



SAFE ELECTRIC Newsletter

To All Safe Electric Registered Electrical Contractors

I would like to take this opportunity to thank you all for your co-operation throughout 2018. It has been a very busy year and it is great to see the electrical contracting industry expanding after almost ten years of decline.

It is never easy for Registered Electrical Contractors while their Audit and Inspection is being carried out, but our Inspectors will conduct the inspection in a fair and professional manner and will always be as helpful as possible.

I would ask you to engage with your local Inspector if you have any issues or technical difficulties as they will give you whatever help they can, and please remember the Inspectors carrying out inspections of your electrical installations are not looking for breaches of the National Rules for Electrical Installations, they are looking for the absence of any breaches to these rules.

Thanks to you, the standard of electrical installation work in Ireland is improving and we hope this trend continues. I would like to ask for your continued co-operation in conjunction with Safe Electric in providing proper functioning and safe electrical installations for all consumers of electricity in the future.

Finally I would like to wish you, your family and friends a Merry Christmas and a Happy New Year.



Yours sincerely,

John Clare

JOHN CLARE

Safe Electric Chief Inspector

Merry Christmas
AND HAPPY NEW YEAR

We would like to take this opportunity to wish all our members a very Merry Christmas and a Happy New Year

CHRISTMAS OFFICE HOURS

Mon 24th Dec	Closes at 1.00pm
Tue 25th Dec	Closed
Wed 26th Dec	Closed
Thurs 27th Dec	Closed
Fri 28th Dec	Closed
Mon 31st Dec	Closed
Tue 1st Jan	Closed
Wed 2nd Jan	Office re-opens (8.30am)

NEW WIRING RULES



Ireland's new Wiring Rules, also known as Irish Standard I.S. 10101:20xx, has been issued for Public Consultation by the National Standards Authority of Ireland (NSAI). The public consultation period is a three-month window in which the Electrotechnical Industry has the opportunity to provide feedback on the draft Standard which will eventually replace the existing National Wiring Rules (i.e. ET101: 2008).

Anyone who wants to view the draft I.S.10101:20xx Standard and submit comments can do so by logging onto the "Your Standards, Your Say" portal through the NSAI website at <http://www.nsainep.ie/>. For comments to be considered, they must be submitted on the Official NSAI commenting template which can be accessed via the platform.

The public consultation phase will close on February 28th, 2019. Following the public enquiry, comments received will be reviewed by NSAI's Technical Committee 2 (TC2) experts and used to enhance the quality of the final publication.



More Details regarding the proposed new wiring rules is shown on pages 4 & 5 of this newsletter.

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ESB Networks have revised the policy on connection of Micro Generation.

The only revision is in Table 1 where the ROCOF (*Rate of Change of Frequency*) Trip setting has changed from 0.5Hz/s to 1.0Hz/s.

<https://www.esbnetworks.ie/docs/default-source/publications/conditions-governing-connection-and-operation-of->

The revised policy can be found at Conditions Governing Connection and Operation of Micro Generation:



PROSECUTION



Wicklow man given criminal conviction and ordered to pay €2,345 for illegally undertaking restricted electrical works

The Commission for Regulation of Utilities (CRU) secured a prosecution against Dara Griffiths of Inspired Homes for illegally carrying out restricted electrical works without being a registered electrical contractor (REC) with Safe Electric.

The case was heard on 10 December 2018 and presiding Judge Lucey heard evidence from Mr. Seán Ward, Electrical Investigative Officer with the CRU, that the works carried out did not conform with the relevant standards required.

The electrical works were undertaken in a house in Monkstown, Co. Dublin in March 2017. Significant breaches of the national wiring rules were found resulting in the potential risk of a house fire. Judge Lucey fined Mr. Griffiths €500 for the offence of illegally undertaking designated electrical works and awarded costs of €1,845 plus VAT to the CRU.

It is illegal for an individual or company to carry out restricted electrical works or to portray themselves as registered, unless they are REC with Safe Electric. The penalties for non-compliance include a fine of up to €15,000 and/or imprisonment for up to 3 years.

This successful prosecution sends out a strong message to both unregistered electrical contractors and consumers. If an electrical contractor does not have the required registration or cannot prove membership of the Safe Electric scheme, consumers should not use them.

Christmas Postage Deadlines



The last day for postage is 20th December (19th for Northern Ireland). This guarantees delivery before Christmas

Please ensure that you allow 2-3 days for your certificates to be processed and 3-5 days for delivery of any orders placed (certificates, documentation etc.)

IMPORTANT!

Please ensure that **you** are fully compliant and that your membership is paid before you **undertake** any 'Restricted Works' (Domestic)

Frequently Asked Questions

Q1 - Can I run NYMJ cable on an external wall.

A. NYMJ cable may not be suitable if it is exposed to direct sunlight. Please check the manufactures data sheets.

Q2 - I plan to run a lighting circuit through a lift shaft for some external light on the building. Is this ok?

A. This is not permissible Rule 528.1.2 states: *No cable shall be run in a lift shaft unless it forms a part of the lift installation.*

Q3 - I have a 3 phase supply that in an installation that is currently being extended. There is an existing 3 phase main panel, can I use one phase to supply a distribution board in the new installation?

A. Yes, The rules do not prohibit this. Just ensure that the three phases are balanced as practically as you can. This may mean modifying the existing installation.

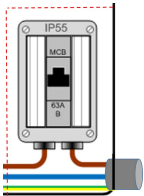



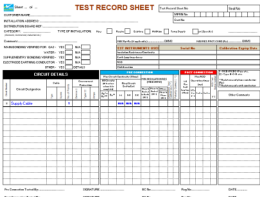
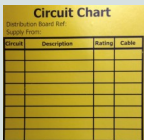




Q4 - I have been asked to wire a new central heating system from an existing supply. The current heating supply is not RCD protected, is this ok?

A. If you introduce new wiring to the installation for pumps, boiler etc. then that part of the installation must comply with the current rules. Rule 555.3.2 States: *A circuit supplying auxiliary equipment associated with water services and water systems (e.g. pumps) shall be protected by an RCD having a rated residual operating current not exceeding 30mA. This requirement does not apply to equipment used for industrial and similar purposes.*

Q5 - I have just completed an 'Emergency Lighting Installation' The customer is now looking for a certificate. Where can I obtain one?

A. The Annex of the IS3217 'Emergency Lighting' contains the 'Model Certificates' you will require. The current standard is the 2013 version with 2017 amendment. The standard give the detailed requirement regarding emergency lighting installations. A hard copy can be ordered from our office or it can be downloaded via the NSAI website. The requirement is that you copy the Certificates on to your company letterhead. Please ensure that the installation totally complies with the standard prior to it/them being issued.

Top 10 Rule Breaches Found in 2018

No	Rule No	Breach	Comments
1	533.3.5	Main Protective Device Incorrect.	 <p>This has been a top rule breach for a number of years. Again in 2018, this is top rule breach identified by Safe Electric inspectors. Please see back page of this newsletter.</p>
2	544.2.8	Metal sink not bonded.	 <p>Please ensure that all metal sinks with draining boards are bonded to the nearest protective conductor (usually a local socket outlet).</p>
3	526.5.1	Connections of conductors to equipment not made in suitable enclosures.	 <p>We come across light fitting's or smoke detectors for example where connectors are used and just taped up . Please ensure a suitable enclosure is used.</p>
4	63	Certificate incorrectly filled, not issued or not returned to Safe Electric.	 <p>Please ensure that certs are correctly filled and issued as required. It is a requirement that a certificate is issued for ALL controlled works that are undertaken. For example if you install new circuits to a kitchen extension, a cert No 3 should be issued and a copy returned to Safe Electric.</p>
5	61	Testing and completion of Test Record Sheets	 <p>Either the testing is incorrectly carried out or the Test Record Sheets are incorrectly filled. Inspectors are also being told that the Test Record Sheet is not available. This is not acceptable.</p>
6	530.5.12	Distribution Board not correctly labelled	 <p>It is very important that each outgoing circuit is clearly and correctly identified.</p>
7	555.1.2	No local isolation for appliances	 <p>Every appliance shall be provided with a separate isolating switch that is located within 2mts.</p>
8	514.3	Incorrect cable colours used	 <p>Inspectors still come across cables with the black being used as a neutral or a blue being used as a live or switchwire. This is <u>not</u> permissible.</p>
9	526.5.2	SWA cables not correctly terminated	 <p>Adequate electrical conductance shall be provided between metal sheaths or armouring of cables and the earthing terminals of equipment. This requires proper design. A proprietary gland is usually required. Please gland both ends of SWA cables (where possible).</p>
10	705.411.3.01	No RCD protection in agricultural installations	 <p>It is a requirement that ALL circuits in agricultural environments require RCD protection.</p>

Please avoid these common rule breaches in 2019!



WHATS NEW IN IRELAND'S NEW NATIONAL RULES FOR ELECTRICAL INSTALLATIONS?



Ireland's new Wiring Rules, also known as Irish Standard I.S. 10101:20xx, has now been issued for Public Consultation by the National Standards Authority of Ireland (NSAI). The public consultation period is a three-month window in which the Electrotechnical Industry has the opportunity to provide feedback on the draft Standard which will replace the existing National Wiring Rules¹ in 2019.

This article aims to highlight some of the key proposed changes in the new standard and describe how you can get involved in the public consultation phase.

¹ET101:2008 (Incorporating Amendment No. 1, Amendment No. 2 and subsequent amendments)

It has been over ten years since the publication of ET101 in Ireland and there has been a significant change in the regulatory and standards development landscape. Under the Electricity Regulation Act (1999), the Commission for Regulation of Utilities (CRU) now regulate the safety of electrical installations in the country and Safe Electric are the Safety Supervisory body tasked with inspection and monitoring of the certification process. In terms of standards development, NSAI are now responsible for providing a comprehensive set of standards for the electrical industry. In respect of the new National Rules for Electrical Installations, NSAI ETC Technical Committee (TC) 2 is specifically Ireland's national mirror committee responsible for maintenance and development of these rules.

It is important also to highlight that the European Committee for Electrotechnical Standardisation (CENELEC) have continued to revise the 60364 series of Harmonisation Documents for which there is ongoing adoption by European member states. These documents form the basis for the development of national wiring rules, and Ireland, through the national mirror committee (i.e. ETC TC2) has had a vote and a say in developing these documents.

A summary of the proposed key changes in I.S. 10101:20xx are as follows;

I.S.10101 – GENERAL

What were known as “Parts” (i.e. Parts 1-7) in ET101:2008 are being relabelled as “Chapters” in I.S.10101:20xx. This change will serve to enhance readability of the document into the future.

I.S.10101 - CHAPTER 1 - SCOPE

Chapter 1 has not changed, and the scope still refers to the fixed wiring installation right up to the plug or isolator. Equipment plugged into or wired into the isolator is handled under other standards, but not by the National Rules for Electrical Installations.

I.S.10101 - CHAPTER 2 - DEFINITIONS

Definitions are now all contained in Chapter 2 to enhance readability. The definitions list has been expanded and certain definitions have been modified to align with the definitions provided in the International Electrotechnical Vocabulary.

I.S.10101 - CHAPTER 4 – PROTECTION FOR SAFETY

Clause 411.3.4

Residual Current Devices (RCDs) will now be required to be installed on lighting circuits in domestic premises.

Clause 421.7

Arc Fault Detection Devices (AFDDs) will now be recommended for circuits installed in locations with particular risk, such as;

- in premises with sleeping accommodation;
- in locations with risks of fire due to the nature of processed or stored materials, i.e. BE2 locations, (e.g. barns, wood-working shops, stores of combustible materials);
- in locations with combustible constructional materials, (example = wooden buildings);
- in fire propagating structures;
- in locations with endangering of irreplaceable goods

422.4 Locations with combustible constructional materials

Wiring connections in hollow walls may refer to either modular pods or modular wiring assemblies with connections being accessible.

I.S.10101 - CHAPTER 5 – SELECTION AND ERECTION OF EQUIPMENT

Clause 512.1.5

The above Clause will require sign off by the appropriate person that the installation complies with the Electromagnetic Compatibility (EMC) Directive 2014/30/EU. The installation will of course apply only to the fixed wiring and switchgear, and not to any appliance connected after the isolator or socket.

Clause 527

The above Clause requires all cables to be rated Class Dca s1,d2,a1 in accordance with EN50575.

Clause 530.6.1

Distribution boards in domestic installations will need to be manufactured from “non-combustible material”. This requirement builds on the safety criteria specified by ET101:2008 which required distribution boards installed in escape routes to behave like a fire proof enclosure, with the exception that the said clause did not apply to domestic premises.

Many domestic premises have distribution boards installed in the main entrance hallway, which is the escape route, and therefore the Clause 530.6.1 will improve protection for the escape route. Non-combustible material may include steel or metal boards.

Clause 531.3.3

Residual current devices (RCDs) Type AC are not recommended in new installations. RCD technology has improved greatly, and alternative devices now provide better protection.

Clause 534

This is a complete new section; provides details on selection of Surge Protection Devices (SPDs) including wiring diagrams, especially where lightning protection will be installed in a building.



I.S.10101 - CHAPTER 6 – INSPECTION AND TESTING

Chapter 6 has been completely revised to align with the CENELEC Standard. Model certificates have now been removed. As previously mentioned, CRU now oversee the inspection and verification process, and certificates are issued by Safe Electric. It is necessary to highlight that certification will soon transition to an online format and it is for this reason model certificates are no longer included in the Standard.

I.S.10101 - CHAPTER 7 – SPECIAL LOCATIONS

The associated CENELEC 60364 series of HDs have been updated which is now reflected in I.S.10101:20xx

Part 722 Supplies for Electric Vehicles

Charging for Electric Vehicles was published as an amendment to ET.101:2008 in 2017. This section is now consolidated as Part 722 in Chapter 7 and has unchanged from the version released previously.

Part 710 Installations in Medical Locations

Part 710 has been revised in accordance with HD 60364-7-710:2012 and contains several changes including;

Clause 710.411.6.3.101

Now requires risk assessment of "other electrical equipment" before being used in the patient environment.

Clause 710.415.2.2

Now requires the resistance of supplementary protective bonding conductors in group 1 as well as group 2 medical locations, to not exceed 0.2 Ohms.

Clause 710.55.101

Now requires the intended use of a medical location to be considered with regard to deciding on the number of socket outlets to be protected by a single RCD.

Clause 710.55.102

Now requires that socket outlets of medical IT systems in group 2 locations be unswitched, coloured blue, and clearly and permanently marked "Medical Equipment Only".

Part 730 Onshore Units of Electrical Connections for Inland Navigation Vessels

This section is entirely new.

I.S.10101 – CHAPTER 8 – ENERGY EFFICIENCY

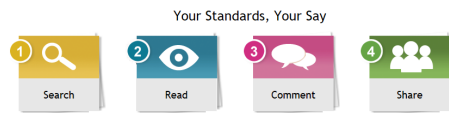
This section is entirely new and provides recommendations and guidelines on design and erection of electrical installations to optimise energy, including metering and load control and minimisation of losses in conductors.

IS.10101 – WHAT HAPPENS NEXT?

NSAI seeks input from the electrotechnical industry on I.S. 10101:20xx. Anyone who wants to view the draft I.S.10101:20xx Standard and submit comments can do so by logging onto "Your Standards, Your Say" web portal through the NSAI website at <http://www.nsainep.ie/>. For comments to be considered, they must be submitted on the Official NSAI commenting template.

The public consultation phase will last for three months from December 1st, 2018 to February 28th, 2019. Following the public enquiry, all comments received will be reviewed by TC2 (committee) experts and used to enhance the quality of the final Standard before publication in 2019².

²Post publication, there will be a six-month transition period before the new requirements come into effect. However, installations may be designed in accordance with the 'new version' before that date.



Anyone who wants to view the draft I.S.10101:20xx Standard and submit comments can do so by logging onto the "Your Standards, Your Say" portal through the NSAI website at <http://www.nsainep.ie/Home/Details/13124>

[//www.nsainep.ie/Home/Details/13124](http://www.nsainep.ie/Home/Details/13124)

For comments to be considered, they must be submitted on the Official NSAI commenting template which can be accessed via the platform.



We will be running a number of Roadshows during the course of next year. We intend to cover as many counties as practical. The shows content will focus on the key changes to the forthcoming 5th Edition of the National Wiring Rules. Once the final version is approved we will confirm venues and dates. We will keep you informed of progress. The Roadshows will be undertaken in conjunction with the NSAI. Please try to attend when a show comes to a location near you as this will be your opportunity to gain a good understanding of many of the rule changes.



NOT ALL COWBOYS RIDE HORSES

Always:

- ✓ Use a Registered Electrical Contractor
- ✓ Ask for a Completion Certificate



ROI only.

8 out of 10 homeowners aware they need to hire a REC

The Safe Electric media campaign ('Not all cowboys ride horses') ran this year from June through September. The campaign aims to communicate three key messages to homeowners: *Only hire a REC for domestic electrical works; Always ask for a completion certificate; and Use the Safe Electric website to find a REC.*

The campaign is managed by the CRU and funded by ESB Networks to promote electrical safety to homeowners.

The campaign was extremely successful, with research showing that 3 out of 4 homeowners saw or heard the campaign (on TV, through radio, in print, or online).

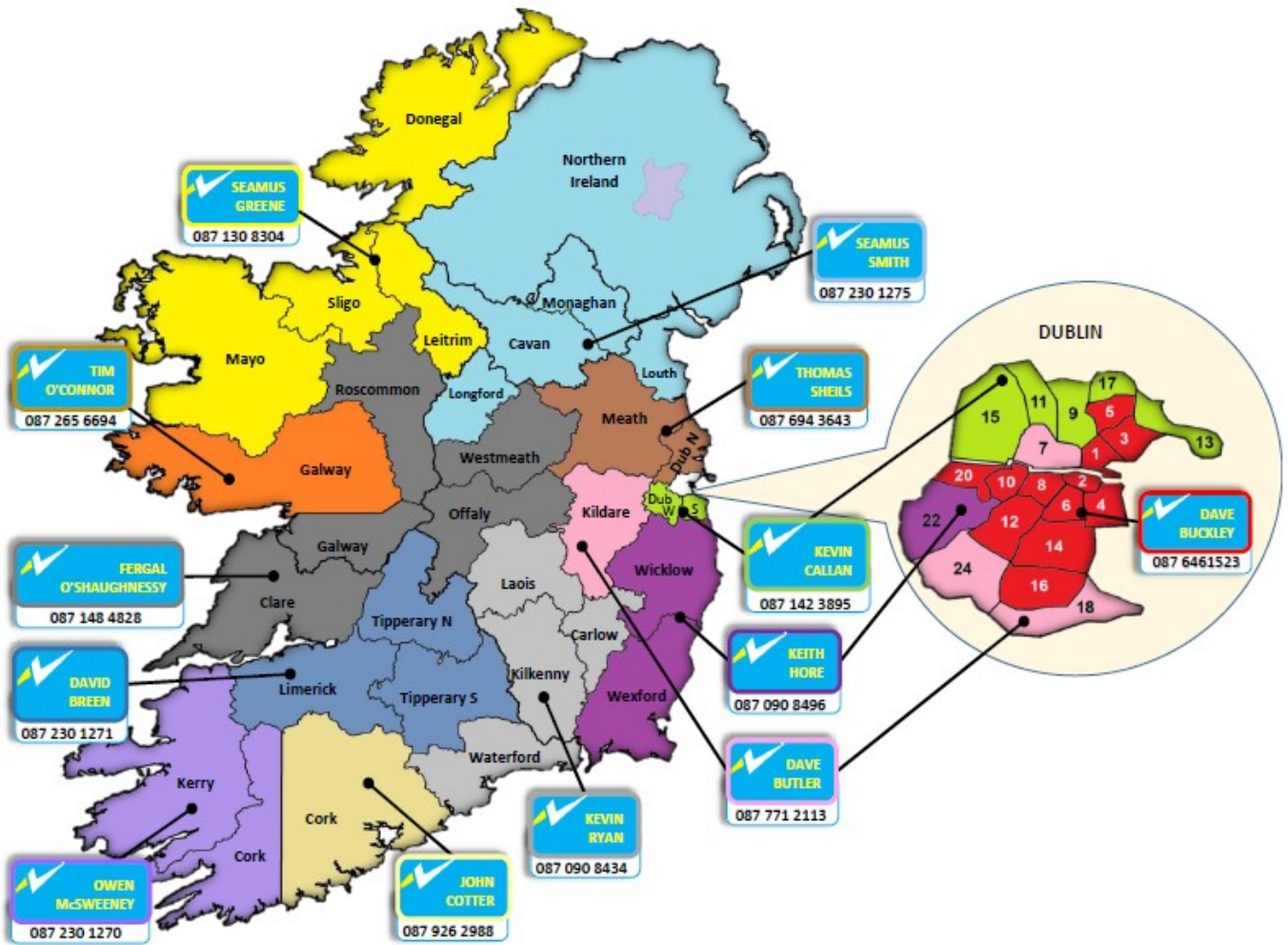
Research also showed that the vast majority of homeowners (about 80%) know that they can only hire a REC for domestic electrical works. And when asked who they would hire to do electrical works in their home, only 7% of homeowners said that they would hire someone other than a REC or electrician.

However, younger homeowners, especially those between 25-44, are least likely to understand that only a REC can undertake domestic electrical work. Next year's campaign will look for ways to better reach younger homeowners.

Promotion of the Safe Electric brand and website increases the likelihood that homeowners will use Safe Electric to find RECs in their area, or will check the status of their electrician. This stops illegal works before they begin, and ensures that jobs are going to those who are qualified – RECs.

The Safe Electric media campaign will run again in 2019.

2019 Safe Electric Inspector Areas



DISCIPLINARY MATTERS

A total of 17 Registered Electrical Contractors were brought to disciplinary hearings this year. The reasons for RECs being disciplined ranged from issuing certificates for works carried out by others, poor installation safety compliance, installations left in a dangerous state, and installations left with unsatisfactory testing being carried out. The lack of 'Test Record Sheets' was a major factor for the majority of RECs being disciplined.

IMPORTANT!

Please ensure that the Main Overcurrent Device is installed **before** the pre connection certificate is issued!

Once again we are highlighting the requirements for installing the main overcurrent device in a domestic or similar installation. The reason being that this rule was recorded on our database as the highest amount of breaches issued by Safe Electric Inspectors in 2018. Inspectors would often come across installations where the Main Overcurrent Device is not installed (when required) or in breach of the rule detailed below. Let's try and improve on this in 2019?

533.3.5 Main over-current device.

a) The protective device shall be an MCB.

Occasionally Inspectors come across fuses.

b) In the case of installations having a maximum import capacity (MIC) less than 50 kA, the MCB shall have a rated short-circuit breaking capacity of at least 9kA.

Occasionally Inspectors come across 6kA MCBs most manufactures produce 10kA.

c) The MCB shall be located in a weatherproof enclosure having a degree of protection IP55 and made of non-conducting self-extinguishing material (750°C).

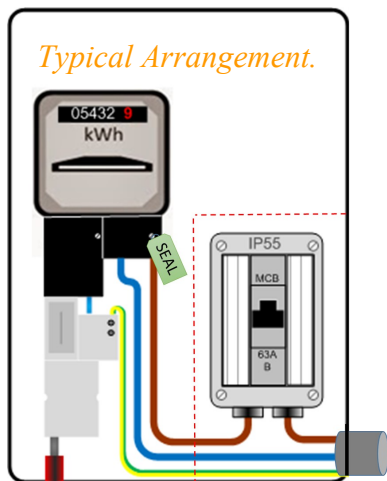
Regularly Inspectors find that the IP rating has not been maintained, leaving holes or gaps whereby moisture can penetrate.

d) A hinged transparent cover shall provide access for operating the MCB. Access to live terminals shall be only by means of a tool or key.

Not often a problem, please ensure that the lid is firmly closed at all times to reduce the ingress of moisture.

e) The enclosure shall be mounted only at the bottom right-hand side of the meter cabinet, and sufficient space shall be allowed for mounting additional equipment by the DSO as the need may arise.

Regularly Inspectors find that the enclosure is incorrectly located, please ensure that the enclosure is mounted as close as practical to the bottom right hand corner.



Typical Arrangement.

As required by the CRU please ensure that a seal is fitted to the meter before the Post Connection Cert is issued.

Accredited Verification & Certification Course Providers

Listed below are course providers where you can obtain a QC number

Centre Name	Address	Contact
Designer Group Training Academy	52 Nore Road Dublin Industrial Estate Dublin 11 D11 V667	01 960940 / 0877477487 seanpurcell@designergrp.com
Future Skills Ireland Ltd	47B Keeper Road Drimnagh Dublin 12	01 5324058 info@futureskillsireland.ie
iSkill Training	12A & B Bluebell Business Park Old Naas Road Dublin 12	01 4242440 info@iskill.ie
METAC Ltd	Mountrath Enterprise Park Portlaoise Road Mountrath Co. Laois	057 8756540 info@metac.ie
Waterford Wexford Training Services, WWETB	Waterford Industrial Estate Cork Road Waterford X91 PX02	051 301500 (Waterford) 053 9143602 (Wexford) infotraining@wwetb.ie
ECSSA	Coolmore House Park Road Killarney Co. Kerry	064 6637266 info@ecssa.ie
Cavan & Monaghan Education & Training Board	CMETB FET Campus Dublin Road Cavan	049 4353906 / 4353923 EdelCoyle@cmetb.ie

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