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Building Limes Forum Ireland is a community of lime practitioners, specifiers, suppliers and producers of lime. The Forum exists to encourage expertise and understanding in the appropriate use of building limes, and education in the standards of production, preparation, application and aftercare. Building Limes Forum Ireland is connected and affiliated to the Building Limes Forums across the world.

BUILDING LIMES FORUM ANNUAL CONFERENCE & GATHERING BELFAST 2022

INTRODUCTION TO THE CONFERENCE

The organisation's Annual Conference and Gathering took place from 2nd to 4th September 2022 attracting a total of 135 delegates over the three day event. It was a great honour for Belfast to be selected as the venue and the event also showcased Belfast with tours of the city and its environs, and attracted many visitors for whom this was their first time in the country.

The numerous historic buildings that lie neglected and in need of repair and re-use in NI alone demonstrate the need for awareness of their potential, and the conference was entirely dedicated to the historic environment, its conservation, preservation, use and re-use, repair and enhancement, to enable its future proofing. More than 30 presentations in the weekend programme covered repair projects, materials, practices, philosophy, history, current research and threats such as climate change, neglect, poorly executed repairs and fire damage.

Keeping abreast of current practices is important for practitioners and the programme included 28 speakers comprising architects, surveyors, engineers, plasterers, stone-

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Dawson Stelfox delivering the Baker Memorial Lecture to a packed audience in the Great Hall, QUB.

Letter from the Chair

Dear Members,

As a new chair my first task in this newsletter is to thank my predecessor, Una Ni Mhearain. Una has stood down as Chair but is thankfully still actively involved with the Board. She will be a difficult act to follow and a high standard for me to try and match.

But perhaps I should also start by saying, welcome back! The necessary but unpleasant restrictions we endured through the recent pandemic are lifted and we can all meet in real life which has made the events calendar of this year particularly enjoyable. During the lockdowns life continued through virtual meetings and online events. BLFI's Board meetings followed this pattern, and it was a perfectly functional arrangement. However, there was no substitute for catching a quick pint with the others after our meetings and before rushing for the last train.

Meeting with members again has been enjoyable but has also brought home to me the great strength that lies in the width of membership in the BLFI. We bring together conservation Masons, Plasterers, and Architects, specialist Contractors, Engineers, Archaeologists and Academics. This is a setting where silos can be broken, and knowledge and experience shared. It is also a forum where mutual respect allows difficulties in projects to be discussed in a supportive environment and allows real learning to happen.

2022 was a mammoth year for the BLFI with the annual gathering held in Belfast and organised and hosted by us (see page 1). However, our calendar year kicked off events with the annual Lime Slam on the 8th March 2022. An important event the annual Lime Slam is a chance to share projects, ideas, knowledge and problems encountered. Presentations were heard on wide range of topics, from the use of hot lime mixes on medieval tower houses in Galway to the application of soft wall capping at Cashel Palace. The event was well attended lively and enjoyable.

The next event was our AGM held on Thursday 19th May where Ivor McElveen, former chair and stalwart of the BLFI delivered a key note lecture on his expansive and illustrious career. In June the BLFI and SPAB Ireland jointly held a workshop at Shankhill Castle, Co Kilkenny (see page.12). The theme was "Keeping Traditional Walls Warm" which ties into the increasing relevance of reusing existing buildings as part of a climate change strategy to utilise embodied carbon and reduce fossil fuel consumption through insulation. The carbon neutral benefits of using lime must become increasingly significant in construction.

The BLF Annual gathering moves from year to year giving regions have the chance to host the event, spreading knowledge and providing opportunity to travel and learn from one another. The venue in Belfast was the mellow red brick gothic splendour of the Queens University Lanyon Building. Originally one of the Colleges



Ivor McElveen, former BLFI Chair delivering the key not address at the BLFI AGM, 2022.

of the University of Ireland with sister Colleges in Cork and Galway. Spread over three days the programme among other topics placed "Belfast in context", provided an "International Perspective" with key a key note presentation on the ongoing repair of Notre Dame de Paris by French architect Benjamin Mouton and considered the challenges of climate change and retrofitting of our historic building stock. Special thanks must be extended once again to Una Ni Mhearain, Acting Chair of the BLFI who graciously stepped in to cover for me after I managed to get a bad case of Covid and had taken myself out of circulation for some months. Thanks again Una!

Our next event is the walking Tour of Armagh, the Ecclesiastical Capital of Ireland and a pretty town, well-endowed with high quality historic Architecture. Hope to see you there!

Dermot Mac Randal
(Chair BLFI)





Nathan Morrow of Rock Stone Masonry demonstrating letter carving in the quad at Queens, Rock Stone provide a range of courses including lime pointing workshops at Glenarm Castle, Co. Antrim—for further details go to <https://glenarmcastle.com/carved-at-the-castle/>

(Continued from page 1)

masons, planners, archaeologists and a materials scientist, who detailed projects and current research on materials and methodology and provided an excellent networking platform for exchanging knowledge. Examples of successful projects in the presentations also served to inspire the use of heritage structures over the all too common practice of demolition and newbuild.

Attendees were sought from construction industries, local authorities and heritage organisations, to enhance their knowledge of the historic environment, and how to correctly manage it to ensure its use for the future. While the majority of the speakers were Ireland or UK based, many of them had worked abroad in locations in Bulgaria, Malta, Italy, France, Greece, SE Asia, USA, Spain, South America, Canada and Norway, giving the conference insights into architecture, archaeology and repair in other countries.

Sponsorship for the event came from government departments, local authority organisations, commercial enterprises, an architectural practice and a building preservation trust.

THE CONFERENCE PROGRAMME

Each day started with presentations from various speakers in the morning, with the afternoons of Friday and Saturday featuring walking tours of Belfast city centre and the Titanic Quarter, and separate coach tours to Historic Environment Division State Care sites Ballycopeland Windmill and Carrickfergus Castle.

Day one was entitled “Belfast in Context” and introduced the delegates to Belfast and its environs, with an introduction to the city from Marcus Patton, explaining the streetscape and the reasons for the loss of buildings over the decades. James Grieve followed with an account of the latest tranche of repairs to the Grand Opera House, while Peter Robinson and Shane Nolan showed the wiggling



Conference attendees enjoying light refreshments in the quad ahead of the Baker Memorial Lecture.

project at the Royal Belfast Academical Institution and Ashley Turner introduced the exercise of repairing and finding an alternative use as a camera obscura for the Donaghadee Gunpowder Store. Local specialist plasterer, Daniel McAteer illustrated details of some of his firm's work in prestige buildings, followed by an introduction to three prominent organisations, Ulster Architectural Heritage, Architectural Heritage Fund, which helps communities to secure sustainable uses for heritage buildings and Hearth, from Paul Harron, Rita Harkin and Marcus Patton respectively. While this completed the local introductions, the morning finished with architect Grellan Rourke taking the conference through repairs at Skellig Michael in an unusual presentation that illustrated the difficulty in repairing and maintaining structures on a very small and remote island site.

The afternoon featured three walking tours led by local architects and historians; Titanic Quarter led by Graeme Moore and Dawson Stelfox, High Victorian Highlights of



Dawson Stelfox delivering the Baker Memorial Lecture in the Great Hall, Queens.

Central Belfast led by Dr Paul Harron and Belfast before the Factories led by Professor Raymond Gillespie, which concentrated on Georgian Belfast. The coach tour took 24 participants, to Ballycopeland Windmill, where Maybelline Gormley and Robert Noade of HED presented the history of the site and its significance to the farming community in the past and explained its importance as the last remaining example of a functioning roller reefing windmill, not just in Ireland but in the world. The special visit allowed access inside the tower to see the machinery and have its workings explained.

Friday's programme concluded with the Baker Memorial Lecture, a traditional lecture commemorating the work of Robert and Eve Baker, who pioneered the revival of the use of lime for the repair of historic buildings in the UK with their work on the conservation of the west front of Wells Cathedral between 1975 and 1984. The lecture was delivered by Dawson Stelfox MBE architect and mountaineer. Dawson's lecture was entitled "Planting Vines" and ad-

dressed the need for collaboration between disciplines and groups in order to achieve the best results for heritage buildings. This was followed by a dinner in the Great Hall in Queen's University.

Day two was the "International Perspective" and majored on lime as a building material, with presenters from Norway, ROI, Israel, USA and France. Jason Bolton spoke on lateral cements in the early 19th century, which contrasted well with Paul Marlow's Harnessing the beauty of lime in modern construction. Chris Pennock from Norway explained the repair of a part of Nidaros Cathedral in Trondheim, necessitated by the detriment caused by previous repairs using unsuitable materials, which had caused structural as well as material damage. James Howley then took the conference through some interesting repairs, including a memorial column whose top levels had been extensively damaged in a lightning strike.

Nigel Copsey and Maria-Elena Calderon introduced the Past, Present and Future of lime in Israel, while Steve Waite from USA explained his use of lime in Cuba, Hawaii and SE Asia. Saturday's lectures were completed by French architect Benjamin Mouton who told the poignant story of the ongoing repair of Notre Dame de Paris in which he has had a pivotal role since the 2019 fire.

The afternoon events included a second chance for delegates to take the walking tours, while the coach tour went to the State Care Carrickfergus Castle, where delegates had guided tours of the site and archaeologist Chiara Botturi of HED and main contractor JPM Contracts principal Colum McNicholl delivered detailed talks on the recent works to the Great Tower, including a timelapse presentation showing the work.

Dinner on Saturday evening was held in the Banqueting Hall of Belfast City Hall, the venue being provided courtesy of Belfast City Council, which served to display some of the inner grandeur of the building. Chris Pennock gave a presentation on the construction of a Catalan vault prior to the meal and many delegates took the opportunity to address the assembled diners later in the evening, showing their appreciation of the event.

The last day of the conference, Sunday was dedicated to climate change and retrofitting of historic buildings. Jacqui Donnelly (DoEHLG) spoke on climate action and heritage,



Professor Raymond Gillespie leading a tour of 'Belfast before the factories', in the shadow of St. George's Church.

Andrew Frew from the Housing Executive suggested ways of saving carbon in older homes, while Joanne Curran explained the importance of monitoring moisture in solid walls to inform specification decisions. Ciaran Fox spoke on Climate Action NI, followed by SPAB Fellow, stonemason and lime practitioner Eoin Madigan, who addressed the subject of lime mortars from the SPAB perspective. Peter Cox, Sinéad Hughes, Roger Curtis, Henry Thompson and Niall Crossan presented on the use of lime in insulation and retrofitting for thermal performance before Jill Kerry gave a short overview of the Institute of Historic Building Conservation. A panel of experts answered questions in a final Q&A session to close the conference, which was chaired by Una Ni Mhearain, Acting Chair of BLFI.

Judy Hewitt

(Belfast Conference Sub-Committee Member)

Heritage Social 2022

In late summer 2022 the BFLI joined, the Young Irish Georgians, SPAB Ireland, and The Industrial Heritage Society of Ireland at the Heritage Social hosted in the lush garden setting of Royal Society of Antiquaries of Ireland at No.63 Merrion Square. An initiative of the Young Irish Georgians the Heritage Social is intended to become an annual event where young people interested in heritage could get together and make connections. Each group gave a brief introduction of their aims and activities so that potential new members could learn about the various organisations. Attended by over 60 people, the Social was considered a great success. Keep an eye on the SPAB Ireland and BLFI websites for details of this years Heritage Social!

Shona O'Keeffe (Chair of SPAB Ireland)



5 Northumberland Road, Dublin 4 A former parochial house built in 1899



Archive image of No.5 Northumberland Road.

Over 100 years of traffic and pollution led to the deterioration of this beautiful brick façade at the top of Northumberland Road. The introduction of cementitious mortar pointing and damaged rain water goods caused further damage to the façade leaving it in a very fatigued state. Bricks were spalled and parts of the granite sills and window surrounds were missing. The chimneys were overtaken with Buddleia growth leading to the ingress of water which is very common in Dublin, were this hardy plant can be observed on most roof tops.

Works were carried out over the long hot summer which is always a bonus. However, the lime needed to be treated so that it would dry in the correct way. A full wrap on the scaffold was also introduced to create a micro climate that we could control instead of having the site open to fluctuating weather.

Our first task was to gently clean the façade using our Doff system which is a superheated steam cleaning system designed to gently



Replacement of irreparably damaged brick.

remove paint, all biological matter and general dirt and grime without causing harm to the substrate. Whilst the temperature in the system is high, the pressure on the surface is very gentle and water volume is low. The surface is therefore not saturated and will be dry within minutes. This removed all contamination without causing damaging the patina of the façade. The cleaning returned the bricks to their deep rich orange colour. Some heavily carbon-stained bricks required additional attention with a chemical and biocide treatment. The cleaning process also exposed the brick surface so we could assess for repairs.

The façade was typical of the Victorian era featuring many decorative brick specials and corbelling with precision cut and intricate patterns.



Raking out of inappropriate cement-based mortars.

It also features ornate granite capping, parapet and pillars. Parts of these features had broken and chipped and needed to be repaired. Damaged and missing bricks were replaced where possible with matching salvaged bricks. Some spalled bricks were repaired using pigmented St Astier lime mortar from the Traditional Lime Co.

All cement mortar had to be cut out from the joints using hand tools and fully cleaned out. The joints were then repointed using NHL lime mortar in the original flush style. Lime pointing allows the building to breathe again through the joints, not forcing water through the bricks which was causing the bricks to spall.

Parts of the granite sills had completely failed and the granite window jams had fully deteriorated. Our skilled stonemason carried out grafts to the window sills displaying a seamless finish. The missing stone window jams were replaced with matching granite.

Chimneys rebuilt and re-haunched:

The two stacks were in bad shape and it was sad to see such decorative brickwork fall into disrepair. Buddleia is an invasive species and their seeds are dispersed by wind and find their way into damaged brickwork or cracks in mortar and overtime the strong roots embed themselves within cavities and put pressure on the structure allowing wider cracks to form which leads to further damage. The roots of the Buddleia were treated with a herbicide to ensure the growth would not return after our restoration. The chimneys were dismantled brick by brick and numbered. Some of the intricate brick specials needed to be replaced so we sourced suitable salvage bricks and they were rubbed to create a matching shape. We then rebuilt the stacks and re-haunched the caps using lime mortar and now they stand proud and strong again.

The result of the restoration works are stunning and we are delighted once again to have played our part in restoring this beautiful piece of our built heritage on this architecturally significant street.

John Pigott (PMac Masonry Restoration & Conservation)



Protection of lime works to chimney stacks.



No.5 Northumberland Road on completion of works.

Conservation & Restoration of Historic Mortars

Why do we need to conserve the historic mortars? This is the first question we have to face as many times it is widespread to consider mortars as a sacrificial material inside the context of a structure, and of course they are, but inside conservation of cultural heritage, they take on a new dimension. They belong to historic buildings and the environment of it, its significance and keep historic information about it in addition to their common practical or aesthetic function from its origin.

This important documental value is associated to the fact that they are unique in the place where they are located in the building. They are not susceptible of being reused (maintaining the same characteristics) as stones or bricks actually are, in different buildings or modifications. A deep research through archaeometric techniques of historic mortars nowadays constitute an important record data inside interdisciplinary teams who participate writing restoration projects as well as for the final memory of the intervention for posterity, increasing the value of monuments. These studies give us more information about the evolution of the building, pathologies and its modifications through time, being many times conclusive to decide the interventions to be carried out as complement to the previous historic documents research. With these records we can have strict data in order to decide intervention criteria in historic buildings.

In addition, we get information that can be used to understand better traditional techniques and their application, the use of special additions, surface treatments, tools and so on. If we lose this information, the data that we can not understand today, would be impossible to discover by future researchers.

With the knowledge of the importance for the need to conserve historic mortars, when we have to deal with the conservation of a decayed building of cultural interest, protected buildings, we have to ask ourselves other questions: (because, normally we have another approach less strict in the sense of conservation ethics criteria for common vernacular buildings). What do we conserve or repair or replace? Are these actions really necessary and at the same time keeping as much as possible the integrity, authenticity and historic information of the building as a document from the past?

We resolve this question, taking into account one of the most widespread worldwide contemporary conservation principles: the minimum intervention. Is it really necessary to replace the element? Is it really necessary to repair the element? Is it not possible only to clean and if necessary to consolidate that element?

Now, to answer the question of how to do the intervention, having

in mind to be respectful for the original and historic additions, about compatibility and durability, this is a critical point where a lot of research has been carried out through time. The purpose of these studies is to understand historic mortars and design new compatible recipes to achieve similar behaviour to the historic, like for like, which is something that changed from the charter of Athens to Venice and today is common as well as in other fields of conservation. For example in canvas conservation, the lining method (affixing a second fabric support to the back of a painted canvas), is now going back from the current method based on synthetic materials, to the traditional recipes based on flour and animal glue, with contrasted good results through time and more sustainable and cheaper.

The requirements for a new compatible mortar are both technical and aesthetic. In terms of mechanical resistance, for example in the case of pointing mortars, the bond with the substrate is very important to prevent water penetration between the fabric element and the mortar. A low modulus of elasticity is what allows traditional mortars, especially air and earth mortars, to maintain slopes in old walls with less risk of collapse. About water behaviour, sufficient resistance to water penetration, porosity characteristics to deal with freeze-thaw cycles and acceptable water vapour transmission in relation with the fabric.

The harmonious integration of elements into the whole is a widespread concept in architecture, as well as in its conservation, with the honesty to be able to identify the additions or reintegrated elements on close inspection, in order to avoid historical falsifications. This statement comes from the Venice Charter and has been in force in contemporary conservation ever since, although

Case Study:

Renaissance "loggia" , Bornos, near Cádiz

its application is subject to interpretation.

Since the information about the decorative finish of the carved brick fabric was not clear, to avoid conjecture, it was decided to reintegrate harmoniously in low level using a mortar with texture and color similar to the damaged fabric. In this case we try to keep the attention on the historical fabric, maintaining an overall vision and avoiding focusing on the new reintegration elements. For this mortar it was used a mix of brick dust, marble sand (to improve grading curve), iron oxide pigments and lime putty.



Volume reintegration in the most damaged areas of the brick fabric with lime putty mortar.

In this monument it was also necessary to cover the renders that were inside the vaults, so after cleaning, it was applied a shelter coat (lime putty-marble powder) and over this, some translucent patinas with mix of pigments and lime putty to harmonise with the bricks fabric. For the render of the parapet, it was used the same painting process but using a higher percentage of lime putty in the mix of pigments, so after drying, it is still vibrant color surface but



Renaissance "loggia" on completion of works.

Case Study:

Cathedral of Seville

working as a flat background maintaining the leading role on the other historical elements.

During the works carried out on the Renaissance façades of the Cathedral of Seville, a similar procedure was performed with the mortar for pointing the stone, matching in texture and color to the stone ashlar, not the joints. Due to the weathering of this type of calcarenite stone over the years, sometimes the mortar has to fill a larger area around the joint. For this mortar, a hydraulic lime prepared by the manufacturer was used. It was given to the manufacturer a recipe based on this powdered lime, pigments, marble sands and two types of quartz sands of angular morphology, which, in addition to obtaining a good structure, manages to match the texture and color of the calcarenite stone. Thanks to this recipe, the lime manufacturer could deliver the number of pallets required to finish the works as a pre-dosed mortar. In other areas, it was created other recipes for compatible pointing mortars matching the historic pointing, not the stones, in color and texture.

Antonio González (Conservator-restorer of cultural heritage)



Top image: Detail of the surface of the stone and new re-pointing. Bottom image: Seville Cathedral.

WALKING TOUR ARMAGH 22nd July 2023

For further details please check our events page at www.buildinglimesforumireland.com



2023 BLF Annual Gathering Lincoln, UK

This year, the Annual Gathering will be hosted by the BLF and will be held in Lincoln, UK.

The theme of this year's event is 'Simplicity, Quality, and Modernity' with a full and exciting programme of events planned including talks, tours and demonstrations.

For further details please go to <https://www.buildinglimesforum.org.uk/events/gathering-2023/>



Keeping Traditional Walls Warm

Intended as a follow on event to the very successful 2021 joint SPAB Ireland and BLFI event at Shankill Castle, a further one day workshop was held at Shankill in June 2022 focused on the how to improve the energy efficiency of traditional solid masonry walls. The event began with an introduction to SPAB Ireland and the BLFI, followed by a general introduction to how traditional solid masonry walls relied on the use of porous and breathable renders and plasters to prevent the build up of dampness within the wall. While a dry masonry wall is certainly warmer inside than a damp wall, the use of insulating renders and breathable insulation boards can further improve the energy efficiency in traditional buildings, if properly specified and applied.

Peter Cox, of Carrig Conservation, and Jackie Donnelly, of the Department of Housing, Local Government and Heritage, presented expert guidance on how traditional buildings were built and how their materials evolved to provide not only architectural expressions, but also were a carefully balanced system of providing a warm, dry and secure internal environment for their occupants. They discussed how an appropriate balance must be struck between respecting the character and original fabric of our historic structures, and how some of their constituent finishes and renders can be modified or replaced to improve their thermal performance, during a period of climate change and increased fuel costs.

These lectures were followed by demonstrations and discussions of traditional lime plastering, harling and rendering, by expert practitioners Eoin Madigan, Damien Condon and Ger Edwards. Attendees were shown how the traditional lime renders were mixed and applied, and invited to try their hands at plastering and re-pointing, using various kinds of lime mortars and renders. Expert practitioner Tom Pollard demonstrated the mixing and use of earth plasters and mortars, of particular importance for the repair of mud-walled buildings, or masonry buildings with earth mortars.

After lunch, served up by our hosts at Shankill Castle, the focus of the demonstrations shifted to the use of contemporary insulating renders, and how to achieve better thermal performance without compromising the vapour permeability or dewpoint in a traditional solid masonry wall. Demonstrations of a variety of types of renders with additives ranging from chopped hemp, ground cork, diathonite and other lightweight materials were given by expert practitioners Henry Thompson and Brian Tobin, and supplier Niall Crosson, from Ecological Building Systems.

During the lunch and coffee breaks, the attendees were encouraged to view the exhibits of a broad range of commercially available materials from which to create traditional mortars, plasters and renders, in addition to the lightweight additives that can improve their thermal performance.

The final event of the day was a spirited discussion, moderated by Dr. Jason Bolton, focused on whether the new insulating renders and plasters will deliver on their promises of better energy efficiency, without compromising on the need to maintain vapour permeability and appropriate dew point considerations in the modified wall assembly.

Tom McGimpsey (Mesh Conservation Architects)



Sample products including hemp and lime based plaster.



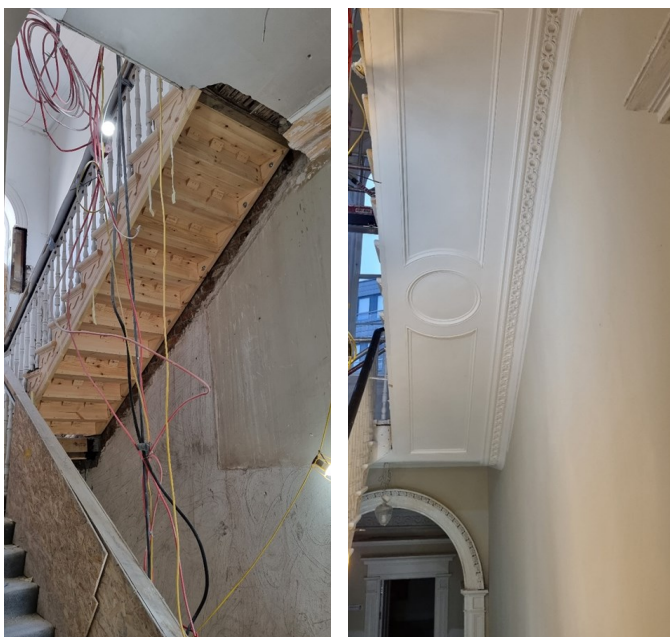
Henry Thompson (BLFI Board Member) demonstrating the application of insulating lime renders.

A Question of Conservation or Restoration

We recently completed work at No. 2-4 Wilton Place (built c.1830's) and The Rubrics in Trinity College (built c.1700 but heavily altered in the late 19th century). Collectively these two projects can be used to showcase the difference between restoration and conservation of historic flat and decorative plasterwork.

When approaching work on a historic building we always aim to retain as much of the original fabric as possible, using like-for-like materials when carrying out repair. In both cases we were appointed early. This ensured sufficient time was set aside to survey and assess the existing plasterwork. Working as part of an integrated design team allowed our expertise to shape plans, ensuring maximum retention of the historic fabric and ultimately provided a cost saving for the client. This collegiate approach to working was particularly important given the requirement to provide localised strengthening of joists, the installation of new M&E and the provision for lifting of floorboards to facilitate fire compartmentation between floors.

Although we were able to save most of the historic ceiling plasterwork on both projects a number of irreparably damaged sections were removed as part of the initial works. In these areas new lath and lime plaster was installed. We use split laths (also referred to as riven laths) not only because they are historically appropriate but because splitting the timber along the grain makes these much stronger than sawn laths, and crucially because the rough edges provide an important key for the plaster. Sawn laths should never be used in lime plasterwork.



Undercarriage of staircase before and after restoration.

We carried out a simple yet effective tap test on all the wall surfaces identifying areas of loose or damaged plasterwork. Like the ceilings, the walls on both projects required a considerable degree of work. We judiciously stripped localised areas of loose plaster back to the substrate before applying new plaster in four coats using NHL 2 and Wexford sand. We use lime plaster because of its compatibility with the historic plaster and because of its breathability and flexibility – important considerations when working on a historic building of traditional construction. Cracks to areas of retained historic plaster were also repaired using lime.

With the plaster secure, the subtleties between 'conservation' and 'restoration' is discussed in greater detail below.

2-4 Wilton Place, Dublin 2

Architect: Lawrence and Long Architects

Main Contractor: M&P Construction

No. 2-4 Wilton Place comprises a group of three four-storey over basement terraced houses, built in 1830s. Each of the three houses retain fine decorative plasterwork throughout.

At Wilton Place we retained as much of the historic plasterwork as possible choosing to restore the scheme back to its former glory - the way it was originally intended using historically appropriate techniques and materials. While we always aim to retain as much of the historic fabric as possible the colonisation of dry rot in areas of the building necessitated the removal of substantial areas of plasterwork, not least of all in the stair hall where two flights of the staircase had to be carefully taken down. In these areas we restored the decorative registers to the undercarriage of the staircase once this had been reinstated.

The buildings are to be reused as residential accommodation with bathrooms inserted within the new apartments as 'pods' – designed as an almost freestanding item of furniture. The pods don't rise full height within the rooms mitigating their impact on both the original volume and preserving the ceiling plasterwork uninterrupted.

In addition to addressing areas of dry rot, repairs were carried out where previous late 20th century partition walls had been removed. Scaring was most evident at the junction between these partitions and the historic plaster cornices. A comprehensive approach was taken with the three properties to include the repair of cracks, the replacement of missing enrichments and the removal of poorly executed previous repairs which all served to restore the historic plasterwork back to how it would have been in the 1830's.

The Rubrics, Trinity College, Dublin 2

Architects: Pascall & Watson and Carrig Conservation International Ltd

Main Contractor: Clancy Construction

The Rubrics built c.1700, being the oldest building in Trinity College, is a detached four-storey halls of residence. The uppermost floor was added in 1894 when the building underwent significant alteration.

As with Wilton Place we saved as much of the historic plasterwork as possible however while all works were carried out to a high standard of repair, the approach taken was one of conservation over restoration. Missing sections of decorative plasterwork were

not reinstated unless required to provide structural stability to adjacent areas of plaster.

In a building over 300 years old there were a lot of 'humps and bumps'. Areas of historic damage were largely left untouched – offering a very honest approach to the works. Of course in some areas a different tact was taken due to specific circumstances in in these areas agreement was reached with the Design Team on a case-by-case basis. Large cracks in the decorative plasterwork were repaired but smaller cracks or incidentally chips etc. were not. In this instance the approach of the Design Team respects the 300 year historic of the building 'humps and bumps' and all!

Paul Griffin (Griffin Plastering)



Left: Damage to junction of cornice over fireplace. Right: Patch repairs to plasterwork of chimneybreast.



Completion of plaster conservation works to the Rubrics, Trinity College.

Irish Heritage Trust Gardeners Lime workshop April 4th, 2023

Special Guest Malcolm Noonan, Minister of State for Heritage & Electoral Reform

Johnstown Castle, Estate, Museum, Gardens, and location of the EPA headquarters is located outside Wexford town in Irelands sunny southeast. It's at this location where there has being Great support of Heritage skills and conservations professionals by Our Government, Teagasc, The Irish Heritage Trust , County Council and an army of local Volunteers . All working together to bring it back to its former glory as a landmark in Irelands Ancient East. Johnstown Castle is a beautiful example of Gothic Revival Architecture. The Castle was originally built by the Esmonde family who came to Ireland from Lincolnshire in the wake of the Anglo-Norman invasion in 1169. The Castle was donated to the Irish State in 1945. In 2015, Teagasc partnered with the Irish Heritage Trust to reinvigorate Johnstown which is an ongoing success.

Ivor McElveen (Conservation Engineer BAI MA CEng FIEI & Former Chair of the BLFI) came to me with an exciting plan to set up a tailored training event for the Irish Heritage Trust gardeners and volunteer's which was focused on Basic Hot-mixed Lime washes & Renders so they could apply traditional maintenance techniques on their own historic glass houses and walled gardens. As the old saying goes a stitch in time saves nine and what better place to hold the workshop than in Johnstown Castles very own Victorian Glasshouse.

We started the workshop off with a welcome speech from Peter Kirk PMP Irish Heritage Trust followed by me and Ivor with health and safety and of course details of the lime cycle. Next we went

outside and gave a demonstration of Hot-Mixing kibble from Clogrennane lime ltd with local sand from Inis Pebble at a ratio of 1:3 to produce a course stuff mortar to be soured for use at a later day. Hot-mixed instead of dry-slaking.

Limewashing and preparation of surfaces was next on the list. I explained to them it just like baking ... you can give the exact same ingredients to two people and get 2 completely different cakes. Or in our case quality of limewash or render. As each group mixed their own lime wash I brought each in and demonstrated the technique of application and burnishing.

Next up was basic application of render . At this point our special guest Minster of State for Heritage and Electoral Reform, Malcolm Noonan arrived. He was very enthusiastic in getting his shirt sleeves rolled up and joining in with some of his colleagues and the trainees. His trowel skills were quite impressive and he stayed with us right through the plastering tutorial.

At the end myself, Ivor and Damien Condon BLFI Board member were able to have a word with him about issues regarding heritage skills training and funding which he fully supported and which will form the basis of ongoing discussion. So all in all and great event and a special thanks to all involved.

Brian Tobin (aka Limemaster)



Ivor McElveen (former Chair of BLFI) briefing Minister Noonan.



Damian Condon (left), Brian Tobin (centre) & Minister Noonan (right).

The Dreaded Peaky Binders

Building conservation, especially historic building conservation is an inconsistent business that requires us as practitioners to assess the buildings we work on carefully and continuously. We must always consider the materials we use to consolidate and finish these buildings, in a way that is appropriate and sympathetic to the buildings and most importantly, as authentic as possible.

Over the years of trying to do this I have developed a way to practice that works well, with very few failures. Through education and training and through trial and error, by thrashing out theories and methodologies with my counterparts and with other experts in the field, but mostly through just doing this work every day, I have formulated a guide that I refer to when matching building sub-strata with binders.

Fundamental principles are always at the forefront of my assessment. I hang my work practices on these principles of,

- Minimum Intervention
- Reversibility, Honesty and Distinguishability
- Meticulous Recording and Documentation
- Respect for Age and Historic Patina
- Materials, Techniques and Integrity.

We should use the right materials for the job without saying that one material is better than another. Hot lime versus NHL's is the big debate. The use of NHL is commonplace and plays a vital role. Both materials have advantages in the right situation and disadvantages when used in the wrong situation. The right materials for the right situation and considering all the factors following detailed assessment of the fabric: substrate, date of the building, microclimate. Whatever decision is made my aim is for the work to be as authentic as possible and as far as possible in keeping with traditional materials and methods.

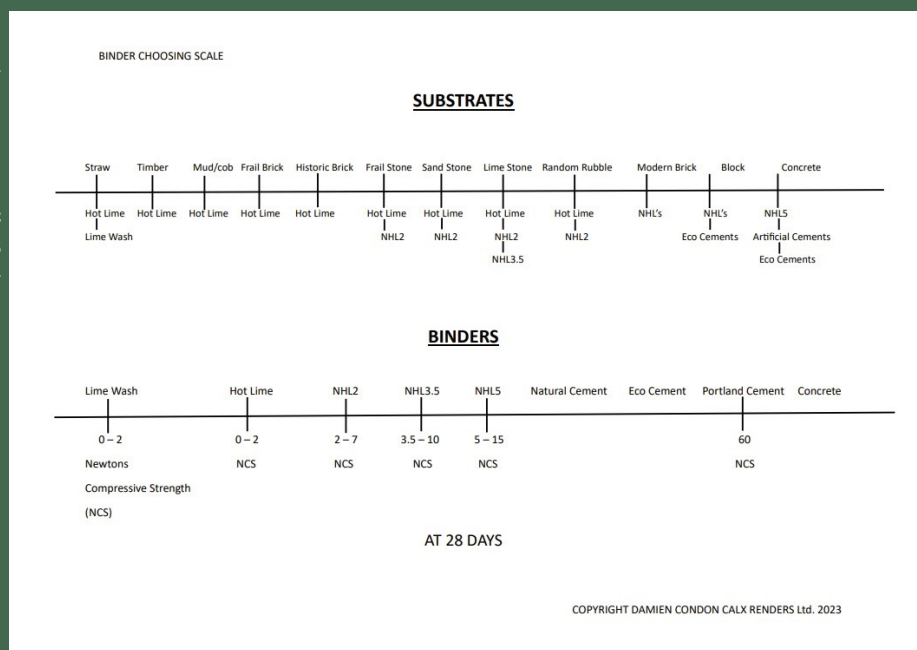
Over the years I've kept this system in my head of what works best but decided to try and develop it into a usable scale to determine the correct binder to use when creating a suitable mortar. This scale is not intended to be definitive, and mixes will need to be adjusted or added to affect the set depending on many factors. To determine the best binder for the job, whether it be hydraulic or non-hydraulic, several elements must be considered:

- Matching Existing Mortars
- Substrata
- How Frail or Decayed is that Substrata
- Microclimate or Geographical Location.
-

Binders range from those which produce very soft lime wash to putty, to clay, hot lime and on to NHL 2, 3,5, 5, eco mortars, cements and concrete. Substrates range from straw and timber, mud, frail brick, masonry, modern brick, and concrete.

I have found in some instances that there is scope for using different strength mortars, NHL's, hot lime, eco mortars and cement, side by side, on the same project. Assessment of the fabric of building and making appropriate choices regarding the strength of the mortars used is a dynamic process. Having this scale to refer to has acted as a useful tool for me and my practice.

Damian Condon (Calx Renders Ltd.)



Two Churches, One Tower House – Community Monuments Fund 2021 & 2022

Fingal County Council (FCC) has been actively managing a pipeline of conservation reports and works on ten of its historic architectural and protected/ recorded monuments since 2018 to date using the Community Monuments Funds (CMF) Stream 1 & 2 Awards, supplemented by its own Monuments and Structures at Risk (M-SAR) fund (see BLFI 2022 Newsletter for works to Stella's Tower and St. Catherine's Church, Portrane).

Stream 2 Awards for Condition Reports were granted to FCC for five properties in 2021, including the three described here. The consultant briefs prepared by FCC for the reports, as well as following the Conservation Management Plan format required under CMF, also asked the consultant conservation team to prepare reports just short of full Works Specifications – in readiness for the CMF Stream 1 applications planned for the following year – in 2022. I.S. EN 16096: 2012 'Conservation of Cultural Property-Condition Survey and Report of built cultural heritage' was employed for the condition reporting element. The measured surveys, itemised schedule of works, detailed costs estimate, annotated drawings, and archaeological method statements contained in the Condition Reports prepared the ground for successful CMF Stream 1 Awards in 2022, and saved valuable time in procuring the works subsequently, in the highly compressed works window allowed by the CMF. In 2021 a programme of vegetation treatment and cut-back on all sites was executed in advance of survey work to facilitate assessment.

Each of the sites presented its own conservation repair challenge, and the experience of the repair solutions employed offered new insights into ongoing conservation management. The repairs were developed with the goals of the CMF programme in mind - climate change protection, public access and interpretation, and best practice conservation methods.

Project Team

Client :Christine Baker, FCC Heritage Officer on behalf of FCC

Archaeologists: Architecture & Built Heritage Ltd

Conservation Engineers : David Kelly Partnership

Conservation Architects: FCC Architects

Conservation Contractors : James Oliver Hearty & Sons

Mortar analysis by Dr. Jason Bolton.



St. Marnock's Church, following completion of works.

St. Marnock's Church, Portmarnock

St. Marnock's Church, Portmarnock (DU015-007001; 12th century and later) and graveyard is sited off the main road south of Portmarnock and just west of Portmarnock beach dunes system; close to Portmarnock House, a former Jameson family house, now Portmarnock Hotel & Golf Links. The remains consist of a narrow, undivided nave and chancel structure, with gable structures at each end, the western gable still showing evidence of the carved bellcote, an historic photo of which is presented on the sign at the entrance gate. A cast-iron railing and gate of much later origin, forms an unequal division within the church. One of the collapsed tombstones in the 'chancel' is a recorded monument in its own right. The site is somewhat isolated and the building has suffered from unauthorised 'improvements' and some vandalism. The particular challenge at St Marnock's was to address the large amount of fallen and/or dismantled masonry from the south wall, north wall and bellcote. Under archaeological direction, part of south wall masonry was re-built as a consolidation exercise and to

prevent further collapse, as well as to protect the original piscina at the east end. The carved bellcote masonry was gathered into flat mesh gabions under the west gable, the remaining masonry in slightly larger gabions, low enough to sit on. Other works included vegetation removal and the laying of surface terram and gravel; and small interventions to brace and prop the ironwork.

Rush Tower House

Rush Tower House, Rush Demesne townland (DU008-003; first mention mid-17th century) is located off the coast road north of Rush village and close to the northern gate lodge of Kenure Park (demolished 1978). It is now surrounded by local authority playing fields in St. Catherine's housing estate, and visible from the main road. The remains consist of a large, ridge-vaulted ground floor room, lit by windows at each end, with s/east and n/west corner outshots, the latter containing the main entrance door and a stair access to the top of the vault, the former containing a small chamber with it's own, smaller entrance. The tower would have been a tall multi-storey building in it's original form. The particular challenges at this site were extreme anti-social activity, vermin infestation and unguarded access to the upper level. This inaccessibility/invisibility of the site was made worse by the erection of a palisade fence, partially vandalised, which also encouraged the extensive growth of unwanted vegetation around the monument. A bespoke stainless steel access gate and 'cage' secured the interior and the stone steps and upper level from unauthorised access; the other opes were also secured against access. Graffiti was erased; and a large soft capping was laid on puddle clay on the top of the vault. Access to the roof was thereby 'discouraged'. Minor masonry repairs were undertaken; and some loose carved masonry, with mason's marks, were gathered into the interior for site storage. The parks management team of FCC removed the palisade under the same ministerial licence and archaeological supervision. The site was then re-landscaped to reveal the monument to public view.



Soft capping laid on puddle clay to skyward surface of vault.



St Catherine's during works to the bellcote.

St. Catherine's Church, Rush

St. Catherine's Church, Rush Demesne townland (DU008-004001, stone window tracery dated to 15th century) is within sight of and south of Rush Tower House, and also sited within established woodland and on a high point above the stream that runs through the former Kenure Park estate. It is surrounded by an actively-used graveyard. The church is a simple, well-proportioned single rectangular space with high walls and intact gables at each end, a bellcote to the east and a decorated window to the east. Access is through a small, gated archway in the south wall. Inside there is a centrally-placed chest tomb and railings, as well as fragments of a mensa tomb and recorded monument. The challenges at this site were the advanced rooting of ivy within both gable walls, particularly the west gable, with consequent local cracking and movement, likely to lead to collapse. The chest tomb was also found to be in a dangerous state of collapse after removal of a cloak of vegetation. This was also a risk to public access if unaddressed. Masonry was carefully opened up around both root systems to allow as much cutting back as possible. Herbicide treatment plugs, accessible for replenishing/ replacement, were planted into the thickest parts of the embedded system in the west gable. Strap pointing was too extensive to remove in one season, along with the other demands of the site, so removal was limited to the west gable only, as a learning exercise as much to assist drying out around the root system. The tomb and railings were re-assembled and re-positioned on a no-dig, gravel-filled geotextile containment tray in the original location. The interior surface was cleared of vegetation and a new layer of gravel laid over geotextile sheet to improve access and interpretation of the monument and tombs, and to prevent re-growth.

Brian O'Connor - Fingal County Council, Architects Department

Dates of your Diary



Armagh Walking Tour
22 July 2023



Annual Gathering Lincoln, UK
1st - 3rd September 2023

Training & Education

- Madigan Traditional Masonry, Co Clare ph:0857679753 email:madigantraditionalmasonry@gmail.com
- Stoneware Studios Ltd., Co. Cork, ph:024 90117 · email:mail@stonewarestudios.com Visit www.stonewarestudios.com/
- The Lime Store, Dublin 12 ph:01 450 8624 email:info@thelimestore.ie Visit www.thelimestore.ie/
- Traditional Lime Company, Co Carlow ph:059 9151750 email:info@traditionallime.com Visit www.traditionallime.com/

What is Building Limes Forum Ireland?

The Building Limes Forum encourages expertise and understanding in the use of building limes. It aims to achieve this goal by:

- exchanging, collating and disseminating information, through publication of a regular journal and by holding meetings and conferences;
- encouraging practical research and development through field studies, trials, monitoring and analysis;
- encouraging development of appropriate industrial and craft skills and techniques;
- educating building professionals, builders, conservators, craftsmen and women, and property owners in the appropriate use of lime in building through demonstrations, publications and courses;
- developing contacts with institutions and individuals outside the forum and in other countries that have relevant experience or knowledge.

Communicating With Your Forum

If you would like to get involved please contact us by post or by email on info@blfi.net

Follow us on Twitter @BLF_ie

The blfi are also now on Instagram - follow us @blfireland



Membership

Membership of the Building Limes Forum offers:

- the opportunity to participate in conferences, courses, workshops, demonstrations and visits organised by the Forum
- an informal network of contacts that is prepared to share information and to discuss matters of general interest
- annual bursary to assist with training and education

For a membership form go to:

www.buildinglimesforumireland.com

