



# Concrete field testing technician: ACI-ICT certification programme rolled out

*The Institute of Concrete Technology, in partnership with the American Concrete Institute whose long-established certification scheme is enshrined in best practice wherever ASTMs apply, offers a scheme tailored specifically to EN Standards. It aims to assess and validate the skills of technicians in performing specified tests on fresh concrete. Edwin Trout and Raman Mangabhai look at the scheme's roll-out.*

**T**wo-day sessions include a copy of the workbook, revision exercises and practice on testing equipment, multiple-choice examination and practical assessment by ACI-ICT appointed examiners. Successful candidates are awarded a certificate and a card valid for five years. The scheme is co-sponsored and jointly badged as ACI-ICT to ensure the global recognition of certified technicians to an agreed benchmark.

The months since the ACI-ICT scheme for certifying concrete field testing technicians (CFTT) to EN Standards was launched last year have seen a rapid roll-out of the programme and demonstrated a considerable degree of demand.

The first session to follow the April launch was held on 14–15 June 2019 in Belfast. It was a preliminary session with the aim of participants becoming examiners to help extend the CFTT programme in Northern Ireland. The session was applauded for its comprehensive reinforcement of correct practice in the testing procedures so critical to

concrete construction. All six candidates were successful in gaining certification and several have since been appointed as examiners to the scheme.

The first session publicly promoted to industry – rather than prospective examiners – was held in Whitminster, Gloucestershire, on 17–18 September and was kindly hosted by the Cullimore Group. It was fully

Above: The latest session – in Riga, Latvia.



An example of the site card.



Prospective examiners in Belfast.

subscribed with ten candidates and there was a waiting list for cancellations. Candidates came from a variety of test houses and independent ready-mixed concrete suppliers, along with Aggregate Industries and Breedon Group. There was even one who came especially from Latvia.

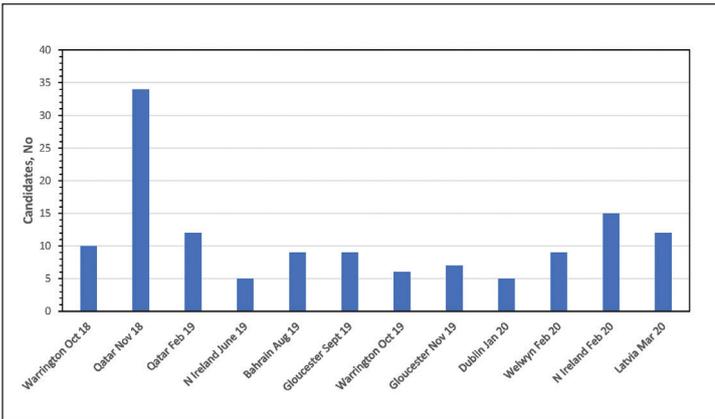
On the day, and setting the pattern for the following sessions, the two examiners led the cohort through the requirements of the Standards and in the early afternoon undertook a practical demonstration of the seven procedures by way of demonstration. Finally, the candidates sat a surprisingly exacting multiple-choice examination of 64 questions. On day two, each candidate took a turn to attempt a satisfactory performance of the seven sampling and testing methods covered. Of the nine attending, seven passed and have now been certified with an ACI-ICT co-branded certificate and site card, each valid for five years.

On 28–29 October 2019, a second session was held further north, in the Warrington laboratory of GCP Applied Technologies, with GCP's Antony Hegarty joining the team of examiners. Then on 5–6 November, a further seven attended a follow-on session at Whitminster, including one long-distance candidate from Australia.

### Review

An end-of-year review saw the ICT's workbook updated to reflect the latest amendment of the Standards (EN 12350<sup>(1)</sup> and EN 12390<sup>(2)</sup>) and the written examination extended to 90 minutes and adjusted to weight the marking between sections more equitably. There are now 70 questions rather than 64, with an equal number of questions for each of the seven Standards included. In addition, branded banner stands were purchased and the scheme publicised with an article in *Concrete International*<sup>(3)</sup>.

The programme entered 2020 with a flurry of activity. Much the same as was arranged in Belfast last June, five prospective



ACI-ICT EN Standards CFTT sessions.



Mattest laboratory equipment, Dublin.

ICT assessors were themselves examined at a session arranged with the Irish Concrete Society and kindly hosted by Mattest in Dublin on 20–21 January. Back in England, the next session was held at Sika’s premises in Welwyn Garden City early in February. Ten candidates attended from a range of companies based in the south-east, along with two others resitting the written exam.

Following the success of the initial Belfast session, the ACI-ICT certification programme is now being made more widely available to the sector in Northern Ireland. The scheme there is being conducted with the financial support of the Construction Industry Training Board NI and the involvement of The Concrete Society Northern Ireland Region, with Bryan Magee the local co-ordinator. The first ‘open’ session was held in Crumlin at the end of February, with candidates attending from both sides of the border. It was oversubscribed and a reserve list is now in place for the next session.

Early March saw the ICT examiners travel to Riga for the first session in Latvia – just before Covid-19 restrictions were introduced – where the candidates went on to achieve an exemplary pass rate of 100%.

**Positive**

The reception by industry has been overwhelmingly positive, with the major integrated materials companies represented among the candidates and feedback such as: “I am very pleased; the course was really well run and as a newcomer to the industry was informative yet enjoyable”; “The study booklet covered everything, as you’d expect... the revision session was very good and the practical demonstration was very helpful”; and “the examiners were exemplary”.

And the results have been very satisfactory

Table 1 – Certification in numbers

Date	Candidates	Resits	Passes
2018	44	0	16
2019	56	42	54
2020	41	2	38
Total	141	44	108
Pass rate			77%

Note: The pass mark is 70% overall, with at least 60% required for each of the seven sections and a pass in both the practical and written exams.

too. It’s a demanding process, with some candidates undertaking two attempts to achieve certification, but the figures indicate a very pleasing uptake by industry and achievement by individuals.

With expressions of interest from half a dozen more companies, the CFTT steering committee is now actively planning sessions for the summer and autumn in both England and Northern Ireland, while making provision for additional sessions in the Republic of Ireland and the Baltic states.

Two companies, moreover, have approached the ICT for in-house sessions for their own staff, at locations in Scotland and northern England. ■

**Further information:**

A future session will take place at Mapei’s premises in Halesowen on 19–20 October. Visit: [www.theict.org](http://www.theict.org) for more details.

**References:**

- BRITISH STANDARDS INSTITUTION, BS EN 12350. *Testing fresh concrete*. BSI, London, multiple parts.
- BRITISH STANDARDS INSTITUTION, BS EN 12390. *Testing hardened concrete*. BSI, London, multiple parts.
- LEWIS, R.C. and TROUT, E.A.R. ACI and ICT Collaborate on Certification Program. *Concrete International*, Vol.42, No.2, February 2020, pp.27–29.