

# THE ACT DIPLOMA: a career enhancement?

Since the first Diplomas in Advanced Concrete Technology (ACT) were awarded in 1969, numerous diplomates have gone on to pursue successful careers throughout all parts of the concrete industry. To illustrate the continuing relevance and value of the diploma, a number of graduates have given us profiles of their careers to date, as well as comments on their experiences when undertaking the diploma course. Most of these have achieved their diplomas relatively recently, but at varying stages in their careers. We start, however, with a long-standing diplomate, Graham True, who has recently achieved UK Chartered Engineer status, with the ACT Diploma, ICT corporate member status and the affiliation of the ICT with the Society of Environmental Engineers and hence the Engineering Council being key factors in this; this is a first for the ICT.

## GRAHAM TRUE

GFT Materials Consultancy



After abandoning my first plan to become an architect I decided to transfer from a holiday job to permanent employment in the Concrete Section of the Central Electricity Research Laboratory (CERL) in Leatherhead, Surrey. This was during the late 1960s when concrete was being used extensively in the construction of nuclear power plants and, of special interest, radiation containment and pressure vessels. Working in this section provided an excellent and rapid understanding of concrete technology, together with hands-on performance monitoring and basic research within a set-up staffed by a wealth of knowledgeable individuals. However, there was no opportunity to gain a qualification. I then spent eighteen months with E.H. Bradley & Sons, developing GRC products, during which, in 1974, I took the CGLI Concrete Technology and Construction course.

An opportunity arose in 1975 to join Thyssen (GB) Ltd to develop GRC lightweight sprayed concrete for third world housing and to provide technical development in the use of concrete at the new Selby Coal Mine. I took this job on the understanding that the company would fund my participation in the 1976-77 ACT Diploma course, with a project investigating the benefits of GRC permanent formwork in protecting underlying concrete.

The course was held at Fulmer Grange, and those who have studied there will recall the excellent facilities, expert staff and the benefits of the contacts made during the study and throughout one's career. The course helped to broaden knowledge and the lectures and notes provided a useful first reference source when back at work.

The six-month project proved of benefit to both me and my company. It was possible to demonstrate the cover benefits in using GRC formwork that, following translation of my project into Norwegian, was used to convince the Norwegian Road Authority to allow reduced reinforcement cover when GRC decking was used, thereby saving weight.

The ACT Diploma provides a recognised (now worldwide) qualification in concrete technology and a level of understanding, attainment and ability which demonstrates one's credibility to a potential employer or, in my case, as an expert witness.

Not having a first degree, the ACT was a vital contributor in obtaining an offer to undertake a funded PhD study at Wolverhampton University from 2007 to 2011. Having attained the PhD, the ACT Diploma and membership of the Institute of Concrete Technology provided a link with the Society of Environmental Engineers and together they were sufficient to gain chartered engineer recognition by the Engineering Council in 2012. Having the ACT Diploma was necessary for the progression to CEng registration.

## ADRIAN ASHBY

Ardex UK Ltd



After graduating with an MSc in mineral exploration in 2000, following a first degree in geology and chemistry, I worked for Hanson Premix and then Civil & Marine Slag Cement. I achieved the City and Guilds Parts 1 and 2 (General Principles and Practical Applications) in one year and I then really wanted to, and knew I should, do the ACT course. I was under 30 at the time and was aware of a huge generation gap between existing technical managers in the UK. The only way to broaden my knowledge and succeed in the climate of ever-increasing threats of redundancy and reducing opportunity in the national cement and concrete industry was to undertake the ACT Diploma.

I joined the 2006-08 TALENT distance learning course. This started intensively and remained so throughout. The only way to survive was to read and become familiar with all the books and the common references. When leading an assignment, a switch to an adversarial role to question the submissions of each group member was needed. There was also a degree of chasing and logistics in order to meet deadlines. The assessment and review of the assignments were very rigorous; it was an eye opener to find that some intrinsic principles I believed to be true were not. The assessments also gave me an insight into thought processes and empathy with the mistakes of others; they are still useful in this respect. I enjoyed the revision immensely and the exams even more so - if you ever need to know you have proved something to yourself then just prove it to others. Since the course I am in regular professional contact with my classmates from all over the world and socialise with some of them.

During the course I joined Castle Cement (which subsequently became Hanson Cement) as a technical development manager, but I had no team or financial responsibility. I was probably one year away from redundancy when I finished the course. I completed my ACT project and was awarded a diploma in 2011; shortly after this I joined Ardex, a group of engineered cement companies that operate in 54 countries. I have worked in the UK and Europe with a global as well as a UK role. I am now the UK manager for high technology terrazzo cements and cement-based flooring and render finishing systems; I work in Germany and the UK and I manage a team with a combined experience of over 200 years in the construction industry. All this has happened within two years of completing the ACT Diploma; many of my international colleagues recognise and highly respect this qualification.

## LIAM GUISE

Sika Middle East Services



After leaving school at 16 in 1986 I started my love affair with concrete at Fosroc's International R&D Lab in Aston. After five years and a few visits to the C&CA Training Centre I travelled throughout the UK testing admixtures in concrete. In 1997 I joined Chryso UK, which was then a little-known company in the Lafarge empire. After two years learning about cement manufacture and testing grinding aids I moved to Paris as a manager, not speaking a word of French, and travelled the world, visiting some 24 countries in four years. A new family resulted in a move to Atlanta, Georgia, as a design manager for Lafarge Readymix. In 2005 I moved again to the Lafarge research centre in Lyon. After getting used to a research culture I decided to consolidate my knowledge with an ACT Diploma, and I was accepted on to the 2008-10 TALENT distance learning course.

The induction at Hertford University was a great networking experience and I have many close friends from those few days together. I quickly realised that I knew really very little about the vast subject of concrete. The first few assignments flew by, and my motivation was maintained by my working in a research centre that was full of experts. The mid-course meeting was a great way to re-motivate and continue to work together. As well as completing assignments, we all had to pursue our goal of completing our projects on time. Once again I was fortunate to have Lafarge backing and they gave me a budget for my laboratory trials and results analysis.

I spent countless hours revising for the exams, but with the help of my friends and family I was ready on time and passed with a credit, and then successfully completed my project. Success was sweet. The day I was presented with my Diploma in front of my peers was one of the proudest days of my life.

As I was already a research engineer in one of the best laboratories in the world I had reached my pinnacle. I now knew how to write a decent report, had gained a wide knowledge of concrete technology and I prized my Diploma. I decided I wanted to travel again and in 2010 left Lyon and Lafarge for Dubai and Sika and my current post of a Key Account Manager. The time has flown by and the travelling involved is fulfilling my love for new places and cultures.

The ACT Diploma has given me great confidence and was one of the reasons Sika employed me. The distance learning system was the only way I could have taken the time out of a career to achieve such a qualification. Here in Dubai the Diploma is extremely well known and diploma holders find work very easily. The future for diploma holders is good, and I would recommend anyone to give it a go.

I was fortunate to be asked to become a Diploma Examiner in 2011 and I have had a lot of fun setting questions and marking papers for the past couple of years. This keeps me on my toes, as concrete technology is an ever changing subject.

If you are reading this and are wondering 'is it worth it?' - it is, and yes, you can!

## DAVID SIMONS

BAM Nuttall Ltd



The seed for achieving the ACT Diploma was first sown in 1991 while working as a Senior Materials Technician on the QEII Bridge project for Trafalgar House Construction. At that time my Head of Department had just achieved his diploma and I saw it as a requirement for my own career progression. It wasn't until 2004, after several overseas postings and a move to Edmund Nuttall Ltd (now BAM Nuttall), that I decided that it was time for me to attempt the ACT as the academic balance to my practical knowledge. This decision was reinforced by my company developing more formal job descriptions and role profiles. To differentiate between my role as a Materials Engineer within a support department and those of the site based materials engineers, my current post required either a Degree in Civil Engineering or other relevant technical qualification, studied to advanced level and which entitled corporate membership of a professional institute. The ACT and Institute of Concrete Technology fitted this requirement and also provided evidence of a suitable academic qualification for technician membership of the Institution of Civil Engineers.

I enrolled for the first TALENT distance learning course (2004-6). My experience of this was that it should not be undertaken lightly, particularly for someone like myself with a busy workload. The course is tough but rightly so, as it is this that maintains the qualification's status and ensures that it continues to be recognised by the worldwide concrete industry as the leading academic qualification in concrete technology. I successfully completed my project in 2012.

Whilst not as yet getting any tangible benefit from my present employer, it is obvious from looking at construction journals that employers are looking for higher qualifications to distinguish between potential employees. While this is important for anyone seeking a change of employer, possible overseas employment or a change of career within the concrete industry, more important to me was the self-satisfaction of being awarded the Diploma and the friends and contacts I have made along the way.

## ALAN KIRBY

Kellogg Joint Venture, Gorgon Project, Australia



I started my career in civil engineering as a materials technician with Sandberg in 1973, working on major road and bridgeworks projects in the UK. Concrete was the material of choice for bridges in those days and the more I found out about it as a construction material the more I wanted to know. My formal education in concrete started with a CGLI course in Concrete Practice (now ICT Stage 1) at night school in the mid-1970s.

After a few more years' experience, including a spell in Bahrain, I recommenced my education and graduated with a BSc in Civil Engineering from the University of Paisley in 1981. I then resumed my career as a materials engineer, working in the Middle East and in Borneo before being transferred by my employer, Zublin A G, to New Zealand as the concrete production manager on the Clyde Dam – an approximately 1Mm<sup>3</sup> mass concrete structure. I learned much about mass concrete mix proportioning, pre and post-cooling, placing, rigorous quality control and assurance, and concrete technology in general.

During this period I completed Parts 1 and 2 of the CGLI Concrete Technology and Construction course (now ICT CT and C Stages 2 and 3), by correspondence.

For about the next 20 years, whilst working on a variety of projects in New Zealand, Taiwan and Germany, I 'threatened' to enrol in the Advanced Concrete Technology residential course, contacting Graham Taylor (the then ICT Executive Officer) countless times. It wasn't until 2006 that I finally enrolled in the TALENT distance learning course, whilst working at the Cement & Concrete Association, New Zealand. Prior to this I was often considered (by others) as a concrete 'specialist'/'expert'/'guru'. I believe this was because I knew slightly more than the average engineer/ supervisor on the projects where I was employed. Of course, I always denied being any sort of expert, but little did I know how little I actually knew.

Web-based studying suited my location, family and work commitments at the time. I graduated with the Diploma in Advance Concrete Technology in 2008. Quite simply, the course was excellent. I thoroughly enjoyed the learning experience from day one. Meeting and interacting with my fellow students during the induction course and the mid-point review sessions were both pleasurable and valuable. The combined knowledge and experience of everyone on the course and the course organisers was tremendous. I don't know anyone on the course who was not thoroughly impressed with it. The on-line interaction and sharing of information with the other participants was both informative and fun. Indeed, I have maintained contact with a number of classmates and the tutors through the course website and by personal contact. I learned early in my career that a good engineer/technologist did not need to know everything, but did need to know how to find the answer to almost everything! I now have the contacts to do that!

Of course, earning the Diploma lent some authority to my opinion on matters of concrete technology, and it certainly enhanced my education and experience. I still do not consider myself an expert – rather an experienced journeyman – but I now know that I know more than most about concrete.

The bottom line? I would strongly recommend the course to anyone interested in concrete. I wish I had enrolled years before I did, but even in the latter stages of my career I'm pleased that I gave it a go. I am convinced I have enough years in front of me to develop my education and experience more fully.

## GRAHAM STEPHENSON

Petrofac Offshore Capital Projects



For most of my working life I have been involved in the technology of civil engineering materials, including aggregates, concrete and asphalt. I started as a laboratory technician and have progressed to posts such as Materials Engineer, Technical Manager and QA/QC Manager. It was during my time as Technical Manager with Dubai Readymix that I realised I certainly did not know as much about concrete technology as I had previously imagined and it was then that I decided that I would study for the ACT.

I enrolled on the 2009-11 TALENT distance learning course, which I enjoyed despite the fact that it consumed a significant amount of time. I was, however, fortunate in that I could usually find time at work to spend a few hours on my assignments. I initially found the group assignments frustrating, especially if I felt that other group members were not doing their fair share. However, I eventually adopted the approach that I would consider each group assignment as if it was an individual assignment and answer this in full myself. I really enjoyed completing the individual assignments and found that these give me an in-depth knowledge of the topics covered.

Despite passing the examinations at the first attempt I was disappointed at my own performance as I had targeted better grades. I was also disappointed that there were only eight of us that passed at the first attempt, a significantly lower proportion on previous years. I believe that our group was no less able than in previous years and several have subsequently passed on re-sitting.

Obtaining the Diploma has not made a significant difference to my current position other than giving me greater confidence about providing answers to concrete technology questions. However, I am hoping that having the Diploma, along with being a corporate member of the ICT, will provide the credentials to enable me to operate as an independent concrete technologist in the future.

## AAGI JOHN KOLLANNUR

M/s HBK – Remix



I graduated in Mechanical Engineering in 1993 and started working in the Middle East in 1994. Due to some sudden job shuffles, I found myself working from 1998 in concrete sales with M/s Delmon Readymix in Bahrain. During my tenure I progressed to Production Engineer in charge of a plant, and at the time of leaving them in September 2008, I was the Operations Manager for one of their subsidiary companies.

During this time, I found that experience in working with a readymix company alone would not help me to get full professional recognition. I then became aware of the ICT and Mr Ray Austin, my workplace mentor, confirmed in 2005 that working towards corporate membership was an appropriate route to follow.

I had to obtain the City and Guilds Parts 1 and 2 (General Principles and Practical Applications) before I could join the TALENT ACT distance learning course and I enrolled for this in 2006. This proved to be very enlightening and inspiring with enthusiastic colleagues, some of whom had a sound knowledge about concrete while others, like me, came from backgrounds with less experience. The two years of the course were one of the best learning experiences in my life; the tutors were very supportive throughout and subsequently have remained so.

Soon after achieving my Diploma, I was interviewed by a group of concrete professionals in the UAE for a job with the prestigious M/s Unimix, which at the time was producing about 8000 m<sup>3</sup> of concrete a day, the highest volume in Dubai! They were impressed with my advanced knowledge of concrete technology, which I could put across thanks to the ACT course, and immediately hired me as their QA/QC Manager. I joined them in August 2008 and I was subsequently promoted to the company's Technical /QA Manager.

The ACT Diploma gave me a leading edge in concrete technology and helped me to stand out among the concrete professionals in the Middle East. This was instrumental for my current employer M/s HBK Remix from Qatar to find me and to offer me the role as Manager - Technical & Operations in Qatar, an assignment that I accepted in September 2010. The option available to register with Engineering Council UK through the joint SEE and ICT membership is another career milestone that I am looking forward to and which has been made possible by the ACT Diploma. Also, ICT membership brings opportunities to learn about new developments in concrete technology and to interact with concrete professionals at various venues.

Overall, the ACT Diploma has been the helm of my career growth and has steered me through the toughest times in recession-hit job markets.