Energy Training for Building Construction Workers for Low Energy Buildings

BUILD Up Skills QualiBuild

Report Title: Roadmap Implementation and National Roll-Out: Roadmap Supporting Measures

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Prepared By: Padraic Cullen and Ciaran Lynch, LIT

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Executive Summary

The QualiBuild project is part of the EU’s Build Up Skills programme which is aimed at upskilling the construction workforce across Europe, particularly with regard to energy efficiency in building construction. The Build Up Skills Ireland (BUSI) project which preceded the QualiBuild Project identified the need for enhancing the knowledge of construction workers in Ireland and of those who train them. It also identified the need to develop a mechanism or register, through which those with the required knowledge and skills could be identified and acknowledged by others in the construction sector, or those who would require their services.

The QualiBuild project which was a response to the BUSI review, was, therefore, primarily focused on three key areas.

1. First, the design and piloting of a training programme – Foundation Energy Skills (FES) - for construction workers to upskill their knowledge in energy efficiency and associated construction techniques.
2. Second, the development of a course to train-the-trainer and upskill those charged with delivering the FES programme.
3. Finally, the development and piloting of a skills register for construction workers.

While these were the three key elements of the project, however, another important element of the project was to examine how the programmes developed and piloted during the project would be rolled out at a national level. A summary of the approach to this roll-out and of the responses received is set out below.

The successful rollout of the training programmes requires a number of key things –

1) An organisation willing and able to take on the responsibility and coordination function for the roll-out
2) Finance to pay for the programme delivery
3) Organisations willing to deliver the training courses
4) The development of a mechanism, such as the Construction Worker Skills Register, which would make it worth the while of construction workers participating in the courses and

5) The continuous promotion and highlighting of the programme and the register and of their importance.

In addition to these requirements other support measures were identified as being necessary. This report outlines conclusions regarding these measures.

Support for the National Roll-Out of FES was sought through meetings and discussions with various government bodies (including local authorities and the Sustainable Energy Authority of Ireland - SEAI) and professional institutes such as the Royal Institute of Architects of Ireland (RIAI), Society of Chartered Surveyors Ireland (SCSI), Engineers Ireland (EI) and the Irish Building Control Institute (IBCI). The focus of these discussions was to ascertain the possibility of inserting the requirement of providing proof of quality training (such as FES) into the procurement selection criteria for construction projects, the intention being that this might act as a stimulus for contractors to send their employees on training courses such as FES and also bring pressure to bear on the Government to provide the necessary legislation which would make FES mandatory for all Building Construction Workers. A final response to these discussions has not been received at the time of writing.

The Construction Workers Skills Register is developed and is in the process of being piloted. Actions to support the use of the register were also identified.
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ROADMAP SUPPORTING MEASURES
Report 6.3 Roadmap Supporting Measures

1.1 Background

It is proposed that the training requirement for all building construction operatives and craft workers will ultimately become a mandatory/standard requirement in the Construction Industry. Some of the mechanisms to stimulate and encourage workers to complete and upgrade their training were considered for this report and are outlined below.

Six measures were identified as necessary to support the training actions outlined in the BUSI Roadmap. These supporting actions (S.1-S.6) reflect the changes that need to be addressed if the training actions are to have their desired effect.

1.2 S.1 Introduce Industry Driven Training Requirements

1.2.1 Introduction

This supporting action is closely linked to supporting action S.4 Develop a Quality Building communications campaign. It was envisaged that if the market (homeowners etc.) was informed by the media (through advertising etc.) of the need for Quality then it would stimulate the Industry into providing well trained and suitably qualified contractors. If homeowners were made aware that they had a choice between employing contractors with a quality trained workforce and those that hadn’t then they would insist on the former. This in turn would act as a stimulus for contractors to send their employees on training courses such as FES. Another stimulus for encouraging training take-up would be for industry to insist/strongly encourage their contractors to undergo training if they want to tender for their work or remain on approved contractor registers/frameworks.

1.2.2 Financial Institutions

The ideal situation would be that future loan documentation for self-build and home improvements would stipulate that the works can only be undertaken by quality accredited builders. This would act as a very positive stimulus in encouraging contractors to upskill their workforce. The main Lending Institutes acknowledge the latest Building Control Regulations
(BC(A)R) and understand that the Assigned Certifier must now be a chartered architect, engineer or surveyor and listed on their respective institute’s registers. These banks also know that this latest legislation has come about as a direct result of the problems now coming to light as a result of self-certification and lack of attention to detail.

Some banks offer preferential lending rates to homeowners wishing to carry out Energy Upgrade works on their homes.

Many of the larger financial institutions have published guides to building or renovating homes and this is where the requirement for quality trained workforces could be introduced. Some lending institutes were approached to ascertain whether they would be willing to include the need for proof of quality training in their Loan Guidance Documentation. Unfortunately this suggestion will not gain traction with procurement departments until such a time as courses such as FES are readily available, accessible and affordable to all contractors. If legislation was in place making quality training mandatory then loan documentation would be obligated to reference same.

1.2.3 Sustainable Energy Authority Ireland (SEAI)

QualiBuild Project Team Members met with the SEAI on a number of occasions both at Steering Committee Level and on a one-to-one level. SEAI were generally very supportive of the project and were particularly interested from a Quality Control perspective. The SEAI are currently running three grant aided schemes: - Better Energy Homes, Better Energy Warmer Homes Scheme and Better Energy Communities\(^1\). They also have an Approved Contractor’s Register with upwards of four hundred contractors listed\(^2\). At the moment, the main criteria for tendering for SEAI work and getting on the register is threefold, namely: contractors are required to prove that they are tax compliant, provide proof that their insurances are in order and also furnish the required Health and Safety documentation, none of which are quality or energy efficiency training related.

The SEAI in their discussions with the project team indicated a willingness to commence signalling to their contractors that the requirement to provide proof of quality training will shortly be coming down the line in much the same way that it will shortly be compulsory for

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\(^1\) [http://www.seai.ie/Grants/](http://www.seai.ie/Grants/)
\(^2\) [https://hes.seai.ie/GrantProcess/ContractorSearch.aspx](https://hes.seai.ie/GrantProcess/ContractorSearch.aspx)
plumbers to be registered with OFTEC if they are to work on oil fired boilers. It was felt that this could start to focus minds more on quality training and act as a stimulus for contractors to upskill their workforce in the area of energy efficiency.

SEAI also indicated a willingness to investigate the possibility of including in their Procurement Documents the requirement for FES (or equivalent training). If this requirement was part of the contractor selection criteria it would act as a stimulus for quality training take-up amongst prospective contractors. The project team acknowledges that the Procurement Department would most likely have issues pertaining to the availability, affordability and accessibility of courses currently available. The likelihood is that they will be unable to include this requirement until such a time as there is a National Roll-Out of FES or equivalent. SEAI invited QualiBuild to give a presentation during SEAI’s forthcoming training days and they also stated that they would ‘encourage’ (as a pilot project) a number of their approved contractors to attend the upcoming FES training programmes which are planned for roll-out in September 2016. This coming roll-out is an interim solution to the long-term National Roll-Out which will require a national organization to co-ordinate, fund and plan. However, regardless of the limited number of courses that will be available if bodies such as the SEAI start sending their contractors on these courses it will inevitably stimulate other contractors who are keen to get on the SEAI’s Approved Contractors Register to send their employees on the FES course also.

1.2.4 Local Authorities

Local Authorities have frameworks of Approved Contractors which they use for issuing tenders for the retrofitting and maintenance of their housing stock. Representatives of a number of Local Authorities were met to ascertain if they might be willing to signal to their contractors the necessity for quality training. In common with the SEAI, at present the main criteria for selection onto these frameworks is: - proof of tax compliance and insurances and provision of health and safety documentation. Although the Local Authorities still employ Clerks of Work to oversee the quality of workmanship on these housing projects and though they are vigilant and do a very good job, it was conceded that because they were not on site full-time opportunities naturally arose where standards often slipped and work was covered up and couldn’t be inspected. The lack of inspections from Building Control was also a contributor to poor quality and defective work.
Shoddy workmanship can occur for a variety of reasons. The transient nature of the business means that there is often a high turnover and ever changing workforce on the sites. It was conceded by all included in these discussions that if every building construction worker had the same basic quality training turnover of workers might not be the issue that it presently is. The project team asked these representatives if they would examine the possibility of including quality training as a requirement for contractor selection in their Procurement Documents. The feedback from the various Procurement Departments was that the requirement could not be included until such a time as the FES course was rolled-out nationally, readily available to all, affordable and accessible. However, for projects with a contract value less than €50k and which are not subject to Government Procurement Guidelines it is proposed to insert FES course flyers into tender documents as a means of encouraging contractors to attend FES courses planned for short-term roll-out.

1.2.5 Insurance Companies

1.2.6 Homebond

Homebond have two first party insurance policies for newly built homes. These are Latent Defects Insurance and Mechanical and Electrical Inherent Defects Insurance. Homebond have a Register of Approved Contractors for carrying out remedial works. There are approximately 30 contractors on this list and the first prerequisite is that these contractors are all members of Homebond. They also need to provide proof that they are tax compliant, carry all the usual contractor insurances and must furnish the necessary Health and Safety documentation. Discussions took place between Homebond and the QualiBuild project team members at Steering Committee level and also on an informal one-to-one basis. The Project Team sought support from Homebond in making their contractors aware of training programmes such as the FES course and in recommending that the contractor’s employees undergo this training. It was also requested that Homebond Inspectors would mention the FES course to site managers and construction workers when they are carrying out their inspections.

3 http://www.homebond.ie/home_builders/
1.2.7 General Building Insurance/AXA

The current situation often requires that homeowners obtain quotes from reputable builders to carry out repair works such as those caused by fire and flooding. The only requirements for the contractors are that they provide proof of tax compliance; they carry the usual contractor’s insurances and health and safety documentation. Some insurance companies\(^4\) and their Loss Adjustors can provide assistance in sourcing contractors. Reference is made to “Reputable Builders” in guidance documents and help sheets and it is here that reference might be made to the FES course in the future. Other insurance companies\(^5\) have panels of experienced, professional builders and tradesmen who are handpicked and vetted by the insurance company. One insurance company which was approached about lending its support to the FES training programme said that they would recommend to their contractors that they send their employees on the next roll-out of FES. They said they would be happy to send a FES ‘flyer’ to their panel of contractors advertising course dates for the next roll-out.

1.3 S.2 To support implementation of the Building Contractors Register

1.3.1 Background

In order to provide a mechanism through which those who have engaged in training and education in quality building to be recognised, it was agreed that a construction industry register was required. At the time of the submission of the QualiBuild project proposal no such register existed. However, by the time the project was being implemented the CIRI register had been established. Nevertheless, the QualiBuild project had the development of a Construction Workers’ register as one of its objectives. The existence of the CIRI register, together with information gathered by the QualiBuild project during the course of its consultations and uncertainty regarding the intended legal status of the CIRI register complicated this aspect of the project.

\(^4\)http://www.aviva.ie/online/property/home-insurance/faq/  
\(^5\)http://www.axa.ie/home-insurance/
1.3.2 Construction Industry Register Ireland Background

The Building Control (Amendment) Regulations (BC(A)R) 2014 provided for the appointment of competent contractors and builders. The Government made a request to the Construction Industry Federation (CIF) to establish a new register of construction companies and sole traders. This new register was called the Construction Industry Register Ireland (CIRI) and included main builders, specialists, subcontractors and sole traders of all sizes. CIRI was to operate on a voluntary basis initially but the Government said they would put it on a statutory footing within a year of its establishment. Builders included on the CIRI register meet the definition of competent builder for the purposes of BC(A)R. Provision has been made for including a member’s CIRI registration number on statutory Commencement Notices for lodgement with Building Control Authorities since the 1st of March 2014.

The Construction Industry Register Ireland (CIRI) now lists QualiBuild amongst their Structured CPD Resources and Events. Continued Professional Development (CPD) is a mandatory requirement for CIRI registration. All CIRI members are required to ensure that the personnel within their organizations are competent and informed on current thinking and developments relating to their role and to the type and level of their individual responsibility. Each organization is required to plan, record and verify the CPD activities of their personnel. They should also be able to provide evidence that the training and development activities undertaken address the needs identified.

1.3.3 The Construction Worker Skills Register

The Construction Industry Register of Ireland is an important contribution to enhancing the quality of building in Ireland and, if and when it is put on a statutory basis it will have an even greater importance. However, during the course of the countrywide consultations associated with the QualiBuild project it became clear that the CIRI register did not meet the needs of all of those within the sector. In particular, the CIRI register structure is aimed at accommodating building construction companies and the cost of registration is high for an individual construction worker.

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6 [https://www.ciri.ie/cpd/structured-cpd](https://www.ciri.ie/cpd/structured-cpd)
In the light of this feedback, it was decided that it was important that a register for individual construction workers be developed. This register was developed and piloted before the end of the project.

It is anticipated that the register will be handed over to a national organisation for long-term management and maintenance but, in the interim, a consortium of the QualiBuild partners will carry out these functions.

The Construction Worker Skills Register will, for a modest annual fee, allow an individual worker to register on a site and upload his or her qualifications and experience. It will also permit a print-out of the worker’s CV to be generated and will be searchable by construction firms and the general public. Eligibility to be part of the register is based on completion of the FES course.

It is acknowledged that it is important that the CIRI register and the CSWR register are integrated at some point. The CSWR has been designed to facilitate this integration when current legal and administrative issues have been addressed.

In the meantime, the CSWR and the CIRI register will operate in parallel, albeit with somewhat different focuses.

One positive factor to note is that the CIRI website lists QualiBuild as a source of CPD courses.

### 1.3.4 Conclusions/Recommendations

The fact that CIRI lists QualiBuild as a source for structured CPD on its website should act as a stimulus for more contractors to send their employees on the FES course when they are rolled out in September/October 2016. This recognition is very positive and endorses the value of the FES programme. The CWSR Register in turn has a link to the CIRI Register which demonstrates its recognition of CIRI.

The CIRI Register is not now expected to be on a statutory footing until 2018 at least and as a result the take-up for contractor registration has been low. However, once CIRI transitions from voluntary to mandatory it should encourage a larger number of firms to register and, thereby, direct more building construction workers to the FES course.
It has not been possible to hand over the CSWR to a national organisation as was originally planned. However, discussions on this issue are ongoing and it is hoped that SOLAS will ultimately take responsibility for this as well as the roll-out of the FES course. An assessment of the long-term income from the register suggests that it will be easily self-funding even at the modest registration fee of €50. In the interim a consortium of the QualiBuild partners have formally agreed to manage the register until a final solution is reached or until it becomes clear that no such solution is possible.

1.4 S.3 Provide for the Upskilling of Building Control Officers

Building Control Officers perform an important function in ensuring the quality of building and particularly in ensuring that energy efficiency construction is carried out.

1.4.1 Background

Generally, Building Control Officers receive training from three different quarters.

- Their immediate employers (i.e. The Local Authorities),
- The Irish Building Control Institute (IBCI)\(^7\) and
- Their own professional institutes (RIAI, EI, SCSI and CIOB).

Local Authorities are obliged to ensure that their Officers are kept abreast of all changes to legislation and are duty-bound to arrange all necessary training. It is also incumbent on Building Control Officers who are members of their Professional Institutions to attend CPD training courses in order to fulfil their membership requirements. Building Control Officers who are members of IBCI can also receive CPD training by attending IBCI organized conferences and events.

Nowadays, most Building Control Officers tend to be engineers but there are many who have come from trades backgrounds and have first-hand experience of working on construction sites. These officers have their own professional institute known as the Institute of Clerks of Works and Building Inspectors in Ireland\(^8\).

\(^7\) [http://www.ibci.ie/index.html](http://www.ibci.ie/index.html)
\(^8\) [http://www.clerkofworks.ie/](http://www.clerkofworks.ie/)
1.4.2 Introduction

The IBCI were represented on the Project Steering Committee and attended the project steering committee meetings. They were appraised of project status and their input was sought at these meetings and in reviewing reports generated by the project work package deliverables. QualiBuild were invited to the IBCI annual conference of 2015 and a presentation was made by the DIT Project Partner. Numerous conversations took place between the IBCI and QualiBuild project team members in relation to how IBCI might be able to support the National Roll-Out of FES. The members spoken to were very positive of the FES training programme and indeed for future add-on training courses. IBCI said they would be happy to invite QualiBuild Project Team members to make presentations at future IBCI events. Also, the President of IBCI stated that he would seek a quorum from the IBCI Council Members at this coming August’s IBCI Council Meeting and hopefully issue a Letter of Support/Endorsement for the FES training programme.

1.4.3 Conclusions/Recommendations

It would seem that unless the instruction for training comes directly from the Department then it is often left to the individual Building Control Officers to apply to their employers for CPD. Also, some Local Authorities have funds set aside for this purpose and are easily able to send their staff on CPD training courses whereas other Local Authorities take longer to issue approval for such training. However, it is probably fair to say that Building Control Officers are keeping their training in line with the evolving Regulations, Standards and Innovations.

Furthermore, whilst the QualiBuild project is primarily focused on Part L of the Building Regulations, Building Control addresses Parts A-M of the Building Regulations. Issues around fire prevention, pyrites, mica, site suitability assessments etc. are equally as important to Building Control as Energy Conservation is. This makes it difficult for Building Control to ‘champion’ the FES training programme with the Department of the Environment and Local Government over other competing and, perhaps, broader-based training.

However, IBCI by inviting QualiBuild to present at its future Conferences brings the FES training programme to the attention of not only its members but in turn offers the possibility
that Assigned Certifiers and Contractors will be alerted to the benefits of sending their employees on the FES training course.
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Brian Head, Project Manager, SOLAS
Brian Redmond, Manager, SOLAS
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Kevin Sheridan, Council Member, IBCI
Claire Curley, Director of Services and Housing, Tipperary County Council
Eoin Powell, Senior Executive Engineer, Tipperary County Council
Leonard Cleary, Senior Executive Officer Housing, Clare County Council
Robert Burns, Senior Executive Engineer, Clare County Council

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