

The Formation and History of the Northern Ireland Branch of the Institution of Structural Engineers 1947 – 1982

A. H. K. Roberts, BA, BAI, FStructE, MICE, FIEI

The first positive steps towards forming a Northern Ireland Branch were taken on Monday 10 November 1947, when some members of the Institution resident in the Province held a meeting in the Library of the Belfast College of Technology. Fourteen attended and there were apologies from eight others. The Institution Bye-laws relating to the formation of the Branches were explained and it was decided that if possible a Branch should be formed. Since the first necessity would be to get the membership into line with Institution requirements, an ad-hoc committee was formed for the purpose, with Mr Howard Harding as Chairman, Mr S. G. Duckworth as Honorary Secretary, and Messrs P. C. Hogarth, H. C. Gillies and Mr M. T. Shaw as members.

They clearly did their work well, for at the next meeting on 23 January 1948 it was announced that the position as to membership would shortly be in order, and the decision was thereupon taken to petition Headquarters to allow a Branch to be formed. Mr J. M. C. Tyack was named Honorary Assistant Secretary, and Messrs R. Montgomery, P. W. Bott and R. J. N. Sweetman were added to the Committee. They worked throughout the summer in liaison with Headquarters and completed everything necessary to enable approval to be given.

At a General Meeting on Tuesday 12 October 1948 Branch Bye-laws were adopted, the acting officers and Committee were confirmed with the addition of Messrs F. H. G. Fox and W. S. Benton as Honorary Auditors, and it was resolved to hold the Inaugural Meeting on Wednesday 17 November 1948. It was held in the Grand Central Hotel, Royal Avenue, Belfast, and prominent engineers from Eire as well as those from Northern Ireland, with other distinguished guests, were present to hear Major R. L. Maitland, Secretary of the Institution, present the Authority for the establishment of the Branch. Mr L. Scott White, the President, reviewed the progress of the Institution and outlined the ways by which Branches could and should encourage suitable young people to join the profession and so ensure the future of Structural Engineering. Mr Harding was confirmed as the first Branch Chairman, in which capacity he served for three years.

Among those present at the dinner was Capt. the Honorable Terence O'Neill, some years later Prime Minister of Northern Ireland, and it is interesting to recall that Mr F. Fox forecast this at the time, when Capt. O'Neill was only at the threshold of his political career.

Some 54 people attended the Meeting and the Dinner, which had been preceded by a visit to Messrs Harland and Wolf's shipyard; and a Civic Reception for the President, Secretary and Officers was given by the Deputy Lord Mayor of Belfast, Councillor W. E. Johnstone.

So the Branch got under way. A pattern of lectures, films and visits to engineering works was proposed, and the first lecture was given by John Tyack (18 January 1949) in the Central Hall of the Belfast College of Technology. This Hall was the Branch's 'home' for a long time, although it could comfortably hold 600 people and the attendance rarely exceeded 30 or so! His paper dealt with BS Code of Practice No 449 (1948) Structural Steel. Succeeding papers

were read by Mr Ove Arup (Visitor), and by Alec Roberts on the planning, design and construction of a 15,000 ton reinforced concrete grain silo. In all there were three lectures, a film, and two visits to sites in the first year, and the Committee felt reasonably well satisfied.

The pattern of events thus established continued. The Annual Dinner was a men-only affair, as it still is. The President and Secretary became regular visitors and Northern Ireland Government Ministers were frequent guests, as were also other notables. After Mr Harding retired in 1950, Mr H. C. Gillies became Chairman and held the post for two years, which is still the adopted course. It has been found to work well, particularly after the posts of Vice-Chairman and Immediate Past Chairman were created, giving a six-year run at the heart of affairs. The interests of both these gentlemen lay in Structural Steelwork, but they were followed by 'Jimmy' Malcolmson who was a 'concrete man', with a strong interest in piles and piling; and by 'Bob' Ferguson, a distinguished Consulting Engineer who towards the end of his very long career was awarded the OBE for his services to the profession and the community.

At the early dinners entertainment was provided (at the Chairman's expense!) but this was phased out as the function became more formal.

In October 1949 Mr Duckworth became seriously ill and Mr F. G. H. Fox acted for him for a time. Although Mr Duckworth recovered and resumed his office, he became ill again in 1954 and died during the summer. He played a leading part in the founding and initial running of the Branch, and had just previously been elected Vice-Chairman, with the Chairmanship within his sights. The Chairman and the Secretary attended the very large funeral.

There was no 'home' for the Branch and for some years the Committee met in such venues as the Overseas Club, the Presbyterian Hostel and a Nurses' Home. Finally on 22 December 1953, possibly in an excess of the Christmas spirit, Mr J. C. McClure, the Honorary Assistant Secretary, offered the use of his office, and it then became the practice for the Chairman to provide such accommodation, though it meant a change of locale every two years. A courageous attempt by Harold Sidwell of Queens University to obtain a permanent home for all the engineering Institutions failed, chiefly for lack of financial support.

Though it was difficult to get local speakers there was always at least one in each session. They were supported by such eminent visitors as Alan Harris, Leslie Podmore and W. Shearer Smith, who all spoke on topical subjects of the day. Speakers from various specialist research and development associations and other commercial organisations helped out, and a film and site visit were always included. Terence Mallagh visited the Branch from Dublin in 1954 to explain and illustrate his own system of prestressing small circular silos. John Singleton-Green, W. S. Atkins and others came, and in 1955 Mr G. B. Godfrey paid the first of many visits to speak on aspects of steel design and construction.

Branch members giving papers included Morris Shaw, Bob Montgomery, Robin Sweetnam, Alec Roberts, Douglas Boyd, W. J. Shirley, Jack McClure and others.

Numbers in the Branch remained static; what was lost by departures was balanced by new members and by others coming on posting to Northern Ireland. At the time of the Institution's Golden Jubilee celebrations in 1959, membership stood at 40. The Branch under its Chairman Mr A. H. K. Roberts participated in these celebrations with a programme extending over four days, 2 – 5 June.

After being received by the Deputy Lord Mayor, Dr Jefferson, the President Mr Gordon S. McDonald attended a technical session at Queens University at which he outlined the position of the Institution after its sixty years of existence. Following this Messrs J. G. Berry and W. A. Toner gave a review of prestressed concrete construction in Northern Ireland up to that time, and a vote of thanks proposed by Mr S. O. Morton, Branch member, was seconded by Mr Donovan Lee, a visitor from England well known inter alia for his part in introducing the Macalloy bar.

On the following day a party of members with their ladies travelled to the Mourne Mountains to view the newly completed Ben Crom Dam and the Silent Valley Works. Mr Ernest Rea, Chairman of Belfast Water Commissioners, welcomed the party and Dr Norman Agnew, Branch Chairman of the previous year, who had become Secretary of the Commissioners, explained the purpose of the new construction.

Luncheon and tea were partaken of in the Commissioners' bungalow and a halt was made on the return journey to see the new Spelga Dam, which had been designed by the Belfast firm of R. Ferguson and S. McIlveen.

On the final day, members with their ladies and guests boarded the Belfast Harbour Commissioners' tender 'Sir Thomas Dixon' for a tour of Belfast Harbour. Sir Kenneth Sinclair, Chairman of the Commissioners, welcomed the party, and the various works were pointed out and explained by other Commissioners and their technical staff. Hospitality was dispensed in racy style by Mr J. McF. Neill, Chief Engineer, a Branch member.

In the evening the Golden Jubilee Dinner and Dance took place at the Woodbourne House Hotel, Dunmurry, when over one hundred members and their guests were entertained. The loyal toast was proposed by the Chairman Mr A. H. K. Roberts; the Institution by Lord Glentoran, Minister of Commerce, responded to by the President Mr Gordon McDonald; and the Guests by Dr Norman Agnew, Past Chairman, which was responded to by Mr R. E. D. Bain, Chairman of the Northern Ireland Association of the Institution of Civil Engineers.

During the period of the celebrations an exhibition of Structural Engineering photographs and models was staged in the Ulster Hall and attracted over 600 visitors. The exhibition was introduced on BBC Television by the Branch Chairman, and the proceedings were wound up on Radio by the President. The arrangements were in the very competent hands of the Branch Honorary Secretary, Leslie Clements, ably assisted by Peter Rhodes.

The Post-Jubilee Years

In the years after the Jubilee the Branch began to gain recognition as a body of informed opinion. The number of members rose above fifty and W. A. Plester was the first Chairman to attend Council meetings (1961-1962), while Gregg Doran was allocated to the Science and Research Committee. In 1966 Bill Thistlethwaite had the honour of attending a reception held by Her Majesty the Queen, when the Council of Engineering Institutions (CEI) was presented with a Royal Charter. In 1976 Jack McClure was Honorary Secretary of the Institution, and Dr Doran was Honorary Treasurer in 1979. Members were called on increasingly to serve on Governmental or other groups; Alec Roberts was on the British Standards Northern Ireland Advisory Council and its predecessor for fourteen years, while Douglas Boyd also served for a long period. Fred Poskitt became Chairman in 1976. Dr Doran played a leading part in drawing up the Northern Ireland Building Regulations and was Chairman for a time of the Northern Ireland Construction Industry Advisory Council.

The Northern Ireland CEI Council was formed in 1968 and 'Davy' McIlwaine and Sam Pyper took a keen interest, the former becoming Chairman later. Distinction of another kind came to Robert Ferguson who was awarded the OBE in the 1970 New Year Honours, and Fred Poskitt received a similar honour in 1983. Fred had served for a number of years on the British Section of the International Commission on Large Dams.

By 1967 membership had risen to 109 and the increase owed much to young men coming into the profession through the Institution training programme. In that year Frank Wright was elected a Companion of the Institution, the only representative of that class of member. He soon became a fixture as one of the Honorary Auditors of the Branch accounts!

Meetings continued on the pattern already set, with the addition of joint meetings with other professional associations, notably the Institution of Civil Engineers and the Concrete Society. Subjects were usually topical; settlement of groups of piles was a popular subject at one time. Morris Shaw, having become Chief Civil and Structural Engineer at the War Office, returned to deal with Corrosion. 'Change to Metric' by Peter Rhodes won him the Murray Buxton Diploma for papers of general interest published in the 'Structural Engineer', and for another, 'The Structural Assessment of Buildings subjected to Bomb Damage', he received the Oscar Faber Diploma.

A paper on two very different long span roofs won several awards for its joint authors John Hill and Stanley Taggart, including the Sir Arnold Waters medal and the Stephen McGloughlin medal of the Institution of Engineers of Ireland. Other subjects included 'Contracting to Construct' by Kurt Fleischer, describing the organisation of a medium-sized firm which has just received a contract; 'The Construction of Fabrication Facilities for Off-shore Structures', 'Limit Design', 'The Belfast Building dock', 'Cracking in Concrete', 'Temporary Works', 'Tall Structures', and their antithesis, 'Very Deep Basements', to name but a few.

A paper on the restoration of Belfast Opera House attracted wide attention and won the Branch Prize for its author Albert Fry. This is a building of special Architectural and Historical importance, but the fabric was cracked due to deterioration to the tops of the wooden piles and other causes, and there was much dry rot in the timbers. Deepening of the orchestral pit in typical Belfast sub-soil conditions was just another problem! The restoration won great praise from many quarters.

Don McQuillan gave a pioneering paper on 'Structural Design aspects of Steel Chimneys' for which he was awarded the Sir Arnold Waters medal in 1983. Another Murray Buxton award went to a paper entitled 'Load Distribution characteristics of M-beam Bridge Decks', by Branch members J. Kirkpatrick and Professor A. E. Long, in association with A. Thompson.

Two other unusual papers attracted interest; 'An Heritage of Structures', by Peter Rhodes, and 'Engineering since the Ice Age' by Gregg Doran. Each in its own way took minds away from 'Computer Applications' and 'Limit State Philosophy'!

Visits to site remained a regular feature, especially in the 'boom' years of the sixties, and the new office buildings, factories, motorways and bridges received attention. During this period with plenty of work going on there was ample scope for new materials and techniques to be employed and these were examined with the greatest interest.

Some very successful seminars were held under the Branch's organisation, those on Brickwork and Steelwork being well attended by members and others concerned with these subjects.

The Committee from the first was attentive to the needs of students and young people wishing to enter the profession, but was equally mindful of the high standards required. Links were maintained with Queen's University, the Belfast College of Technology, and later the Northern Ireland Polytechnic, by the award of prizes to the best performers in structural engineering subjects at their final examinations, on the recommendation of their professors. Careers exhibitions and talks to schools took place and in 1974, special tutorial sessions were organised for the benefit of candidates for the Institution examination. On separate evenings, candidates are taken through two typical examination subjects, one each in concrete and steel, by practising members of the Branch. These have been so useful that they have continued each year since.

The Annual Dinner was held for 23 years at the Midland Hotel, Belfast, but in 1971 the disturbances in the city necessitated a change. After ventures elsewhere it has now settled down at the Belfast Europa Hotel (its name was recently changed to the Forum) – known variously as the 'World's Press Centre' and 'The most bombed hotel in Europe'. It has suffered damage on some 30 occasions, but only once seriously.

The Dinner had grown in popularity over the years and now attracts up to 200 members and their guests. It is still for men only, although in recent years Chartered Engineers of the opposite sex have been noticed. The President and the Secretary are always present, and the principal guests have included Mr William Whitelaw and Mr Humphrey Atkins when they were Secretaries of State for Northern Ireland, as well as prominent politicians and leaders of industry, and the Chairmen of the Branches of kindred Institutions in the Province. Another pleasant occasion occurs in November when the President and the Secretary 'call in' on their way to Dublin for the Annual Dinner of the Irish Branch. After a formal meeting when the Chairman is installed and Institution affairs are discussed, the visitors are entertained by the Committee and their ladies at the Old Inn at Crawfordsburn, where an enjoyable and convivial evening is spent.

At midnight they disperse, which seems a suitable moment at which to bring this history to a close. The Branch is well based and in good heart, and ready to face the challenge posed by the dissolution of the CEI and the setting-up of the Engineering Council. Whatever

organisational changes there may be, the Branch remains quietly confident that the science and art of Structural Engineering will continue to develop for the benefit of the community under the wise guidance of the Institution of which we are proud to be an integral part.

A.H.K. Roberts
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