windows can make a significant contribution to the overall integrity of our historic buildings and their replacement need not always be a necessity; sympathetic repair and thermal enhancement being real alternatives. While energy efficiency is desirable great care must be taken to avoid inappropriate levels of intervention. The thermal performance of historic buildings may be substantially improved through sympathetic intervention; however, we must accept that the benefits and privilege of ensuring their continued use outweighs the argument to apply a regime of retrofitting that may impact on the overall performance of the building brought about by reduced levels of natural air infiltration.

The advice provided by Historic Scotland, English Heritage and the Northern Ireland Environment Agency provides us with a way forward in treating historic windows with the respect they deserve.

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Assessing contemporary architecture in Irish historic settings

Cathal Crimmins

National Gallery of Ireland extension, Clare Street, Dublin, by Benson & Forsythe — considered successful and used as an example of good infill in the Department of the Environment Conservation Guidance document to Planning Authorities

One of the issues facing the Historic Buildings Council (HBC) and indeed local authorities, planners, and conservationists, concerns the understanding and assessing of large-scale contemporary buildings in historic settings. Practically all large modern developments in Irish cities lie in historic settings and, despite the economic downturn in construction HBC has had its share of large-scale city-centre proposals put forward for its views in recent years. While there are varying, even opposing opinions of proposals, it has been the Council's view of many projects submitted that there was a lack of understanding of the historic background and the character of the listed buildings and sites. There has been little attempt to determine significance, the impact on the surroundings and on the listed buildings themselves. In the cases where works were proposed to the listed building, knowledge of the construction and materials seemed lacking. Concern has also been voiced over the architectural quality of some proposals.

Pressure on our historic landscape is mounting with the majority of the population living in our urban areas requiring more office space and housing. This provides a continuing challenge for the planning authorities and HBC as advisors on conservation matters to the Department of the Environment in developing our urban areas. Guidance from HBC members is an important factor in ensuring protection of heritage, architectural quality, and sustainable development. There are pressures from developers and their architects that their sites, especially corner sites, require iconic landmarks or taller 'bookends' enclosing the historic streets. Iconic buildings all vying for attention cannot relate to the historic city. Control must be exercised to allow appropriate development in the historic environment.

The differences between the modern movement and conservationists have altered considerably since the 1950s and the 1960s when the past was rejected, especially by architects, in

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favour of a new aesthetic – often resulting in inappropriate developments in our cities. One of the most controversial projects on the island of Ireland where a contemporary building was erected in a historic setting was the building of the ESB Modern Movement headquarters interrupting the 'Georgian Mile' of Dublin's Fitzwilliam Street. Resulting from an architectural competition and designed by architects Stephenson Gibney in precast concrete it brought about protests from those promoting modern architecture and those against. The City architect Daithi Hanley compared the loss to ripping pages out of the *Book of Kells.* The eminent architectural historian Sir John Summerson described the doomed Georgian building as *'architectural rubbish, simply one damned house after another'*. While the loss of the historic buildings was unforgivable, the resulting Modern building attempted to retain the street line, scale and rhythm of the former houses.

Stephenson Gibney's later, more controversial, Civic Offices on the Liffey Quays beside Christ Church Cathedral, ignored everything about the historic site. Much praised, important and unashamedly contemporary buildings in historic settings include IM Pei's glass pyramid building in the Louvre and the Pompidou Centre in Paris. Both are much appreciated by Parisians and tourists alike. The extension to the National Gallery of Ireland in Dublin by Benson and Forsyth is considered successful and is used as an example of good infill in the Department of the Environment Conservation Guidance Document to Planning Authorities.

Charters, Conventions and Resolutions

The Venice and Washington Charters; the World Heritage Convention 1972 and Granada Convention 1985; The Bruges Resolution on the Rehabilitation of Historic Towns 1975; the Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas 2005 and the Vienna Memorandum on World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape 2005, all give protection for cultural heritage, providing policies and guidelines which achieve some level of consensus at an international level.

The 1964 Venice Charter, the founding document of the modern preservation movement, declares that the intention in conserving and restoring historical monuments is to safeguard them no less as works of art than as historical evidence. However, it also says in restoration, any extra work must be distinct from the architectural composition and must bear a contemporary stamp.

As far back as forty years ago 'New Buildings in Historic Setting' was the topic of the General Assembly of the International Council on Monuments and Sites (ICOMOS) in Budapest, 1972. At the conference, it was declared that articles 12 and 13 of the Venice Charter should be used even in the scale of settlements; the architectural language should be contemporary while the new building should *'integrate harmoniously'* into the old surroundings not breaking *'the balance of the composition'*.

The Bruges Resolution on the Conservation of Smaller Towns 1975 states that the preservation of historic towns is justified by their cultural and aesthetic value. However, a stronger justification still is to be found in their social function, both as the natural meeting place of the urban community and as a diversified habitat. The preservation of the historic town necessitates its adaptation to the requirements of contemporary life and goes on to state that respect for authenticity implies the integration of modern architecture in old towns.

The Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and

Stephenson Gibney ESB office, Fitzwilliam Street, Dublin — the former 'Georgian Mile'

Areas adopted in Xi'an, China, by the 15th General Assembly of ICOMOS in 2005 advises that heritage impact assessments should be required for all new development impacting on the significance of heritage structures, sites and areas and on their settings. Development within the setting of heritage structures, sites and areas should positively interpret and contribute to its significance and distinctive character. Change to the setting of heritage structures, sites and areas should be managed to retain cultural significance and distinctive character.

The World Heritage Centre in cooperation with the City of Vienna and ICOMOS organized the international conference 'World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape' in Vienna in 2005. It discussed how to properly regulate the needs for modernization of our daily urban environment, while at the same time safeguarding the irreplaceable heritage that our historic cities constitute.

United Kingdom guidelines

While many policies have emanated from Icomos, English Heritage and Historic Scotland, in relation to contemporary interventions in environments of heritage value there is a need for clear guidelines in Ireland, both north and south. Our nearest neighbours seem to provide the clearest advice.

In their *Building in Context, New Developments in Historic Areas*, English Heritage and the Council for Architecture and the Built Environment (CABE) express views similar to the concerns of HBC, and believe that sensitive sites are not being well served by the development taking place within them. Their good practice guide discusses the uncritical conservationist approach which leads to a superficial echoing of historic features in new buildings which erode an area's character and it suggests that a contemporary building may be less visually intrusive than a failed attempt to follow historic precedents. New buildings in historic areas do not have to use traditional materials or include historic features, but they should reflect the street patterns and be the result of a character appraisal of the areas.

The report cites the example of triangular pediments unrelated to the rest of the front of a building, or cornices out of scale with buildings, which it describes as the 'lipstick on the gorilla'. Nevertheless, it asserts that large modern uses can be accommodated within the grain of historic settings, and traditional materials are not incompatible with contemporary architecture. It also suggests that high-density development does not necessarily involve building high or disrupting the urban grain and it can be commercially highly successful. There is a need for architects to know more architectural history and be trained to appraise the character of historic areas and to produce higher quality design.

Many architects believe that modern buildings should be of their time and what shocks today will in the future be acceptable and form part of the organic historical development. This may lead to architecture that detracts from the character of areas. Many conservationists oppose

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developments, wishing for superficial copies of existing buildings to maintain the historic character that will, again erode the character of a historic area. The report recommends an approach in examining the context in detail and relating the building to its surroundings by informed character appraisal. Fitting new buildings within historic contexts requires a dynamic process between planners, architects and developers to ensure that any new schemes fit into their surroundings. The character appraisal should consider how the building would relate to the geography and history of the place and the lie of the land. It should also consider whether it sits happily in the pattern of existing development and routes through and round it, and that important views are respected and new views created adding to the variety and texture of the setting.

English Heritage Planning Policy Statement *(PPS) 5: Planning for the Historic Environment Practice Guide* suggests that a successful scheme will be one whose design has taken account of the following characteristics:

- The significance of nearby assets and the contribution to the setting
- The general character and distinctiveness of the local buildings, spaces, public realm and the landscape
- Landmarks and other features that are a key to the sense of the place
- The diversity or uniformity in style, construction, materials
- Detailing, decoration and period of existing buildings and spaces
- Views into and from the site and its surroundings
- Green landscaping
- The current and historic uses in the area and the urban grain

Some or all of these factors may influence the scale, height, massing, alignment, materials and the proposed use in any successful design.

Bank of Ireland building, Baggot Street, Dublin, by Ronald Tallon of Scott Tallon Walker — a much admired modern building in an historic setting in the style of Mies van der Rohe

New Design in Historic Settings by Historic Scotland gives eight general principles to be applied all of which should be balanced rather than focusing on one. The principles state the new developments should respond to: urban structure and grain, density and mix, scale, materials and detailing, landscape, views and landmarks and historical development. It suggests in detail methodologies that set out a process connecting new design with its historic setting through the understanding, documentation and interpretation of the place. It also emphasizes that success depends on the appointment of a designer with appropriate analytical skills and the relevant experience.

Some American guidelines

Conservation is an issue in many North American cities and Americans working in this field seem to be increasingly conservative in their approach, more so than in Europe or Australia as demonstrated in *Sense of Place: Design Guidelines for New Construction in Historic Districts* by the Preservation Alliance for Greater Philadelphia of 2007.

In Philadelphia's National Register Historic Districts, while there is an acceptance of contemporary design, a preference is expressed for designs that reflect and relate to the context than for designs whose style and character try to be distinctly different and in contrast to the historic setting. Reference is made to an article by Historical Architect, Steve W. Semes of the National Trust for Historic Preservation concerning 'Differentiated and Compatible Designs' and considers his four stages for additions to historic settings:

1. Literal replication – where architects choose to replicate a previous work when adding to existing buildings or extending a pattern perhaps completing a design. It gives examples that include Jacques le Mercier – replicated Pierre Lescot's Louvre façade to maintain the symmetry of the elevation in the mid-seventeenth century.

2. Invention – within the same or related style adds in closely related style. The work of Quinlan Terry adopting the language of the eighteenth century but including elements not previously seen. Much of Postmodernism would have adopted this approach.

3. Abstract reference – which seeks to refer to the historic setting while consciously avoiding literal resemblance or working in a historic style. This approach seeks to balance differentiation and compatibility, but with the balance tipped towards the former. The strategy of abstract reference sees the historic urban setting as a resource to be conserved by means of deferential massing, but is typically unwilling to engage traditional formal language at the scale of the building or its constituent elements.

4. Intentional Opposition – which contrasts with a conscious opposition to the context, as in Norman Foster's Building opposite the Maison Carré in Nimes or IM Pei's Pyramid at the Louvre.

The decision regarding which of the four strategies to follow is a question of what is most respectful of the existing architectural and urban conditions or, what will produce the greatest degree of harmony and wholeness in the built environment. If we adopt this ethic, we will naturally seek not the architecture of our time but, more importantly, the architecture of our place to create continuity of character regardless of the style.

In fact, Semes offers the perspective that literal replication, often feared by preservationists for creating a false historicism, has its place in certain circumstances and that intentional opposition is the least acceptable in a historic district. This would differ from the European norm where contemporary expression, when well designed is welcomed and literal replication is used in preservation and replacing the 'missing tooth' in unified terraces.

Some of the prescriptive design standards in Philadelphia appear too restrictive and would limit a good architect when producing an innovative response. The Rittenhouse Fitler Historic District standards developed there include:

Building heights should be consistent with the heights of other building in the same block, consistent with adjoining rooflines or should not exceed rooflines by more than one storey and retain building lines. Buildings should have a tripartite building façade divided into three sections a base, middle and top and a cornice line at the top and windows throughout. Facades should include elements, bays, changes in plane or materials at 25 foot intervals and avoid large expanses of blank mirror or opaque facades.

Portland, Oregon, along with other cities has similar restrictive guidelines. Four principles begin by stating that a compatible design for a new building supports the integrity of the district and shall complement one of the existing historic styles. Residential buildings are to face the street, be set back from the lot

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lines and spaced from one another similar to the immediate neighbourhood. The buildings should relate to the buildings in the immediate neighbourhood and form reference to the principles, proportions and scale of a historically appropriate style. The selection of a 'historically appropriate style' would in general not be acceptable as good conservation and there are few practitioners capable of executing such work.

Susan McDonald of the Getty Conservation Institute examines the role of contemporary architecture in historic urban environments in her article to be found at http://www.getty.edu/conservation/publications_resources/newsletters/26_2/contemporary.html. She argues that contemporary architecture can contribute to the inevitable change in ways that conserve and celebrate the character of historic areas. The design quality of new insertions in historic areas can be seen as subjective. More objective guidance is required to secure what constitutes appropriate development. Planning requirements of height and size limits and use of materials rarely include design quality and character assessments except when historic areas are judged by impact assessments.

Prescriptive planning tools such as height restrictions, envelope limitations, and requirements to use certain materials all attempt to provide qualitative design measures. In many places, it is only when a historic building or area is involved that issues of design quality and character are included in the planning process through development or impact assessment. Clearly there is a need to provide guidance or establish well-understood standards to assess new development occurring within older streetscapes.

Designated Conservation Areas in our Development Plans have already been assessed in terms of architectural, historical and aesthetic character and preservationists will criticize development that stands apart from it. The Vienna Memorandum, which proposes an integrated approach to the contemporary development of existing cities in a way that does not compromise their heritage significance, resulted from World Heritage Sites being endangered by inappropriate highly contemporary development.

In reaction to modern interventions, some architects have chosen to continue to design buildings in a more historical style while nevertheless utilizing modern materials and technologies. Others abhor historicism and argue that each generation should represent its own time. New layers should represent the ideas, technology, materials, and architectural language of each generation. It is the quality of the relationship that is important, not the style. The traditional response may be as valid as the contemporary one. In all conservation work the significance of the place is crucial and all are historically and architecturally different. New designs must understand the context and respond to its character and qualities. The environment must not be diminished but enhanced by new work. Conservation principles, a balance between preserving the special character, quality, and significance of the historic place and facilitating change in a way that sustains it into the future, must be abided by to ensure decisions do not damage.

We can all learn from all of the documents referred to above. The applicants for modern interventions in sensitive sites should satisfy those assessing the merit of their applications that their proposals have been assessed under the following headings:

- Relationship to site and surrounding sites
- Positive and imaginative response to site conditions

- Respect for existing physical aspects, grain, street pattern, and routes, scale and rhythm of neighbouring buildings
- Results of changes in height with neighbours on townscape
- Acceptable differences in density
- Suitability of architectural quality, design, composition, solid to void in openings and detailing
- Quality and relationship of material
- Contribution to the public realm, public space, benefits and use
- Views and vistas
- Composition with existing buildings
- Positive or negative impact

An impact assessment should be carried out, not only on interventions in listed or protected structures, but on all new proposals in historic settings before they are submitted and reach HBC for advice and discussion. The format of an assessment system might take the form of Environmental Impact Assessments, EIA Directive, as promoted by the EU.

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European Heritage Open Days

Manus Deery
Principal Conservation Architect - NIEA

First Derry Presbyterian Church

European Heritage Open Days (EHOD), initiated in Northern Ireland in 1997 by the Historic Buildings Council (HBC), is today one of the region's largest cultural events. 61,000 people visited heritage locations or took part in a related event on the second full weekend of September 2012. There has been consistent growth every year since the start when 12,500 people visited 125 buildings or took part in twenty walks. Over the three years of this Council, figures have risen from 56,600 in 2010 to the 61,000 of 2012. This testifies to a continuing and growing popular interest in our historic surroundings in Northern Ireland.

The project also delivers one of the region's largest volunteer events. Last year, over 320 buildings or events were on offer and all were manned by volunteers happy to share their knowledge of a particular place or building with the public. As a volunteer myself, I know that it can be a long day with sore legs and a sore throat at the end, but also a very rewarding experience to see at first hand the interest that so many people have in our built heritage.

All of this activity is coordinated by a small team within the Historic Buildings Unit and the core of DOE. In May 2010 contractual help to deliver this coordination ceased and officers from the administrative team of the Historic Buildings Unit have since been seconded on a three month rotation from their other tasks. This has not been an ideal situation but it has been necessitated by budget reductions. However, it has been a good challenge and all rose to the reality of quite a demanding role admirably. In 2011 and 2012 the proposed cutting of the Second Survey budget also allowed scope to increase the time that the managing Senior Architect could devote to the project. In 2013 with the Second Survey back at full speed, resources have been secured to

support a dedicated manager from 1 January to mid-September. We will be bidding 'in-year' for resources to support this post after that date.

During the period, our colleagues in DOE Core went through a difficult period of change as the former NIEA Corporate Communications team was rationalised down to a smaller team serving all of DOE. The advertising budget which included television advertisements and billboards in 2010 was completely cut in 2011 and 2012 which makes the achievement of increasing numbers over the period all the more remarkable. A major effort was put in by the communications team to increase interviews, articles and other forms of free advertising to compensate for this loss and this has delivered. The Northern Ireland Tourist Board brought back some billboard advertising in 2011 as part of its wider 2011 tourism campaign.

In 2012, we also had the added fun of an electrical fire in our offices on the week before the event – just when the phones go mad with enquiries and our team want to be on hand to support openers as much as they can. With a mammoth effort and much good nature the HBU team and the DOE Communications team rallied round and every opener was telephoned within forty-eight hours and told of changed contact telephone numbers and the websites were updated. I hope that you didn't notice any change.

Celebrating EHOD visitor numbers at Belfast City Hall, 2012

This raises a further area of effort which has developed significantly over the period of this council. Partnerships with other Agencies to grow and expand the project have been further developed. The Northern Ireland Tourist Board has been very supportive. In 2012, as well as the billboards, online information on the event has been hosted on their website. This year the Arts Council of Northern Ireland contributed to the EHOD programme by organising six high-quality arts-based events. The highlights of the programme were probably the Big Telly Theatre Company theatrical production at Dunluce Castle and a piano recital by Michael McHale at the Harbour Commissioner's office in Belfast. In 2012 DCAL, also arranged for a number of plays to be performed in listed buildings with the theme of the signing of the Ulster Covenant – the first event in the 'Decade of Centenaries'.

I attended the play on Winston Churchill coming to Belfast, to defend the Government position in support of Home Rule, which was staged in First Derry Presbyterian Church. Complete with heckling suffragettes, it was a fascinating story complemented by the historical surroundings. Libraries NI- who have always supported the project by circulating brochures, hosted three mini-launches in 2012 which helped stimulate publicity in Omagh, Bangor and Coleraine.

District Councils have also been firm supporters of the project, opening many of their buildings over a number of years. Treasure Trails NI have also provided trails for the brochure and all year round online access. Virtual Visit Northern Ireland also recorded a number of buildings to allow those who could perhaps not visit, to get a

European Heritage Open Days

Manus Deery
Principal Conservation Architect - NIEA

flavour of these spaces. If you haven't seen these they are well worth a look.

Each year a number of competitions are held in association with the event: a children's drawings competition; a photography competition (in three age groups) and in 2012, a teddy bear's picnic. This last competition produced some hilarious results and you can see a selection on our website. All of these competitions have grown over the years and stemmed from an initial concern to encourage a closer look at historic buildings but also to stimulate interest from children.

The redesign and television campaign in 2010 was about stimulating interest from sections of the population which might have perceived that visiting our heritage is a serious matter. Fun was therefore emphasised and the brochure took a deliberately bright and engaging turn with colour illustrations in a magazine format. A section for drawing as well as notes and some puzzles was also included. This has been balanced with the traditional information summarising the interest of a building and most importantly opening times. More subtly, the brochure is printed on recycled paper and no text is smaller than a defined size to aid accessibility.

Opening times are a continual problem. There appears to be an assumption among many that buildings and events will be open or free all weekend. But as this is a volunteer event, and although the Department wants to encourage maximum participation, this cannot be the case. Please always check the opening times before you visit.

This brings us to the openers. The event could not happen without them and it is their enthusiasm which makes it something special. I would like to extend my thanks to those who do this or who participate by helping out or taking a tour. Seeing behind a normally closed door is one thing, but to hear the story of a building, or the difficulties of looking after it, at first hand, is priceless. It brings history to life and it probably communicates better than any other way just why our heritage is important.

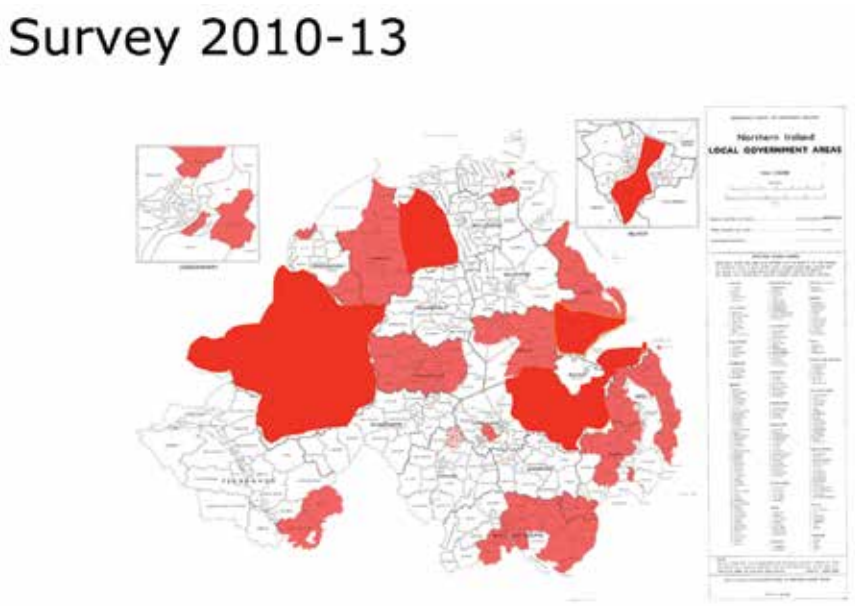
Each year, in November, NIEA hosts a thank-you event for the volunteers. We try to find a different venue every year in an interesting historic building. A tour is always included as we are conscious that volunteers get little chance to see the other buildings open. The Minister of the Environment has attended on each of the last three years to extend his thanks to those who have participated, but the event is less about speeches and more about a chance to relax and meet other volunteers. Prizes are also awarded to the competition winners and the standard of entries is always a high point. In the last three years, Belfast City Council, Newtownabbey District Council, and Armagh City Council have all hosted the event and I extend my thanks to them for this.

In conclusion then, the European Heritage Open Days event is still expanding and going from strength to strength. It is a very positive way of investigating and celebrating the breadth of built heritage that this part of Europe possesses. My thanks to the HBC members who volunteered to take part in the event and I hope that you all have the second weekend in September firmly highlighted in your diary for next year.

In 2013, in support of the Derry~Londonderry UK City of Culture, we will be making a major effort to highlight the heritage of this city and its region. So, don't take my word for the quality of the recent conservation work to First Derry Presbyterian Church, come up and see it for yourself.

Second Survey Update

Manus Deery
Principal Conservation Architect - NIEA



The Agency's 'Second Survey of Buildings of Architectural and Historic Interest' aims to review all historic buildings in Northern Ireland with a view to listing them, or if already protected, deciding whether they remain on the list. Under way since 1997, in the last HBC report I described how the project was reviewed comprehensively in 2007 and speeded up to reduce its expected completion date by eight years.

My article reported that a contract was let in 2009/10 for the survey of two average-sized council areas every year for three years. This programme is required to meet the Agency's target of completion by 2020 and I am glad to report that, at the time of writing, it is still on track.

This statement hides a lot of activity in the interim. The listing process has been scrutinised by the Northern Ireland Audit Office (NIAO) and by the Public Accounts Committee of the Assembly, with a lot of work needed to answer questions and supply statistics. While this was going on, widespread pressure on government spending resulted in the budget line for the project being cut in May 2011. Though this was subsequently reinstated, in stages, there have been consequences for the smooth processing of the survey in the field and within the Unit.

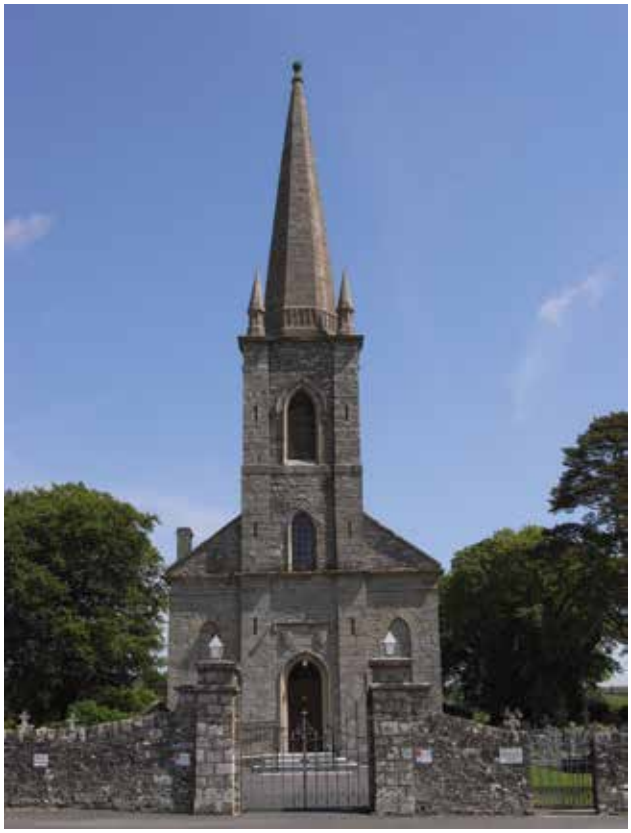
The NIAO was critical of progress up to 2007 but acknowledged the improved procedures that had already been introduced and recommended that the *'improved arrangements built into the current contract for targeting survey work and managing throughput of work within NIEA are reflected in all future contracts for the remainder of the survey process.'* This is being incorporated now as a new contract is developed.

In a second recommendation it asked that *'NIEA builds on its procedures for the current contract by formally prioritising for survey those buildings which are most at risk.'*

The Public Accounts Committee made a similar pronouncement that *'at a time when public expenditure is particularly constrained, NIEA must be able to demonstrate that it is making best use of its resources. The Committee recommends that NIEA reduces the proportion of surveyed buildings that do not qualify for listing and sets an early date for achieving its 40 per cent target rate.'*

Second Survey Update

Manus Deery
Principal Conservation Architect - NIEA



Cappagh Church of Ireland church, Co. Tyrone

These concerns relate to statistics produced for the audit report that showed that 60% of the buildings surveyed by NIEA between 1997 and 2010 had not resulted in a listing. There are many reasons for this, not least that in a holistic survey it is necessary to get inside a building and carry out research to determine if it is of the appropriate grade. Also, there is wider benefit in this data for the protection and understanding of the historic environment. For example, local listing (proposed under the reform of Public Administration) is likely to seek to protect many of these recorded buildings. However, from 2007 the Agency has sought to reduce this proportion by introducing and refining its initial scoping review process with our contractors. In the three council areas surveyed and fully processed between 2009 and May 2011 the proportion has reduced to 49%. We expect further targeting in recent survey areas to reduce this further.

However, the headline has been that the overall survey has continued on track. In 2010/11, Lisburn and North Down Council areas were surveyed. In 2011/12 Banbridge and part of Belfast were surveyed and this year Coleraine and a second part of Belfast are being surveyed. Cookstown, Carrickfergus, Newtownabbey, Strabane, and Omagh have all been fully surveyed and processed since 2008 and publications highlighting the built heritage of these areas are being prepared. In addition, the recording of Antrim District, which had been started in an earlier phase of the Second Survey, was completed.

In the five complete districts, 2,235 records were reviewed. The Historic Buildings Council must be consulted on all proposed changes to the list and papers were brought to them in regard to 328 buildings. Over the period, 246 buildings were added to the list in these areas and 82 removed.

Because the areas surveyed have been spread across Northern Ireland they differ widely in the types of buildings they contain. In Cookstown, to the west of Lough Neagh, some very fine survivors of our railway heritage were discovered. The town was the end of the line for two Victorian railway systems and the termini are located next to each other and

Vernacular house at Loughmacrory, Co. Tyrone

Corrugated metal railway station, Ballymagorry, near Artigarvan, Co. Tyrone

benefited from competition for their original designs (HB09/13/019). They now both have complementary new uses as a restaurant and club house that have maintained and exploited the character of good internal detailing. Both were previously listed but the survey provided a much better record of their interiors and history. Nearby, an unusual train shed with roof trusses constructed using railway technology was a new listing.

In Newtownabbey, new listings encompassed vernacular houses in the hinterland, railway bridges and civic buildings, including Ballyclare Town Hall and Merville House (HB21/06/004B), now re-used as an arts centre. Industrial heritage was significant here and the survey also highlighted the post-war architecture of new town planning and the railway in urban areas.

In Carrickfergus, there are many fine houses lining the road northwards from Belfast along the Lough. The village of Whitehead, built specifically by the railway to encourage business, is composed of buildings from the later Victorian and Edwardian periods and the best of these were selected as new listings (HB22/06/005). Also associated with the sea, the lighthouse on Blackhead was a notable new listing in Carrickfergus district (HB22/05/005A).

In Omagh, to the west of Northern Ireland and covering river valleys and upland fringes, there was much discussion of the protection of rural vernacular buildings. Many of these buildings have been subject to replacement dwelling applications in recent years, focusing attention on those that remain; many are also underused or vacant. Listing cannot consider future use or condition in making an assessment, the test is 'special architectural or historic interest'. If a building meets this test then it should be protected by listing.

In Omagh, therefore, we selected the best examples of the vernacular buildings typical of the area and those that had most of their historic fabric and detail intact (House at Lough Macrory HB11/18/016). These were proposed for listing with final decisions refined following consideration of views expressed by the District

Railway bridge, Lagan Canal, near Moira, Co. Down

Council and Historic Buildings Council. There was also a notable number of railway bridges, a few of which were already listed, the best of the others, examples of several types, were added to the list. An unusual find was Cappagh Church of Ireland church (HB11/16/042) which had not been recorded previously and is now listed at grade B+.

In Strabane, we found some more unusual railway features in the form of a corrugated metal station building in Ballymagorry near Artigarvan (HB10/11/014) and some fine metal bridges between Strabane town and Omagh, such as Breen Bridge over the Mourne River (HB10/06/022).

North Down, like Newtownabbey, was also significantly influenced by the expansion of Belfast. We recorded in detail a number of very fine former merchants' houses, a few of which were not previously protected by listing. In towns like Holywood the influence of improved communications in the late nineteenth century was particularly strong, exemplified by some interesting small developments in a range of eclectic styles and a number of buildings were added to the list as good examples from this period.

Lisburn District's heritage of rail, commerce and canals, as well as of industry, has supplied many new listings such as the railway bridge over the Lagan canal at Moira (HB19/03/013) and the processing of the survey there is ongoing.

Of course the survey does not only list buildings. Some structures were found not to meet the required standard following complete internal and external review by the survey. At Alexander Place in Sion Mills, Strabane (HB10/07/009A-T), large rear extensions, coupled with a lack of internal features and the removal of windows, meant that they could no longer be justified as being of special architectural and historic interest. However, they remain protected within Sion Mills Conservation Area where they make an important contribution to its character.

Reviewing the progress of the past few years, the survey, despite some problems, has continued to progress its coverage of Northern Ireland. This information is made available on our website as soon as it is processed and records for some 7,759 buildings are now available (December 2012). A programme of work to make the interface with this information more user-friendly has been commissioned and will start this year. This information will help the NIEA, owners, and the general public to appreciate the great range and variety of Northern Ireland's built heritage and to make the most appropriate decisions as they manage this important resource into the future.

Note: References within the text in brackets prefixed with HB are the Listed references for the structures described.

Follies: frivolous or functional?

Iona Erskine Andrews

'Follies are joyful little buildings which aim to please.' The Follies Trust

Generally defined as ornamental buildings with no practical purpose, follies conjure up images of romance and eccentricity and are thought of as peculiarly British/Irish. In Northern Ireland they range from The Temple of the Winds at Mount Stewart to Lord Limerick's decorative gate pillars near Bryansford, Co. Down with mausolea, obelisks, garden buildings and all manner of delightful structures in between.

Dunmore Pineapple, West Lothian, Scotland

Functional follies

The popular image only tells part of the story. Delving into the detail we find that each and every folly actually has a purpose, even if it is merely to mark a view or to commemorate a loved one. Conversely, many functional buildings also contain wonderful and elaborate detailing, an element of '*folie*'.[1] There is thus a spectrum from functional to frivolous along which most building structures lie. Follies may be at the frivolous end of the spectrum but there is no black and white, merely shades of grey or shades of frivolous ornamentation.

One of the best known follies in the British Isles is the Dunmore Pineapple in West Lothian. According to Jack Stevenson it is said to *'rank as the most bizarre building in Scotland'*.[2] It was built in 1761 by John Murray, 4th Earl of Dunmore, as a hot-house for growing pineapples. Murray left Scotland after the initial structure had been built, and went on to become Colonial Governor of Virginia in America. The upper-floor pavilion or summerhouse with its pineapple-shaped cupola and the Palladian lower-floor portico were added after Murray's return from Virginia. The design is attributed to Sir William Chambers who designed similar fanciful structures at Kew Gardens and the Casino at Marino, Dublin. Nowadays the building can be rented as holiday accommodation from the Landmark Trust.

The Monument in the City of London commemorates the Great Fire of London in 1666 and celebrates the City which rose from the ashes. Designed by Sir Christopher Wren and Dr Robert Hooke, it was completed in 1677. It is 202ft (67m) tall and is located 202ft from the King's baker's shop in Pudding Lane where the fire started. As leading lights of the Royal Society, Christopher Wren and Robert Hooke designed The Monument to carry out scientific experiments. The Doric column of Portland stone with internal staircase is also a giant telescope with a laboratory in the cellar. The staircase steps, measuring exactly six inches high, were designed to be used for experiments on pressure while the hollow shaft was destined for experiments with pendulums. Referred to by Hooke as *'The Fish Street Pillar'*, it was restored by the City of London Corporation in 2009 at a cost of £4.5m. More than

The Monument, City of London (photo courtesy of Amanda May)

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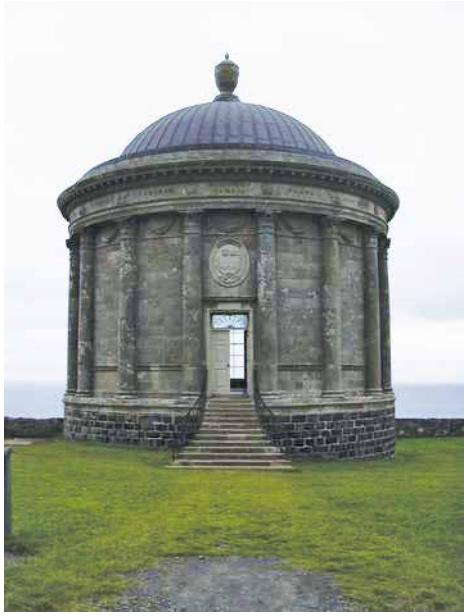
150,000 visitors per year climb up to the observation gallery. Many claim that its views are better than those from St Paul's Cathedral for they include views of St Paul's itself.

Picturesque follies

Many follies were constructed as garden features as part of the 18th century Picturesque movement in landscape architecture. Also popular at the time was the Palladian style of architecture and the fashion for going on a Grand Tour. This resulted in elegant follies harking back to classical times.



Mussenden Temple, Co. Londonderry (photo courtesy of Judy Hewitt)

Mussenden Temple, Co. Londonderry is thought to have been inspired by the temples of Vesta at Tivoli and Rome. It is dramatically perched high on the cliffs above Magilligan Strand with views across the sea to Scotland, Donegal and the Antrim coast. It was built as a library in the grounds of Downhill Demesne by the 4th Earl of Bristol and Bishop of Derry, 'the Earl Bishop' in 1785. He dedicated it to his cousin's daughter, Mrs Mussenden, to whom it was rumoured he was unsuitably close, not helped by the fact that he had packed his wife off to Suffolk. It is now owned by the National Trust and appears regularly on BBC Northern Ireland at the beginning of the six o'clock news.

Members of the Follies Trust at the Temple of the Winds, Mount Stewart, Co. Down

The Temple of the Winds at Mount Stewart, Co. Down stands on top of a wooded hill looking out over Strangford Lough. It was built in the 1780s by Robert Stewart who had returned from a grand tour in 1762 and later became the first Marquis of Londonderry. The designer was James 'Athenian' Stuart whose favorite Greek building was a clock tower, The Tower of the Winds, Athens. It was octagonal with two porches as is the folly at Mount Stewart. However, the Temple of the Winds, used for dining, also has large sash windows and a sumptuous interior.

With the introduction of Gothick Revival by Horace Walpole at Strawberry Hill, Twickenham, arguably a giant folly in itself, the Gothick style (spelt thus to differentiate it from the original Medieval Gothic) became popular in landscape architecture. Tollymore Park, under the magnificent Mountains of Mourne, with the Shimna River tumbling over rocks through its grounds, provided an ideal romantic setting for a picturesque eighteenth century landscape. Thomas Wright, garden designer, mathematician and astronomer, known affectionately as the 'wizard of Durham' and Lord Limerick, designed decorative entrance gates, bridges, a barn that looks like a church, a hermitage and follies sited to take advantage of the natural landscape in the Gothick style. *Tollymore Park – a guide to the follies and garden buildings* is available on the Follies

The Hermitage at Tollymore Park, Co. Down

Trust website www.follies-trust.org. Tollymore opened as the first forest park in Northern Ireland in 1955.

Famine relief follies

In Ireland famine relief projects resulted in the construction of estate walls and follies. Scrabo Tower, Co. Down was built in memory of Charles William Vane, 3rd Marquis of Londonderry, one of the Duke of Wellington's generals in the Napoleonic Wars. Its construction completed in 1857, on top of a volcanic plug at the head of Strangford Lough, provided employment for the tenant farmers of Mount Stewart. It was designed by W. H. Lynn, then working for Lanyon, in the Scottish Baronial style. Now a well- loved local landmark it is in the ownership of the Northern Ireland Environment Agency.

Scrabo Tower, Co. Downs

Helen's Tower, Clandeboye Estate, Co. Down

Nearby Helen's Tower on Clandeboye Estate, was part of an ambitious landscape project by Lord Dufferin. It was designed by William Burn in 1848 and construction also provided work for tenants suffering from the Irish Famines. Dedicated to the memory of Lord Dufferin's mother, Helen Selina Blackwood, a grand daughter of Sheridan, it has been the subject of poems by Tennyson, Browning and Kipling.[3] Before the First World War, land below it was used as a training camp for the 36th (Ulster) Division. Following devastating losses at the Battle of the Somme, a replica, the Ulster Tower, was constructed at Thiepval in 1921 in commemoration. Helen's Tower has been restored by the Irish Landmark Trust and can be rented as holiday accommodation.

Foreign follies

The construction of follies is not entirely restricted to the British Isles. The Hameau de la Reine at Versailles was built as a retreat for Marie Antoinette in 1783. It includes a model farm

Follies: frivolous or functional?

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with a dairy, dovecot, boudoir, mill and a tower in the form of a lighthouse. The Queen sought refuge from the formalities of the Court by dressing as a peasant and milking the cows, kept meticulously clean by farm workers. It fell into disrepair after the French Revolution but was restored in the 1990s.

The Taj Mahal in Agra, India has been referred to as 'poetry in marble' and '*the most extravagant monument ever built for love*'.[4] It was built in 1631 by Emperor Shah Jahan as a mausoleum to his second wife, Mumtaz Mahal, who died in childbirth (of their fourteenth child) in 1631. The death of Mumtaz left the emperor so bereft that his hair is said to have turned grey overnight. Some 20,000 people from India and Central Asia worked on the building, some later had their hands or thumbs amputated to ensure that the perfection of the Taj could never be repeated. The main architect is believed to have been Isa Khan from Iran but other specialists were brought in from as far afield as Europe to produce the exquisite marble, screens and pietradura (marble with inlay work) made with thousands of semiprecious stones.

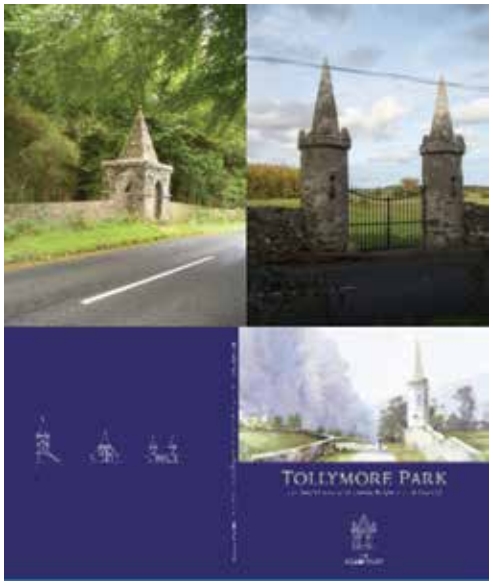
Recording of follies in Northern Ireland

In Northern Ireland, follies are well documented. Many are listed buildings and recorded on the Historic Buildings Database. Others fall within the boundaries of properties on the Register of Parks, Gardens and Demesnes of Special Historic Interest. James Howley's book, *Follies and Garden Buildings of Ireland* is the definitive guide, beautifully illustrated, including measured survey drawings and listing over 500 structures. Many follies are recorded in the informative and scholarly books published by the Ulster Architectural Heritage Society. *Buildings of County Antrim; Buildings of County Armagh* and *Buildings of North County Down* by C.E.B. Brett and *Tollymore: the story of an Irish Demesne* by The Earl of Roden particularly spring to mind. In 2004-5 Judy Hewitt conducted a valuable survey as part of a dissertation on follies for an architectural conservation course at Queen's University, Belfast. Under the categories of tombs/mausolea, garden features and temples/ summerhouses/ hermitage/shams, she visited and recorded features like the Temple of the Winds at Mount Stewart as well as the Long Pond and Round Pond at Antrim Castle.

Sadly, many follies are in poor condition and are on the Built Heritage at Risk in Northern Ireland (BHARNI). Many are in private ownership forming part of an historic landscape. Their maintenance is often far down on the list of priorities of maintaining a house and estate buildings. Mausolea in graveyards are deemed by the Church Authorities to be the responsibility of the descendants of those buried in them. However, these people are often widely dispersed. Many follies are in Government hands, whether it be the Forest Service, Water Service or local councils whose purpose and focus is elsewhere. Those fortunate enough to be owned by conservation bodies such as The National Trust and The Irish Landmark Trust fare better.

The Follies Trust

The Follies Trust was formed in 2006 to encourage the appreciation and conservation of Irish follies. Since its inception, it has successfully completed the restoration and conservation of a whole host of delightful structures, held informative lectures and published three books. It has battled funding constraints, sourced grants and worked with local community groups and owners. Much of the energy behind the group is its chairman, Primrose Wilson CBE, also a former Chairman of the Historic Buildings Council (1994-2000.) She is ably supported by trustees who include the current Chairman of Council, Frank Robinson. One of the founding



Lord Limerick's Follies, Tollymore, Co. Down

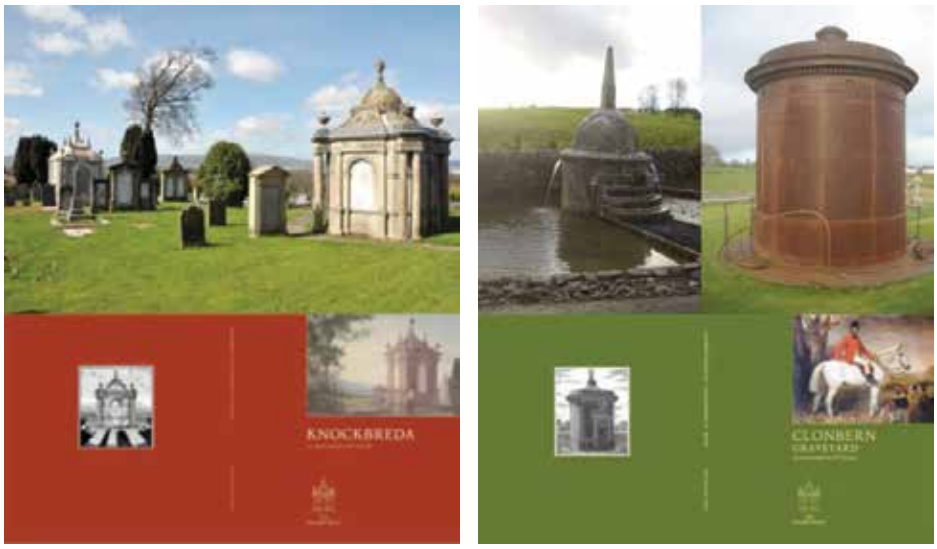
trustees was Richard (Dick) Oram who served on the HBC from 2004 until his death in 2008. Such was the love and esteem with which he was held that The Follies Trust dedicated their conservation of Lord Limerick's follies on the edge of Tollymore Forest Park to his memory.

The three delightful structures, constructed in the 1780s, lie on the Bryansford-Hilltown Road. They are in the Gothick style, attributed to Thomas Wright, as mentioned above, and are decorated with bap-stones, smooth round local stones, so called because they look like baps. One was built as a pedestrian gateway, now blind. Another comprises a pair of cylindrical gate piers. The third, the largest and most prominent, is thought to have served as a boundary marker. It sits on the edge of Tollymore demesne and would have been the first feature visible to Lord Limerick as he travelled from his main home in Dundalk to his summer residence at Tollymore.

The Follies Trust carries out conservation and restoration work to the highest conservation standards using specialist advisors and appropriate materials such as lime mortar. Its first project, the mausolea in Knockbreda Churchyard, has received commendations from The Georgian Group, the Royal Institute of Chartered Surveyors NI and Europa Nostra.

The Greg and Rainey mausolea, conserved in 2009, and the Waddell-Cunningham mausoleum conserved in 2010 are miniature Classical temples and lie within the graveyard of Knockbreda Parish Church. Professor James Stevens Curl describes them as '*an astonishing array of funerary monuments … these Knockbreda mausolea are sumptuous yet refined; ostentatious yet delicate*'.[5] The church, constructed in 1737, was designed by the Dublin-based architect, Richard Castle, famous for Powerscourt, Russborough House and the Rotunda Hospital, Dublin. The graveyard became fashionable as a burial ground for the prosperous families of Belfast.

In 2011, the conservation of a charming drinking fountain in Kilkenny and of a cast iron



The Greg and Rainey mausolea; Stroan Fountain, Kilkenny and Dennis Mausoleum, Clonbern, Co. Galway and associated Follies Trust books

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Sham Fort, Tyrella House, Co. Down (photo courtesy of David Corbett)

mausoleum in Galway were completed along with another book.

Future projects include a linen green tower, an obelisk, funerary monuments,a prospect tower and a sham fort at Tyrella House, Co. Down. This was purportedly constructed to house three cannons removed from *SS Great Britain* which ran aground on Tyrella Beach in 1846, having mistaken the newly constructed (1874) St John's Point Lighthouse for the lighthouse on the Isle of Man.

Contemporary follies

The construction of follies is not an activity totally consigned to the past. The tree house at Alnwick Castle, Northumberland, opened in 2005, cost £3.3 million to build and is among the largest, most expensive and lavishly equipped tree houses ever built. It occupies a copse of mature lime trees and includes an eighty-seat restaurant, a shop and acres of timber decked hanging walkways.

In Northern Ireland, Sir William Hastings of Hastings Hotels has built a mausoleum in the grounds of Down Cathedral, Downpatrick for his future use.

I leave the last word in praise of follies to Alan Terrill of The Folly Foundation:

I think people love the thought that someone somewhere had the imagination, money and lack of planning authorities watching over them to build something fantastic, weird, huge, beautiful or totally useless just because they could. It certainly cheers me up and makes me envious.[6]

References

1. Origin: Middle English: from old French folie "madness," in modern French also "delight, favorite dwelling." www.oxforddictionaries.com/definition/english/folly

2. Jack Stevenson *Exploring Scotland's Heritage: Glasgow, Clydesdale and Stirling*. Edinburgh, Her Majesty's Stationery Office, 1995.

3. Alfred, Lord Tennyson *Helen's Tower 1861*, Robert Browning *Helen's Tower*, Rudyard Kipling *The Song of the Women*.

4. Recorded in author's *Indian Travel Journal*, 2006 (unpublished.)

5. Professor James Stevens Curl writing in *Knockbreda - Its monuments & People, The Follies Trust*, Belfast 2009

6. *The Great Outdoors: Fabulous Follies*, BBC Countryfile Magazine, 7/11/2007

Hastings Mausoleum, Down Cathedral graveyard, Downpatrick

Two decades of the Historic Buildings Council

Joe Fitzgerald

The general rule of membership of the Historic Buildings Council (HBC) is that members are initially chosen to serve for three years with an option at the end of that period for a further three years. In my case why refer to two decades? This needs an explanation since I first served on the HBC in the 1980s, when I was co-opted on to Council due to the sudden death of the eminent Derry architect Frank Corr. In my mistaken and flattering belief that I had been head-hunted, I found out later that it was considered important that bodies such as the HBC should be seen to have a balanced membership. This meant little to me at the time but the reasons were soon clarified when I eventually asked one of the older members. The Council needed at that time a co-opted member who would satisfy three conditions: 1) a man, 2) an architect and 3) someone who could pronounce 'haitches' in a particular way (I assume that no explanation about the letter H is needed!!).

This of course was a period during which the aftermath of the worst of the then recent Troubles, together with the organisation of local government and the effect of Direct Rule meant that bodies like the HBC had its remit extended to be more of an unofficial alternative for important planning matters, where for example the Royal Fine Arts Commission felt it was not in a position to act on Northern Ireland matters. Indeed, in my opinion, even the introduction of the Commission for Architecture and the Built Environment (CABE) (now dissolved) in Great Britain had no remit here. HBC was therefore genuinely considered a sounding board for all major planning applications and whilst these in most cases were relatively simple to judge, now and again a very difficult and controversial problem would come into the arena and if, as it happened, there was no general agreement within the Council, the Chairman would request one or two members to prepare a report.

These reports usually found their way into the workings of the civil service 'powers-that-be' and decisions were made accordingly. This could have its benefits but also its pitfalls as happened on one occasion, as a result of a planning application for what was considered at the time to be the biggest post-war shopping centre development

Castlecourt, Royal Avenue, Belfast

Two decades of the Historic Buildings Council

Joe Fitzgerald

The Model School, Enniskillen

in Belfast. The Chairman decided that two of the architect members of Council should write a critique on that planning application for what was accepted by Council to be an unsatisfactory design proposal and which was, generally, a steel-frame building with a brick pastiche façade.

A very detailed report was prepared by the architects criticising several basic omissions such as the absence of proper service access areas, etc. It also included the suggestion that the external façade, if proposed as a steel frame structure for this very large building, should be modern and with the hint that Council was looking for a building of special merit for tomorrow's heritage which should be 'in sympathy' rather than 'in keeping' with the surrounding Victorian brick and sandstone buildings. Consequently, the materials offered for consideration to the design architects were bronze metal work for the external structure and tinted glass for the very large windows.

The report was accepted by Council with enthusiasm and it was felt that this would produce a building of real merit. As luck – or bad luck – would have it, the bronze unfortunately became stainless steel and the windows ordinary clear glass. In a number of ways the new building was considered by many to be a good modern building but that 'special' element was missing. Indeed, the effect of the change allowed one member of Council to ask the question 'When will the scaffolding be removed?' So there are inherent dangers in Council getting too close to proposing design changes.

I came off that period of six years membership in the late 1980s and concentrated on my architectural practice for several years but after a time I felt that I would like to seek membership of the Council, this time on my own merit and joined Council in 2007. One of the pleasant differences from my earlier experience on Council was that it is now a task of the members at the end of their three years' service to write an article for the triennial report. This gives the opportunity for members to 'sound off' about any particular aspect of the built heritage.

For the Seventeenth Report I contributed an article on a subject which has seriously exercised my frustration during my Council membership since the 1980s. The article was titled 'Mending

Modernism' during which I also outlined the limited number of modern buildings considered by Council for listing. Modern buildings, which had been built before the thirty year period which was the conventional cut-off date for listing, appeared not to be a popular source for consideration. I pointed out that surely, for instance, a large number of school buildings built after the Second World War could be considered for listing.

In my opinion, modern buildings of architectural merit, however scarce, deserved the same protection as the older traditional buildings. In my limited experience on Council only two modern buildings have been listed and although there are a few listed modern buildings of special architectural merit, these can often be at risk with the dreaded 'not fit for purpose' tag being applied after just a few years, as has recently happened to a school built in the late 1970s. Whenever has that phrase been used in reference to the older types of buildings?

At this, the end of my second and final period of membership of Council, I had intended to comment on the importance of sustainability and the effect on built heritage. After all, listed Historic Buildings by their very nature must be inherently sustainable and even though sustainability begins with preservation, it does not necessarily include any consideration of design on those occasions when a modern intervention with a listed building needs to have special architectural merit. I wanted to emphasise the need for the importance of design to be considered within the term 'sustainability' where all that might be necessary to achieve planning approval might be a box-ticking exercise in a 'sustainability' audit.

I decided against the subject since I felt that it could have been misunderstood, as just an architect's private whim even, although I believe that preservation of a listed building keeps our history and culture alive and we learn much from the methods and practices of those who came before us.

In conclusion, I enjoyed my times on the Council and although the remit of Council has been a little different in recent years from my time in the 1980s (for instance the lunch then included wine!), I have thoroughly enjoyed my time under an excellent Chairman, who always allowed a fair and full debate on whatever appeared on the agenda. In particular, I have been very impressed by the interaction with the other members and the depth of knowledge and keen interest they have shown and I found the experience very rewarding indeed.

Traditional building skills in Northern Ireland – a future for craft skills?

Roisin Hamill
Conservation Architect - NIEA

Tullyreagh Road, Brookeborough, Co Fermanagh

Introduction

This article is a synopsis of a dissertation titled 'Traditional Building Skills in Northern Ireland – A Future for Craft Skills?' It was an independent study submitted in January 2012 towards the RSUA Diploma in Conservation Studies.[1]

On 11 November 2008, I attended the second National Heritage Training Group (NHTG) annual conference in Alnwick, where each Regional Heritage Skills Action Group reported their progress in their efforts to revive traditional building craft skills in England, Scotland, Wales and Northern Ireland (NI). It was at this conference that the first two heritage-endorsed Construction Skills Certification Scheme (CSCS) cards for existing craftspeople, were presented through Managed Industry Accreditation. Most areas had bursaries, National Vocational Qualifications (NVQ) and 'Training the Trainers' schemes. Subsequently I developed an interest in the subject of availability of traditional building skills in NI.

The National Heritage Training Group (NHTG) is an independent skills development group who assist in recruiting, training and qualifying the built heritage sector workforce in the UK. In 2007 Construction Skills commissioned NHTG to carry out the survey *Traditional Building Craft Skills, Assessing the Need, Meeting the Challenge – Skills Need Analysis of the Built Heritage Sector,* for Ireland, which was completed in 2009. The NHTG study, which forms the backdrop to the dissertation, identifies shortfalls in traditional building craft skills in the North and Republic of Ireland. It gives recommendations and Skills Action Plans for each area, designed to address the issues, to be carried out by a dedicated Working Group. My dissertation provides

background information on traditional building skills in NI, its provision today and a summary of the findings and recommendations from the NHTG report for NI. The research aimed to answer the following questions: Is the NI Skills Action Plan successfully addressing traditional building skills in NI? Has the relevance of the NI Skills Action Plan increased in the economic downturn, and if so, how can its delivery be improved?

Background

The dissertation was not intended to focus on any specific traditional building skill, but on today's practice in NI of the specific skills used to construct pre-1919 buildings. Traditional building skills, as the subject suggests, is not a new topic of study; however, the provision of and access to these skills in NI is proving difficult as they have declined over the years. In relation to architectural conservation, traditional building skills and the use of traditional materials is critical. It is necessary to provide the correct repair and maintenance techniques for this decreasing proportion of our building stock.

NI has approximately 125,000 pre-1919 buildings, 8500 listed buildings and 1875 scheduled monuments. Without the knowledge of these skills, historic buildings will receive inappropriate alterations which will conflict with their original construction and have long-term detrimental consequences to their aesthetic, character and fabric. The provision of traditional building skills is relevant to all stakeholders associated with historic buildings.

A concern of the study was the wide parameters of the subject matter, which makes it difficult to draw boundaries. Also, a study can only reflect the status of traditional building skills during the time of writing, as initiatives constantly develop. For example, with a declining new-build construction industry, property owners may wish to focus on their existing building stock and if this is the case, traditional building skills may experience a revival at this time.

The Council of Europe recognises the 'Value of Cultural Heritage for Society'[2] and calls for promotion of the skills necessary for conservation of the physical cultural heritage.[3] This includes both the visual and historic dimensions. Unfortunately many of the lesser used traditional building skills were gradually lost towards the middle of the twentieth century, as more modern building techniques, materials and technologies prevailed. Traditional building skills are historically handed down from those with experience through apprenticeships, on the job training or work experience. In many cases the skill transfer would have been from father to son or in a haphazard way. Most craft skills are not suspended in time and evolve (e.g. joinery and stonemasonry), which can assist in identifying a buildings period of construction. Thatch has probably been the most static.

A desirable aspect of craft skills is that they are fulfilling and rewarding activities for participants. People achieve satisfaction in the manual dimension of these tasks. Craftspeople are often the envy of people in professional occupations, who have craft skills as hobbies. Advances in technology, robot assembly and automation have led to deskilling in the building industry. This has left people with little emotional contact to their jobs. Technology may produce results which look the same as work crafted with hand tools and perhaps there is an equivalent skill or gain in the programming of electric tools. However, with traditional crafts, it is often the blemish that adds to the charm of a piece or the shortcoming that identifies it to a particular craftsperson. Authentic skills that have been transferred over generations are part of the fabric and structure of our history.

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The provision of traditional building skills in NI has benefited mostly from the listing of buildings, Northern Ireland Environment Agency (NIEA) Listed Building Grant Aid and the Heritage Lottery Fund and other sources of support; however, the sources of information and training are fragmented. The Construction Skills Register CSR Gold craft card is the formal system of accreditation available to craftspeople and contractors, who claim to have specialist heritage building skills and understanding. In NI there are no holders of this recently introduced card.

There is also no all-encompassing body specifically dedicated to the training, promotion and development of traditional building craft skills. Consequently it is difficult to source craftspeople with the correct skills required to work on historic buildings. The Ulster Architectural Heritage Society (UAHS), a registered charity, in partnership with the government body the Environment and Heritage Service (now NIEA), produced a book, the *Directory of Traditional Building Skills*, which was last published in its fourth edition in 2004. Although now somewhat out of date, this book remains the primary source of information for owners of historic buildings to locate the appropriate consultants, contractors, specialists and suppliers, when planning to undertake repair and maintenance work. There are other key organisations and schemes associated with historic buildings in NI, though awareness of the need for heritage skills has additionally arisen from growing public awareness of loss of heritage and events such as European Heritage Open Days.

Research

The members of the NI Working Group tasked with addressing the recommendations of the NHTG study are drawn from key organisations involved in contributing to the NHTG Skills Need Analysis research. They represent educational, government and non-government groups. The NI Working Group operates primarily from the Construction Industry Training Board Construction Skills (CITB-CS) NI premises at Nutts Corner where they meet annually. From meetings and discussions with members of the Working Groups, my dissertation assessed the successes and delivery of the NI Skills Action Plan and obstacles encountered in fulfilling its objectives.

Meetings between the NI and Republic of Ireland Working Groups have been considered a beneficial platform for sharing experiences. A Skills Action Plan has been developed to galvanize action. It is considered a crucial mechanism for the agenda of promoting traditional building skills. The NI Working Group has made advances in achieving the Skills Action Plan and many of the Performance Measures have been delivered or progressed. Some items, however, have taken longer to implement than predicted and many of the time-lines have been missed. The Skills Action Plan is seen as a live document, so the Actions, Performance Measures and Timelines can and should be adjusted to reflect changing circumstances. It is necessary to recognise any change in resources, funding and today's construction industry. The Working Group has built on its successes and momentum is starting to develop in the training and awareness of traditional building skills.

The first focus after establishment of the Working Group was to develop the NIEA training centre in Moira. Next was to improve relationships with the six Further Education colleges in NI, in order to introduce the NVQ Level 3 in Heritage Skills. In NI the NVQ Level 3 Diploma in Heritage Skills is the primary vehicle being used by the Working Group to introduce a consistent and recognised qualification scheme for students and their trainers.

Restoration at Holy Trinity Church, Cookstown, Co. Tyrone

In 2010 a pilot up-skilling course occurred in the NIEA Moira Depot where ten employees completed NVQ Level 3 in Heritage Skills apprenticeships in conjunction with South Regional College. South Western College is managing the CITB-CS NI Sustaining Traditional Building Skills in Northern Ireland project with £240,000 Skills for the Future funding from the Heritage Lottery Fund. This includes nine bursaries for work/site-based placements, a Training the Trainers programme and a Heritage Ambassadors-Mentors programme.

The chapter 'Lessons from Neighbours' researches several successful innovations carried out in England, Scotland, Wales, Republic of Ireland and NI. Such case-studies may influence the use and awareness of traditional building skills in NI. These schemes have been targeted for their steadfast, pioneering or novel approach and include: The Challenge Fund; The English Heritage Angel Awards; Revive to Regenerate; Historic Environment Champions; Village SOS/Big Lottery Fund; My Valleys House Website; Audit Scoping Exercise; Strategy for Sustaining and Developing Traditional Building Skills in Scotland; Scottish Lime Centre; Craft NI; Building Limes Forum Ireland and Monumentenwacht in the Netherlands.

The research demonstrates there are many innovative ways in which to carry out and publicise traditional building skills, including targeting owners. Several schemes are community based and concentrate on bringing skills to end users with little or no experience in their use. Making owners aware of the requirement for appropriate repair and maintenance work to pre-1919 buildings will increase demand for these specialised skills, and subsequently create jobs, training opportunities and better access to craftspeople.

Recommendations

The Historic Scotland *A Strategy for Sustaining and Developing Traditional Building Skills in Scotland*, states that projections of the construction sector show demand for repair and maintenance growing faster than new-build. This sector is identified as one of the strongest performing to 2015, with increased demand for traditional building skills. It is important, therefore, in NI to recognise the role traditional building skills may have in economic regeneration, not only in the context of a declining new-build construction industry, but in terms of our growing tourist industry, as the revenue from tourism is expected to increase. In recent years focus on new build construction has been at the expense of conservation. The

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NHTG 2009 Ireland report states there are skills gaps in this field, however unemployment in construction has risen. This demonstrates the increasing relevance of the Skills Action Plan and highlights the requirement for other types of construction jobs.

An estimated18.9% of 18-24 year olds are unemployed.[4] As university fees escalate, apprenticeships would be an attractive training option. The repair and maintenance sector is believed to be growing however jobs in this field are not perceived to be guaranteed. For this reason employers may not want to invest funds into unnecessary training. Challenges for Further Education Colleges include finding suitable placements and insurance for apprenticeship workers. An optional modular approach for training traditional building skills parallel to general skills is preferred by colleges. The tradition is for learning on the job from experienced craftspeople who can hand down their skills; however, this is difficult to evaluate.

The latter chapters of my dissertation provide strategic recommendations for a way forward for traditional building skills in NI. The proposed approach should include accessibility to private owners, development of current successful formats, government input, cost effectiveness and the potential to create jobs. Recommendations refer to: the role of grants; accreditation; an NI centre dedicated to traditional building skills; the NIEA Moira Depot; Urgent Works Notices; the proposed Baseline Condition Survey; NGO grants; owners awards; a summit for traditional building skills and further work of the NI Working Group. The Working Group (and Skills Action Plan) is believed to be the most prevalent organisation in NI working towards this cause. The recommendations may present an ideal approach, however my dissertation is considered to be a catalyst for detailed discussions, written without a background agenda or budget in mind.

Conclusion

The principles of conservation require maximum retention of historic fabric and minimum intervention. Not only craft-skills are required; however, successful schemes are often attributed to having the expert judgement to know the extent of work that is, or is not, necessary. Repair rather than restoration is more culturally significant, as not only the original aesthetic is retained but also the actual tangible historic fabric. For this reason it is important to engage and educate building owners regarding the merit of sympathetic retention and maintenance schemes. Similarly Tourist Board funding should be for quality conservation projects, in order to maximise our 'Cultural Capital.' The overall psyche of NI needs to be altered to understand the importance and significance of our heritage.

In 2011 NI experienced an upsurge in fires in historic buildings, leading to the first Heritage Crime Summit, called by the Minister for the Environment. In Autumn 2011 rates for unoccupied domestic listed buildings were abolished. While this will reduce pressure from demolition, it may have the unintended negative effect of encouraging them to remain empty, favouring the use of non-listed dwellings. Historic buildings and their upkeep should instead be considered an opportunity for economic growth, as skilled labour is required in this sector.

As well as focusing on creating a trained traditional building skills workforce, perhaps an awareness strategy is required for decision makers and funders, in order for the recommendations to be implemented. A 'Traditional Building Skills Summit,' may be the best way to instigate interest in the provision of traditional building skills at a higher level. Since the time of writing of the dissertation CITB-CS with NIEA hosted a free special event, Right Skills for the Repair & Maintenance of Traditional Buildings in September 2012. In October 2012 UAHS organised a Home and Dry event, Heritage Time – making the most of our historic assets, to promote the sustainable use and potential of vulnerable historic buildings. Both events were well attended by leading people from the built heritage sector.

The economic argument for focusing on these skills needs to be clearly identified in a study similar to the *Scottish Traditional Building Skills - Audit Scoping Exercise.* If demand for traditional building skills was a requirement, for example, through accreditation as a condition of grant aid, employers, building owners, colleges etc. would follow suit. The ongoing debate of skills accreditation, which is likely to create jobs and benefit our historic building stock, would require significant investment. More people than ever are purchasing lottery tickets, which may boost Heritage Lottery Fund investment; however, this cannot replace government spending.

Historic environments are often preferred to new buildings, so an issue also lies with repair and maintenance of pre-1919 non-listed vernacular and urban vernacular buildings which form the backdrop to our rural and built-up areas. Listing buildings helps to protect them from removal, but without this measure non-listed and non-protected buildings are being lost through wilful neglect, by creating an argument for their replacement. Traditional building skills should be considered in the context of what is best for the sustainable development of NI, its economy and culture, our identity, quality of environment and lifestyles.

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Civic Ornament – the Thompson Memorial Fountain and some brief observations from Heritage Walking Tours of Belfast

Paul Harron

The Thompson Memorial Fountain, Belfast

One of the real successes in raising awareness of and valuing the built heritage in Northern Ireland has been the establishment and development of annual European Heritage Open Days over a specified weekend each September. Currently, the EHOD programme is managed and promoted very effectively by the NIEA, and long may that continue. For my own small part in the initiative both as a member of the Historic Buildings Council (HBC) and as someone who has a desire to promote and share in the appreciation of the best of our architectural inheritance, I have led EHOD walking tours around central Belfast's commercial heart focusing on some of the buildings and structures designed by one of the city's most prolific Victorian- and Edwardian-era architects, Young & Mackenzie, in whom I have had a particular research interest.[1]

My curiosity in Young & Mackenzie stemmed from looking around Belfast in particular and wondering which architects were responsible for the design of such dominant, large-scale and flamboyant edifices as Robinson & Cleaver's; Anderson & McAuley's; the Ocean Buildings; the Scottish Provident Buildings and the Presbyterian Assembly Buildings ('Church House'). In 1909, looking back over the previous fifty years, the *Irish Builder* had noted that in the second half of the nineteenth century:

In Belfast a new city arose … from 1859 to 1889 were extremely busy times for architects. Some did a vast amount of work – to an extent almost incredible in a small and poor country. Indeed, during the decade succeeding 1859 the building trade and architecture were in a more flourishing state than either before or since.[2]

It became evident from even a cursory glance at the historical records that the firm of Young & Mackenzie was responsible for a very great deal of this transformation of Belfast described by the *Irish Builder* and for each of the landmark buildings noted above.[3]

Hence the walking tours looking at some of the firm's output, from the stand-out buildings to the more ordinary ones which nonetheless form part of the essential grain of the industrial-

Detail of the Thompson Memorial Fountain, Belfast

age city (and which, arguably, amount to more collectively than the sum of their parts), to particular curiosities – such as: the copper crown spire on Church House and the melding in that building of Late Gothic Revival and Scots Baronial styles along with a welter of applied sculptural decoration; the decorative sculptural schemes on the eclectic range of commercial buildings, not least the attractive door on the corner entrance of the Swanston & Bones warehouse on Queen Street with its keystone head depicting Sir Arthur Chichester[4] and, in particular, one stand-alone structure, the Thompson Memorial Fountain of 1885, which will be the principal focus of this short article.

Doorway of the former Swanston & Bones warehouse, Queen Street, Belfast

I, and those who joined me on the EHOD tours, were struck by how these buildings and structures added a distinct and distinctive civic-minded ornamentation and visual variety to the city centre, often combined with practical benefits for the citizen.

For instance, in the case of both Robinson & Cleaver's (1888, extended 1895) – originally the Royal Irish Linen Warehouse – and Anderson & McAuley's (1899), aside from the architectural sculpture which rewards anyone who decides to look up above ground-floor level, the citizen is generously provided with a timepiece in the form of a large-faced illuminated clock. Both department stores also provided viewing points from their top floors, accessed by modern lifts (alas, no longer possible for today's public). The *Northern Whig* on 25 July 1888 considered that the tower viewing point at Robinson & Cleaver's would be

Robinson & Cleaver's, Belfast — detail of the tower, Donegall Square North/Donegall Place

> *…no doubt largely used by strangers, who disinclined for the long climb of Cave Hill, are still naturally anxious to see Belfast from the most elevated and accessible point … the lift … will render ready access to this elevated point so that it will be one requiring absolutely no exertion whatever to attain.*

At Robinson & Cleaver's, moreover, shoppers could also perambulate at first-floor level on the balcony on Donegall Square North/Chichester Street. The *Belfast Evening Telegraph* on 29 March 1888 noted that this balcony (or *'verandah'*) was *'a pleasing feature'*, going on to say: *'This will afford a delightful promenade in summer time, and is readily gained from any part of the showrooms on the first floor'*. We know from many historical photographs that it has also been used as a vantage point for rallies and major events taking place in front of the City Hall.

Church House (1899-1905), meanwhile, also told people the time with an electric clock from Sharman D. Neill of Belfast on its prominent tower but additionally provided citizens with some aural stimulus in the form of its peal of bells. This electrically driven carillon machine rang the chimes and played tunes, *'the first combination of the kind in Ireland driven by electric power'* according to the *Northern Whig* of 7 March 1905.

Civic Ornament – the Thompson Memorial Fountain and some brief observations from Heritage Walking Tours of Belfast

Paul Harron

Presbyterian Church House, Belfast

However, it is the Thompson Memorial Fountain, designed by the firm in 1885,[5] which provided the city with a really distinctive High Victorian curiosity and which when walking around central Belfast is worth pausing to consider at the junction of four roads: Ormeau Avenue, Bedford Street, Linen Hall Street West and Dublin Road. A Decorated Gothic Revival landmark in the manner of a fourteenth-century English Eleanor cross, it is a B1-listed structure.[6]

Originally functioning as a drinking fountain, it had a clearly practical as well as an ornamental purpose. The Victorian penchant for drinking fountains was well established by the mid-nineteenth century. The *Irish Builder* on 1 March 1860 ran an article about the *'drinking fountain movement'* highlighting the existence of a pattern book of designs for them by architect Henry Godwin, along with fountains for public parks; so this example of the type is actually somewhat late in its erection.

The fountain was erected as a memorial to Dr Thomas Thompson by his daughter Eliza. A slab is inscribed 'Erected 1885. In memory of Thomas Thompson, M.D., R.N., of Wellington Park who practised as a physician in Belfast for above forty years. *"Though dead yet he liveth."*' It is built of red Dumfries sandstone – described in correspondence of 1884-5 between the firm and Revd George Shaw of Wellington Park Manse (who was acting on Miss Eliza Thompson's behalf and was trustee of the fund) as Manley stone – on a grey Castlewellan granite base with two basins of red granite from Peterhead, Aberdeenshire. It is set on a wide surrounding base of two steps and flanked by traceried cast-iron lamp-stands which were part of the original design. It takes the form of an acute octagonal crocketed spire surrounded by spirelets and is richly decorated with traceried gables.

There are eight small male and female heads at the base of the spire and a bas relief of Christ and the Samaritan woman at the well *'in the style of Annibale Caracci from a workshop in Chester'*, according to the *Northern Whig* on 30 March 1885, which also described the fountain as *'a very handsome structure which is a real ornament, not only to the site on which it stands but to a town the streets of which are so bald of ornaments'*. The structure also includes the evangelistic inscription of Christ's words, *'Whosoever drinketh of this water shall thirst again; but whosoever drinketh of the water which I shall give him shall never thirst.'*

As reported in the *Belfast Newsletter* on 16 April 1885, the fountain was opened on 15 April by the mayor, Edward Harland. Presented as *'a gift to Belfast'*, Harland stressed that the Corporation was happy to take charge of it and protect it in the future, while the Water Commissioners would be glad to supply it. While the mayor described it as *'elegant and handsome'* and the architects and contractor were publicly praised for it, Shaw appeared anxious to play down its exuberance at the opening, saying that there was *'no elaborate work here but the design and workmanship were symmetrical and chaste.'* This remark is a revealing one, indicating a tension in Belfast at the time between a desire for public architectural and sculptural display twinned with

a nervous reserve around overdoing flamboyance – one might surmise that this tension was rooted in perceptions of Protestant and Catholic aesthetics.

All in all, the Thompson Memorial Fountain, while now it runs dry, is an enrichment to Belfast which deserves to be appreciated for its architectural form and for the part it plays in the city's social and cultural history. It makes a relatively small but unique and striking contribution to the cityscape and visually manages to 'pull together' a disparate junction in a harmonious and attractive manner. While the reintroduction of running water would be too much to hope for, it might not be too much to ask that it receives a little TLC (while bearing in mind Patricia Warke's illuminating and instructive conclusions in her essay elsewhere in this publication) – on close inspection the level of moss and encroachment of nature detract from its beauty and reflect somewhat poorly on the city.

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1. The author's PhD thesis (QUB, 2011) is entitled 'The work of Young & Mackenzie, architectural practice and dynasty, and its significance to Ulster's built environment, c.1850-1950'. For those who may want to know more about the firm's work, see the author's chapter 'Big vision city: the physical transformation of Belfast, 1870-1910, by provincial architects' in: Purdue, Olwen (ed.), *Belfast: the emerging city, 1870-1914*, Irish Academic Press, Dublin, 2012; and 'Young & Mackenzie's rich deployment of architectural sculpture in High Victorian buildings' in the R.S.U.A. journal, *Perspective,* vol.21/no.6, Nov/Dec 2012.

2. *Irish Builder,* Jubilee number, 1909, p.184

3. Excellent information on these buildings and others in Belfast can, of course, be found in: Brett, C.E.B., *Buildings of Belfast, 1700-1914* (revised edn), Belfast, 1985; Larmour, Paul, *Belfast: an illustrated architectural guide,* Belfast, 1987; and Patton, Marcus, *Central Belfast: a historical gazetteer,* Belfast, 1993. The Public Record Office of Northern Ireland contains the Young & Mackenzie archive and Young family papers.

4. This is the building, known to many as the Athletic Stores on account of its onetime anchor tenant, which has been the subject of prolonged recent controversy. Situated within Belfast's Linen Conservation Area but is not statutorily listed, permission was given to demolish it – attracting much adverse local media attention – however, this decision is at the time of writing (late 2012) subject to a judicial review.

5. Young & Mackenzie archival papers and correspondence (P.R.O.N.I., D.2194/73/14)

6. Listed in 1982: HB26/30/014

In support of heritage regeneration

Noelle Houston

Ignoring our historic environment neglects our resources, our skills and our identity. On the other hand respecting and re-using it as a key to regeneration achieves sustainability, reinforces a sense of place and contributes to a high quality of life. It creates jobs, underpins local economies and draws in external investment. The continuum in development creates confidence and a solid foundation on which to build into the future.

Wirksworth, Derbyshire is a town which grew from the lead, textile and quarrying industries but was decaying in the 1970s with the loss of its economic foundation. It was taken on as one of the first heritage-led regeneration projects embarked upon by the Civic Trust. The regeneration of Wirksworth focused on the re-use of redundant historic buildings and the involvement of the community to realise the value of the town's heritage.

The success of Wirksworth provided some ground rules for subsequent projects in regeneration: mixed funding, exemplar projects and public participation. Over the last forty years many such initiatives have been developed. The examples used in this article are a small selection which have had recognised success over a period of time and have contributed to best practice. Given Northern Ireland's priorities over its recent troubled history fewer examples are drawn locally; however, the ongoing regeneration of Derry has been recognised and is using its historical assets to great advantage such as the Ebrington Barracks site and, along with the ongoing Townscape Heritage Initiative projects in Derry and Portaferry, will undoubtedly provide inspiring examples in the future.

Corn Store, Draperstown

In the 2004 report *The Role of Historic Buildings in Urban Regeneration,* the House of Commons Select Committee gave strong support to heritage-led regeneration as follows:

Historic Buildings provide a foundation for the regeneration of many of our towns and cities. Regenerating these buildings can reinforce a sense of community, make an important contribution to the local economy and act as a catalyst for improvements to the wider area. They should not be retained as artefacts, relics of a bygone age. New uses should be allowed in the buildings and sensitive adaptations facilitated, when the re-use of an historic building is no longer relevant or viable.

The UK Government's new National Planning Policy Framework has as a central theme the *'presumption in favour of sustainable development'*. The principle of understanding, valuing, protecting and using historic assets runs throughout the Framework as a means to promote sustainable growth. Local Plans are required to include 'a positive strategy for the conservation and enjoyment of the historic environment' considering:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;

- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution made by the historic environment to the character of a place.

The Economic Value of Ireland's Heritage, a recent report for the Heritage Council of Ireland states:

The economic value of the historic environment may be most readily apparent in terms of the role of heritage assets as generators of revenue and job creation. More widely, Ireland's historic environment is a critical contributor to sustainable economic growth, and to the creation of attractive communities that are places where people want to live, work, visit and invest. Unquestionably, heritage represents a valuable national asset, and one which is fundamental to Ireland's core values and principles as a nation.

Partnerships and mixed funding

For positive outcomes it has been shown that heritage-led regeneration projects should have a strong vision for the future which involves the community and interested parties at an early stage developing an integrated approach in which no one social, economic or environmental consideration is concentrated on. This process leads to one of the drivers for success in heritage regeneration – mixed funding which comes from involving a strong network of stakeholders aiming for linked outcomes.

An essential component of Buxton's regeneration was the many partnerships which developed leading to various funding opportunities. Regional Development Agency and Heritage Lottery Fund grants played a key role in providing necessary investment grants for the Devonshire Royal Hospital refurbishment for the expanding University of Derby. The Buxton campus of the University provided training in the tourism and hospitality sector which linked in with the tourist board initiative for Buxton and the Peak District. A private developer is restoring the town's Crescent as a new Spa Hotel reviving the heritage of Buxton as a spa town. Small and modest grants from English Heritage and the local council helped owners to enhance and restore their properties, in particular commercial properties and shop-fronts.

Orkney Island Council has created Team Stromness to co-ordinate the activities of council departments, partner agencies and their funders to deliver various regeneration projects for the town. The £2.5m Stromness Townscape Heritage Initiative (THI) is funded by the Heritage Lottery Fund, the European Social Fund, the European Regional Development Fund and Orkney Island Council with ten other partners. It provides grants for the refurbishment of buildings and the replacement of concrete pavement slabs with stone. The project also delivers training in traditional building skills and, due to the community's demand that stone was sourced locally, the abandoned stone quarry was re-opened with jobs created.

Townscape Heritage Initiatives act as a catalyst for further regeneration by attracting additional investment from the public and private sector. Every £1million of Heritage Lottery Fund money attracts £863,000 from partner organisations, which, turning to Northern Ireland, has made a huge impact on conserving heritage here. Throughout the Heritage Lottery Fund's involvement in restoring about 100 buildings in Northern Ireland, 244 jobs have been created. The Drapers' Towns Partnership Ltd was awarded the British Urban Regeneration Association (BURA) Award for Best Practice in Regeneration in 2006 for its achievements and cross-community involvement.

In support of heritage regeneration

Noelle Houston

Sustainable resources

Demands on our historic townscapes and buildings change; they respond over time with continual evolution. Subsequently, stored within them is history, the community's identity, pride, social cohesion, energy, skills and materials – all valuable resources. When regeneration plans are developed the short-term costs of new-build versus refurbishment do not include these indirect benefits; consequently, building on a clean slate is often favoured. As well as missing out on developing these important 'soft' resources, an opportunity is missed to utilise existing infrastructures and to reap the premium price with which adapted, refurbished historic buildings are rewarded. The Royal William Yard in Plymouth was converted into apartments by the developers Urban Splash. The flats were so desirable they were pre-sold within one day.

The National Planning Policy Framework recommends bringing back empty housing stock and buildings into residential use. Another Urban Splash scheme, Chimney Pot Park in Salford, illustrates how re-using existing buildings not only can provide desirable, high-quality properties but also achieve sustainability. Research undertaken in the North-West of England found that, based on projections over thirty years, the cost of repairing a typical Victorian terrace house was between 40-60% cheaper than replacing it with a new home. Re-using buildings also saves on waste and reduces the energy demands of producing new building materials.

Pride of place

The re-use of buildings and the retention of the character and texture of the urban plan can create a strong identity and sense of place – a local brand that can be promoted. The area-based approach to the recent regeneration of 'The Viking Triangle' of Waterford has created a new destination brand with Failte Ireland opening a 'Discover Ireland' office in the central area. The Liverpool Rope Walks area had a strong character serving the old Liverpool Dock. Its regeneration blends the refurbishment of the historic buildings, public realm improvements and new infill buildings. As a result, it retains its strong local identity and has been successful in increasing population to the area and with it more commercial activity. The historic environment can inform communities of their cultural development. Norwich's Heritage, Economic and Regeneration Trust (HEART) has highlighted cultural themes (faith, merchant trading, innovation and defence) which are embodied in the city's historic buildings, making links and developing understanding. With their historic trading and immigration links with the Low Countries of Europe the Trust has extended its projects to link with Ghent in Belgium.

Norwich lanes

The Cathedral Quarter in Belfast is the historic heart of the city and its regeneration recognised it as such. Respecting the seventeenth-century street patterns and the eighteenth- and nineteenth-century buildings which are evidence of the birth of the city and its later prosperity, the regeneration re-valued these assets to create a vibrant area which attracts mixed businesses, tourists and thriving local cultural activities. The historic buildings have been revitalised and

Titanic Belfast with the Harland & Wolff building in the foreground

the urban realm enhanced which, in turn, has brought the confidence to welcome in new investments and new buildings of high quality modern design.

New large-scale developments can sweep away a community's pride and connection to an area. Places lose the fine grain and texture that has evolved over time producing unique, irregular, incidental places that have developed to fit, respond and support peoples' lives. Yet still, large-scale developments or iconic buildings are often given priority over the existing historic fabric. The Titanic Quarter, Europe's largest brownfield site, has a strong brand identity but while the £97m Titanic Belfast Visitor Centre provides a striking feature and tourist attraction it is sad to see the continuing dereliction of the adjacent Harland and Wolff Drawing Offices.

Downpatrick, where St Patrick is reputedly buried, is one of Ireland's most historic towns mentioned in AD130. Its plan is essentially that laid out in the early seventeenth century still retaining a strong Georgian character. As a Millennium Project, the St Patrick's Visitor Centre was built to tell the story of St Patrick. However, its long-term sustainability is now being called into question as its closure was threatened in the summer of 2012. Meanwhile, many of the historic buildings in the fine terraced streets remain dilapidated. Their appearance is detrimental to the town not only as a tourist destination but also as an attractive environment in which to live, work and invest.

Success

We have seen how the recognition and use of the historic environment is an important part of successful regeneration. It provides many opportunities to attract investment from a wide variety of sources and it is beneficial in achieving sustainability. It consolidates or creates a sense of place which enhances the opportunity for investment, increases the quality of life, improves understanding of communities' development and provides a powerful focus for community action and cultural activities.

Successful heritage-led regeneration considers an area with its individual historic buildings, connecting spaces and interstices, its economic and cultural activities and foundations, all of which create its overall character. Understanding how places change, what makes them distinctive and the significance of their history is the key to regeneration.

The economic downturn has caused our towns to be drained of investment with the loss of jobs, closure of shops and subsequent degrading of the urban fabric and the community's confidence. Nevertheless, there are now many examples of areas which have undergone or are going through vibrant regeneration in which respect and involvement of the historic environment has been key to their success. Developing regeneration strategies and masterplans that, rather than labeling old neighbourhoods as deprived but value their existing assets, seems particularly pertinent in these economic challenging times.

A brief history of lime in Ireland

Alistair Lindsay

While lime has been used extensively, both as a mortar and decorative coating, in Ireland in the past, no records of its use in the pre-Christian era have survived. Leask noted that seven pre-Norman castles were erected and demolished or burnt between the years 1124 and 1166. He noted that *'the evidence goes to show that they were not castles of mortared stone'* and concluded by inferring that these buildings were timber.[1]

Arthur Champneys, in his book *Irish Ecclesiastical Architecture* gave a chapter to early Irish churches built with mortar. He made three important conclusions. First, he found that the early Irish stone buildings were constructed without mortar in the *'very early times'*. Secondly, he noted that from the seventh century the Irish were aware of the building types current in Europe and their origins from Classical Greece and Rome. Finally, he asserted that building in wood was the usual and native custom among the Irish at that time and later.[2] He traced the use of 'mortared' church building, quoting the earlier records of Lord Dunraven and Sir George Petrie,[3] but could not date the buildings with any accuracy. In his study of the Round Towers of Ireland, Stokes studied their masonry types, masonry that pre-dated the 'repairs' of the last 100 years found in these structures. He concluded that they were built by people adept and experienced at using the material.[4] As these structures are usually associated with Monastic settlements, the contention that the Monastic Orders introduced lime to Ireland has added weight.

At present, the earliest substantiated date for the use of lime is in the early ninth century church at Clonmacnoise, a date corroborated by radiocarbon dating.[5] Archaeologists generally agree that lime could have been used earlier, although as yet, the evidence has not been forthcoming. Archaeological evidence has shown that, in the main, the earlier buildings of Ireland were timber and have not survived as argued by Leask. In locations where timber was not readily available dry stone buildings were erected as noted by Champneys. Many of these dry stone buildings have survived such as the Skellig Michael, Gallurus, DúnAenghas and others along the western seaboard. O'Keefe and Simmington[6] showed that the earliest inhabitants of Britain and Ireland lived near the sea and that their middens indicated a diet rich in fish and shellfish. They intimated that their cooking fires could have caused the calcination of the sands, shells, bones etc. and that this process could offer the origin of lime use in Ireland. However, such settlements would have dated from the Neolithic period to the ninth century and there was no evidence of the use of lime as a binder in those times. The earliest uses of lime surviving in Ireland demonstrate a mastery of lime technology. Therefore, it would seem that the skill must have been imported rather than native.

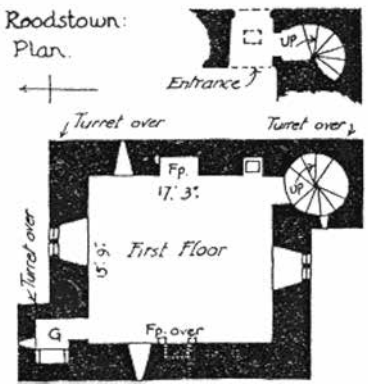
Lime Mortar, Rinndown Castle — note the coarse grain of the mortar.

By the twelfth century and the coming of the Normans, the use of lime for building was well established. In order to cement their hold on the country, they established a network of fortified towns to control the areas of the country which they had annexed. Deserted for many centuries, Rinndown was one such town. The town was sited on a promontory on the western side of Lough Derg, north-west of Athlone. It consisted of a Castle,

Church and a series of defensive walls to protect the town.[7]

The castle and curtain wall date from the early thirteenth century, the Dining Hall dating from about 50 years later. The quality of the lime mortar can be judged from one corner of the Keep. At least two storeys high originally, this wall fell at some stage in history. The fallen corner has remained largely intact, albeit in two large sections. A second testament to the quality of the lime mortar is the condition of the hearting or core of the walls. The external walls present a 'pockmarked' appearance in a number of locations. This is the result of stone detaching from the outer leaf of the wall. The structure of the wall has remained intact, with minimal loss of material from the hearting or other signs of distress.[8] The surviving buildings of this period, mainly castles and religious buildings, demonstrate that the use of lime in Ireland was known and a durable mortar was consistently produced. This suggests continual communication and movement of people between Ireland, Britain and the Continent. This factor is considered in detail in the later.

From the twelfth to the sixteenth century there can be little doubt that there was considerable demand for defensive structures in Ireland. This emanated from the turbulent political situation. It resulted in the widespread use of lime for castles, churches, cathedrals, monasteries, etc. Town walls were built, although the number so defended is the subject of continuing research. Bridges were also built, but simple domestic buildings of the period have not survived.



Plan of a £10 castle. Roodstown, Co. Louth Source (Leask)

The design of fortifications frequently sited castles adjacent to bridges and associated them with the with town walls in a clear defensive gesture. In 1325, King Edward II declared that the bridge and tower at Limerick, which had been built and maintained by the *'…progenitors Kings of England and Lords of Ireland at their own expense, should be now maintained and repaired by the Barons of the Exchequer funded form the 'issues' of their Bailiwick'*.[9] Subsequent Charters of the period indicate that the City was attacked on a number of occasions. A grant of murage in 1307 permitted the enclosing of the suburbs with a stone wall, while a further Charter of 1340 was granted for the building of a Bridge, generally accepted to be Baals Bridge.[10]

Leask noted that from about 1440 onwards there was a great building revival[11]. This revival centred on additions to existing buildings, notably belfries and cloisters to existing monastic establishments, and the construction of fortified residences, mainly Tower Houses. He commented *'…for fifty years or more they kept the masons hard at work'*. He further suggests that they may have been *'the fruit of a statue of the 8th year of Henry VI which states: "It is agreed and asserted that every liege-man of our Lord the King of the said counties who choose to build a castle or tower sufficiently embattled or fortified within the next ten years to wit twenty feet in length sixteen feet in width and forty feet in height or more, that the Commons of the said counties shall pay to the said person to build the said castle or tower ten pounds by way of subsidy."'* [12] This was the origin of the Tower Houses known as the £10 pound castles.

Leask indicated that in excess of 400 castles were built in Co. Limerick, at least 253 in Co. Tipperary and not less than 325 in Co. Cork. He noted that, in total, more than 2,900 castles were built in Ireland. If the religious buildings are added to this number, it must be

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concluded that an extremely active building industry existed in Ireland during the period leading to the Reformation.

Craftsmen such as masons and carpenters were controlled by the merchant guilds. The earliest records of the merchant guilds in Ireland were the Merchant Rolls in the archives of Dublin Corporation. They date from the latter half of the twelfth century to 1265 and possibly earlier. The earlier entries on the rolls tended to be written by a single strong hand. In later entries a number of different hands could be detected but the format of the entries remained consistent – Christian name, place of origin and the amount charged. In some instances, the family relationship to an existing member was noted. The place of origin was of particular interest. This showed that as well as 'native' citizens, a significant number originated in the 'West Country' of Britain, whilst others originated from London, the North of England, Cardiff, Scotland and Ireland outside Dublin. There was also a small, but significant, number from the Continent: Barcelona, Cordoba, St. Omer and Ypres.[13] It is reasonable to conclude the designs of buildings and the work practices of the craftsmen were influenced from abroad.

The records of the guilds outside Dublin indicated a similar situation. The Limerick guild of plasterers received its Charter in 1672 and the minute book showed that Hall Meetings were held in members' houses. The membership was drawn from all trades associated with building.[14] An Irish pipe roll of King John's reign in 1211 recorded payments of *'2s to a lyme burner of Athboy'* and *'6s. 8d. to a lyme burner between Castleknock and Clonee'*. The roll did not record any information regarding the burning, slaking, or mortar mixing with lime. It noted that lime was to be used for the repair of castles following a destructive military campaign. It stated that the craft was specialised but the repairs would be undertaken by locally recruited labour. This statement suggested that the skill required for the actual repair work was either not particularly specialised or that sufficient specialised labour was readily available in the area. The value of these repairs could be related to other payments recorded in the roll. Among others, a payment of £45-6s-8d was recorded for 272 cows valued at 3s-4d each.[15] The ancient records of Cashel showed that similar charters were given to the guilds there.[16] Writing earlier this century one commentator concluded that the Irish walled towns were virtually independent, self governing states. They controlled all aspects of the crafts, trade and commerce within their own areas.[17]

Athlone Bridge, Phillip's sketch c. 1680.

A pattern of 'skill migration' can be traced. The major original locations of the Dublin craftsmen were recorded as Cheshire, Dorset, Lincolnshire, Norfolk, Nottinghamshire, Somerset and Wiltshire as well western continental Europe during the thirteenth century. These locations were similar to those recorded during the thirteenth century castle building programme in Wales which followed King Edward's victory over Prince Llywelyn in 1277.[18] This similarity of origin gives a strong indication that there was considerable movement of craftsmen across the Irish Sea.

Some records of the wages paid have survived. Richard II signed an instrument in 1388 by which a master plasterer

received 2d a day.[19] By 1555, masters of all crafts were to be paid 15d per day without meat or drink, while a journeyman received 12d. The rates with meat and drink were 6d and 4d respectively. In 1689, with the concurrence of the Privy Council, the Deputy Lord Mayor issued a proclamation which decreed that, in all crafts, the daily rate was to be 2s for a master, 14d for a journeyman and 8d for a common labourer.[20] Lewys' accounts for the building of Athlone Bridge in 1567 noted that the total paid to 'Lyme Burners' was £12-7s-2d (the full account is preserved in the National Archives of Ireland).

In the period following the Reformation, a gradual transition from castle and defensible house to 'Manor House' becomes apparent. Some, like Carrick-on-Suir (late sixteenth century), were adjoining older castles, others, such as Donegal, were additions to existing castles and some were purpose built, such as Old Bawn House (c.1635).

Old Bawn, Tallaght, Co. Dublin (Leask)

Perhaps the most ambitious was Jigginstown House, near Naas. Designed to be the Hampton Court Palace of Ireland, this house was commenced by Thomas Wentworth, Earl of Strafford, in 1632 or 1633. The 300-ft frontage was built of brick on a vaulted stone base. It was generally recognised as one of the first brick buildings in Ireland. In letters to Archbishop Laud, Strafford made it clear that it was intended to draw King Charles I to Ireland. In the event, Strafford returned to England in 1639 in controversial circumstances, eventually to be executed. His house was never finished. There were no records to indicate how far the building was completed, but it stands today as a mighty ruin. Leask noted that the brickwork was 'of excellent quality' and suggested that it may have been built by a John Allen, a member of the Anglo-Irish family that were influential in Ireland at the time.

The Renaissance came late to Ireland. The earliest manifestation was in some of the details at Portumna Castle. The turbulent times of the Cromwellian Period, allied to the rebellion of 1641, had a restrictive effect on building activity. One of the earliest buildings of the restoration period was the Royal Hospital, Kilmainham. Reputedly modelled on Les Invalides, Paris, it pre-dated a similar institution in Chelsea. The end of the seventeenth century was again characterised by unrest and it was not until the comparative calm of the eighteenth century that building prospered again. The first phase of 'The Barracks' (later Royal Barracks and now Collins Barracks) Dublin, was designed by Colonel Thomas Burgh and completed in 1706 was typical of this period.[21] Investigations in 1994-5 confirmed that the mortar was still in excellent condition.[22] Burgh also designed the Library, Trinity College, Dublin (1712), St Werburgh's Church (1715) and Dr Stephen's Hospital, Dublin (1720). The other notable building of the time was the Parliament House, College Green, Dublin (1729) by Sir Edward Lovatt Pearce. Both employed decorative plasterers, the designs being described as 'conventional' by Curran.[23]

Domestic buildings of the time were generally criticised. Mrs. Delaney, the celebrated letter writer of the time commented *'… the people of this country do not seem solicitous of having good dwellings…'* Lord Orrery, wrote to an English friend in 1734 *'… our nobility like the*

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old Patriarchs live in cottages with Hogs, Sheep and Oxen….' While Dr Madden wrote in 1738 *'… even in great estates of several thousand acres you will not meet with two houses of lime and stone fit (I will not say for a gentleman but even) for a farmer to live in…'* A significant change was imminent. By 1747 Orrery wrote *'…I have known this Kingdom for fifteen years. More improvements I have visibly observed of all kinds could not have been effected in that space of time.'*[24]

Ireland had entered the period known as the Georgian era. The influence of the Palladian style arrived, not from Britain but from Europe with the architect Richard Cassels. With Cassels came the European *stuccadori,* La Francini, Cramillon and later the native Irish decorative plasterers, West, Stapleton, Thorp, Smyth and others. Using classical references from Italy, these people brought the art of decorative plasterwork to a quality that may have been matched elsewhere, but never surpassed. McDonnell has traced many of these references to their original inspirations[25] that demonstrated the communication and interaction that existed between Ireland and the Continent during the period.

If records of the methodology of the preparation and use of lime were prepared, they have not survived. Curran quoted some references to Italian practice of the time and noted that there were many 'secret recipes'.[26] An important record of the material in Ireland during this period was recorded by George Semple. The origins of this publication relate to the state of Essex Bridge in Dublin, which Semple was asked to inspect in 1752 and published his findings in his book *A Treatise on Building in Water* in 1776.[27] He found the south pier in a state of collapse due to undermining of the foundation by water. Elsewhere, the mortar was in good condition, of *'exceeding great strength'*. As the bridge was built in 1684, this record indicated the quality of the lime produced in Dublin at that period. The fact that it set underwater indicated hydraulic properties. This is not particularly surprising. While basically a limestone, the local stone, 'Calp', contained many clayey beds which would impart hydraulic properties when burnt and slaked. In Chapter XIII, Section II of the book, Semple gave a contemporary account of the preparation and use of lime in mortars and grouts with historic references, dating to 1685, from his father, a stonemason. In particular, he noted his father's assertion that the methodology for the preparation and use of lime were originally taught by the *'Romish Clergy'* when they came to *'plant Christianity'* in these countries.

He described the practice of preparing lime. Quick lime was taken hot from the kiln and ground with a wooden maul on a smooth stone on a dry boarded floor until it was as smooth as flour. Then it was sieved without loss of time and added to the sands, beaten and used immediately. This description points to the dry slaking of the material and a full awareness of the possible loss of hydraulic properties if the mortar is not used immediately. Later he described the workability of the various limes he encountered. He accompanied his description by the comment that, although the workmen preferred the fat lime for workability, it would not result in as durable a mortar as the hydraulic variant. In many respects, Semple was replicating the studies

Athenian Stuart Ceiling, Rathfarnham Castle, Co. Dublin c.1775.

of Smeaton in Britain. Both were required to design structures for harsh natural environments hostile to non-hydraulic lime.

The latter half of the eighteenth century was characterised by the influence of the great English architects of the time. Chambers, Adams and Stuart prepared designs for buildings in Ireland. They sent decorative plasterers from Britain to execute their designs as well as using 'native' craftsmen.

The Custom House, Dublin (1781-91) river elevation.

The construction of the Custom House, Dublin commenced in 1781. The architect, James Gandon, was a pupil of Chambers and settled in Ireland. He was instructed to obtain the services of English workmen. However he noted that they were *'more refractory than the natives, more exorbitant in their demands for increase of wages and worse, by far as to drunkenness.'*[28] His comment made no mention of the quality of the workmanship or materials. During the conservation of the external fabric of the building (1985 to 1991) the writer (as project architect) was able to examine the mortars. This confirmed that the lime mortars used in the original construction withstood not only the rigours of 200 years weathering in a harsh, marine, urban atmosphere but also the effects of the fire in 1922 which left only the walls standing. Indeed, it was not necessary to re-point the fine joints of the Portland Stone ashlar of the South or River Elevation as the original pointing had survived in good condition. In the event, it was the relationship between the English architect of Huguenot descent and the native Irish sculptor and *stuccadore*, Edward Smyth, that produced the masterpiece of Gandon's career. This association was repeated in the Four Courts and other of Gandon's buildings in Ireland.[29]

It can be concluded that the materials and procedures for preparing and using lime in the Custom House were of the highest standard. The excavations for the foundations of the building were recorded as eighteen feet below ground floor level in an appendix to Gandon's biography. [30] This was later confirmed, first in 1926 during the re-building campaign[31] and again in 1990 during excavations. This level was (and still is) below the water level of the adjoining river. Gandon recorded constant difficulties associated with flooding of the excavations.[32] Therefore, for the lime to set, it must have been a hydraulic lime, probably from Dublin Calp, which possessed clayey beds as already noted.

In the nineteenth century the use of lime in Ireland largely replicated that of Britain. Scientific studies were undertaken including those of Mahan and Stoney. Mahan thoroughly analysed the accumulated knowledge available in these Islands in the 1840s. His text included a basic chemical analysis of materials which demonstrated a clear understanding of hydraulic and non-hydraulic limes. He discussed the differences between artificial additives and natural *pozzolanas* but largely discounted their use.[33] Others, such as Wilkinson, recorded the geological aspects of the country and included notes on the use of the rock and stone recorded.[34] By 1865, Stoney was able to show that the amount of soluble silicic acid in limestone related to the durability of mortar formed from the limestone, the analysis was completed in association with Professor Apjon, Trinity College, Dublin.[35] Patent cements such as Keen's or Payne's were used

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frequently. Papiermâché was used for decorative motifs, the most significant being the replication of the ceiling of the Chapel in the Royal Hospital, Kilmainham following the collapse of the original. Decorative castings of fibrous gypsum plasters were developed from the 1840s.

In terms of mortars, the most noticeable change was the introduction of black mortars, particularly in brickwork. The reasons for this colour have not been recorded but the use of coke dust has been recorded.[36] It could be speculated that the coke dust imparted some hydraulic properties but this cannot be proved.

Late 19th- / early 20th-century smooth red brickwork: note the regression in the pointing above the stone string course and the modern cement pointing below

The use of lime required kilns to burn the limestone. The earliest record of a lime kiln in Ireland was contained in the Annals of the Four Masters, dated circa. 1163.[37] It described *'… a lime-kiln, measuring seventy feet in every way, was made by the successor of Colum-Cillle, FlaithbeartachUaBrolchain and the clergy of Colum Cille in the space of twenty days…'* Two aspects of this record were worthy of note. In the first place, the sheer size of the kiln and the relatively short time it took to build (although this may have referred to the firing of the kiln) suggest that their skills and knowledge were well advanced. The second point was that the kiln was constructed by the clergy, supporting the contention that the use of lime was imported by the monastic orders.

Typically, kilns were located close to the works that used the lime in the medieval period, such as were discovered during archaeological excavations at Killeen Castle, Co. Meath. The technological developments of kilns mentioned in the Europe were seen in Ireland also. Extant remains of eighteenth century lime kilns are visible in many parts of the country, many of which were quite monumental structures and some in banks of three or more kilns, continuously burning with limestone and fuel added at the top and quicklime removed at the bottom in a continuous operation. Where now disappeared, their locations can often be found recorded on the Ordnance Survey Maps and in the Office of Public Works' archaeological records under the general title of *'Industrial Archaeology'*. Their former locations can also be determined by reference to place names or townlands. Joyce reasons that the Irish word *'teine-aoil'* is derived from *'teine'* meaning fire and *'aol'* meaning lime, resulting in a place where *'fire of lime'* or a lime kiln existed. *'Aol'* he reasons was anglicised to the ending 'eel' such as Kilkeel, the church of lime. Quick lime was *'aolbeo', 'beo"* meaning alive, a highly descriptive name for the reactive material, while the word *'sorn'* refers to a furnace or oven.[38]

Medieval Lime Kiln, Killeen Castle, Co. Meath: note the pinkish colour where the heat dissipated into the surrounding ground

The dangers associated with lime were recognised. By Act of Parliament in 1774 (13 & 14 Geo. III) Grand Juries could impose a fine of £0-10s-0d on any person building a kiln within 50 yards of a road. In addition, it allowed them to demolish any kilns erected within this distance.

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What constitutes heritage crime?

Michael Martin

Crumlin Road Courthouse, Belfast

Heritage crime can be described as: Any crime or behaviour that harms the value of heritage assets and their settings, to this and future generations.

Heritage assets include:

- Listed buildings;
- Conservation areas;
- Scheduled monuments;
- World Heritage Sites;
- Registered Parks and Gardens;
- Battlefields;
- Protected marine wreck sites; and
- Other sites of archaeological interest.

Such crime can take many forms which damage or destroy our Heritage.

It can range from vandalism and neglect to metal theft, arson and destruction with ulterior motives in mind.

In Northern Ireland, we have seen a dramatic increase in fires in listed buildings in 2011 and have witnessed an ongoing increase in metal theft. Between April and August 2011 there were eleven fires at listed buildings compared to one or two in an average year. Some of these were small scale fires which can occur in any year – such as a result of faulty wiring or late night use of a chip pan, but nine occurred in vacant listed buildings. Many of these had planning permission for a new use which had stalled due

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to the economic downturn and the extra time in an unused state as well cost pressures on owners in regard to security made them more vulnerable than they would have otherwise been. As a result, many of these buildings were significantly damaged. Though most of this loss does not appear to have been intentional, damage to any listed building, without consent, is an offence. Leaving a building open to such an attack by others is not a responsible action.

In addition to arson there has also been a dramatic increase in metal theft both here and in the UK due to its world wide high scrap value. The increase in lead and copper theft has risen by 100% and by March 2011 the PSNI had recorded 158 reported cases of lead theft in Northern Ireland which was double the number of cases reported the previous year.

Research carried out by English Heritage has also indicated that metal theft has become a serious trend in England with the highest number of thefts being from churches and other clerical buildings. It has produced guidance aimed at churches in particular which can be downloaded from its website.

The removal of lead from old ecclesiastical buildings or indeed any building causes major problems. Water can then get in, leading to rot and the deterioration of historic fabric.

Heritage Crime Summit

In August 2011, as a result of the recent dramatic increase in fires at listed buildings, the Minister of the Environment convened a 'Heritage Crime Summit' which was attended by more than a 100 delegates from key stakeholder groups across Northern Ireland. Speakers from English Heritage, the NIEA, Building Control, Fire Service, the PSNI and the voluntary sector made presentations to highlight some of the issues and stimulate discussion. The day resulted in the isolation of twelve key action points to tackle the problem:

- Police to monitor and record heritage crime
- Improve the chance of legislation acting as a deterrent by seeking a power for replication in cases of unauthorised total demolition
- Action on the 'proceeds of crime' as it relates to heritage
- Explore all Ireland Police and Justice co-ordination
- Establish a strategic multi-agency taskforce
- Develop guidance for Planning Officers on using conditions to link repair of listed buildings to associated development
- NIEA to identify and take action on issuing Urgent Works Notices to help deterrence
- NIEA to seek to increase public and owner knowledge of solutions including the promotion of the concept of 'meanwhile uses'
- Engagement with judiciary, banks and insurance companies to ensure awareness of issue and requirement to ensure good security
- Explore reform of powers available to local councils in regard to dangerous structures
- Explore VAT and Rates reform to encourage reuse of Historic Buildings
- Re-commit Government to leading by example by publishing a NI version of the Protocol for Government Historic Estate

In the following months these actions were followed up by the agencies identified as responsible for each action with progress overseen by the new 'taskforce'. Minister Attwood called a follow up summit in October 2011 and held a further summit in April 2012

The old Downe Hospital, Downpatrick

where progress was reported and actions refined. All of this information is published on NIEA's website for public scrutiny.

There has been reasonable progress, not least that the number of reported fires in listed building has dropped back to more normal levels. A pilot scheme for co-operation on the issue was set up between NIEA and PSNI by October 2011 and this has since been expanded to all of Northern Ireland. The NIEA's Environmental Crime Unit (ECU) has also appointed officers to be the liaison point with PSNI for each of their areas. Research on legislation has suggested that there may be some scope to seek reinstatement of buildings without any additional legislation and a suitable test case is being sought. Proceeds of Crime legislation has also been identified as suitable for gains resulting from heritage crimes and potential cases are being monitored in this regard. The NIEA has been given extra funding by its Minister to issued Urgent Works Notices and six have issued since October 2011. This is in stark contrast to two in the preceding thirty-eight years and has sent a good message that the Department is prepared to take action. The Agency has also reported that over sixty warning letters making owners aware of these powers have also issued in the same period and that this has resulted in a number of additional owners taking action to avoid a more costly bill from the Department.

The Ulster Architectural Heritage Society (UAHS) has also been commissioned by NIEA to develop guidance on 'meanwhile uses' and good progress on this was reported to a conference they held in October 2012. There has also been engagement with the judiciary, banks and insurance authorities to highlight the issue and there has been cross border cooperation between police forces and a sharing of knowledge with England Scotland and Wales. DoE has also agreed to convene a meeting to look at dangerous structures powers and to publish information on VAT and rates to increase clarity for owners.

In June 2012 DoE and the Northern Ireland Executive published a new 'Protocol for the Care of the Government Historic Estate'. This commits all government departments and agencies to reporting to NIEA by June 2013

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and NIEA to reporting to the Environment Committee of the Executive by September.

All of this is good progress but while penalties for the illegal demolition of a listed building were raised from £30,000 to £100,000 in 2011, there is still a risk that unscrupulous owners may calculate that the value of a cleared site will be worth more than this. This is why it is important that planning policies and penalties are vigorously implemented and that a test case seeking a requirement to re-build the demolished building thus preventing the benefit derived from a cleared site is identified at an early stage.

A number of contributors to the Heritage Crime Summits also argued that larger penalties must be imposed for illegal demolishing of listed historical buildings, and perhaps this could be further increased, but in my view, penalties and, not just Urgent Works Notices, should also be enforced on owners of listed buildings who fail to protect them and allow then to fall in to a ruinous condition where they become beyond economic repair.

A good example of this is the Crumlin Road Court House, which was sold to a private developer by the Government with the intention of being preserved and restored as a hotel. Due to lack of progress on this, the building has now been vacant for over ten years and suffered numerous attacks and vandalism which has left it in a near ruinous condition. Due to the economic downturn it is now very unlikely that the proposed hotel development will ever take place.

Another example is the old Down Hospital building which also now lies unused and in a state of deterioration due to vandalism.

Therefore, there needs to be more responsibility placed upon the owners of listed buildings to avoid them getting to this state. This is particularly relevant where planning applications are prepared for vacant listed buildings which are complicated or controversial and likely to take some time to work their way through the system. In my view, such owners should be required to find an interim use to improve security and deter vandalism while their proposal is being considered.

Combined with this there could be more encouragement and attention paid to the needs of owners through grant aid support for the repair of listed building and it is good to see that the Department has recently won funds from the Executive to help it increase aid over the remainder of the current budget cycle.

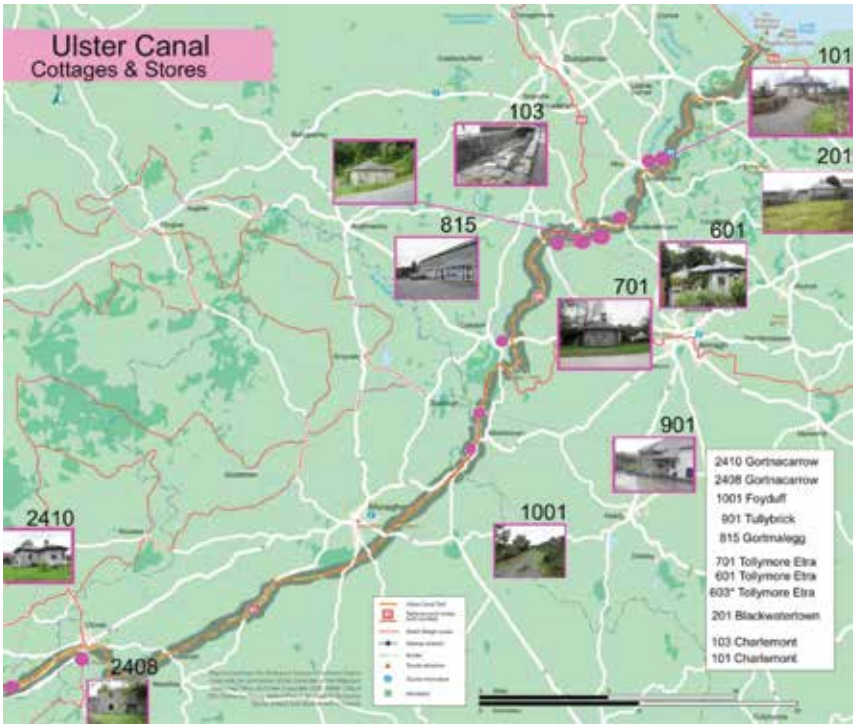
It can be seen that heritage crime requires robust governing and clear measures and penalties which can act as a deterrent. In addition, the Government needs to consider providing more resources and training within the various government departments responsible for protecting our heritage.

The upsurge in heritage crime in recent years can be partly attributed to the state of the economy; however, there is a general lack of public awareness and understanding of the historical value our historic buildings and heritage which could be lost to future generations. In my view, there is also a need for better education on the value of this resource. The Department's recent report on the economic value of historic buildings disserves a much wider audience in this regard.

Heritage crime, like all criminal activity, is an unnecessary evil which we must curtail if we are to allow our society to develop a better understanding of our historical roots. This needs appropriate and vigorous measures to allow our society to develop both socially and economically.

Extract from 'The lock keeper's cottages of the Ulster Canal'

Robert J. S. Miles



Map of Ulster Canal cottages and stores

This extract is taken from a more comprehensive study which looks primarily at the lock keepers' cottages (& stores) of the Ulster Canal, but also in the process, highlights the importance of the architectural heritage of the canal and informs of its relevance and importance in the history and architecture of Northern Ireland.

The Ulster Canal runs from Charlemont on the River Blackwater to Wattle Bridge on the River Finn at the south-east end of Upper Lough Erne. Blackwatertown, Caledon, Middletown, Monaghan and Clones are situated on or near its course, approximately 39kmn (53%) of which lies within Northern Ireland. The Ulster Canal connects to Lough Neagh at Maghery. Along the canal there are numerous features, architectural and archaeological (industrial). There are forty-six bridges, twelve locks, seven lock keeper's cottages, five quays, four stores, three aqueducts, two culverts, one feeder and one dry dock. The canal is currently underused and somewhat forgotten.

Inland Navigation of the North of Ireland consists of eight canals: Newry Canal; Lagan Navigation; Tyrone Navigation; Ulster Canal; Ballynamore and Ballyconnell Canal; Strabane Canal; Broharris Canal and the Lower Bann Navigation. Today only 50% of the Ulster Canal exists; the other 50% has been filled in and is unrecognisable as a canal. Of the existing canal, 35% is in a relatively good condition and the remaining 15% is partially in filled or seriously damaged.[1]

So why was it constructed? At the turn of the nineteenth century in 1800, Ireland's waterway network was rapidly developing. In Northern Ireland, general consensus at this time was for a through route from Belfast to Limerick, linking north and south and thereby benefiting the economic prosperity of the province and the promise of profitability and commercial trade.

This was the time of The Great Irish Famine when Ireland's population decreased rapidly, from

Extract from 'The lock keeper's cottages of the Ulster Canal'

Robert J. S. Miles

8.2 million in 1841 to less than 4.5 million in 1901. The Lagan Navigation had reached Lough Neagh in 1794 and subsequently the Shannon was also being improved. All that was needed to complete the network were two final links, (a) between Lough Neagh and Lough Erne and (b) between Lough Erne and the River Shannon.

Construction began on the Ulster Canal in 1821; it was the last of the Northern Irish canals to be constructed. The Newry Canal was the first to be opened in 1742 and prior to the Ulster Canal opening, the Strabane Canal opened in 1796. The Ulster Canal was an attempt to grasp at some prosperity.

We must remember that at this time the connection of all the canals and waterways in Ireland would have conjured up a more efficient transport system for all, an appealing prospect for business.

In 1814 John Killaly Engineer, was instructed by the Directors General of Inland Navigation[2] to investigate the building of an Ulster Canal. Killaly proposed building the Ulster Canal to the same dimensions as the Royal Canal (at this time nearing completion – the cost of which it was thought to be about £223,000).

Under pressure from the Directors' General to cut costs, Killaly redesigned a canal of reduced dimensions – this proved to be the 'Achilles heel' of the Ulster Canal project. The smallest lock was only 11ft 8 ½ ins (3.6m) wide (the narrowest lock in the country) which meant that other 'lighters'[3] from other navigations could not pass through or use it! Killaly also pointed out in his initial report that he was only able to find one practical source as a water supply for the summit level of the new canal.

Lagan Navigation Lighter

Seven years later the Directors General of Inland Navigation thought it to be a useful undertaking to begin constructing the canal. The Ulster Canal company was incorporated. As employment and near famine conditions existed – perhaps it was thought that the canal construction could alleviate these problems. After some initial fraught starts with contractors, William Dargan (engineer/contractor)[4] was employed by the Directors General of Inland Navigation with inspections of all plans by engineer Thomas Telford. During the time frame of construction various attempts were made to reduce costs, locks were made shallower than had originally been designed and in the end just twenty-six locks were constructed.

Telford had made numerous previous attempts at attracting work in Ireland. He wrote to the Directors General of Inland Navigations frequently, but it was not until 1826 when he became involved with the early surveys and design of the Ulster Canal that he actually got to work in Ireland. Telford visited the site of the canal and approved plans and estimates that had been prepared by Killaly.

Apart from some brief work in Ireland, Telford also worked in Scandinavia; he had the opportunity of working on the Gothenburg canal, cutting a channel across Sweden. He drove a network of roads through the then trackless Highlands of Scotland and a ship canal through the Great Glen, and then returning again to Wales after many years absence, slung a slender suspension bridge across the Conway and Menai Straits to carry his road to Holyhead. Telford is acknowledged as the father of civil engineering.

What makes the Ulster Canal special was Telford's influence. Apart from the docks in Dublin and Howth Road and Harbour, Telford tried to work at Belfast port (the Victoria Channel was completed by William Dargan in 1839-1841) but had no success, indeed it is the lock keepers cottages of the Ulster canal that directly link the Scottish Telford with Ulster.

The design of canals include a number of locks along their length; the Ulster Canal is of no exception. These lock gates required to be opened and closed, and in some case a toll to be paid. In order for this to operate at all times of the day it was necessary for a lock keeper to be on site. Lock keepers cottages were constructed to house the lock keeper, with provisions for his family to live also – essentially the purpose of the cottages. Lock keepers' cottages were usually a modest affair, with a couple of rooms. The lock keeper would have been paid a small salary for his work, but the incentive of having a warm new cottage would have been a considerable benefit in kind. The job of a lockkeeper would have been much sought after at this time.

The architectural features of the Ulster Canal include seven lock keeper's cottages and three stores (there are numerous bridges and piers also). As some of the locks tended to be in close proximity to one another – more often than not one lock keepers house served more than one lock – which is why on the Ulster Canal there are only seven lock keepers' cottages but twenty-six locks. One must also remember that cost cutting was to the forefront of thought in planning the Ulster canal.

The cottages of the Ulster Canal would have been built around 1840. The Victorian era runs from Queen Victoria's reign from 1837 to 1901; the Ulster Canal was built between 1825 and 1842, (abandoned finally in 1931). The 'style' of the cottages therefore is notably late Georgian (the Georgian period being 1714 – 1837).

Lock keepers cottage on the Royal Canal, Dublin

All the cottages on the Ulster Canal are of identical style – one storey high with hipped slate roofs, over sailing eaves with exposed rafter tails, central chimney, dressed limestone quoins and squared random limestone walls. With the exception of cottages 901 and 2410 (which may have been removed over time), all are embellished with horizontal drip mouldings over the door and multi pane window openings – displaying classic characteristics of a Georgian style – symmetrical arrangements.

The cottages of the Ulster Canal are, therefore, of similar standard and significance to notable architecture of the period. Most of Caledon town and early parts of Caledon Castle are buildings of notable architectural merit or significance in the area of the Ulster Canal.

One can also make a comparison between the lock keepers' cottages of the Grand and Royal Canals in the Republic of Ireland and that of the Ulster Canal. Telford had worked in Dublin on the docks[5] and as the Ulster Canal was the last of the northern Irish Canals to be constructed there was plenty of precedents to choose from.

Southern Ireland benefits from a larger selection of Georgian buildings than Northern Ireland (notably Dublin, Limerick and Cork cities). Northern Ireland is predominantly vernacular – traditional rural or Victorian urban. Pre-Victorian architecture of significance in Northern Ireland is rarer.

Extract from 'The lock keeper's cottages of the Ulster Canal'

Robert J. S. Miles

When one compares the Ulster Canal's lock keeper's cottages and the cottages of the other Northern Irish Canals, immediately one is struck by the contrast in style. The lock keeper's Cottages of the Newry, Lagan and Tyrone Navigations are traditional vernacular in design. For example, the newly restored cottage by Shaw's Bridge on the River Lagan sits beside the now disused Lock No.3. A vernacular two-storey house with four rooms, it was built between 1827 and 1834.

Restored lock keeper's cottage near Shaw's Bridge on the Lagan Navigation – traditional vernacular – built between 1827 and 1834

The Telford Connection

There is a limited amount of material on Telford in Ulster. The Institute of Structural Engineers Library in Belgrave Street and the library of the Institute of Civil Engineers on Great George Street in Westminster, London, provided some useful literature. Both of these expert institutions have lengthy reference libraries of famous engineers. I made these research trips to see if I could find any plans or drawings of Telford's for the Ulster Canal, notably the cottages or stores. What I did find were plates from Atlas to the life of Thomas Telford, Civil Engineer, containing eighty-three copper plates, illustrative of his professional labours, sold by Payne and Foss, Pall Mall, 1838. In this volume of plates there is a number of the Holyhead Toll Houses. No drawings of lock keepers' cottages can be found. However, the similarity with the lock keeper's cottages of the Ulster Canal and the Toll houses is uncanny.

I spoke with the chief librarian at the library of the Institute of Civil Engineers who has never come across any plans of the Ulster Canal cottages or stores. He was almost certain that the drawing offices of Telford in London would have perhaps issued standard sets of details and plans from their drawing offices – similar to that use on the Holyhead Toll houses. Essentially a limited amount of time was spent on the design of the cottages – secondary to the canal itself. Perhaps plans were sent to Thomas Casebourne (Chief Engineer/Surveyor) and then to William Dargan (contractor) who may have interpreted them in a way suitable for the local limestone; with a brief supplied by the Ulster lock keepers? Was Casebourne instructed by Telford to copy what they saw fit for the purposes of what they required? Did Thomas Casebourne (the engineer/surveyor) interpret the Telford drawings?

One can observe that the doorway is central in the Telford plans for the Holyhead cottage, the door is off centre for the Templetate Ulster Canal Cottage. However, similar banding of stonework, the same rafter tails, window arrangement and horizontal and dropped drip mouldings over the windows, a central chimney is apparent. Obtaining copies of these Telford plans as much as confirms authorship and establishes the historical base of these buildings.

We can deduce that it was the offices of Telford who designed the lock keeper's cottages of the Ulster Canal, perhaps drawn by Turnbull (in Telford's offices), but it was William Dargan who built them and Thomas Casebourne the surveyor/engineer who interpreted the execution. In his eagerness to please did Telford pass on some generic plans of the cottages to the Ulster Canal team? Was he eager to gain more

Ulster Canal Lock keepers cottage 601 at Tollymore Etra, Benburb, Co Tyrone prior to recent restoration

work in Ireland? Telford had just worked on the Dublin Dock project in Dublin in 18215 and would have been the obvious choice to influence any major construction or engineering works in Ireland at the time.

Below is a picture of a lock keeper's cottage of the Shropshire Canal by Telford – almost identical to the Ulster Canal Cottages.

In rural Ulster we have a direct correlation between what was happening with domestic architecture in Great Britain and Ireland. What is unique about the lock keeper's cottages of the Ulster canal is their rarity in the context of Northern Irish canals, their uniqueness in their context – small domestic scale quality late Georgian architecture.

After Telford died (1757-1834) Sir William Cubitt took over and the navigation was finally opened to commercial traffic in 1842, William Dargan having been the main contractor.

Lock keeper's cottage – Shropshire Canal – by Telford's offices

What makes the Ulster Canal unique is the architecture of the lock keeper's cottages. It has not been stated previously that Telford designed the Ulster Canal cottages but one only has to look at his designs for his toll houses from London to Holyhead or the lock keeper's cottages of the Shropshire Canal (all by Telford) to prove the same hand was the chief designer.

The significance of the Ulster Canal structures can be summarised as follows:

- The cottages (and stores) along the Ulster Canal are the only nineteenth-century, late Georgian canal buildings surviving in Northern Ireland. The cottages form an integral part of the linear route along the canal, which included the locks, piers, stores as well as gates.
- The cottages are largely intact with over 80% still standing.
- The canal is one of Northern Ireland's hidden 'stories'.
- The expression of the strategic importance of the Ulster Canal in its cross-border connections between the Republic of Ireland and Northern Ireland is of notable interest.
- The partial collapse of the lock keeper's cottage at Foyduff (Cottage 1001) reveals the need to tell the story of these cottages and to raise awareness of their dereliction.
- The Stores at Gortnacarrow (2408) were included in the Industrial Archaeology of the Ulster Canal report by Fred Hammond prepared for the Environment & Heritage Service in May 2002. They were listed as being in fair condition; however, they are now in a worse state of repair and are close to collapse (2012). (With irregular wall heads and a dense covering of ivy that obscures the

Extract from 'The lock keeper's cottages of the Ulster Canal'

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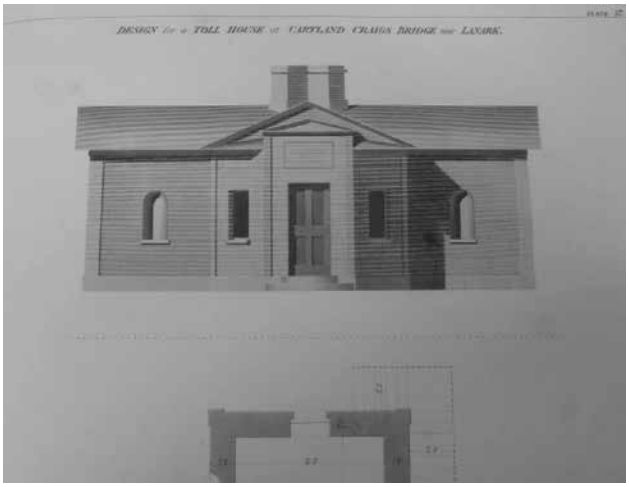
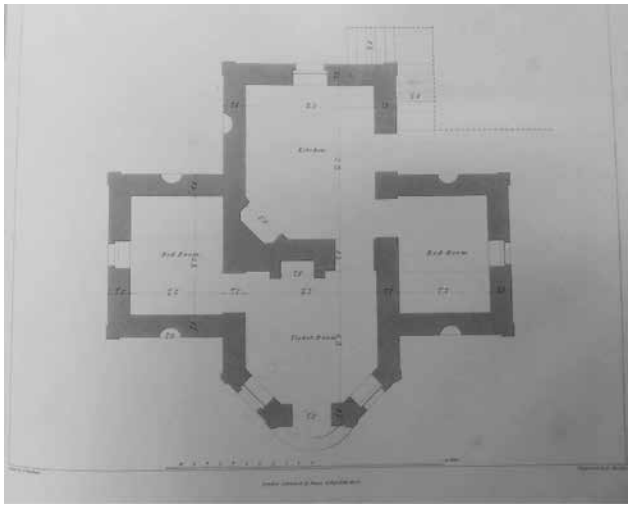


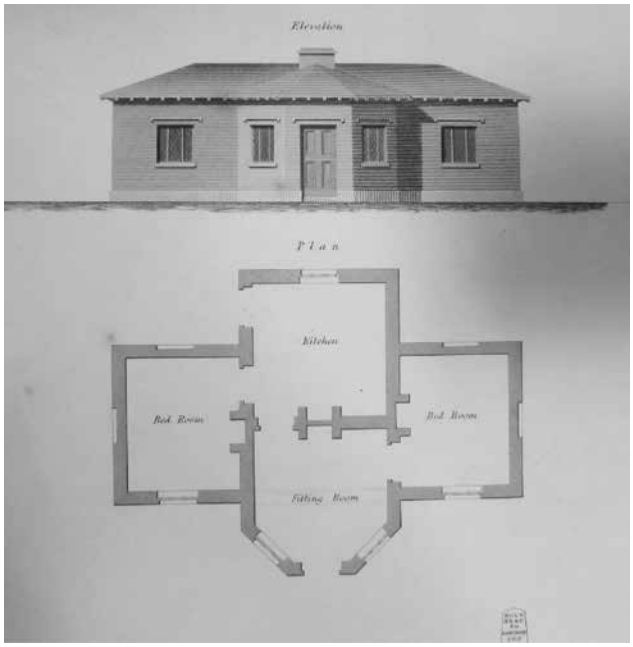
Elevation design for a toll house at Cartland Craigs Bridge near Lanark – drawn by Turnbull, Offices of Telford

Atlas to the life of Thomas Telford, Civil Engineer, containing eighty-three copper plates, illustrative of his professional labours (plate 57)



Plan design for a toll house at Cartland Craigs Bridge near Lanark – drawn by Turnbull, Offices of Telford

Atlas to the life of Thomas Telford, Civil Engineer, containing eighty-three copper plates, illustrative of his professional labours (plate 57)



Designs for toll Houses on the Holyhead Road – drawn by Turnbull, Offices of Telford

Atlas to the life of Thomas Telford, Civil Engineer, containing eighty-three copper plates, illustrative of his professional labours (plate 57)

Ulster Canal Templetate lock keeper's cottage - Lock 22 (1840)

actual condition of the masonry behind.)

- Many of the cottages have been 'restored' but not with the best conservation methods or expertise.
- The lock keeper's cottages and stores contain valuable architectural records within an important collection of standing archaeology that has made the Ulster Canal one of the most interesting canals in Northern Ireland.
- They show the importance of Telford's designs in Ireland, and are an example of his Georgian 'in house' architecture.
- There is a sequence and collection of buildings that could without proper

conservation could be lost forever.

- Together the cottages are among the most intact of the structures that were constructed along the canal, and provide interesting historic features that are not always accessible and sometimes visible to the public.
- The cottages (and stores) could be used to introduce conservation works to the residents and visitors to the area; an important education tool, perhaps as a S.P.A.B. project?
- The south-west section of the canal is undergoing a programme of reconstruction following receipt of funding from the Irish Government (at Clones).
- The Ulster Canal, although considered a failure was justified in its construction. The Ulster Canal is not only of great scenic beauty but also contains historical, architectural and industrial structures of national quality.
- Perhaps the most obvious solution or proposal for the canal is within tourism.
- Local people have knowledge of local features along the Ulster Canal but the collective whole is unknown as a complete entity.
- If the structures along the canal are to survive than the canal and its structures need to be recognised, recorded and not forgotten.

Lock keeper's cottage at Goragh

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[1] RPS Environmental Impact Assessment of the Ulster Canal – Clones to Lock Erne – Waterways Ireland

[2] In 1800 the Irish parliament carried out an inquiry into inland navigation and it became obvious that a further injection of public funds was needed. In its dying moments, before it Union with Westminster, the Irish parliament appointed five Directors General of Inland Navigation with a fund of up to £500,000 at their disposal. For the next thirty years it was this body which controlled waterway development in Ireland'. (Delany, 1986, p15)

[3] The boats used on the Lagan Canal were called lighters. Up until1821 the lighters were mostly horse drawn, with a sail to cross Lough Neagh. The lighters were home to the families, and included a stove for heat and cooking with basic but compact storage. Inside there was also a shelf to sleep on and a hinged table. (theLaganCanal Trust.com)

[4] Through the offices of Sir Henry Parnell, Carlow-born William Dargan (1799-1867) has in 1819 secured a position with Telford and learned many of his building skills in North Wales as an inspector of works. R.C.Cox, 'Telford in Ireland: work, opinions and influence', *Engineering History and Heritage* 162 issue EH1, 2009.

[5] Telford has been appointed by the commissioners to continue works to the docks in Dublin following the death of Rennis in 1821. Telford managed the construction of the new docks. R.C.Cox, 'Telford in Ireland: work, opinions and influence', *Engineering History and Heritage* 162 issue EH1, 2009.

Climate change and historic stone; are we moving towards a greener future?

Patricia Warke

There are not many aspects of modern life that are not in some way linked to the issue of 'climate change' either through their apparent role in contributing to it or through the impact it is having on them.

Debate persists over the causes of climate change; whether it is part of the Earth's natural long-term climatic cycle or whether it has been driven by the effects of 200 years of fossil fuel emissions or, indeed a combination of both of these factors. However, regardless of what is driving the change in our climate, there is no doubt that climate change is no longer a prediction for future years but is a feature of the present-day.

We have to accept that we are now experiencing a shift to more unpredictable weather patterns with increasingly frequent extreme weather events and a noticeable move to wetter conditions within parts of the UK as outlined in the *UK Climate Change Risk Assessment*.[1] In 2011, Historic Scotland reported a 20% increase in overall rainfall in Scotland since the 1960s with a 70% increase in winter rainfall[2] and a similar trend is becoming evident in Northern Ireland's patterns of rainfall receipt although there is variation across the region.

The severity of extreme weather events and their manifestation in an increased frequency of urban flooding and damage to infrastructure are the ones most commonly reported in the media because of their obvious disruptive impact on the day-to-day functioning of our society. But, what is the significance of this for historic buildings aside from the obvious and major effects of flooding?

With regard to historic buildings, planning for the impact of more extreme storms in terms of higher wind speeds and rainfall intensity is most often considered in relation to the quality and management of such things as rainwater goods and maintenance of a 'weather-tight' building shell. However, there is a more insidious manifestation of climate change that is becoming increasingly evident throughout the UK and Ireland and this is the 'greening' of historic building stone.

Ormeau Park gate pillar, Belfast, before it was cleaned in 2002 (Photo courtesy of Dr J. Curran)

With the shift to wetter conditions and especially increased winter wetness, building stone is remaining wetter for longer with field data from sandstones in Co. Fermanagh indicating that once wet, some stone will remain so right through the winter months when air temperatures are lower and drying is limited. This increased time of wetness has all sorts of implications for historic structures in terms of their management but the most significant immediate effect is an aesthetic one with an increase in the growth of algae on sandstone surfaces in particular.

Sandstone is the most widely affected stone type because it presents a relatively porous and chemically inert surface that algae can colonise relatively easily. In contrast, other stone types do not provide such a welcoming microenvironment because either their porosity

Extensive 'greening' of sandstone (Photo courtesy of C. Adamson)

is so low that they do not retain sufficient moisture for algal growth or the surface chemistry is such that only specialist species can gain a foothold. This is especially the case with regard to limestones where calcium-rich conditions restrict growth to all but a few hardy calcicolous species.

It would appear that 'greening' of building sandstone appears to be occurring much more rapidly and more extensively than observed in the past, and is attributed to a combination of two factors. First, the increased time of wetness which facilitates the algal colonisation of stone surfaces. Secondly, and rather ironically, our cleaner urban air which now has much lower levels of atmospheric sulphur-rich particulate pollution that historically was shown to be inhibitory to the growth and spread of algae, lichens and other stone-dwelling organisms and which led to the development of blackened rather that green surfaces.

However, complexity arises from the fact that not all 'greening' is a response to natural environmental conditions with some examples of extreme 'greening' of sandstone resulting from previous inappropriate stone cleaning, typically chemical cleaning or high pressure washing. Cleaning with chemicals can result in the release of nutrient elements such as potassium from minerals within the stone, which encourage algal growth while high pressure washing of sandstone in particular can open up pore structures thereby creating the micro-scale niches so beloved of algae.

Implications of the 'greening' of building sandstone are twofold. First, 'greening' of stone often eventually results in cleaning but not always using procedures that are appropriate for the stone with the greening returning within a relatively short period of time. Even when cleaning is combined with the application of biocides, this can be a short-term fix that that will need to be reapplied as the initial application gradually degrades. Secondly, a well-developed layer of algae has been shown to contribute to the retention of moisture within stone as the algal community restricts moisture evaporation. This moisture retention has significant long-term implications for the chemical and physical weathering of stone. With regard to chemical weathering, subsurface moisture provides a mechanism for the movement of salts and other contaminants within the fabric of stone while in terms of physical weathering, saturated stone is more susceptible to the effects of extreme

Over time algal colonies will facilitate the growth of lichen

Climate change and historic stone; are we moving towards a greener future?

Patricia Warke

Collapse of a saturated sandstone block during the 'big thaw', which followed the 'big freeze' in December 2010 (Photo courtesy of D. McAlister)

weather events such as a prolonged period of subzero temperatures during which moisture may freeze and lead to catastrophic failure of the stone during the subsequent thaw.

The title of this article asks if we are moving towards a greener future for some of our historic buildings and the evidence would tend to suggest that we are as our weather, especially during the winter months, becomes wetter and milder and sandstones in particular stay wetter for longer. Many products are available for treating stone surfaces with the aim of preventing algal growth by restricting moisture penetration and through the action of a biocide component. However, great caution needs to be exercised when considering the application of such products especially with regard to their use on historic building stone as the long-term effects of these on the weathering response of stone is not well understood.

We may have to learn to live with 'greening' buildings as often the damage done by inappropriate and overly frequent cleaning may be greater than any damage caused by the presence of the algae in the first place. As always, when managing historic building stone with its complex weathering history, we must accept the fact that it is not immutable but has an inherent potential fragility that can be triggered by even the most well-intentioned of management actions.

References

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