Chairman’s Address by Peter Finnegan

Dear Regional Group Member

Although I have been involved with the Republic of Ireland Regional Group of The Institution of Structural Engineers for some time, I am still daunted by taking on the role of Chairman. I am honoured to do so and hope that I will represent the Group effectively. I would like to thank the outgoing Chairman, Don Toomey, for his contribution over the past two years. Don will remain on the committee as Immediate Past Chairman which will assist continuity.

Regrettably, our Regional Group Secretary, Una Beagon will be stepping down and her role taken up by Simon Dunne. I would like also to thank Una for her contribution and wish her well with her further studies. The full list of committee members is at the back of this newsletter. On behalf of the committee, I would also like to thank Tara Reale, Mairead NicChoine and Darragh Noble for their work with the young Members Group over the past few years.

The Regional Group (formerly a Branch) exists because of the commitment and work of the committee members, supported by the members. I would urge any members who would like to become involved with the committee to do so. In particular, I would invite any of our younger graduate members to become involved with the committee. It is a rewarding experience, except of course, financially.

The membership of the Republic of Ireland Regional Group at present comprises (approximately) 21 Fellows, 279 Members, 1 Associate, 13 Associate Members, 145 Graduates, 0 Technician Members and 91 Student Members. I would like to encourage any non-members or graduates to consider attempting the Chartered Membership (CM) exam. The CM exam is internationally recognised and the RoI Regional Group has always had an above average pass rate. This is due in no small part to the exam preparation course, currently run by Joe Ryan. I would ask any existing Members to encourage their younger colleagues to join the Institution, and sit the CM exam in due course.

The Institution has a Mutual Recognition Agreement with several Engineering Institutions internationally, including Engineers Ireland. In summary, a chartered member of the Institution of Structural Engineers can apply for direct chartered membership of Engineers Ireland without undergoing further training and Professional Review. A chartered member of Engineers Ireland is eligible to apply directly for the CM exam without further controlled training.

I would ask our more
experienced Chartered Members to consider whether they feel eligible for Fellowship of the Institution. The requirements are available on the Institution website and the Regional group requires a number of Fellows to function.

One of our longest serving members, now a Fellow of the institution – Mr Joseph Kindregan, has recently been elected to Vice President of the Institution. This is a great honour for the Regional Group, and well deserved by Joe for his contribution to the Institution over the past 35 years. Joe has served the ROI Regional Group in various capacities over the years, and hopefully he has one more position to occupy after this one.

The Annual Dinner was held in February with an attendance of 170. This attendance is up on previous years which is hopefully a sign that the worst times are over. While companies tables have and will continue to be the mainstay of the dinner, I would encourage individual members to attend. It has always been an enjoyable evening and an opportunity to meet the Institution President and Chief Executive.

In January 2015, the Institution completed the process of moving to Bastwick Street in London, details of which were included in “the Structural Engineer” of June 2015. While this deprives me of the glamour of attending Institution meetings at Belgravia, home of the Institution for 80 years, it is a sound move that removes any uncertainty about the future.

We have continued with a tradition of high quality evening lectures, though numbers are somewhat lower than I would have hoped. This may in part be because most of the lectures are available as a podcast, but also because of difficulties with the group emailing system for notifications. We hope to have this resolved shortly.

One of the lectures, “Soils in Dublin” by Dr Eric Farrell was of particular interest to me as it was previously given 25 years ago by Dr Eric Farrell in collaboration with a previous Branch Chairman, Denis Wall. Sadly, Denis is no longer with us, but he would have marvelled at the progression in the availability of information to designing engineers.

A previous paper presented to the ROI Regional Group (and winner of the 2014 Regional Group Prize) – 10 Trinity Square, by Owen Carroll and Roger Tegart of Barrett Mahony, won the Sir Arnold Waters Medal in 2015. This is for the paper deemed to be the best of those who have won their Regional Group prize. This is a credit to it’s authors and an indication that the projects with which our members are involved are indeed world class. I would encourage anyone who feels that they have the makings of a paper, either for presentation to the Regional Group or for publication, to do so. Further information is available from any of the committee members.

Peter Finnegan

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Invite to the Annual Dinner at Trinity College

The ROI Regional group would like to invite you to the Annual Black Tie Dinner to be held at the Dining Hall in Trinity College on Friday 19th February 2016. Last year, over 170 members attended the event and a great night was had by all.

The night will begin with a drinks reception at 7pm and the banquet dinner will be served at 8pm. Tickets will be selling at €85 per person. If you would like to attend the event, please contact Orla Mannion: orla.mannion@arup.com

Darragh Noble, Una Beagon and Orla Mannion enjoying the 2015 Annual Dinner
The Shard in Cork
by Kieran Ruane, RPS

In recent years, the annual IStructE / Engineers Ireland joint lecture has provided local engineers of all persuasions with an interesting night out. Informative lectures on the New Forth Bridge and the Titanic Experience in Belfast, and Bill Harvey’s informative presentation on masonry structures have been very well received. We are continuing this tradition by hosting the chief structural engineer of the Shard building in London, Mr. John Parker of WSP on the 26th of January at 6.30pm in Rochestown Park Hotel.

The Shard, at 306m high, is the tallest building in Western Europe. Mr. Parker’s lecture will describe its design and construction, including: site history; development of the initial scheme; robustness and stability; change of material with usage and the effect of wind on both the tower and façade design. Construction challenges (including the constrained site, top-down construction of the core and basement, logistics, crane strategy, tolerances, and assembly of the spire at the top of the building) will also be covered.

This is a lecture of the highest quality with exceptional graphics presented by a renowned structural engineer. Attendance is highly recommended. As an aside, the structural engineering students at CIT are capitalising on Mr. Parker’s visit by attending an engineer’s tour of the Shard the following day in London.

Kieran Ruane

IStructE – Exam Preparation Cork

Cork Institute of Technology will, as usual, serve as a centre for the Chartered Member Examination. Subject to demand, local members of the Committee will be pleased to organise exam preparation evenings in conjunction with CIT.

Enquiries may be directed to john.justinmurphy@cit.ie or kieran.ruane@rpsgroup.com

Alternatively, we will be pleased to organise informal study groups for exam preparation.

IStructE Routes to Membership

In recent months, committee members Roger Tegart and Kieran Ruane presented an evening lecture on the routes to membership of the Institution. The slides and audio from this lecture are available on the Region’s website (www.istructe.ie). If you have any questions regarding membership or if you need any assistance with the application process please contact Kieran Ruane who is currently the education representative on the Committee.

IStructE Members Awards

Congratulations to our local members who won Institution awards in 2015:

Roger Tegart and Owen Carroll for their paper “10 Trinity Square, London”. They were awarded the Sir Arnold Waters Medal, for papers deemed to be the best of those that have won the Regional Group Prize during the session.

Brian Hawkins, Paul Forde and Peter Finnegan for their paper “Sulphate-generated heave - the effect on structures in Dublin” published in May 2014 in the Structural Engineer. They were awarded the Clancy Prize for papers of merit related to the understanding and practice of the whole life management of structures including surveys, investigations, strategic planning, testing and subsequent works to structures.

“Roger Tegart and Owen Carroll”, winners of the Sir Arnold Waters medal pictured with Michael Hough
Following the disaster in Rana Plaza in 2013, where a garment factory collapsed with the loss of 1,129 lives, Arup was asked to develop a methodology for assessing the structural safety of the factories in Bangladesh. The textile garment industry is of tremendous social and economic importance in Bangladesh, employing more than four million people, many of whom are the only wage-earners in their families. It is also a major source of employment for rural migrant women in a country where women have been largely excluded from formal work in the cities.

Understanding the importance of this industry to the people of Bangladesh, Arup came up with a pragmatic approach for carrying out the structural safety assessments, focusing on critical life-safety issues.

Driving Change
In the 2.5 years post-Rana Plaza, Arup has supported a number of clients in driving an agenda of change. So far, an Irish-led Arup team has inspected almost 900 factories there for Inditex (Spanish retail group) and the Bangladesh Accord (an umbrella organisation of clothing companies, employers and workers representatives). We have provided clear advice on actions required to ensure the safety of the workers, including closure of a small number of facilities. In addition, we have overseen and provided a quality review role on an additional 750 fire, electrical and structural factory inspections which were commissioned by the International Labour Organisation on behalf of the Bangladesh Government.

In total, over 3,000 factories in Bangladesh have been inspected to date using the structural methodology developed by Arup.

The challenge presented by this project was how to balance the immediate requirement of preventing another Rana Plaza, without shutting down an entire industry which is critical to the national economy.

The structural safety assessments are directly leading to safer workplaces for those employed in over 3,500 garment factories, ensuring that people feel safer going to work every day.

The Next Steps
We are currently advising Inditex on the next steps, including the provision of guidance on preparation of detailed engineering assessments and monitoring the work of local consultants who are undertaking this work. In addition to this, in 2016 we will be delivering structured training to local engineers working for the Accord, to help them with their ongoing work in overseeing and implementing safety upgrades in the factories.
On the 1st of March 2014 the Building Control (Amendment) Regulations, BC(A)R S.I. 9 2014 were introduced into law.

BC(A)R 2014 applies to the design and construction of new dwellings, extensions with an area greater than 40m2 and works which part III of the Building Regulations apply to. Part III is the section of the Building Control Regulations setting out the requirements for a Fire Safety Certificate, Regularisation Fire Safety Certificate, 7 day Notices and Disabled Access Certificates. In September 2015, BC(A)R (2) introduced the Opt Out Clause for single unit developments and extensions to existing dwellings. A homeowner who wishes to avail of this facility must sign a form of "Declaration of Intention to Opt Out of Statutory Certification" which may be obtained online via the Building Control Management System (BCMS) or from the local Building Control Authority.

A key aim is to limit regulatory oversight, ensuring a culture of compliance with Building Regulations using a risk based approach to target those who are non-compliant. Through BC(A)R, the powers of enforcement and prosecution will become a more credible threat to those who are non-compliant. The amended Building Control Regulations will ensure a better quality of construction, and will provide safer, more energy efficient and sustainable buildings including our homes, places of work and other buildings.

Under BC(A)R 2014, there have been many changes to the coordination of a project including the definition of new roles such as the Assigned Certifier and Design Certifier. The most notable change to the coordination of a project is at commencement stage. A new commencement notice form requires the appointment of the Assigned Certifier, Builder and Owner that are recorded on the BCMS.

The requirements under the role of the Assigned Certifier are:
1. Inspect and to co-ordinate the inspection activity of others during construction.
2. Certify the building or works on completion.
3. Main point of contact with building control.

The Assigned Certifier along with the Design Certifier must determine the appropriate level of inspection for each element to allow certification and completion.

Ultimately it is the building owners responsibility to appoint an Assigned Certifier who is a registered professional and is competent. A competent Assigned Certifier must be one of the following:
- Chartered member of Engineers Ireland
- Chartered and Registered member of the Society of Chartered Surveyors
- Registered member of RIAI

It must be clear that under BC(A)R 2014, the Building Regulations (listed Parts A to M) have not changed. This is a common misconception. The changes are associated with the Building Control Regulation, and are related to the following:
- Requirement to submit a commencement notice for all works to which the Regulations apply (including material alterations to offices, shops and industrial units);
- Requirements for Fire Certificates (FSC) and Disability Access Certificates (DAC);
- Requirement for revised FSC following significant changes to granted FSC’s;
- Building Control System is still a "self-certification" system;
- Process for applying for dispensation / relaxation. There have been teething issues associated with the introduction of BC(A)R 2014 and some of these have been listed below:
- Unauthorised use of details on BCMS;
- Phasing of works – part occupation / housing units;
- 40 m2 rule;
- Building Control Authority getting used to the system which is leading to delays;
- Knowledge base and resource of Building Control Authority;
- Designers / Contractors (particularly sub-contractors) getting used to their obligations;
- Public sector contract delays;
- One-off housing (Direct Labour).

The Building Regulations comprise Parts A to M and differ from the Building Control Regulation as noted. The aims of the Building Regulations (Parts A to M) are as follows:
(a) making provision for securing the health, safety and welfare of,
(i) persons in or about buildings, and
(ii) persons who may be affected by buildings or by matters connected with buildings;
(b) making provision for the special needs of disabled persons in relation to buildings;
(c) making provision for the conservation of fuel and energy in relation to buildings;
(d) making provision for securing in relation to buildings the efficient use of resources;
(e) making provision for the encouragement of good building practice;

Construction is the one industry where everyone thinks they know better. A number of multi-disciplinary sectors and persons contribute to the design and construction process. Each of the individuals involved should be knowledgeable and competent to carry out their respective works in an appropriate manner and in compliance with Building Regulations. Through third party inspection, a higher quality product is attainable within the construction industry.
In order to represent the views of the younger members of the profession on a range of Institution topics, the Institution must continually look at how it engages with young members to increase Student and Graduate membership. To that end, the Headquarters of the IStructE launched an initiative to look at how Young Members are catered for in the different regions.

The purpose of the group from HQ's perspective is to get young graduates involved with IStructE events early and to increase the awareness and the presence of the Institution itself.

From a graduate perspective, we hope to help with graduates' development as engineers, particularly in bridging the gap between University and the workplace and also creating a platform for which young engineers can interact with their peers outside of the workplace.

Last year, the Republic of Ireland Regional Group of the IStructE, in conjunction with HQ in London established a “Young Members Group” in the Republic of Ireland.

According to the Institution’s main website (www.istructe.org): “The Young Members’ Group primary objective is to represent the views of young members of the profession within the Regional Group and to develop initiatives that will generate the interest of Young Members in the Institution. It is also intended that the group involves young members in the community who aspire to be Civil and Structural Engineers and are therefore not members of the institution.”

“The Group aims to supplement normal Regional Group functions with programmes particularly designed for young members. The Group is responsible for undertaking initiatives independently without the direct involvement of the Regional Group but accountable to it. Young Members and aspiring members are encouraged to express their views and ideas on all matters of Regional Group interest.”

To date the Group has organised a series of events, these included professional lectures such as the talk “Roads to Chartership” by Kieran Ruane, Director, RPS Group and Roger Tegart, Director of Cronin & Sutton and “A Review of Structural Failures in Ireland and Elsewhere” by Ian Duckenfield BSc CEng MICE MInstSCE. The YMG also hosted Graduate Evening in UCD in November, this is an annual event where 3 recent graduates working in consulting, contracting and research speak to final year students about their experiences since leaving college. The group participated in a site visit in association with BAM Building to the Research Hub 1 Building in DIT Grangegorman. As well as this the first YMG Pub Quiz took place in March, we hope to make this an annual event.

In the coming months, we plan on organising a few more site visits, some project talks and the odd social event. Any suggestions would be greatly appreciated and if anybody wants to get involved please email Orla Mannion: orla.mannion@arup.com, we’d love to hear from you!