

The Building Limes Forum Ireland Newsletter

Comments and articles in this newsletter do not necessarily reflect the views of the Committee or the Editor



Editorial

Welcome to our July 2012 edition of the Building Limes Forum Ireland Newsletter. 'Hope everyone is in great spirits and enjoying the holiday season.

Each year the BLFI moves along at a steady pace and 2012 is no different with a new chairman, Kevin Blackwood, on the rudder and plenty of new talent getting involved on the committee and at the various events. Innovative new uses of lime abound and the appetite for lime use seems to be stronger than ever.

It is a shame, the building industry, as a whole, is continuing to tighten so we do know people are hurting. Maybe, in some small way, the BLFI can help in softening some of that pain. An introduction to a potential client, a solid reference, a piece of technical advice or just a contact to sound-out an idea. These are the little things our Forum can do that can make a big difference for businesses at this time. We hope you are getting the full benefit of being a member of the BLFI and we openly welcome any suggestions to make it work better for you.

The BLFI has had a very active year so far with several events taking place around the country. Thank you to those who attended and in particular to the hard working events and CPD committees, led by Katriona Byrne and Lisa Edden, for producing some superb days out.

Thanks to all of you who contributed to this Newsletter. In particular, Katriona Byrne who

has been extremely helpful, as always, in helping to summarise and write-up events. We very much appreciate Katriona, and every one else, taking some time out of their busy schedules.

Hugh Dorrian
BLFI Newsletter Editor

Words from our new Chairman, Kevin Blackwood.



Dear Members,

It has been a great privilege to have been elected Chair of the Building Limes Forum Ireland and I am most honoured to hold this position. I hope I will be worthy of the trust you have put in me. I would like to acknowledge the many achievements of my predecessor, Ivor McElveen, who with great zest and energy steered the BLFI to greater things. He will be a difficult act to follow.

Training and the provision of CPD have become an important focal point of the BLFI. Dissemination of information and knowledge about the many aspects of lime is a core activity. The sub-committee groups have been very successful in organising these events. Indeed the recent 2-day event held at Drimnagh Castle on the repair and maintenance of mediaeval town walls was a resounding success with both practical demonstrations in the repair of stone walls as well as covering the more theoretical elements by way of lectures and presentations. Thanks are due to all those

The Building Limes Forum Ireland Newsletter

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who have worked so hard to make these activities a success.

The BLFI can only be as good as its sub-committees and the members who support them and I would like to encourage you all to partake as much as possible so that you may reap the benefits of the Building Limes Forum. I would encourage you to contribute to the BLFI newsletter and help make it a vibrant communication tool of our forum.

The main focal point next year will be the organising of the International Building Limes Forum Gathering in Dublin to be held in September. This will be a major challenge for all of us in these difficult times, but I am certain that we will achieve an exciting and memorable event. It has been 10 years since we last hosted the much talked about Kilkenny gathering. I would encourage all the membership to become involved and at this stage we need active members to join the organising committee.

Kevin Blackwood
Chair, BLFI

Sean Brogans restoration of a baptismal font in Donegal, 'plastic repairs' and finished with Claypaint.

Before:



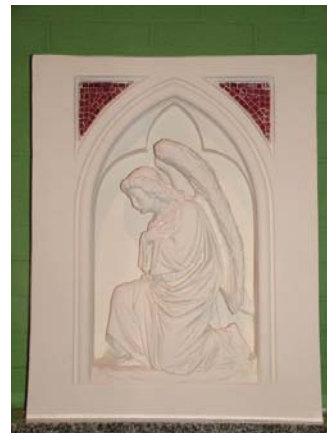
And After!:



Before:



After:



Well done Sean, some lovely work in bringing this 150 year old Baptismal font back and reinstating it in St. Mary's. It will be cherished I'm sure for many generations by the congregation at Derrybeg.

The Building Limes Forum Ireland Newsletter

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Group of enthusiastic walkers at the 'Show and Tell' Lime walk in Cork 23rd June.



On the 23rd June the second BLFI Members' Day of 2012 was held. This was a walking tour of some Cork sites, which were considered to be examples of best practice in recent lime work. The theme of the day was 'Show N' Tell' so that the people involved in the sites and the decision-making process were present and the issues and challenges of each site could be frankly discussed with peers. The sites were proposed by Hugh Dorrian, BLFI committee member, and the Conservation Officer of Cork City Council, Pat Ruane, and selected as being within easy walking distance of each other in the city and covering a range of topics.

A large group of 25 gathered in Fitzgerald Park and proceeded to Sunday's Well, our first stop. Here a slate-hung rear elevation was discussed by David Higgins, the contractor on the project. The slates were laid in diminishing courses and were bedded in lime mortar and held in place with two nails each on battens. Part of the building was also lime-rendered with an excellent ruled and lined finish. The second site was nearby and was another slate-hung project where the slates were also bedded in lime mortar but with narrower joints and where the slates were all the same size.



Our first stop in Cork; Mr Brian Foskins house in Sundays Well before and after, returning it to original.



The next stop was to consider a development project on Sheares Street where an old house was finished in two coats of lime wash, made from Naturally Hydraulic Lime which gave it a beautifully luminous creamy colour. Lunch followed with much good conversation and networking.



The Building Limes Forum Ireland Newsletter

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After lunch we went to Christchurch, now Triskel Arts Centre, to consider the challenges of juxtaposing the old building with a modern extension and link. This was presented by architect for the project Helen Devitt. Much of the façade was re-pointed although where there was quite recent cement pointing under the portico this was left in place. The interior which had been saturated for some time prior to restoration works but following application of (fat) lime mortars internally appeared to be functioning very well throughout.



In Triskel Arts Centre.

The last scheduled stop was to St Finbarre's Cathedral where badly-designed drainage from the exuberant roofline with gargoyles shooting water directly onto stone buttresses below was causing water to penetrate to the interior and to cause a lot of damage to the internal finishes. The marble and mosaic cladding were being badly affected by salts and Roy Thorpe talked us through how the marble panels were lifted and isolated from the background and repaired using scagliola techniques.



Thanks to Hugh and Pat and to everyone who contributed. Welcome to first-time members – Delphine, a stone mason from France and Eamonn, Conservation Officer with Kerry County Council.

This was the first time a Saturday was tried and it seems to have been a popular option. Looking forward to hitting another urban area in 2013!

Katriona Byrne BLFI Events Committee



One of the impromptu stops along the way – at the pavilion in Fitzgerald Park where we looked at some recent render repairs.

Pozzolans and Fish & Chips.

By Ivor McElveen

The earliest documented use of lime as a construction material was approximately 4000 B.C. when it was used in Egypt for plastering the pyramids. Nice work if you can get it.

It was obviously used earlier than that as shown from early archaeological finds. It is well documented that the Roman Empire used lime based mortars extensively. Vitruvius, a Roman architect, provided basic guidelines for lime mortar mixes.

Here is his standard specification: "... When it [the lime] is slaked, let it be mingled with the sand in such a way that if it is pit sand three of sand and one of lime is poured in; but if the same is from the river or sea, two of

The Building Limes Forum Ireland Newsletter

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sand and one of lime is thrown together. For in this way there will be the right proportion of the mixture and blending."

Keep it simple. The different sands presumably affected the voids hence the difference in mix. Note that salt did not bother them as they liked fish and chips. It is a well know fact that the Romans brought fish and chips to England and not pizza as is popularly believed.

As we all so well know, mortars containing only lime and sand required carbon dioxide from the air to convert back to limestone and harden. We also know that this is a slow process. So, the good Romans created hydraulic mortars that contained lime and a pozzolan such as brick dust or volcanic ash to accelerate matters, and presumably to also draw down the grant monies earlier so they could go off and buy their fish and chips.

The most significant developments in the use of pozzolans in mortars occurred in the 18th century when it was discovered that burning limestone containing clays would produce a hydraulic product. In 1756, James Smeaton developed perhaps the first hydraulic lime product by calcining English Blue Lias limestone containing clay. An Italian pozzolanic earth from Civita Vecchia was also added to provide additional strength. This mortar mixture was used to build the Eddystone Lighthouse. A James Parker patented a natural cement product called Roman cement in 1796. Generally, natural cements had higher clay contents than hydraulic lime products, which allowed for better strength development. It all went fairly gourmet from here on in and fish and chips became decidedly *non rigneur*. A lot of this was to do with a Monsieur L. J. Vicat, a young engineer in Napoleon's Army who wrote definitive works on limes in 1818 and 1828. We have never looked back since, which is a pity.

In fact, a Joseph Aspdin, an English mason/builder patented a material called

Portland cement in 1824 and the rest is history.

But we still have fish and chips, so we can surely revive lime pozzolan mortars, and so we should. The advantages could be many and the rewards great, and I like fish and chips. It is perhaps time to look back!

Ivor McElveen



Pyramids



Fish and Chips

Hot Lime Mixes are back!

Great to see LTM Ire. using Quicklime in their mixes for the repair of stonework at St. Michael's Church in Co. Tipperary. Not alone is the mix applied hot which is helping to draw out moisture on what is a very wet part of the structure but it is also a hybrid mix using a combination of Naturally Hydraulic Lime and quicklime to get the best of both

The Building Limes Forum Ireland Newsletter

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worlds. Interested parties please give the Editor a call and we can put you in touch with those involved.

And speaking of Hot Lime's and Italy – some Lime fanatic's holiday snap from the lovely 'Il Campo' in Sienna.



Stroan Fountain – conservation maintenance repairs



Kate Powell, Teige and James get to work!

Stroan Fountain, Kilfane, Co Kilkenny.

The Tullaherin Heritage Society, the Irish Follies Trust and Kilkenny County Council with the support of Civic Structures Funding, undertook the conservation and restoration of

the ornamental stone Stroan Fountain at Kilfane, Co Kilkenny.

The work was awarded to James Powell and Ivor McElveen practicing as Ivor McElveen Associates.

The freestanding Stroan Fountain is constructed of cut limestone and was a source of water for tenants of the nearby Kilfane estate. The fountain comprises a stone basin accessed by three stone steps covered by a domed structure comprising four cut stone curved columns which supports a limestone obelisk. Water overflows through spouts on either side of the base into the surrounding pond. The fountain is fed from a cistern located approximately forty meters to the northwest by means of a buried pipe, and which is in turn fed by a natural spring.

While previously thought to have been built in 1766, with permission of the local landlord Gervase Bushe of Kilfane House, new evidence came to light that it is likely that the fountain was erected in 1866, not 1766.

Pat Byrne, a BLFI Member and master craftsmen mason and a stone cutter were engaged to carry out the stone repair and pointing. The object of the pointing repairs to the structure was for protection and weather maintenance. Removal of calcite build-up beneath the spouts was followed by refitting one of the stone corbels, and renewal of the other.

Lime mortars were used throughout the repairs, with fine pre-mixed blend being used for the Ashlar pointing, with small quantities of carbon black added to reduce *whiteness* ensuring a better aesthetic effect in some areas.

In order avoid the future build up of calcite and to deflect water away from the base of the fountain, copper spouts were added to the existing cast iron outlets as it was clear upon inspection that some form of spout had previously existed.

The Building Limes Forum Ireland Newsletter

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The hydraulic system was overhauled, the reservoir cleared of debris and the cover stones repaired and replaced, accompanied by a general clearance in the surrounding area.

Approximately 20 meters, 1.5 meters high, of face lain fixed stone wall, with vertical capping of a similar design to existing wall at site, was constructed by Richard Cody a member of The Tullaherin Heritage Society. Additionally, the damaged parapet wall of the bridge over the shore beneath the roadway was dismantled and re-built. NHL 3.5 / 1:2.5 sharp well graded Wexford sand generally 3.35mm down.

The overall specification, at all times, was the faithful repair or replacement of what exists, or did exist, as is appropriate to good conservation practice, i.e.; repair with like materials or replace *with what was – and in like manner* – where at all possible.

The fountain has now been carefully restored and for more information please refer to the following websites: www.kilkennycoco.ie, www.follies-trust.org.

A note from Kevin Holbrook

In 1976, Cecil said, “ split a bag of lime , young feller, and pour it into the water trough, mix her up to a nice runny paste it will lovely for the morning” (sic) , now you will say, was it hydraulic or non-hydraulic, well to me and cecil, hydraulic meant something to do with brakes, lime was lime. Next morning Cecil said “ right young feller, lets core out the cornice, grap the stucco and knock up some up the muck” (again, sic) now this material we called stucco, was a pink coloured plaster , that came in brown paper sacks and was mixed with the sand, I am afraid I cannot remember the mix ratio, but the stuff set very fast and you had to clean everything after every mix. Now there used to be a plaster known as browning that you mixed with sand and set fast and if you did not clean the tools

between mixes, the next mix would set in the mixer. Once cored out, it was time to run off the cornice (apply finish coat), the lime that I had mixed with water the day before , was now a lovely thick cheese cake, I scooped out half a bucket of this paste, ringed it out on the spot board, poured in water to form a small puddle of water , then using my fingers as a sieve, added plaster of Paris, till the water was soaked up, this was then turned in quick and mixed and away we went. Once the cornice was run off and the mitres worked, it was time to set the walls, now this was fun, we used a grey plaster called sirapite, now a dodgy bag would set as you mixed it in the bucket, but if it all went well, a fine finish was achieved. Now I was a 16 year old jack the lad, Cecil was over 80, and known as one of Brightons finest plasterers. Now the sad fact is that leading academics have told us that this lime was an inferior lime, that good quality cannot be acheived unless lime putty over 3 months old is used, well nobody had told Cecil this, he had started his apprenticeship before the first war, and in all my 36 years of plastering I never met a man with more skill or passion for the craft, his world was not the world of academia and trial mortar studies, it was apprentice, journeyman ,tradesman and finely recognised as a master plasterer by the other plasterers of the town.

B By the mid eighties, Cecil was up in that workshop in the sky, and me, well I was starting to realise that price work on large housing developments was bloody hard work, use your knowledge, not your muscles. An old spread told me “plastering will kill yer” and as half the older plasterers I worked with were on various heart pills, I think he had a point. I read and read, Miller, Kemp, Bankart, Telling, anything on the craft I could find, Geoffery Beards books were great, a little limited in technique, but nobody knew more about the history. About this time the lime revival was gaining pace, well maybe not so much pace as slowly developing and this amazing material lime putty was being talked about, the interesting thing about this time was many of the enthusiasts that were waxing

The Building Limes Forum Ireland Newsletter

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lyrical about this wonderful material, were not time served or trowel hands, and in fact in the game, we called them the jumper brigade, a mixture of greenham common and very posh accents (you had to be there). Well sure enough, we all immersed ourselves in this material, well to be honest if you dared to say any different, and that putty from hydrate is fine, a kind of Spanish lime inquisition would descend on you, any way, we worked away, now these were the days before Lime Centres, Limes Forums, The S.P.A.B. were the leading source of information, I was living in Surrey in the south of England, so a phone call to Masons Mortar in Scotland or a drive down to Dave Chards in Bristol was the only place to get good putty, well, Paper and Paints in Chelsea sold putty, but blimey they were double posh, plus there were a few telephone numbers in the back of SPAB news, in fact you could call one, and the answering voice used to say "lime putty or a taxi", to be honest they were fun times, some lovely work and some amazing failures, and if you don't remember those days, well mate you weren't there. Of course, John Ashursts books deserve a mention, the book in 83, by the EASA (work that one out yourself (sic) really started the ball rolling, the work at Wells Cathedral by Baker and his team had been working in the lime method for some time, but this did not relate to my world of plasterwork. By now of course I had a grip of terminology, hydraulic, non-hydraulic, pozzolans etc, and the books gave me the basic lime plastering methods (there was no Donhead publishing in those days, i paid 150 pounds for a battered copy, i was only earning 80 quid a week, the wife went mad), in the early nineties we started to use a little bit of hydraulic lime, Cathedral works in Chichester imported a French lime, well we used it on a few pointing jobs, but it was hungry, and compared to working with fat limes, not in the same league. At this time English Heritage started the Smeaton Project, testing fat lime mortars on Hadrians Wall, for performance etc, the jumper brigade said "hmm, interesting" spreads and brickies laughed like drains and shook their heads, a

university education, not always the best way of learning about muck, still they tried their best, bless em. Knowledge was gained over time, trial and error, in fact my most famous error was plastering a church exterior without a lightning conductor fitted, one night after work, and pleased with the result, I headed home, that night the mother of all storms hit us, the church was struck by lightning, the spire blew up and the render became electrified, the sand had fool's gold (pyrite) contamination, and the church developed smallpox, lost some sleep over that one. By the late nineties hydraulic lime was becoming the preferred material for external finishes, and as by this time, those of us that been working with lime for some time could see that fat lime plastering externally had its pitfalls, plus arriving on site in bags, it was easier than tubs of putty. This was the turning point, easier to use, store, buy, and a set, well fat lime now had a rival. Specifications for internal plasterwork started to list hydraulic lime as the standard, those of us with a few years of lime plastering under our belts raised our eyebrows, strength, better weather resistance, if you need better weather resistance internally you really have a problem, but it has become clear that this is not traditional lime plastering, but it is lime plastering, the binder is lime. So it should be noted that this approach to internal lime plastering is in fact the next phase of internal lime plastering development, if we accept that these mortars and plasters are considerably different to the weaker type lime plasters of the past, the next issue is are there any negative results from using these harder lime mortars, well this question needs to be answered by a full academic type study, but at a personal level I have noted few negative outcomes, on masonry/block work there appears to be little difference from using weaker non-hydraulic lime plasters, but the final coat, known as setting, is as far as I am concerned, should be in a non-hydraulic lime/sand blend, hydraulic lime, from NHL2, up to NHL5 are all lean limes, and finishing in these limes to styles that would be recognised as lime plastering can be

The Building Limes Forum Ireland Newsletter

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extremely difficult. The one area where hydraulic lime is used internally does cause a few issues is on timber lathed ceilings and stud walls, the mortar can be applied with no problems, but several months after the work has been finished, large cracks can develop, I suspect this may be due to the early strength and hardness that can develop from hydraulic lime which cannot accommodate the slight deflection in the ceiling joists as the timbers settle from the weight from the new plaster, but I have noted no defects to the plaster nibs, and in fact once the cracks have been filled, the ceiling appears fine. In several books it has been noted that using hydraulic lime internally can cause problems with condensation, well I'm not sure about that, but I have seen condensation form on lime putty finishes, so I feel condensation has more to do with heating, ventilation, core temperatures etc, than choice of plaster alone. The purpose of this little article is to show that the world of lime use is a continually developing process, and as the last 25 years, we will probably still make a few mistakes and who knows maybe one day people will say that hydrated bag lime was good stuff.

LIME SLAM

One of the first events of the 2012 BLFI calendar was held on 29th February in Dublin and was a new type of event. Called LIME SLAM, its format was based on Poetry Slams which are characterised by fast-moving informal displays of creativity. It was designed to provide a platform for recent work, case studies or research, to be shared with peers, all to do with lime of course, but the subject matter entirely down to each individual speaker. A call was put out for speakers in January and by the deadline the programme was full. The day was filled with a wide range of speakers and projects and gave members a chance to see work not previously published and to be exposed to expertise in areas not their own. Based on the thesis that we learn most from our mistakes a sub-theme of the day was the challenges,

issues, mistakes and failures that were experienced.

The morning was kicked off by Una Ní Mhearáin discussing an innovative approach on Talbot's Tower, part of the medieval town wall of Kilkenny, where differently-coloured pointing was used to differentiate between different phases of masonry, which didn't quite live up to the initial aspirations.

Current research going on in Trinity College Dublin was presented by Sara Pavia on testing masonry mortars and by Rosanne Walker on the combination of hemp and lime. It is hoped that the dialogue between academics and practitioners will continue to grow in the BLFI.



One of the watch towers near Banbridge in Co Down that the Follies Trust are keen to restore. These little structures were erected on the linen bleach greens to house a watchman to ensure the large pieces of linen bleaching in the fields did not get stolen.

Primrose Wilson who visited from Northern Ireland presented recent work by the Irish Follies Trust on the conservation of some demesne wall follies in Tollymore Park, Co. Down, and outlined plans for this year's project to restore watchtowers which were built to keep guard over drying greens where valuable flax/linen was dried. Primrose also announced a weekend work camp in June 2012 which BLFI members could volunteer to help on.

The Building Limes Forum Ireland Newsletter

Comments and articles in this newsletter do not necessarily reflect the views of the Committee or the Editor



After lunch I discussed working with rural farm buildings and their owners, many of whom did the work themselves on the buildings, under the Repts 4 Traditional Farm Buildings grant. Muddy mortars were a common feature of these buildings in the Roscommon/Longford area. Henry Thompson and Ivor McElveen then detailed external insulation they had applied successfully to a section of a higgledy-piggledy seaside building. The day was completed by Grainne Shaffrey (seen above) who spoke about a recent inventory and analysis of brick pointing types in Dublin commissioned by Dublin City Council, a taster for a technical seminar on brick, planned for Autumn 2012.



Members and guests enjoying the chat at the inaugural Lime Slam.

The day was fully subscribed and there was a great atmosphere with many questions and comments from the floor as well as many lively discussions and networking during breaks. It was free to all members who had

paid their 2012 membership. It is proposed to run this event again next year at the same time. All members are encouraged to consider presenting a topic!

Editor: Thanks Katriona to you for an excellently devised and delivered first Lime Slam.

What are the fireproofing properties of Lime?

Alex Panteleyenko, a regular at our BLFI days at Drimnagh asks:

I'd like to find out more about fireproof properties of lime, for example using lime in outdoor pizza / bread ovens and BBQs. What type of lime and where it can be used - any information will be much appreciated.

Answers direct to Alex please at 086 2198754

Walled Towns event in Drimnagh Castle



On the 1st and 2nd of May Building Limes Forum Ireland hosted a two day event at Drimnagh Castle focussing specifically on the Maintenance and Repair of Town Walls. The course was split between days, the first being tailored toward the Specifier and the second day more fitting for Practitioners.

The Building Limes Forum Ireland Newsletter

Comments and articles in this newsletter do not necessarily reflect the views of the Committee or the Editor

It was a remarkable two days with a huge variety of speakers and demonstrators advising on the repair of our Town Walls. Up first was Ivor McElveen who welcomed all the large gathering. Liam Mannix spoke of the history of the Town Walls, Aighleann O'Shaughnessy covered legislation which Janice Fuller, James Howley, Una Ni Mhearain and Margaret Quinlan all presented their individual papers, and that's all before Lunch!

In the afternoon, Pat McAfee led the way, with Una once again helping out with Lisa Edden, the chief organiser of the event, supporting at all times. Specifications, Lime mixes, principles of stone wall building, containment of plant growth, mortar selection, mixing mortars and pointing and building were all addressed and demonstrated. Despite the very inclement weather Pat, Lisa, Una and the various speakers did a fantastic job on a complex brief.

On day two, Pat really came into his own with a full day of practical demonstrations on wall repairs and maintenance. The sun broke through the clouds and everyone had a thoroughly enjoyable day. Highlight of the day was the competition for the 'best wall repair' which really got everyone thinking on their feet and mucking in.



Top of the Class receiving first prize, signed copies of Pat McAfee's 'Lime Works'.



Sarah and Denis from Limerick County Council taking it all in.

VIEWPOINT

“Memories in Stone and Mortar” Lecture by Vincenzo Anello at the Irish Architectural Archive Review by Barry McKenna

At the invitation of the Building Limes Forum, the Italian architect Vincenzo Anello delivered a lecture on restoration and conservation projects in Sicily at the Irish Architectural Archive on 25 November. The Lecture coincided with the BLF's AGM and newly elected chairman Kevin Blackwood introduced the Italian conservation architect and father of Dublin-based RIAI architect Manfredi Anello.

Trained as an urbanist, Vincenzo Anello previously worked in Tunisia before moving to Australia where he learned about high-rise technology. It wasn't until he returned to Italy that he began to focus his practice on restoration and conservation projects after falling in love with the modest beauty of small rural projects. His practice has since been involved in the high profile restoration

The Building Limes Forum Ireland Newsletter

Comments and articles in this newsletter do not necessarily reflect the views of the Committee or the Editor

of significant historical buildings and convents in Sicily as well as rural rejuvenation projects on which he has published a series of books.

After publishing a manual for the conservation of rural sites in Sicily where he studied various properties in the area, Anello described how the methods of construction and materials used created a link between the rural and urban. From the small house to the large convent, they are in essence the same as they are built with the same materials using the same methods. While it is inevitable that modern technologies such as fiberglass mesh in the screed or steel cables in the walls are used, such interventions are hidden and therefore do not take from the architectural character of the building. Instead, Anello reinforces said character through the use of old techniques, relearned to pave external courtyards. For example or the testing of lime samples for colour and temperature before being applied to ensure that they are as close as possible to what would have originally been used. For Anello, this is the key to a successful conservation project understanding the materials and methods used originally and reapplying them today.

But aside from the physical effort required to restore old buildings, Anello believes that another important consideration for any conservation project is re-use. Without it, the project risks falling back into decay. This is particularly the case in Anello's current project which is arguably one of the biggest as it involves the conservation of the entire town Santa Margherita, which was devastated by an earthquake in 1968. A new town has since been built nearby resulting in the abandonment of the old town. Today, all that remains is but a shell of what once was; its decay sped up by the theft of building elements. The project is as feasibility stage but Anello hopes to get the funding required to bring the town back to its former glory. Projects like Santa Margherita hold great significance for Anello. They are physical reminders of the past, memories in stone and

mortar losing them would be like losing a part of ourselves.

Hemp Lime Mixes

Deirdre, a concerned lime enthusiast, has asked by way of email if there was any 'ideal' specification for hemp and lime with a view to increasing the u-value of a stone built structure. What is the mix, how has it performed and where can it be seen?

Editor: Yes, at this stage it would be great to have some definitive guidelines from the industry regarding Hemp Lime mixes and some performance figures including u-values. Answers to info@blfi.net. Maybe someone might like to do an article on this for the next newsletter.

Palmerstown Weir



Palmerstown Weir, South County Dublin

Lisa Edden, engineer, was requested by Mr. Pat Lynch of Wild Water Kayak Club (WWKC) to provide an Engineering Appraisal of the erosion damage of the V shaped weir across the river Liffey at Palmerstown and to make recommendations for its repair and stabilisation.

The Building Limes Forum Ireland Newsletter

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Following site visits and inspections, mortar analyses and general study a schedule of works was compiled and specifications for the repair of the weir assembled.

Shane Nolan of the Nolan Group Ltd was awarded to carry out the contract.

The challenge of repairing a partially submerged stone structure in the middle of the river Liffey needs no explanation but the contractor, and Lisa herself, enthusiastically rose to the challenge and produced some excellent results.

The limestone rubble was retrieved from immediately downstream of the damaged area and would once have formed part of the weir. Approximately one tonne of additional 40mm down hardcore / gravel material was brought in to supplement the retrieved rock to provide the fines to infill between the large stones.

The final mortar specification, after some testing, was agreed for the limecrete:

- 3 parts NHL3.5
- 1 part Prompt Natural Cement
- 4 parts 6mm down washed sharp sand
- 4 parts rounded pebble 12mm down

In the tests, it was interesting to note that adjustments to the sand and pebble content (i.e. Substituting sand for pebble) contributed significantly to the performance of the mortar.

One of the many challenges of this repair was simply leaks. Silted up sluices, stemming water coming from leaks migrating through the core of the weir and so forth were all tricky and despite extensive bunding and pumping (an 8 inch diameter pump was used at one stage) the head and flow of water through the area of leaks to the upper part of the weir could not be reduced enough to allow the full extent of the works to take place which included lime grouting in some areas.

Beyond the repaired section the downstream edge was fitted with large stones found in the

debris on the river bed. These were laid to a pitch tailing away from the repaired edge in an attempt to reduce the eddy erosion to the tailing edge.

The largest stone noted in the debris was of approx dimensions 2200 x 500x 300mm equivalent to about 900kg. This stone was not moved during these works!

In summary the repairs to the centre lower apron were effectively carried out. The area of exposed timbers was repaired and encased in masonry to match the original construction. It should be noted that the extent of these repairs does not extend as far as the original apron edge and these works should be viewed as interim works only.

The key to the success of future works will be more extensive management of water levels both up and down stream.

BLFI website Forum

www.buildinglimesforumireland.com

The Building Limes Forum Ireland has progressed significantly in recent years. The emphasis in the past has been on Limes and all aspects of its use in building, both in conservation and new build. This year and onwards there is an equal emphasis on Forum. Our new website has a secure platform for communication between members. This not only enhances the development of the forum, but also facilitates direct contact between members, where discussions can take place, questions can be raised and answers (hopefully) given. The Forum establishes a network of like-minded people, concerned with the use of lime in building. This should give rise to topical discussions based on a robust mix of theory and practice.

The Building Limes Forum Ireland Newsletter

Comments and articles in this newsletter do not necessarily reflect the views of the Committee or the Editor

What is the 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.

The BLF was established in the UK in 1992. The Irish regional branch was established in 1999, and formally constituted as the Building Limes Forum Ireland in 2005. It is affiliated with the Building Limes Forum UK. It is a voluntary organisation with no commercial ties, the majority of members being actively concerned with the repair of historic buildings and some in new build. The Forum acts as an information network, and publishes newsletters and an annual journal of the Building Limes Forum.

The Building Limes Forum of Ireland is currently looking for new members.

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 to members;
- A means of supporting the stated aims.

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Upcoming events

13th September

Brickwork Pointing best practice Seminar - Dublin - Woodquay Venue- 9am to 5pm.

21st-23rd September

BLF conference Durham - The Future of Lime in Building

For details:

www.buildinglimesforum.org.uk/2012-conference

*Note discount if booked before 1st August.

*Travel suggestions:

Fly from Cork, Dublin or Belfast to Newcastle. Local metro from Newcastle airport into Newcastle – 25mins and then train to Durham – 20minutes.

13-14th October

Traditional Building Skills Weekend hosted by Irish Georgian Society in Kilkenny. BLFI will have a stand there. Volunteers required. Contact: Una Ni Mhearain.

18th or 19th October (To be confirmed)

BLFI AGM

Become a member to receive regular updates on upcoming events, seminars and courses.

Communicating with your Forum

If you would like to respond to any of the topics on this or further Newsletters or if you want to get involved please contact us in writing by way of post or email.

POST

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