

DEVELOPING A REGISTER OF BUILDING PROFESSIONALS & CONSTRUCTION WORKERS WHO HAVE UPSKILLED IN ENERGY RENOVATION

Marion Jammet (IGBC) and Lis O'Brien (LIT)

Contributors: Seamus Hoyne (LIT) and Pat Barry (IGBC)

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Definitions & Acronyms

ACEI	Association of Consulting Engineers of Ireland
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
CIBSE	Chartered Institution of Building Services Engineers
CIF	Construction Industry Federation
CIRI	Construction Industry Register Ireland
CIOB	Chartered Institute of Building
DECC	Department of Environment, Climate and Communications
EPBD	Energy Performance of Buildings Directive
Energy Renovation Advisors (Renovation Advisors)	are registered building professionals - BC(A)R certifiers (Registered architect - Chartered engineer - Chartered and registered building surveyor) who have upskilled in energy renovation and can provide independent holistic advice on a full renovation project.
Energy Renovation Installers (Renovation Installers)	are qualified electricians, plumbers, carpenters, bricklayers or plasterers who have upskilled in energy renovation as explained here .
IGBC	Irish Green Building Council
Initial education	Formal education of individuals before their first entrance to the labour market, i.e. when they will normally be in full-time education. It thus targets individuals who are regarded as children, youth and young adults by the society to which they belong.
IPAV	Institute of Professional Auctioneers and Valuers
LIT	Limerick Institute of Technology
NSG	National Steering Group
Reno-NUC	<p>The National Renovation Upskilling Committee (Reno-NUC) was set up in February 2019 to provide high-level strategic and policy input to support large scale upskilling of building professionals and construction workers in energy renovation in Ireland.</p> <p>Its primary aims were:</p> <ul style="list-style-type: none"> • To contribute to the development of a roadmap to launch a user-friendly holistic energy efficiency accreditation system for building professionals and construction workers. • To oversee the development of an online self-assessment tool for building professionals and construction workers to help them identify their training needs – The Build Up Skills App. <p>For further information on the membership of the Committee, please click here.</p>
Renovation	The word renovation in this document refers exclusively to energy renovation.
RECI	Registered Electrical Contractor Ireland
RGII	Registered Gas Installers
RIAI	Royal Institute of Architects of Ireland
SCSI	Society of Chartered Surveyors of Ireland
SEAI	Sustainable Energy Authority of Ireland
Users	Users refer to individuals and organisations that may benefit from this framework, i.e. individuals (e.g. owners, tenants, small landlords) who wish to retrofit a dwelling or an office and are looking for trusted advice; public bodies and larger organisations who procure works; as well as investors, lenders and insurers who need to ensure building professionals and construction workers have the appropriate skills from a risk mitigation point of view.

I. Summary

This document presents how a **Renovation Register** could work in Ireland. The launch of the register could address several barriers to renovation. On the one hand, it would incentivise building professionals and construction workers to upskill in renovation, hence addressing the lack of skills in the supply chain. On the other hand, it would address property owners' lack of awareness and trust in the process. See [section 3 for further information on the added value of the register](#).

To encourage and facilitate building professionals and construction workers upskilling in energy renovation and to make it easier for all users to identify those who have upskilled in energy renovation, the project partners recommend setting up two registers: A register of building professionals who have upskilled in energy renovation ([Renovation Advisor](#)) and a register of construction workers who have upskilled in renovation ([Renovation Installers](#)). To avoid confusion, the **two register systems should be centralised**.

Registration

To register with the Energy Renovation Register, each applicant must:

	RENOVATION ADVISOR	RENOVATION INSTALLER
Qualification	<ul style="list-style-type: none"> - Be a Chartered Engineer (CEng MIEI), a Member of the Royal Institute of the Architects of Ireland (MRIA), a Chartered member of the Royal Institute of British Architects (RIBA) or a Chartered/Registered Building Surveyor. - And have completed one of the pre-approved training courses*. 	<ul style="list-style-type: none"> - Be a fully qualified carpenter, electrician, plasterer, plumber or bricklayer. For plumbers and electricians be registered with Registered Gas Installers (RGII) or with Registered Electrical Contractor Ireland (RECI). - And have completed one of the pre-approved training courses*.
Application	Complete an online application form and submit supporting documents to the secretariat	
Code of conduct	Accept and agree to the obligations set out in this Code of Conduct and the Register Terms and Conditions	
Registration fee	Pay the registration fee	

Initial registration is for twelve months. Renovation advisors will need to complete at least 4 hours of CPD on energy renovation annually to remain on the register. Renovation installers will need to complete at least 2 hours of CPD on energy renovation annually to remain on the register.

* To ensure all pre-approved courses are of high quality and highly practical, and create trust in the register, the following criteria will be used:

- All pre-approved courses should meet one of the following criteria:
 - From QQI recognised providers;
 - City and Guilds recognised course;
 - CPD recognised courses from the following: ACEI, ASHRAE, CIBSE, CIRI, Engineers Ireland, CIOB, IPAV, RIAI and SCSi.

- They must cover at least 60% (65% for renovation installers) of the key energy renovation skills identified to date – This will increase to 80% in the next 3 years;

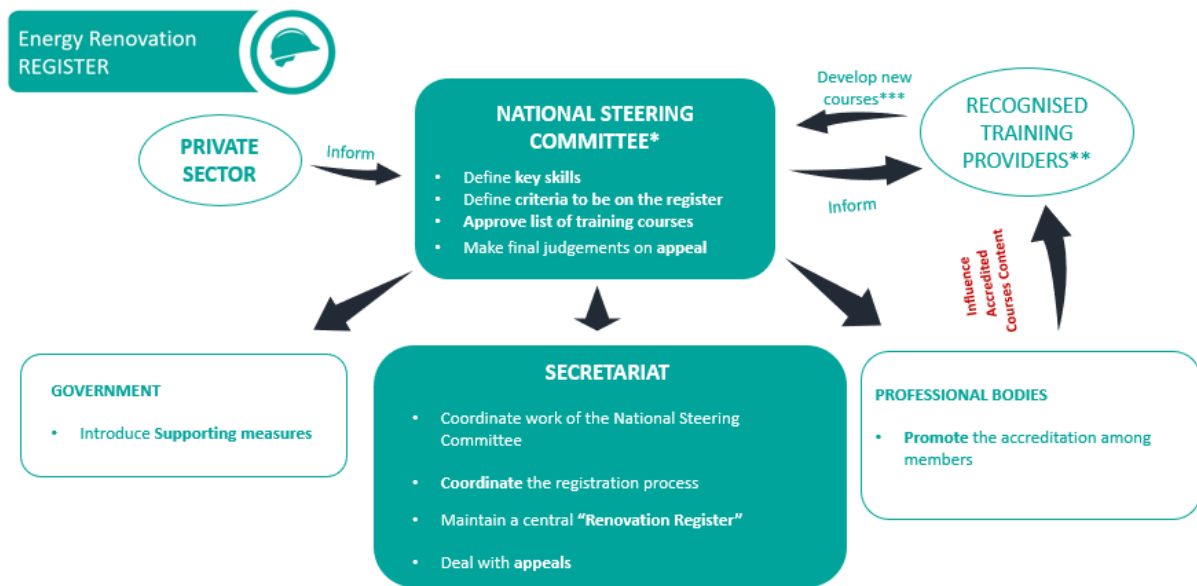
To facilitate upskilling of building professionals and construction workers, the opportunity of introducing a modular pathway to the register will be explored over the next few years. The project partners and the [Reno-NUC Committee](#) acknowledge that this approach would provide building professionals and construction workers with greater flexibility. But developing and maintaining such a register would also be more resource intensive. The suggested approach tries to balance quality, flexibility and resource intensity.

Governance

Confidence and trust in the framework are critical to its success. It must be supported by organisations who can provide leadership and authority. Users' trust in the framework would increase if it were **endorsed by a neutral, nationally trusted organisation** such as the Sustainable Energy Authority of Ireland (SEAI). Public bodies' endorsement is critical if the framework is to become a framework of reference. The register must be recognised by all key stakeholders i.e. users, but also building professionals, construction workers and the Irish construction industry in general. As professional bodies are working within the industry and have direct access to their members, they should be highly involved in developing, promoting and operating the register. A Memorandum of Understanding will hence be signed with organisations that can provide leadership and authority. E.g. the Association of Consulting Engineers of Ireland, the Construction Industry Federation, Engineers Ireland, the Royal Institute of the Architects of Ireland, and the Society of Chartered Surveyors Ireland.

A **National Steering Group** (NSG) will be set up to update the list of key energy renovation skills and competences for [construction workers](#) and [building professionals](#) on a regular basis. The NSG will also be responsible for updating [criteria to be on the register](#), as well as the [list of pre-approved courses which lead to accreditation](#). It will also make judgments on any appeals received. The NSG will be made up of representatives of SEAI, professional bodies, IGBC, the Department of Environment, Climate and Communications, the Department of Housing, Local Government and Heritage, SOLAS, the Higher Education Authority, third-level education and vocational education and training providers. The work of the NSG should also inform future skills needs development.

The work of the National Steering Group will be coordinated by a **secretariat**. The secretariat should be hosted by a neutral and nationally trusted organisation. The secretariat will also be responsible for coordinating the registration process, maintaining the register and liaising with training course providers on an ongoing basis.



*SEAI, Professional Bodies, IGBC, DECC, Department of Housing, NSAI, SOLAS, Higher Education Authority, Education institutions and VET organisations
 ** QQI recognised providers, CPD recognised courses from the following organisations: ACEI, ASHRAE, CIBSE, Engineers Ireland, CIOB, RIAI and SCSL
 *** where gaps identified e.g. Springboard, Skillsnet

Figure 1: Energy Renovation Register - Overall Governance

The secretariat may, in its sole discretion, refuse to accept an application for, or renewal of, membership and may, in its sole discretion, delete or suspend the profile of any Register Member where, the secretariat has reason to believe:

- that any of the Data on such a profile is inaccurate.
- that the Register Member is not in a position to provide renovation services.
- in the event it receives any complaint from a member of the public concerning such Register Member*.

*A member of the public may make a complaint to the secretariat if they believe a Register member has breached the [code of conduct](#). Any such complaint will be considered by the Secretariat and, if the complaint is upheld, may suspend and/or terminate a building professional or construction worker's registration. No such action will be taken on foot of a complaint without an opportunity being given to the Registered Member to respond to the complaint. Registered Members can appeal the decision of the Secretariat to the National Steering Group. Decisions by the National Steering Group will be binding.

Costing & Financing

The estimated cost of setting up and running the register for one year is approximately [€95,000](#). This is based on 150 building professionals and 300 construction workers registering in year one. The annual cost of running the register should be approximately [€103,000](#). This is based on 500 building professionals and 2,000 construction workers being registered, and on the register working on a pre-approved courses basis. If a modular pathway was developed whereby building professionals and construction workers could show they have gained the required skills through a combination of training courses, the cost of running the register would be higher.

Registers are initially a slow burn and require a few years to establish themselves. In this context and given the [added value of the register to the state](#), [financial support](#) will be required at least to set up

the register and to maintain it for the first two years. However, with [appropriate state incentives](#), the system could [become self-financing after a few years](#).

II. Introduction

Over 1.5 million buildings must be retrofitted by 2050¹. The All Government’s Climate Action Plan has set a target of 500,000 homes to be retrofitted to a BER rating of B2 or higher by 2030. Deep energy renovation requires specialist understanding and skills. One of the concerns raised in relation to these targets is the availability at scale of the necessary skills. This would require an increase in the number of young people entering the industry – ensuring they have the right skills, and significant upskilling of those working in the industry. The project partners’ work on key renovation skills for [construction workers](#) and [building professionals](#) should help education providers in developing suitable **initial education** training². However, the main objective of the register is to incentivise building professionals and construction workers to upskill in energy renovation. It will do so, by making it easier for **users** to identify building professionals and construction workers who have upskilled in energy renovation.

On the other hand, the launch of an [upskilling app](#) in May 2020 will make it easier for building professionals and construction workers to identify suitable training courses.



Figure 2: The Build Up Skills App was launched in May 2020 to facilitate building professionals and construction workers upskilling

The register will also help address a key barrier to renovation, i.e. the lack of trust in the process. Next to the availability of finance, property owners are often confronted with a lack of awareness about the costs and benefits of renovation, and with a lack of understanding of the process – what to do, where to start, and which measures to implement and in which order. These perceptual and

¹ DECC, 2020, [Ireland’s Long-Term Renovation Strategy 2020](#)

² This is in line with Commission Recommendation (EU) 2019/786 of 8 May 2019 on building renovation: “Member States could consider incorporating energy efficiency into curricula and programmes for the training of building sector professionals (...) as part of their national educational policy”.

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technical barriers can lead to inaction, delays, or sub-optimal and uncoordinated works – thus creating a lock-in effect.

Background

This document has been developed by the Irish Green Building Council (IGBC) and Limerick Institute of Technology (LIT) as part of [the SEAI funded “Building Upon Ireland’s National Renovation Strategy – 18/RDD/283”](#). It is based on the findings of three projects – [Build Upon](#), [Qualibuild](#) and [EccoPro](#), and on the feedback received from the National Renovation Upskilling Committee between February 2019 and October 2020.

The project partners would also like to thank the [members of the National Renovation Upskilling Committee](#) and the 15 Technological University Dublin students who were interviewed in Spring 2020 to develop this document.



Figure 3: National Renovation Upskilling Committee kick-off meeting with Minister Damien English T.D - February 2019

Report structure

This document further explains the [added value of the register](#), the [suggested governance structure of the register](#), its [estimated cost](#), [potential financing mechanisms](#), as well as [supporting measures required to make it successful](#). The [conclusion](#) details potential next steps.

III. Value added

The launch of a register of building professionals and construction workers who have upskilled in energy renovation will [support the implementation of Ireland’s ambitious energy renovation targets](#). It will do so by [raising renovation awareness](#), [supporting behaviour changes](#) and [improving the quality of energy renovations](#). This in turn, will contribute to [reducing Ireland’s carbon emissions and improving energy efficiency](#).

3.a. Supporting the implementation of Ireland’s Climate Action Plan

The all Government’s Climate Action Plan set up ambitious renovation targets. I.e. the cumulative number of buildings that are retrofitted to a B2 equivalent BER must increase to circa 500,000 by 2030 and 400,000 heat pumps must be installed in existing buildings.

To achieve these targets, the document mentioned several actions, which would all be supported by the introduction of the register. In particular, the register would support the implementation of the following actions.

Climate Action Plan – Actions	How implementation will be supported by the register
<p>Action 47: Establish a One-Stop-Shop model for energy efficiency upgrades</p>	<p>The IGBC is currently working on the development of a one-stop-shop as part of the Horizon 2020 funded Turnkey Retrofit project. The feedback received to date from the local implementation group is that qualified professionals should provide retrofit advice as part of the one-stop-shop model to: 1. Give impartial advice for a tailor-made solution 2. provide a holistic overview that prevents lock-in effects 3. devise solutions with a staged approach to suit homeowners’ budgets and timing 4. answer questions and give options to homeowners, thereby instilling confidence in them. The register would facilitate this approach³.</p>
<p>Action 50: Skill-up current contractors/other industry players in deep retrofit, NZEB and new technology installation</p>	<p>By giving a real value to energy renovation skills, the register will better incentivise construction workers and building professionals to upskill in energy renovation. LIT with WWETB have developed NZEB courses for trades, site- supervisors covering all aspects of energy retrofitting. LIT are also developing online courses using BIM with NZEB as part of the Erasmus+ BIMzeED project to facilitate efficient and quality deep retrofit and renewable installations. The register would play an important role with these courses.</p>

³ The project partners will test a small version of the Renovation Advisor Register as part of the [Turnkey Retrofit project](#). See the Conclusion section for [further details](#).

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<p>Action 51: Develop the supply chain for renewables and retrofitting through engagement with ETBs and SOLAS</p>	<p>By giving a real value to energy renovation skills, the register will better incentivise construction workers and building professionals to upskill in energy renovation.</p>
<p>Action 52: Develop and optimise Government funding and grant schemes to drive demand for energy efficiency retrofits that deliver value for money</p>	<p>As it incentivises renovation upskilling, the development of the register and its use by national bodies will ensure large scale quality renovation, hence delivering better value for money. LIT and Tipperary Energy Agency (TEA) are developing a one-stop-shop as part of Horizon 2020 funded Superhomes project for a home energy retrofit. The key stages include 1. home’s energy solution is designed 2. organise from tender through to the payment of grant funding. 3. engage leading contractors and experienced retrofit specialists to offer quality energy retrofit. The register would facilitate this approach.</p>
<p>Action 54: Provide easier to access tailored finance for SME and residential energy efficiency investment utilising the European Commission’s Smart Finance for Smart Buildings loan scheme</p>	<p>The IGBC has been working on the development of energy efficient mortgages for the last 3 years. Banks have always highlighted the importance of strong quality assurance mechanisms. In particular, one of the 3 quality assurance mechanisms recommended is that the work is “Planned and carried out by qualified/accredited professionals”. This would be supported by the launch of the register.</p>
<p>Action 60 - Sub-action 3: Ensure the supply chain for the installation of renewable heating systems is in place</p>	<p>By giving a real value to energy renovation skills, the register will better incentivise construction workers and building professionals to upskill in energy renovation, including installation of renewable heating systems.</p>
<p>Action 67: Set a trajectory for commencing and implementing the Department of Education and Skills deep energy retrofit programme</p>	<p>The register secretariat will inform the Department of Education and Skills on key deep energy retrofit skills and knowledge. By giving a real value to energy renovation skills, it will also incentivise more young people to enter the industry.</p>

Beyond these specific actions, the launch of the register would contribute to [greater renovation awareness](#) and [trust](#). This in turn, should increase the rate and depth of energy renovations, and contribute to achieving the Climate Action Plan’s targets.

3.b. Raising awareness and supporting behaviour change

The launch of the register should support greater energy renovation awareness and behaviour change of property owners, building professionals and construction workers.

Most **owners and occupiers** in Ireland are interested in improving the energy efficiency of their home. But the percentage of aware and engaged consumers who retrofit their homes annually

remain small. Consumers have different drivers for investment in energy efficiency. E.g. comfort, saving or environmental concerns. Getting the right information to the right consumer at the right time is critical to success⁴. Building professionals and construction craft workers have a unique opportunity to provide personalised energy advice to homeowners at trigger points i.e. when they need or wish to repair or improve their homes. All building professionals and construction workers on the register will have among other things, to [gain good communication skills](#).

[Research by SEAI](#), shows that consumers' engagement is improved where information comes from a trusted source, i.e. a source perceived as likely to act in their best interest and to provide impartial advice. It is extremely difficult for owners and occupiers to find reliable information on what to do, where to start, and which measures to implement and in which order. The launch of the register would improve market transparency, it would make it easier for owners and occupiers to identify building professionals and construction workers who have upskilled in energy renovation. This in turn should improve the quality of energy renovations, and eventually lead to a higher number of energy renovations.

Renovation advice is an essential tool in the realisation of high-quality energy renovation. BERs are a useful tool, but they were designed to be an 'asset rating' rather than an advice tool and tend to be too basic for accurate estimates of costs and saving, particularly as regards advice on deep retrofit. Research show that independent advisory support helps to avoid technology bias in decisions, enable a more holistic approach, and engender trust⁵. Energy renovation is not usually carried out in isolation but at trigger points when a house undergoes major renovation. Building professionals who engage in that process need to have a holistic understanding of the work to be carried out to the home as this may require other improvements – e.g. improving daylighting, accessibility, ventilation or fire safety. While a BER Assessor may look at the home from a very narrow perspective, the renovation advisors must understand the inter-relationship of all these issues.

Accessibility is about making it not just possible, but easy, for decision makers to renovate. This covers availability of the right solutions – effective project approaches delivering the desired results at the right quality. **It entails ensuring enough people with the right skills to carry out the work to the right standards.**

Ireland's Long-Term Renovation Strategy 2020

This approach is also in line with preamble 46 of the [Energy Efficiency Directive](#): “A sufficient number of reliable professionals competent in the field of energy efficiency should be available to ensure the effective and timely implementation of this Directive (...). Member States should therefore put in place certification schemes for the providers of energy services, energy audits and other energy efficiency improvement measures”.

As the industry is currently at full capacity and as most construction companies are small, it can be challenging for **building professionals and construction craftworkers** to find time and/or resources to upskill. One of the objectives of the register is to create demand for building professionals and construction workers who have upskilled in energy renovation, hence incentivising them to upskill in the area.

⁴ SEAI, [Behaviour insights on energy efficiency in the residential sector](#)

⁵ Maby, 2019 - Minimum standards for existing buildings to accelerate the energy renovation of homes

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3.c. Improving energy renovation quality assurance

Skills gap at all levels of the construction supply chain represents a barrier to large scale deep renovation. In fact, lack of skills could lead to a lack of coherent advice, poor quality work and ultimately to a general loss of confidence in energy renovation as cases of building and health problems from inappropriate upgrading works emerge.

The issue of unintended consequences of poor energy renovations has been extensively discussed as part of the [Build Upon² project](#). The Irish National Steering Group⁶ agreed that the best way to address this problem was to upskill the whole construction chain.

“Many people have anecdotes about poor works carried out in their homes or messes left behind. Many people express nervousness about inviting contractors into their homes to carry out works”.

SEAI, Bringing Energy Home – Understanding how people think about energy in their homes

3.d. Reducing Ireland’s carbon emissions and improving energy efficiency

Building-related emissions will play a critical role in achieving the goal stated in the Paris agreement to remain between 1.5 and 2 degrees above the pre-industrial level. In Ireland, the built environment accounted for 12.7% of our greenhouse gases in 2017.

To estimate the potential impact of the register on energy use and CO₂ emission, the following assumptions were made:

- 150 Renovation Advisors and 300 Renovation Installers registered in year 1 (2022).
- 50% of those have been incentivised to upskill by the register.
- Construction craft workers work on an average of 20 retrofit projects per year – assuming all these projects are residential (Ireland average floor area residential 180m²).
- Building professionals on the register work on a mix of residential and non-residential projects, so the average project floor area for them is 500 m².
- According to literature, the difference between design and actual energy performance can be anywhere from 20-200%. The assumption here is 50%.
- The launch of the register and associated upskilling should reduce the energy performance gap.
- Based on literature, the impact of the register and upskilling for Construction workers is relatively small i.e. 10% improvement of the Energy Performance Gap.
- The impact of professionals on the Energy Performance Gap is estimated to be higher (20%) as it is possible to achieve greater improvement at the design stage.
- The CO₂ conversion factor is for electricity.

Based on these assumptions, the register should allow Ireland to use 328.98 GWh less energy between 2022 and 2030, and to reduce its emission by 143,764 TCO₂. This is approximately the full electricity use of 22,000 homes for one year.

⁶ [Build Upon² National Steering Group](#) is made up of representatives from the following organisations: DCCAE, CIF, Codema, CSO, Department of Finance, Department of Housing, Dublin City Council, ESRI, HSE, Retrokit, SEAI and UCD.

IV. Governance structure

4.a. Overall governance

To encourage and facilitate building professionals and construction workers upskilling in energy renovation and to make it easier for all users to identify those who have upskilled in energy renovation, the project partners recommend setting up two registers.

A [register of building professionals who have upskilled in energy renovation](#). These are **Renovation Advisors**. And a [register of construction craft workers who have upskilled in that area](#). These are called **Renovation Installers**.

To avoid confusion, the **two register systems should be centralised**. Confidence and trust in the framework are critical to its success. It must be supported by organisations who can provide leadership and authority. **Users’ trust in the framework would increase if it were endorsed by a neutral, nationally trusted organisation such as SEAI**. Public bodies’ endorsement is critical if the framework is to become a framework of reference. The register must be recognised by all key stakeholders i.e. users, but also building professionals, construction workers and the Irish construction industry in general. As professional bodies are working within the industry and have direct access to their members, they should be highly involved in developing, promoting and operating the register. A Memorandum of Understanding (MoU) will hence be signed with organisations that can provide leadership and authority. E.g. ACEI, CIF, Engineers Ireland, RIAI and SCSI.



Figure 4: Register Website Mock-up

A **National Steering Group (NSG)** will be set up to update the list of key energy renovation skills and competences for [construction craft workers](#) and [building professionals](#) on a regular basis, and at least every two years. This is critical to address weaknesses and to keep up with best practices. The NSG will also be responsible for updating [criteria to be on the register](#), as well as the [list of pre-approved courses which lead to accreditation](#). The NSG will be made up of representatives of SEAI, professional bodies, IGBC, DECC, Department of Housing, SOLAS, the Higher Education Authority, third-level education and vocational education and training providers. The NSG will meet up quarterly. The work of the NSG should also inform future skills needs development.

To ensure all pre-approved courses are of high quality and highly practical, and create trust in the register, the following criteria will be used:

- All pre-approved courses should meet one of the following criteria:
 - From QQI recognised providers;
 - City and Guilds recognised course;
 - CPD recognised courses from the following: ACEI, ASHRAE, CIBSE, CIRI, Engineers Ireland, CIOB, IPAV, RIAI and SCSI.
- They must cover at least 60% of the [key energy renovation skills identified to date](#) (65% for renovation installers) – This will increase to 80% in the next 3 years;
- Where possible, most pre-approved training and education programmes should be delivered in a flexible way (blended, online or with the option of training in the evenings and weekend) and offer a balance of theoretical and practical content.

The work of the National Steering Group will be coordinated by a **secretariat**. The secretariat should be hosted by a neutral and nationally trusted organisation. The secretariat will also be responsible for coordinating the registration process, maintaining the register and liaising with training course providers on an ongoing basis.

Professional bodies, third level institutions and vocational education and training providers will be responsible for promoting the registers among building professionals and construction workers.

[Supporting measures](#) will be required so that the register achieves real impact.

4.b. Register of Renovation Advisors



Renovation Advisors are Building Professionals* who have upskilled in energy renovation as explained in this section and can provide independent advice on a full renovation project.

** These are Registered building professionals - BC(A)R certifiers (Registered architect - Chartered engineer - Chartered and registered building surveyor).*

To encourage building professionals to upskill in energy renovation, while maintaining quality and keeping costs down, the following approach will initially be taken.

Pre-qualification requirements:

- Be a Chartered Engineer (CEng MIEI), a Member of the Royal Institute of the Architects of Ireland (MRAI), a Chartered member of the Royal Institute of British Architects (RIBA) or a Chartered/ Registered Building Surveyor.
- **And** have completed at least one of the pre-approved training courses. As of October 2020, **the suggested list of pre-approved training courses is as follow:**
 - TU Dublin’s [MSc in Building Performance \(Energy Efficiency in Design\)](#), [Postgraduate Diploma in Building Performance \(EEin Design\)](#) and [Postgraduate certificate in Building Performance \(Energy Efficient Design\)](#);
 - [WIT’s Certificate in NZEB Design \(Postgraduate\)](#)
 - [LITs Certificate in Near Zero Energy Building](#)

This is based on these courses covering 60% or more of the [key energy renovation skills identified](#).

✓ Fully covered – ✓ Partly covered

	Practice the principles of sustainability and of sustainable building design and detailing	Assess and manage risks associated with energy renovation (including hazardous materials and condensation issues)	Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J)	Use energy modelling tools	Assess buildings for energy efficiency and quality retrofit	Diagnose and differentiate sources of damp and moisture	Cost retrofit and retrofit options	Connect the individual performance to a team performance	Communicate and transfer all this information clearly to members of the supply chain, building users and clients.	Collaborate with cross-trades	Basics of building physics and construction types, including traditional buildings	Building pathology (including wet and dry rot)	Energy use in existing buildings, energy reduction and energy production (including renewables) solutions, as well as of their interdependencies and effectiveness.	The value of energy renovation (including co-benefits) and the users' needs and motivations	Building regulations compliance software	Energy management solutions and post-retrofit building operation and maintenance.	Financing options	Sustainable materials and resource
MSc in Building Performance (EED)	✓	✓	✓	✓	✓	✓	✓				✓		✓		✓	✓		
Postgraduate Diploma in Building Performance (EED)	✓	✓	✓	✓	✓	✓	✓				✓		✓		✓	✓		
Postgraduate CERTIFICATE in Building Performance (EED)		✓	✓	✓	✓	✓	✓				✓		✓		✓			
Certificate in NZEB Design (Postgraduate)	✓		✓	✓	✓	✓	✓		✓		✓		✓		✓	✓	✓	
Near Zero Energy Buildings (Special Purpose Award Certificate)	✓		✓		✓		✓	✓	✓		✓		✓		✓	✓		✓

Figure 5: Pre-approved as of Oct. 20

This is an initial approach to get the process starting, but It is anticipated that in the next 3 years pre-approved courses should cover 80% or more of the key skills identified.

To facilitate upskilling of building professionals, it is suggested that a modular pathway to the register is developed over the next few years. Further information on training courses that allow building professionals to gain one or more of the key skills is [available here](#). The objective of this [appendix](#) is to initiate conversations with third level institutions to see if some of the courses that are part of Masters’, postgraduate certificate or diploma could be delivered as stand-alone modules. To support all education providers in developing short modules that would allow building

professionals to acquire these skills, the project partners will also work on estimating the number of hours of training required to gain for each key skill.

How to apply: A building professional who satisfies the pre-qualification requirement listed above and wants to be on the register should contact the secretariat and prove that they satisfy the two pre-qualification requirements. They should also sign the [code of conduct](#) developed by the secretariat. The [annual registration fee](#) would initially be set at around €60. This would progressively increase to around €90 by 2027, once [supporting measures](#) are introduced.

Remaining on the register: Renovation advisors will need to complete at least 4 hours of CPD on energy renovation annually to remain on the register. This could be facilitated through the use of the [BUILD UP Skills Advisor App](#).

For further information on the appeal process for building professionals and users, see [section V](#).

4.c. Register of Renovation Installers



Renovation Installers are qualified electricians, plumbers, carpenters, bricklayers or plasterers who have upskilled in energy renovation as explained in this section.

To encourage construction craft workers to upskill in energy renovation, while maintaining quality and keeping costs down, the following approach will initially be taken.

Pre-qualification requirements:

- Be a fully qualified carpenter, electrician, plasterer, plumber or bricklayer. For plumbers and electricians be registered with Registered Gas Installers (RGI) or with Registered Electrical Contractor Ireland (RECI).
- **And** have completed one of the pre-approved training courses. As of October 2020, **the suggested list of pre-approved training courses is as follow:**
 - [WWETB's nZEB for Site Supervisor for new buildings, nZEB for Plumbers, nZEB for construction workers, nZEB for Plasterers for new buildings, nZEB for Bricklayers for new buildings, nZEB for Electricians for new buildings and nZEB for Retrofit Build](#)
 - TU Dublin's Certificate in [Low Energy Building Construction \(Special Purpose Award\)](#)
 - [LIT's Certificate in Near Zero Energy Buildings \(Special Purpose Award\)](#).
 - Certificate in Low Energy Building Construction (Foundation Energy Skills)

This is based on these courses covering 65% or more of the [key energy renovation skills identified](#). This is an initial approach to get the process starting, but It is anticipated that in the next 3 years pre-approved courses should cover 80% or more of the key skills identified.

	Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J)	Collaborate with cross-trades	Communicate effectively on energy renovation with other members of the construction chain.	Connect the individual performance to a team performance	The concept of sustainability and sustainable design	Basics of building physics and construction types, including traditional buildings	Basics of building pathology (including wet and dry rot)	Energy use in existing buildings and of the most common energy reduction and energy production solutions relevant to trade, as well as their interdependencies and effectiveness.	The value of energy renovation (including co-benefits) and building users' needs.	Risks assessment and management in relation to energy renovation within their trade expertise (including hazardous materials and condensation issues).	Sustainable materials and resources.	The cost of retrofit and retrofit options
nZEB for Site Supervisor for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
nZEB for Plumbers	✓	✓	✓	✓	✓	✓		✓		✓	✓	
nZEB for construction workers	✓	✓	✓	✓	✓	✓		✓		✓	✓	
nZEB for Plasterers for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓	
nZEB for Bricklayers for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓	
nZEB for Electricians for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓	
nZEB for Retrofit Build	✓	✓	✓	✓	✓	✓		✓		✓	✓	
Certificate in Low Energy Building Construction (Special Purpose Award)	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Near Zero Energy Buildings (Special Purpose Award Certificate)	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Certificate in Low Energy Building Construction (Foundation Energy Skills)	✓	✓	✓	✓	✓	✓		✓		✓	✓	

✓ Fully covered – ✓ Partly covered

To facilitate upskilling of construction workers, it is suggested that a modular pathway to the register is developed over the next few years. Further information on training courses that allow construction workers to gain one or more of the key skills is [available here](#). The objective of this [appendix](#) is to initiate conversations with training providers to see if some of the courses that are part of certificate or diploma programmes could be delivered as stand-alone modules. To support all education providers in developing short modules that would allow construction craft workers to acquire these skills, the project partners will also work on estimating the number of hours of training required to gain each key skill.

How to apply: A construction craft worker who satisfies the pre-qualification requirement listed above and wants to be on the register should contact the secretariat and prove that they satisfy the pre-qualification requirements. They should also sign the [code of conduct](#) developed by the secretariat. The [annual registration fee](#) would initially be set at around €30. This would progressively increase to around €45 by 2027, once [supporting measures](#) are introduced.

Remaining on the register: Renovation installers will need to complete at least 2 hours of CPD on energy renovation annually to remain on the register. This could be facilitated through the use of the [BUILD UP Skills Advisor App](#) and [CIRI](#).

For further information on the appeal process for building professionals and users, see [section V](#).

4.d. How will it work for users

Users: Users refer to individuals and organisations that may benefit from this framework, i.e. individuals (e.g. owners, tenants, small landlords) who wish to retrofit a dwelling or an office and are looking for trusted advice; public bodies and larger organisations who procure works; as well as investors, lenders and insurers who need to ensure building professionals and construction workers have the appropriate skills from a risk mitigation point of view.

Individuals interested in retrofitting their homes or any small buildings will be able to easily identify “Renovation Advisors” and “Renovation Installers”, through a central register.

To increase users’ trust in the register, it should be published on the website of a neutral, nationally trusted organisation such as SEAI. If this is not possible, the register should at the very least be endorsed by such an organisation. It would also make sense to link the BER Advisory Report to the register. The report could include clear information on where they need to contact an “Renovation Advisor” or an “Renovation Installer” and a link to the register. In line with research completed to date on the development of one-stop-shops, it is anticipated that these would also redirect to the register⁷.



Figure 6: Register Website Mock-up

The register would also make it easier for public bodies and larger organisations who procure work to introduce specific training requirements as part of renovation works, hence improving quality assurance. [See VIII.c for further details.](#)

⁷ The IGBC is currently working on the development of a one-stop-shop as part of the Horizon 2020 funded [Turnkey Retrofit project](#). The feedback received to date from the local implementation group is that qualified professionals should provide retrofit advice as part of the one-stop-shop model. The register would facilitate this approach.

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Finally, the register would allow investors, lenders and insurers to better identify building professionals and construction workers who have upskilled in that field, hence improving their quality assurance process. [See VIII.d for further details.](#)

Further information on the terms of use of the register and complaint mechanisms for users is [available here.](#)

V. Register Terms & Conditions

This section details the register terms and conditions for [registered renovation advisors and renovation installers](#), as well as for [users](#). It also further described the appeal process for both groups.

The Register is administered by a Secretariat, on behalf of the National Steering Group (made up of SEAI, professional bodies, IGBC, DECC, Department of Housing, third-level education and vocational education and training providers). This National Steering Group will have oversight of the Register, its data and processes, tasks and management and will make judgments on any appeals received.

Detailed terms of [use for the website](#), [members](#) and [users](#) are available in the appendix section.

5.a. Members terms and conditions

Building professionals and construction workers aged 18 years or over who offer energy renovation services in Ireland can become registered members of the Renovation Register in accordance with the procedure [set out here](#). The list of documents to become a Renovation Advisor or a Renovation Installer is available in sections [4.b](#) and [4.c](#). Initial registration is for twelve months plus all months up to the end of (calendar) year 2 of registration. An annual fee is also payable, details of suggested fees are set out in [here](#). The Secretariat reserves the right to request further information it deems necessary, prior to accepting the building professional or construction worker onto the Register.

Once an applicant has been accepted, such applicant then becomes a “Register Member” and certain details of such Register Member become available for consultation by Users.

Register Members can use the “Renovation Advisor” or “Renovation Installer” logo for their promotional materials. Register Members must cease all use of the Logo on expiry or termination of membership and ensure that all uses of the Logo on its advertising and promotional materials are removed.



Figure 7: Examples of Logos that could be used by Registered Renovation Advisors and Renovation Installers

Each Register Member may link to the profile for that member on the register, provided such link is not established in a way that damages the register reputation or suggests any form of association, approval or endorsement on our part.

If a Register Member's membership of the Register is not renewed by the prescribed renewal date, the Register Member shall no longer have log in access to the Register.

The register may, in its sole discretion, refuse to accept an application for, or renewal of, membership and may, in its sole discretion, delete or suspend the profile of any Register Member where, we have reason to believe:

- that any of the Data on such profile is inaccurate;
- that the Register Member is not in a position to provide renovation services;
- in the event we receive any complaint from a member of the public concerning such Register Member.

A member of the public may make a complaint to the secretariat if they believe a Register member has breached the [code of conduct](#). Any such complaint will be considered by the Secretariat and, if the complaint is upheld, may suspend and/or terminate a building professional or construction worker's registration. No such action will be taken on foot of a complaint without an opportunity being given to the Registered Member to respond to the complaint.

Registered Members can appeal the decision of the Secretariat to the National Steering Group. Decisions by the National Steering Group will be binding.

5.b. User terms and conditions

The Register is made available to members of the public or other users of the Site for the sole purpose of enabling such users to identify relevant building professionals and construction workers for the purpose of engagement on an energy renovation project, for procuring renovation services from such building professionals and construction craft workers or for obtaining information relating to such services. All other uses of the Register, or of the data contained within the Register, is strictly prohibited.

The data that is published on the Register relating to each Register Member comprises solely and exclusively of data furnished by each Member and is published by the secretariat for information purposes only.

The following details will be publicly searchable fields on the Register: name; business address; occupation; email address; telephone Number; website (if applicable); preferred location for work; list of training courses completed and date of completion and/or date of expiry (if applicable); membership of any professional organisations and date of expiry (if applicable).

The Register does not guarantee the accuracy, authenticity, integrity or quality of the data or that the data is complete, accurate or up to date. It is the responsibility of each User to verify the accuracy and currency of any Data on the Register.

The Register disclaims all liability and responsibility arising from any reliance placed on such data and/or materials by any user of the Register.

A member of the public may make a complaint to the secretariat if they believe a Register member has breached the [code of conduct](#). Complaints will be addressed to the Secretariat. Any such

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complaint will be considered by the Secretariat and, if the complaint is upheld, may suspend and/or terminate a building professional or construction craft worker's registration. No such action will be taken on foot of a complaint without an opportunity being given to the Registered Member to respond to the complaint.

Registered Members can appeal the decision of the Secretariat to the National Steering Group. Decisions by the National Steering Group will be binding.

VI. Costing

This section provides an overview of the estimated costs associated with the [launch](#) and [maintenance](#) of a Renovation Register as described in this document⁸.

6.a. Setting up the Register – Year 1

This section estimates the cost of setting up and running the register for a year. [Financial support](#) is likely to be required for the first few years, before the register becomes self-financing.

Notes: The cost of the initial setup of the BUILD UP Skills Advisor App is not mentioned in this section as this was covered by this SEAI funded project - 18/RDD/283.

CATEGORY	ACTIVITIES	COST
SETTING UP THE REGISTER		
Marketing	- Marketing campaign to launch the register	€15,000
Graphic designer	- Developing the brand entity, logo and website visuals	€2,000
Web developer	- Development of the Energy Renovation Register Website	€7,000
Legal fees	- Reviewing website, users and members' terms & condition	€4,000
Secretariat	- Liaising with National Steering Group, Graphic Designer and Web Developer during the development phase of the register: 460 hours - Supervisor: 92 hours - Project Manager: 230 hours - Project Officer: 138 hours Plus 25% Overheads	€17,000
	SUB-TOTAL	€45,000
MAINTAINING THE REGISTER YEAR 1		
App developer	App maintenance, including developing visuals as required	€2,500

⁸ If a modular pathway was developed whereby building professionals and construction workers could show they have gained the required skills through a combination of training courses, the cost of running the register would be higher.

Web developer	- Maintenance and possible developments of the Energy Renovation Register Webpage	€1,500
Secretariat	<ol style="list-style-type: none"> 1. Coordinate 4 NSC meeting/ year 2. Liaising with 3rd level institution & training course providers (accreditation & app) 3. Deal with any potential complaints from users, building professionals or construction craft workers 4. General website & app management <p>Costing: Supervisor 20 days – Project Manager 60 days – Project Officer 72 days – 25% overheads</p>	€46,000
	SUB-TOTAL	€50,000
	TOTAL COST YEAR 1	€95,000

6.b. Annual maintenance costs – Post-year 1

The increase in maintenance cost between year 1 (6.a) and year 5 is based on an increase in numbers of registered Renovation Advisors and Renovation Installers, as this is likely to lead to an increase in numbers of complaints.

YEAR 5

CATEGORY	ACTIVITIES	ANNUAL COST
App developer	App maintenance, including developing visuals as required	€2,500
Web developer	- Maintenance and possible developments of the Energy Renovation Register Webpage	€1,500
Marketing	- Ongoing marketing	€5,000
Secretariat	<ol style="list-style-type: none"> 1. Coordinate 4 NSC meeting/ year 2. Liaising with 3rd level institution & training course providers (accreditation & app) 3. Deal with any potential complaints from users, building professionals or construction workers 4. General website & app management <p>Costing: Supervisor 37 days – Project Manager 110 days – Project Officer 172 days – 25% overheads</p>	€94,000

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	TOTAL	€103,000

VII. Financing options

Registers are initially a slow burn and require a few years to establish themselves. In this context and given the [added value of the register to the state](#), financial support will be required to set up the register and to maintain it for the first few years.

The success of the register will highly depend on [actions taken to incentivise building professionals and construction workers to register](#). As part of the Qualibuild project and without incentives, only 15% of the approximately 200 eligible construction workers registered on the Construction Workers Skills Register. This section assumes that the state will introduce a number of supporting measures alongside the register - e.g. making it mandatory to use registered building professionals and construction workers to access SEAI funding.

With appropriate state incentives, the system could become self-financing after a few years.

7.a. Suggested financing mechanisms – Year 1

INCOME STREAMS	COST	UNIT	TOTAL
External funding	77,000	1	77,000
Registration fee - Renovation Advisors*	60	150	9000
Registration fee - Renovation Installers*	30	300	9000
	TOTAL		95,000

* These figures are based on 150 building professionals and 300 construction craft workers registering on the Renovation Advisor Register and Renovation Installer Register respectively in year 1.

7.b. Suggested financing mechanisms – Year 5

INCOME STREAMS	COST	UNIT	TOTAL
State funding	0	0	0
Registration fee - Renovation Advisors**	90	500	45000
Registration fee - Renovation Installers**	45	2000	90000
	TOTAL		135000

*This figure is based on 500 building professionals and 2,000 construction craft workers registering on the Renovation Advisor Register and Renovation Installer Register respectively in year 5. The fees have been slightly increased between year 1 and 5 as it would make sense for building professionals and construction workers to be on the register once [supporting measures](#) are introduced.

VIII. Supporting actions needed

Several actions are needed to ensure the register is successful and a growing number of building professionals and construction workers upskill in energy renovation. First, it must be easy for the industry to [upskill in the area](#). Secondly, it cannot be another register, it must be THE register for renovation. To achieve this vision, it will need to be supported by a comprehensive [awareness raising campaign](#), as well as [potential legislative changes](#).

8.a. Facilitate upskilling

The construction industry is extremely busy, and it is difficult for building professionals and construction workers to upskill in energy renovation.

To make it easier for them, the project partners have developed an Irish version of the [Build Up Skills App](#). The app allows building professionals and construction workers to better identify training courses that suit their needs.

It is also critical that as many training courses as possible are available online, onsite or through short module series. This will be far more flexible for building professionals and construction workers.

“Well impressed with the webinar and all from the comfort of the office cutting down on traveling costs”

“The webinar with question box is the perfect equilibrium format between real presence and logistic savings on both sides. Great job!”

nZEB Webinar participants, Dec. 19

8.b. Raise awareness

The register will need to be extensively promoted to gain societal recognition. It must be launched as part of a broader renovation awareness campaign, highlighting the benefits of renovation and of using building professionals and construction craft workers who have upskilled in the area.

It would also make sense to link the BER Advisory Report to the register. The report could include clear information on where they need to contact a Renovation Advisor or a Renovation Installer and a link to the register. In line with research completed to date on the development of one-stop-shops, it is anticipated that these would also redirect to the register⁹.

⁹ The IGBC is currently working on the development of a one-stop-shop as part of the Horizon 2020 funded [Turnkey Retrofit project](#). The feedback received to date from the local implementation group is that qualified professionals should provide retrofit advice as part of the one-stop-shop model. The register would facilitate this approach. This approach will be piloted in early 2021. [Read more](#).

8.c. Make sure we have the right standards

The Irish Government's annual public sector purchasing accounts for 10% to 12% of Ireland's GDP, a large part of economic activity and demand. Public bodies must fulfil an exemplary role as regards energy efficiency. The public sector hence constitutes an important driver to stimulate market transformation towards more energy renovations. Some jurisdictions already mandate the use of competent building professionals and construction craft workers as part of public and social housing procurement. For instance, the Isle of Man has a [register of qualified workers](#) which is used for public tenders. The Hauts-de-France region in France use a "training legal clause" as part of some of its construction tenders. Qualifications and Competence clauses (5.2) are often used as part of public procurement in Ireland. E.g. "The Contractor shall ensure that the Contractor's Personnel are suitably qualified and experienced and are competent to carry out their respective tasks". However, as "competent" is not clearly defined in relation to renovation, it does not lead to an increase in upskilling. On the contrary, the introduction of requirements in relation to conservation expertise to work on historic buildings has led to an increase in the number of professionals upskilling in this area. The National BIM Council (NBC) in Ireland recognise the role of technology and 'better information management' in achieving measured improvements in productivity, collaboration and coordination. Digitalisation plays a vital role in the energy performance of deep retrofit builds and requires a skilled workforce to ensure compliance and quality. The JRC's Report on Green Public Procurement Criteria for Office Building Design, Construction and Management also recommends introducing criteria relating to the ability of the tenderer as part of Green Public Procurement. **To create a momentum around renovation upskilling, it is hence suggested to mandate the use of building professionals and construction craft workers who have upskilled in that area as part of public procurement, social housing procurement and planning process¹⁰.**

SEAI retrofit grants and/or other home renovation tax incentives could also be used to drive upskilling. First, a longer-term perspective would provide the context for the supply chain to invest in skills and education. The renovation industry is just finding its feet. In order to scale up deep energy renovation, businesses need to train staff, build new business models and guarantee long term work for their reskilled employees. This will only happen with a long-term large scale ring-fenced multi-annual commitment from the Government. Secondly, the use of building professionals and construction craft workers who have upskilled in energy renovation could be mandated to access SEAI retrofit grants. This approach is already taken in Germany¹¹. In this country, there is a national list of energy efficiency experts for the federal government's support programmes. This was developed to improve local energy consulting services by means of: (a) uniform qualification criteria; (b) proof of regular advanced training; and (c) random checking of results.

Although more complicated, a similar result could potentially be reached through changes in building regulations¹². As it currently stands, only Technical Guidance Document (TGD) Part F has strong competency requirements for design, commissioning and installation, a similar competency approach could be taken in part L. Slovenia for instance has a common training/certification article

¹⁰ The project partners will work on the development of such a clause with Irish local authorities as part of the new Horizon 2020 funded Busleague project. In particular, they will work to ensure some local authorities make a public commitment to integrate this requirement into their tenders. [Read more](#).

¹¹ Source: [Commission Recommendation \(EU\) 2019/786 of 8 May 2019 on building renovation](#).

¹² Anecdotally, 29% of the TU Dublin students interviewed as part of that project mentioned nZEB legislation as the main reason why they upskilled in energy efficiency.

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in its legislation transposing the Energy Efficiency Directive, the EPBD and the Renewable Energy Directive, and is achieving synergies through a coordinated modular training approach¹³.

“Most practices across Ireland are small. Their objective is to keep their clients’ happy and to comply with legislation. That’s as simple as that and that’s why I believe a pathway to compliance is the best option”

– Building Professional, October 2017

8.d. Other potential supporting actions

The private sector could also support the register and incentivise upskilling of building professionals and construction workers.

Voluntary certification schemes play a critical role in encouraging clients to go beyond national building regulations and thus helping guide the industry towards better practice. Extra points could for instance be awarded under voluntary certification schemes such as LEED and the Home Performance Index¹⁴, based on the number of building professionals and construction workers who work on a project and have upskilled in the area.

The use of building professionals and construction craft workers who have upskilled in the area may also be mandated as part of energy efficient mortgages applications. The work completed as part of the [Energy efficient mortgages – Action Plan project](#) shows that this approach is supported by banks.



Figure 8: Sets of building performance assessment criteria suggested for energy efficient mortgages as part of the EeMAP project

However, these private actions are unlikely to drive real change if not introduced alongside actions mentioned in [8.c](#).

¹³ Idem

¹⁴ Construction and design team skills are mandatory indicators under the [Home Performance Index Certification Schemes](#).

IX. Conclusion and Next Steps

These recommendations were developed by the IGBC and LIT, in close cooperation with members of the [Renovation – National Upskilling Committee](#). This work has involved significant consultation and builds on the work completed within the EU funded [Build Up Skills Ireland](#) (BUSI), [Build Upon](#) and [QualiBuild](#) Projects. All these projects proposed the establishment of a Renovation Register (BUSI – Build Upon) and also its pilot development (QualiBuild).

The role of the renovation register in addressing barriers to retrofit

Half a million homes must be retrofitted to a BER level of B2 by 2030. This represents a significant challenge, which requires addressing all barriers to renovation simultaneously.

The register will help address several of these barriers. On the one hand, it would incentivise building professionals and construction workers to upskill in renovation, hence addressing the lack of skills in the supply chain. It will do so, by making it easier for users (homeowners but also large procurers) to identify building professionals and construction workers who have upskilled in energy renovation. On the other hand, it would improve market transparency, and address property owners' lack of awareness and trust in the process. [Read more](#).

Launching and maintaining a successful renovation register

To encourage and facilitate building professionals and construction workers upskilling in energy renovation and to make it easier for all users to identify those who have upskilled in energy renovation, the project partners recommend setting up two registers: A register of building professionals who have upskilled in energy renovation ([Renovation Advisor](#)) and a register of construction workers who have upskilled in that area ([Renovation Installers](#)). To avoid confusion, the **two register systems should be centralised**.

Confidence and trust in the framework are critical to its success. It must be supported by organisations who can provide leadership and authority. Users' trust in the framework would increase if it were **endorsed by a neutral, nationally trusted organisation** such as the Sustainable Energy Authority of Ireland (SEAI). Public bodies' endorsement is critical if the framework is to become a framework of reference. The register must be recognised by all key stakeholders i.e. users, but also building professionals, construction workers and the Irish construction industry in general. As professional bodies are working within the industry and have direct access to their members, they should be highly involved in developing, promoting and operating the register.

Critical to its success is a strong launch. It must be launched as part of a broader renovation **awareness campaign**, highlighting the benefits of renovation and of using building professionals and construction workers who have upskilled in the area. **Strong government support and legal requirements ([see 8.c](#)) are also key.**

A **National Steering Group** (NSG) should be set up to update the list of key energy renovation skills and competences for [construction workers](#) and [building professionals](#) on a regular basis. The NSG will also be responsible for updating [criteria to be on the register](#), as well as the [list of pre-approved courses which lead to accreditation](#). It will also make judgments on any appeals received. The NSG will be made up of representatives of SEAI, professional bodies, IGBC, the Department of Environment, Climate and Communications, the Department of Housing, Local Government and

Heritage, Solas, the Higher Education Authority, third-level education and vocational education and training providers. The work of the NSG should also inform future skills need development.

The work of the National Steering Group will be coordinated by a **secretariat**. The secretariat should be hosted by a neutral and nationally trusted organisation. Although SEAI was identified as the “natural home” for the register, alternative options could be explored if the register is clearly endorsed by the organisation and [launched alongside supporting measures](#)¹⁵. The secretariat will also be responsible for coordinating the registration process, maintaining the register and liaising with training course providers on an ongoing basis.

Registers are initially a slow burn and require a few years to establish themselves. In this context and given the [added value of the register to the state, financial support will be required at least to set up the register and to maintain it for the first two years](#). However, with [appropriate state incentives](#), the system could become self-financing after a few years.



Figure 1: Source - <https://dbei.gov.ie/en/Publications/Publication-files/Building-Future-Skills.pdf>

Identified gaps

While identifying [key energy renovation skills](#) for building professionals and construction workers, cross-referencing them with existing courses and developing these recommendations, the project partners identified a number of gaps that must be addressed:

- [Existing pre-approved courses for construction workers](#) should be rolled out across the country.
- All [pre-approved courses for building professionals](#) are relatively long courses run by third level institutions. There is an urgent need to develop shorter, more flexible courses which [cover all key skills identified](#). For instance, courses that are part of Masters', postgraduate certificate or diploma could be delivered as stand-alone modules. The opportunity of launching a shorter course similar to the [Retrofit coordinator course](#) that exist in the UK should also be explored.

¹⁵ E.g. the register might be hosted by the Heritage Council, the IGBC or Wexford's Centre for Excellence in Energy Efficiency

- For both building professionals and construction workers, more flexible (online or part-time) training courses are needed.

Finally, the complementarity between the register of energy renovation installers and CIRI must be further explored. By allowing users to identify construction workers who have upskilled in energy renovation, the register would complement CIRI. CIRI on the other hand could be used to track the number of energy renovation CPDs completed by energy renovation installers.

For renovation advisors and to avoid confusion, the overlap with the SEAI's technical advisor role must be explored further. As Building Renovation Passports are likely to be introduced in the next few years¹⁶ and as the [feasibility study](#) produced as part of this project showed that the passport should be developed by BER Assessors +, the link between the Renovation Advisors Register and the development of Building Renovation Passports must also be explored.

Possible next steps

Although many actions remain subject to funding, the project partners have listed initiatives which are perceived as necessary to incentivise building professionals and construction workers to upskill in energy renovation. These are presented in four categories: Governance, leadership, education and training, procurement and regulation.

¹⁶ The European Commission has committed to propose the introduction of Building Renovation Passports by 2023 – [EU's Renovation Wave Communication - 2020](#)

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A. Governance					
Item	Action	Start date	Lead	Timeframe	Status
A.1	Assigning executive responsibility to new secretariat or existing department	TBC	SEAI - DECC	Short term	Action awaiting budget
A.2	Setting up the steering group	TBC	Secretariat	Short term	Action awaiting budget
A.3	Finalising the terms and conditions to be on the register	TBC	Secretariat with support from Steering Group	Medium term	Action awaiting budget
A.4	Developing a marketing campaign to support the launch of the register	TBC	Secretariat	Medium term	Action awaiting budget
A.5	Launching the register	TBC	Secretariat	Medium term	Action awaiting budget
B. Leadership					
Item	Action	Start date	Lead	Timeframe	Status
B.1	Piloting the Renovation Advisor Register	Dec. 20	IGBC	Short term	Funding secured as part of H2020 Turnkey Retrofit project
B.2	Exploring facilitation of one-stop-shops by integration of Renovation Register	March. 21	DECC / One-stop-shops	Medium term	IGBC to share results of pilot (B.1) with SEAI and DECC
B.3	Talking with financial institutions to ensure design and construction teams' skills are a criteria of green and energy efficient mortgages	Ongoing	IGBC	Medium/Long-Term	This is done as part of H2020 funded SMARTER and BusLeague projects
B.4	Working with DIY/Hardware shops to raise consumers' awareness about the importance of quality renovation and of using building professionals and construction workers who have upskilled in that field.	March. 21	IGBC / LIT	Short/Medium-Term	Funding secured as part of H2020 BusLeague project
C. Education and training					
Item	Action	Start date	Lead	Timeframe	Status
C.1	Supporting the inclusion of key energy renovation skills identified as part of this project into initial education (VET + 3rd level)	Jan. 20	LIT/IGBC	Short/Medium-Term	This will partly be done through the HEA funded project - DASBE Digital Academy for Sustainable Built Environment
C.2	Improving the online self-assessment tool - Build Up Skills App. E.g. through the inclusion of e-learning micro-units	June. 20	IGBC / LIT	Short/Medium-Term	Horizon 2020 funding (BusLeague project) secured to maintain and improve it till 2023
C.3	Replicating pre-approved courses run by WWETB for energy renovation installers across the country	Nov. 20	LIT/MosArt	Short-term	Ongoing
C.4	Launching a blended version of pre-approved courses run by WWETB for energy renovation installers	Oct. 20	WWETB	Short-term	Ongoing
C.5	Developing short, flexible deep retrofit training courses for building professionals	Oct. 20	Professional bodies	Short/Medium-Term	Under Ireland's LTRS 2020, SEAI is due to support relevant professional bodies in the development of training specifications/courses for Deep Retrofit of building
C.6	Developing flexible, blended deep retrofit courses for building professionals	Sept. 20	LIT	Medium/Long-Term	This will partly be done through the HEA funded project - DASBE Digital Academy for Sustainable Built Environment
C.7	Developing flexible, blended deep retrofit courses for construction workers professionals	Sept. 20	LIT	Medium/Long-Term	This will partly be done through the HEA funded project - DASBE Digital Academy for Sustainable Built Environment
C.8	Facilitating Upskilling at DIY/Hardware-Stores	March. 21	LIT/IGBC	Medium term	Funding secured as part of H2020 BusLeague project
C.9	Updating mapping of key skills and competencies - Construction Blueprint Erasmus +	Aug. 20	LIT	Medium term	Erasmus+ Funding secured as part of Construction Blueprint Project
D. Procurement and regulation					
Item	Action	Start date	Lead	Timeframe	Status
D.1	Public Procurement - Piloting "Energy efficiency/nZEB" training clause with local authorities	March. 21	IGBC	Medium term	Funding secured as part of H2020 funded BusLeague project
D.2	Upgrading skills for EU Greener PP in Construction works	Nov. 20	LIT	Medium term	Erasmus+ Funding secured as part of GUPP project
D.3	Integrating competency based clauses into Green Public Procurement	TBC	DECC	Medium/Long-Term	TBC
D.4	Opening discussions with SEAI to see if design and construction teams' skills could become a criteria to access SEAI grants	May. 21	IGBC/LIT	Medium term	Funding secured as part of H2020 funded BusLeague project
D.5	Exploring the opportunity to support energy renovation upskilling through changes in building regulations. E.g. introduce strong competency requirements in Part L.	Ongoing	IGBC/LIT	Medium term	Funding secured as part of H2020 funded BusLeague project

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X. Appendixes

9.a. Key energy renovation skills and competences for construction workers and building professionals

Key considerations when developing the graph: Energy renovation is often considered a technical field. Yet, building professionals and construction workers need both hard (technical) and soft (e.g., communication) skills. A holistic approach to renovation upskilling is key in ensuring potential risks associated with deep retrofit (e.g., moisture and radon) and co-benefits of renovation are part of the picture. Building professionals and construction workers are interdependent specialists but the construction industry is highly fragmented. As retrofits often go wrong at the corners, junctions, edges and interfaces between systems and people, multidisciplinary skills and cross-sector approaches are critical.

Note: This graph summarises key energy renovation skills for [building professionals](#) and [construction craft workers](#). For further details on key energy renovation skills for each category see: Renovation Advisors – Renovation Installers.

REGISTERED BUILDING PROFESSIONALS - BC(A)R CERTIFIERS	CONSTRUCTION PROFESSIONALS	CRAFT WORKERS	SPECIALISED WORKERS	GENERAL OPERATIVES	PROPERTY & BUILDING PROFESSIONALS
<p>Registered architect - Chartered engineer - Chartered and registered building surveyor</p> <ul style="list-style-type: none"> Practice the principles of sustainability and of sustainable building design and detailing Assess and manage risks associated with energy renovation (including hazardous materials and condensation issues) Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J) Use energy modelling tools Assess buildings for energy efficiency and quality retrofit Diagnose and differentiate sources of damp and moisture Cost retrofit and retrofit options Connect the individual performance to a team performance Communicate and transfer all this information clearly to members of the supply chain, building users and clients. Collaborate with cross-trades Basics of building physics and construction types, including traditional buildings Building pathology (including wet and dry rot) Energy use in existing buildings, energy reduction and energy production (including renewables) solutions, as well as of their interdependencies and effectiveness. The value of energy renovation (including co-benefits) and the users' needs and motivations Building regulations compliance software Energy management solutions and post-retrofit building operation and maintenance. Financing options Sustainable materials and resource 	<p>Architectural technologist - Project manager - Site manager/supervisor - Building and Facilities manager- BER Assessor</p> <ul style="list-style-type: none"> Practice the principles of sustainability and of sustainable design, detailing and construction Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J) Collaborate with cross-trades Assess buildings for energy efficiency and quality retrofit (BER assessor only) Communicate effectively on energy renovation with clients and other members of the construction chain. Connect the individual performance to a team performance Use energy modelling tools (Essential for all except contract manager) Basics of building physics and construction types, including traditional buildings Basics of building pathology (including wet and dry rot) Energy use in existing buildings and of the most common energy reduction and energy production (e.g. renewables) solutions, as well as their interdependencies and effectiveness. The value of energy renovation (including co-benefits) and building users' needs. Risks assessment and management in relation to energy renovation (including hazardous materials and condensation issues). Sustainable materials and resources. Energy management solutions, and post-retrofit building operation and maintenance (Understand for facilities managers) The cost of retrofit and retrofit options. 	<p>Impacting energy renovation: Electrician - Plumber - Bricklayer & Stone Layer - Carpenter & Joiner - Plasterer</p> <ul style="list-style-type: none"> Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J) Collaborate with cross-trades Communicate effectively on energy renovation with other members of the construction chain. Connect the individual performance to a team performance The concept of sustainability and sustainable design Basics of building physics and construction types, including traditional buildings Basics of building pathology (including wet and dry rot) Energy use in existing buildings and of the most common energy reduction and energy production solutions relevant to trade, as well as their interdependencies and effectiveness. The value of energy renovation (including co-benefits) and building users' needs. Risks assessment and management in relation to energy renovation within their trade expertise (including hazardous materials and condensation issues). Sustainable materials and resources. The cost of retrofit and retrofit options Energy management solutions, and post-retrofit building operation and maintenance 	<p>Glazier, PV and Solar installer, Biomass boiler installer, Heat Pump installer, External Insulation Installer etc.</p> <ul style="list-style-type: none"> Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J) Collaborate with cross-trades Communicate effectively on energy renovation with other members of the construction chain. The concept of sustainability and sustainable design Basics of building physics and construction types, including traditional buildings Basics of building pathology (including wet and dry rot) Energy use in existing buildings and of the most common energy reduction and energy production solutions relevant to trade, as well as their interdependencies and effectiveness. The value of energy renovation (including co-benefits) and building users' needs. Risks assessment and management in relation to energy renovation within their trade expertise (including hazardous materials and condensation issues). Sustainable materials and resources. The cost of retrofit and retrofit options Energy management solutions, and post-retrofit building operation and maintenance 	<p>General operatives & Craft workers with little impact on renovation projects: Groundworker, Stone Cutter and Stone Mason, Slater, Tiler, Painter and Decorator</p> <ul style="list-style-type: none"> Communicate effectively on energy renovation with other members of the construction chain. Collaborate with cross-trades The concept of sustainability and sustainable design Basics of building physics and construction types, including traditional buildings Building standards and regulations in relation to energy efficiency (NZEB) and quality (especially Part L, F and J). Basics of building pathology (including wet and dry rot) Risks assessment and management in relation to energy renovation within their trade expertise (including hazardous materials and condensation issues). Energy use in existing buildings and of the most common energy reduction and energy production solutions relevant to trade, as well as their interdependencies and effectiveness. Sustainable materials and resources Most common retrofit and renewable solutions The value of energy renovation (including co-benefits) and building users' needs. 	<p>Valuers - Estate agents - Quantity surveyors - Contract manager</p> <ul style="list-style-type: none"> Integrate energy efficiency considerations in valuations. Communicate effectively on energy renovation with clients and other members of the construction chain. The cost of retrofit and retrofit options The value of energy renovation (including co-benefits) and building users' needs. The concept of sustainability Building regulations in relation to energy efficiency and quality (especially Part L, F and J) Energy use in existing buildings, energy management solutions and post-retrofit building operation and maintenance Sustainable materials and resources Most common retrofit and renewable solutions Building physics, building pathologies and construction types, including traditional buildings. The risks associated with energy renovation and how to manage them (including hazardous materials and condensation issues) Climate change targets and their impacts on the real estate market

- Must be able to
- Must understand
- Must know
- Must be aware of

9.b. Renovation Installers: Courses to gain key renovation skills

	Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J)	Collaborate with cross-trades	Communicate effectively on energy renovation with other members of the construction chain.	Connect the individual performance to a team performance	The concept of sustainability and sustainable design	Basics of building physics and construction types, including traditional buildings	Basics of building pathology (including wet and dry rot)	Energy use in existing buildings and of the most common energy reduction and energy production solutions relevant to trade, as well as their interdependencies and effectiveness.	The value of energy renovation (including co-benefits) and building users' needs.	Risks assessment and management in relation to energy renovation within their trade expertise (including hazardous materials and condensation issues).	Sustainable materials and resources.	The cost of retrofit and retrofit options	Energy management solutions, and post-retrofit building operation and maintenance
nZEB Fundamental Awareness	✓				✓	✓		✓					
nZEB for Carpenters for new buildings	✓	✓		✓	✓	✓		✓		✓	✓		
nZEB for Plumbers for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓		
nZEB for Site Supervisor for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓
nZEB for Construction Workers	✓	✓	✓	✓	✓	✓		✓		✓	✓		
nZEB for Plasterers for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓		
nZEB for Bricklayers for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓		
nZEB for Electricians for new buildings	✓	✓	✓	✓	✓	✓		✓		✓	✓		
nZEB for Retrofit Build	✓	✓	✓	✓	✓	✓		✓		✓	✓		
Passive Housing and Sustainable Energy technology using timber frame construction - PHASE	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Certificate in Low Energy Building Construction (Special Purpose Award)	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Near Zero Energy Buildings (Special Purpose Award Certificate)	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Certificate in Low Energy Building Construction (Foundation Energy Skills)	✓	✓	✓	✓	✓	✓		✓		✓	✓		
Introduction to Heat Pumps	✓				✓			✓			✓		

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BER assessor training course (dwellings)	✓					✓		✓					
EcoBuild 2 nZEB	✓			✓	✓		✓	✓		✓			
pro clima Intelligent Airtight Systems Installer Training Course					✓	✓							
Internal Wall Insulation Systems for Single Leaf Masonry Walls					✓								
Insulation for Conservation and restoration				✓	✓					✓			
Natural Insulation				✓	✓					✓			
Air and Windtightness					✓								
Residential Ventilation				✓			✓						
Thermal Bridging					✓								
FEEST!! Fabric Energy Efficiency Standard Training					✓								
nZEB in Practice	✓			✓									
Advanced Air-tightness skills	✓			✓	✓		✓						
Renovation Solutions					✓		✓	✓		✓			
Airtightness & Moisture Control					✓								
ROI Building Regulations & Compliance	✓												
Domestic Building Energy Rating (BER)	✓			✓	✓		✓						
Domestic Solar PV Course							✓						
Domestic Heat Pump Systems Installer Course	✓			✓			✓						✓
BER Assessor Training Courses	✓				✓		✓						
Micro-Generator Electrical Installations							✓						✓
Small Scale Wind Systems Implementation				✓			✓						✓
Domestic Biomass Heating Installation				✓			✓						✓
Thermally Upgrading Historic Buildings in the context of Climate Change				✓	✓		✓						
NZEB - (Nearly Zero Energy Building) Ventilation	✓		✓	✓	✓	✓	✓		✓				
Diploma in Sustainable Construction				✓	✓		✓	✓	✓	✓	✓		

✓ Fully covered – ✓ Partly covered

9.c. Renovation Advisors: Courses to gain key renovation skills

	Practice the principles of sustainability and of sustainable building design and detailing	Assess and manage risks associated with energy renovation (including hazardous)	Interpret building standards and regulations in relation to energy efficiency and quality (especially Part L, F and J)	Use energy modelling tools	Assess buildings for energy efficiency and quality retrofit	Diagnose and differentiate sources of damp and moisture	Cost retrofit and retrofit options	Connect the individual performance to a team performance	Communicate and transfer all this information clearly to members of the supply	Collaborate with cross-trades	Basics of building physics and construction types, including traditional buildings	Building pathology (including wet and dry rot)	Energy use in existing buildings, energy reduction and energy production (including renewables) solutions, as well as of their interdependencies and effectiveness.	The value of energy renovation (including co-benefits) and the users' needs and motivations	Building regulations compliance software	Energy management solutions and post-retrofit building operation and maintenance.	Financing options	Sustainable materials and resource
MSc in Building Performance (Energy Efficiency in Design)	✓	✓	✓	✓	✓	✓	✓				✓		✓		✓	✓		
Postgraduate Diploma in Building Performance (EEin Design)	✓	✓	✓	✓	✓	✓	✓				✓		✓		✓	✓		
Postgraduate CERTIFICATE in Building Performance (Energy Efficient Design)		✓	✓	✓	✓	✓	✓				✓		✓		✓			
Fundamentals of Energy Renovation for Traditional Buildings	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	
Post Graduate Diploma in Green Engineering		✓	✓	✓	✓								✓		✓	✓		
Certificate in NZEB Design (Postgraduate)	✓		✓	✓	✓	✓	✓	✓			✓		✓		✓	✓	✓	
CPD Certificate in Hygrothermal Risk Assessment		✓				✓			✓		✓							
CPD Certificate in nZEB Policy + Technologies			✓		✓								✓			✓		✓
CPD Diploma in NZEB Design Tools			✓	✓	✓								✓			✓		✓
CPD Diploma in Thermal Bridge Assessment			✓	✓	✓								✓					
Near Zero Energy Buildings (Special Purpose Award Certificate)	✓		✓		✓		✓	✓	✓		✓		✓		✓	✓		✓
Domestic Building Energy Rating (BER)			✓	✓									✓		✓			
SBEM non-domestic BER assessor training course				✓									✓		✓			

Calculation Competency: Conventions and Standards for Thermal Bridging Calculations and Compliance	✓		✓	✓								✓		✓				
Certificate in Building Regulatory Engineering			✓															
NZEB and TGD Part L - Conservation of Fuel and Energy - Dwellings			✓					✓						✓				
NZEB and TGD Part L - Buildings other than Dwellings			✓															

✓ Fully covered – ✓ Partly covered

9.d. Suggested Code of Conduct

This section provides an example of how a potential Code of Conduct could look like. This is based on the Code of Conduct that was developed for the Construction Worker Skills Register by Arthur Cox as part of the Qualibuild project.

The Appeal section of this draft code of conduct was specifically developed for our Energy Renovation Register and feedback on this section would be highly welcome.

Introduction

This Code of Conduct applies to all persons registered on the Energy Renovation Register (hereinafter the Register). All Register members are required to abide by this Code of Conduct. Failure to comply with this Code of Conduct may result in suspension or termination of registration.

The Operator

The Register is administered by [Name of the Organisation] acting as Secretariat (“**the Secretariat**”), on behalf of the **National Steering Group** (made up of SEAI, professional bodies, IGBC, DCCAE, Department of Housing, third-level education and vocational education and training providers). This National Steering Group will have oversight of the Register, its data and processes, tasks and management and will make judgments on any appeals received.

Registration

To register with the Energy Renovation Register, each applicant must:

	RENOVATION ADVISOR	RENOVATION INSTALLER
Qualification	<ul style="list-style-type: none"> - Be a Chartered Engineer (CEng MIEI), a Member of the Royal Institute of the Architects of Ireland (MRIAI), a Chartered Architect with RIBA, or a Chartered/Registered Building Surveyor - And have completed one of the pre-approved training courses. 	<ul style="list-style-type: none"> - Be a fully qualified carpenter, electrician, plasterer, plumber or bricklayer. For plumbers and electricians be registered with Registered Gas Installers (RGII) or with Registered Electrical Contractor Ireland (RECI). - And have completed one of the pre-approved training courses.
Application	Complete an online application form and submit supporting documents to the secretariat	
Code of conduct	Accept and agree to the obligations set out in this Code of Conduct and the Register Terms and Conditions	
Registration fee	Pay the registration fee	

All applications are submitted to the Secretariat for verification. The Secretariat reserves the right to request further information it deems necessary, prior to accepting the building professional or construction worker onto the Register. An application for membership or renewal may only be considered successful when a confirmation email to that effect has been received.

The Renovation Register may, at any time, suspend and/or terminate a building professional or construction worker's registration if it has formed the opinion that the building professional or construction worker has breached the [terms](#) of his or her registration, or has otherwise failed to comply with the terms of this Code of Conduct.

Publicly accessible information

The Register is made available to members of the public or other users of the Site for the sole purpose of enabling such users to identify relevant building professionals and construction workers for the purpose of engagement on a renovation project, for procuring renovation services from such building professionals and construction craft workers or for obtaining information relating to such services. All other uses of the Register, or of the data contained within the Register, is strictly prohibited.

During the application process (and at any time thereafter), a Register Member can opt in or out of making his or her details searchable through use of the public search tool on the Register. The data that is published on the Register relating to each Register Member comprises solely and exclusively of data furnished by each Member and is published by the operator for information purposes only.

The following details are publicly searchable fields on the Register: name; business address; occupation; email address; telephone Number; website (if applicable); preferred location for work; list of training courses completed and date of completion and/or date of expiry (if applicable); membership of any professional organisations and date of expiry (if applicable).

The Register does not guarantee the accuracy, authenticity, integrity or quality of the data or that the data is complete, accurate or up to date.

The Register disclaims all liability and responsibility arising from any reliance placed on such data and/or materials by any user of the Register, or by anyone who may be informed of any of the data or other content. The Register accepts no responsibility for retaining the information appearing on the site and/or for keeping the Register up-to-date or complete, nor does the Register accept liability for any failure to do so.

All data and other information publicly posted or privately transmitted through the Register is the sole responsibility of the person from whom such data originated and the Register will not be liable for any errors or omissions in any Data or as a result of any Member or User's use of the Site.

The Register reserves the right to review and delete without prior notice any data that, in its sole judgment, breaches this Code of Conduct or the Register Member Terms or which might be offensive, illegal, or that might violate the rights of, harm, or threaten the safety or commercial interests of others or the Register.

Registration Renewal

Initial registration is for twelve months plus all months up to the end of (calendar) year 2 of registration. Following this initial period of registration, registrations are subject to annual renewal, unless suspended or terminated by the Register during that period or otherwise cancelled by the building professional or construction worker.

In the event that a Register Member's membership of the Register is not renewed by the prescribed renewal date in accordance with the instructions set out in the renewal notice issued to the Register Member (including payment of the relevant renewal fee), the Register Member shall no longer have log-in access to the Register and all profile information of that user shall be deleted or suspended from the Register.

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	RENOVATION ADVISOR	RENOVATION INSTALLER
Annual renewal	Proof of completion of at least 4 hours CPDs on energy renovation	Proof of completion of at least 2 hours CPDs on energy renovation

Evidence of Registration

Upon registration, the Register will issue each registered building professional and construction worker with a Certificate of Registration and a soft copy of the annual “Renovation Advisor” or “Renovation Installer” logo.



Figure 9: Examples of Renovation Advisor and Renovation Installer logos that could be used by registered building professionals and construction workers

Each Register Member may link to their profile, provided such link is not established in a way that damages the reputation of the Register or suggests any form of association, approval or endorsement on the part of the Register.

Membership

The Register may, at its sole discretion, refuse to accept an application for, or renewal of, membership and may, at its sole discretion, delete or suspend the profile of any Register Member where the Register has reason to believe that any of the data on such profile is inaccurate; that the Register Member is not in a position to provide renovation services; that the Register Member breaches any of the Member Terms or Code of Conduct, or in the event the Register receives any complaint from a member of the public concerning such Register Member.

By submitting or renewing an application to become a Registered Member, the applicant warrants that all such information furnished by that applicant is complete, accurate and up to date and has been provided in compliance with all applicable laws.

Each Register Member undertakes that they shall notify the Secretariat promptly of any changes in the applicable data. All Register members must acknowledge and agree that they are solely responsible for any data they submit including keeping such data accurate and up to date.

Use of the logo

All Register Members may log into the Register to generate a pdf of the record for that Register Member which shall contain the ‘Renovation Advisor’ or “Renovation Installer” logo.

The register grant a limited, personal, royalty-free, non-transferable, non-sub-licensable, revocable licence to each current Register Member of the “Renovation Advisor” or “Renovation Installer” Logo solely for use on promotional material controlled by the Registered Member and solely for so long as such Register Member has a current membership.

The Register Member must cease all use of the Logo on expiry or termination of membership and ensure that all uses of the Logo on its advertising and promotional materials are removed.

A building professional or construction worker whose registration has lapsed, or been suspended, terminated or cancelled, shall promptly remove all reference to registration from his or her printable material, website, communications, assets and property and shall not in any way represent himself or herself or his or her business as being on the Construction Worker Skills Register.

Appeals and Complaints

A member of the public may make a complaint to the Register if they believe a Register member has breached this code of conduct. Complaints will be addressed to the Secretariat. Any such complaint will be considered by the Secretariat and, in the event that the complaint is upheld, may suspend and/or terminate a building professional or construction worker's registration. No such action will be taken on foot of a complaint without an opportunity being given to the Registered Member to respond to the complaint.

Registered Members can appeal the decision of the Secretariat to the National Steering Group. Decisions by the National Steering Group will be binding.

9.e. Terms of Use for Website

This section provides an example of how the terms of use for the website could look like. This is based on the Terms of Use that were developed for the Construction Worker Skills Register by Arthur Cox as part of the Qualibuild project.

By accessing or using the **Site**, you acknowledge and agree to the disclaimers and terms and conditions ("**Terms**") set forth below. Please ensure that you (referred to as "**you**" or "**your**") read these Terms with care. If you do not agree to these Terms, you should not use the Site. These Terms apply to your use of the Site which is administered by [Name of the Organisation] acting as Secretariat ("**the Secretariat**", "**We**", and/or "**Us**"), on behalf of the **National Steering Group** (made up of SEAI, professional bodies, IGBC, DCCA, Department of Housing, third-level education and vocational education and training providers). We reserve the right, in our sole discretion, to change, modify, add or remove portions of these Terms at any time. You should check these Terms periodically for changes as by using the Site after we post any changes to these Terms, you are agreeing to accept those changes, whether or not you have reviewed them. By using the Site, whether as a guest or a registered **Renovation Advisor or Renovation Installer**, you agree to be legally bound by these terms and conditions just as if you had signed this agreement.

Certain areas of the Site are reserved for registered **Renovation Advisors or Renovation Installers**. [Additional terms apply to those areas.](#)

ACCEPTABLE USE OF THE SITE

In general, we will not tolerate any use of the Site which damages or is likely to damage our reputation, the availability or integrity of the Site or which causes us or threatens to cause us to incur any legal, tax, regulatory or other liability. We therefore request you to treat the Site with respect, and not to use the Site for any illegal purpose, or in such a way as to infringe or breach other's rights or to cause or threaten to cause us damage.

We reserve the right to suspend the use of the Site generally or block your access to any part of the

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Site and/or to suspend or terminate your rights to use the Site or any part of it if we suspect misuse or breach of these Terms. We reserve the right to take such action as we deem necessary including reporting any misuse of the Site to the relevant enforcement or other authorities and to our legal advisers and/or instituting legal proceedings against you for reimbursement of all costs on an indemnity basis (including, but not limited to, reasonable administrative and legal costs) resulting from the breach or misuse. We further reserve the right to disclose your identity and any evidence we have which relates directly or indirectly to misuse of the Site. In the event of such a breach, your right to use our Site will cease immediately.

You must not misuse the Site by knowingly introducing viruses, Trojans, worms, logic bombs or other material which is malicious or technologically harmful. You must not attempt to gain unauthorised access to our Site, the server on which our Site is stored or any server, computer or database connected to our Site to make unauthorised alterations to the Site by any means. We will report any such breach to the relevant law enforcement authorities, and we will cooperate with those authorities by disclosing your identity to them. We will not be liable for any loss or damage caused by a distributed denial-of-service attack, viruses or other technologically harmful material that may infect your computer equipment, computer programs, data or other proprietary material due to your use of our Site or to your downloading of any material posted on it, or on any website linked to it.

You agree not to use the Site or cause or permit the Site to be used:

- a) to jeopardise or prejudice the operation, quality, security or integrity of the Site, or the operation, quality, security or integrity of any telecommunications network;
- b) to impersonate any person or entity or to cause harm or distress to any persons using the Site;
- c) to harvest or otherwise collect information about others, including email addresses, or upload any information about a third party without their consent, except in context of consulting the Register;
- d) for any commercial purpose including but not limited to any direct marketing, surveys or contests, nor to use the Site to participate in or cause others to participate in sending chain letters, junk e-mail, spam, duplicative or unsolicited messages, advertising or promotional material or otherwise interfere with other users' enjoyment of the Site;
- e) to distribute, download, upload or transmit any material which contains viruses, trojan horses, worms, or any other harmful or detrimental programs;
- f) to transfer, upload or store illegal material including that are deemed threatening or obscene;
- g) to transfer, upload, store or otherwise store any material that you do not have a right to make available under any law or contractual obligation which includes a breach of third-party intellectual property rights;

In addition, you shall not:

- (j) use or remove any copyright, trade mark or other proprietary rights notices contained in or on the Site or any material obtained via the Site and/or the Register; or
- (k) deploy or use any robot spider, website search/retrieval application, or other automated device, process or means to access, retrieve or index any portion of the Site.

If any material on this Site, your use of this Site, or services advertised on this Site, is contrary to the laws of the jurisdiction in which you are located then this Site is not intended for your use and we ask that you do not use this Site. You are responsible for compliance with the laws of the jurisdiction in which you are located.

INTELLECTUAL PROPERTY

All materials incorporated in or accessible through the Site are protected by Irish and international copyright laws, and are owned, controlled or licensed by the Secretariat, or by the original creators of such materials or their permitted licensors. All such rights are reserved. Such materials may be used only for viewing the Site in the ordinary course or as a resource for availing of the services offered by us through the Site. You must not use any part of the materials on the Site for commercial purposes without obtaining a license to do so from us or our licensors. You may print off one copy, and may download extracts, of any page(s) from the Site for your personal reference. Any other use of such materials without the prior written permission of the copyright owner is strictly prohibited. All trade marks (whether registered or unregistered) on this Site, including but not limited to “Renovation Register”, “Renovation Advisor Register” or “Renovation Installer Register” may not be used without our prior written permission. If you print off, copy or download any part of the Site in breach of these Terms, your right to use the Site will cease immediately. You must, at our option, return or destroy any copies of the materials you have made.

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LIMITATION OF LIABILITY

You expressly understand and agree that (to the fullest extent permitted by law) the Secretariat shall not be liable for any indirect, incidental, special, consequential, exemplary or punitive damages, or any other damages whatsoever, including but not limited to, damages for loss of profits or contracts, income or revenue, goodwill, anticipated savings, data or other intangible losses (even if we have been advised of the possibility of such damages), arising out of, or resulting from: (a) the use or the inability to use the Site; (b) the use or download of any content or other material on the Site or any

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website or websites linked to the Site; (c) unauthorised access to or alteration of your transmissions or data; (d) statements or conduct of any third party on the Site; (e) any errors or omissions in any data on or made available through the Site; or (f) any other matter relating to the Site. This does not affect our liability for death or personal injury arising from our negligence, nor our liability for fraudulent misrepresentation, nor any other liability which cannot be excluded or limited under applicable law. If you are dissatisfied with any portion of the Site, or with any of these Terms, your sole and exclusive remedy is the discontinuation of your use of this Site.

RELIANCE ON INFORMATION

COMMENTARY AND OTHER MATERIALS POSTED ON OUR SITE ARE NOT INTENDED TO AMOUNT TO ADVICE ON WHICH RELIANCE SHOULD BE PLACED. THE ACCURACY OF THE INFORMATION ON THE SITE IS NOT GUARANTEED AND IS SUBJECT TO CHANGE AND THEREFORE THE OPERATOR CANNOT ACCEPT RESPONSIBILITY FOR ANY LOSS DAMAGE OR EXPENSE INCURRED UPON USING THE INFORMATION PROVIDED. WE THEREFORE DISCLAIM ALL LIABILITY AND RESPONSIBILITY ARISING FROM ANY RELIANCE PLACED ON SUCH MATERIALS BY ANY VISITOR TO OUR SITE, OR BY ANYONE WHO MAY BE INFORMED OF ANY OF ITS CONTENTS.

LINKS

The Site may contain links to third party websites. These links are provided solely as a convenience to you and not as an endorsement by the Secretariat of the content on such third-party websites. The Secretariat is not responsible for the content of linked third party sites and does not make any representations regarding the content or accuracy of materials on such third-party websites. If you decide to access linked third-party websites, you do so at your own risk and in accordance with the prevailing terms and conditions of such third-party sites.

The Secretariat generally welcomes the hyper-linking to the Site from other appropriate websites provided such links are to the Site's homepage (and no deeper within the Site) and provided we give our consent to the establishment of such links. Notwithstanding the foregoing, we reserve the absolute right to refuse to consent to such links without giving reasons. Other than to the Site's homepage, written permission is required for links to pages within the Site. Any links to the Site from another website must be presented in such a manner that the viewing of the Site is not impaired by framing or similar techniques that may impair the visitor's user experience.

GOVERNING LAW

These Terms will be governed by, and construed and enforced in accordance with, the laws of Ireland (excluding Northern Ireland). You hereby unconditionally and irrevocably submit to the exclusive jurisdiction of the courts of Ireland (excluding Northern Ireland). Those who choose to access this Site from other locations do so on their own initiative and are responsible for compliance with applicable local laws. The rights and remedies contained in this Agreement are cumulative and not exclusive of rights or remedies provided by law.

PRIVACY

This section will need to be updated asper GDPR requirements.

ADDITIONAL TERMS

These Terms constitute the entire agreement between the Secretariat and you with respect to your access to and use of the Site and any third-party site accessed through the Site. The Secretariat may

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assign or subcontract any of its rights and obligations under these Terms to a third party, without your consent, in connection with any transfer of the management of the Register to such third party.

If any provision of these terms shall be unlawful, void, or for any reason unenforceable, then that provision shall be deemed severable from these Terms and shall not affect the validity and enforceability of any remaining provisions.

Our failure to exercise or delay in exercising a right or remedy provided by these Terms or by law does not constitute a waiver of those or any other rights or remedies. No single or partial exercise of a right or remedy provided by this Agreement or by law prevents further exercise of that right or remedy or the exercise of another right or remedy.

9.f. Members terms and conditions

This section provides an example of how the terms and conditions for Registered Renovation Advisors and Renovation Installers could look like. This is based on the Members Terms and Conditions that were developed for the Construction Worker Skills Register by Arthur Cox as part of the Qualibuild project.

The Renovation Register (the **Register**) is administered by [name of the organisation] (the **Secretariat**) on behalf of the **National Steering Group** (made up of SEAI, professional bodies, IGBC, DCCAE, Department of Housing, third-level education and vocational education and training providers).

These Register Members terms and conditions (“Register Terms”) apply to Register Renovation Advisors and Renovation Installers. Please read these before submitting an application to become a Register Member, as by availing of the Register, you indicate that you have read, understand and accept the terms and conditions of these Register Terms and that you agree to abide by them each time you submit or update Data or otherwise access and use the Register.

If you do not agree to these Register Terms, please refrain from accessing and using the Register. Note that use of the Register is also subject to our [general website terms](#). We reserve the right to at any time and without liability to withdraw, suspend or amend any aspect or feature of the Data, Site and/or the Register without notice or liability. We will not be liable if for any reason the Register is unavailable at any time or for any period. Access to our Site, the Data and/or the Register is provided on an “as is” basis. We also reserve the right, in our sole discretion, to change, modify, add or remove portions of these Register Member Terms at any time. You should check these Register Member Terms periodically for changes as by using the Register after we post any changes to these Register Member Terms, you are agreeing to accept those changes, whether or not you have reviewed them.

THE REGISTER

The Secretariat, on behalf of the National Steering Group (“**Operator**”, “**we**”, “**us**” and “**our**”) operate a register of Renovation Advisors and Renovation Installers (the “**Register**”) on the Site through which building professionals and construction workers aged 18 years or over who offer energy renovation services in Ireland can become registered members of this Site in accordance with the procedure [set out here](#). Once an applicant has been accepted, such applicant then becomes a “Register Member” and certain details of such Register Member become available for consultation by Users.

The Register is made available to members of the public or other users of the Site for the sole purpose of enabling such users to identify relevant building professionals and construction workers for the purpose of engagement on an energy renovation project, for procuring renovation services from such building professionals and construction workers or for obtaining information relating to such services (the “Users”). All other uses of the Register, or of the data contained within the Register, is strictly prohibited including but not limited to any use of the Register for any other purpose, including extracting or replicating any of the Data or other information appearing on the Register for professional or commercial purposes or for the purposes of marketing to or advertising to Register Members without our express permission.

We grant a limited, personal, royalty-free, non-transferable, non-sub-licensable, revocable licence to each current Register Member of the “Renovation Advisor” or “Renovation Installer” Logo solely for use on promotional material controlled by the Registered Member and solely for so long as such Register Member has a current membership. The Register Member must cease all use of the Logo on expiry or termination of membership and ensure that all uses of the Logo on its advertising and promotional materials are removed.



Figure 10: Examples of Logos that could be used by Registered Renovation Advisors and Renovation Installers

The data relating to each Register Member that is published on the Register is composed solely and exclusively of data furnished by each such Register Member (the “Data”) and is published by the Operator for information purposes only.

We do not guarantee the accuracy, authenticity, integrity or quality of the Data or that such Data is complete, accurate or up to date. We disclaim all liability and responsibility arising from any reliance placed on such Data and/or materials by any user of the Register. We accept no responsibility for keeping the information appearing on the Site and/or the Register up to date or complete, nor do we accept liability for any failure to do so. You understand that all Data and other information publicly posted or privately transmitted through the Site is the sole responsibility of the person from which such Data originated and that we will not be liable for any errors or omissions in any Data or as a result of any Register Member or User’s use of the Site.

MEMBERSHIP – REGISTER MEMBERS

Membership of the Register can be obtained by eligible [building professionals](#) and [construction craft workers](#) who work on energy renovation projects who submit any associated documentation to us for the purpose of completing membership applications. The list of documents to become a Renovation Advisor or an Energy Renovation Installer is available in sections [4.b](#) and [4.c](#). An annual fee is also payable, details of suggested fees are set out in [here](#). The Operator reserves the right to request further information as, in its sole discretion, it deems necessary prior to establishing or updating a profile for an applicant or Register Member (as applicable).

In the event that a Register Member's membership of the Register is not renewed by the prescribed renewal date in accordance with the instructions set out in the renewal notice issued to the Register Member (including payment of the relevant renewal fee), the Register Member shall no longer have log in access to the Register.

We may, in our sole discretion, refuse to accept an application for, or renewal of, membership and we may, in our sole discretion, delete or suspend the profile of any Register Member where we have reason to believe that any of the Data on such profile is inaccurate; that the Register Member is not in a position to provide renovation services; the Register Member breaches any of the Register Member Terms or in the event we receive any complaint from a member of the public concerning such Register Member. We reserve the right to limit the amount of Data appearing on the profile of a Register Member. We also reserve the right to review and delete without prior notice any Data that, in our sole judgment, breaches these Register Member Terms or which might be offensive, illegal, or that might violate the rights of, harm, or threaten the safety or commercial interests of others or us.

By submitting or renewing an application to become a Register Member, the applicant warrants that all such information furnished by that applicant is complete, accurate and up to date and has been provided in compliance with all applicable laws. Each Register Member undertakes that it shall notify us promptly of any changes in the applicable Data. Any application for membership or renewal shall only be deemed accepted until such time as we have sent a confirmation email to that effect.

You acknowledge and agree that you are solely responsible for any Data you submit to us including keeping such Data accurate and up to date and ensuring that you comply with applicable laws in furnishing and/or updating such Data. You warrant to us that you have the right, authority and capacity to enter into and be bound by these Register Member Terms.

LINKING TO OUR WEBSITE

Each Register Member may link to the profile for that member, provided such link is not established in a way that damages our reputation or suggests any form of association, approval or endorsement on our part. We reserve the right to withdraw linking permission without notice.

9.g. User terms and conditions

This section provides an example of how the terms and conditions for Users could look like. This is based on the Users Terms and Conditions that were developed for the Construction Worker Skills Register by Arthur Cox as part of the Qualibuild project.

These User terms and conditions ("User Terms") apply to each User. Please read these terms before you start to use the Energy Renovation Register ("Register") as a User, as by accessing and using the Register, you indicate that you have read, understand and accept the terms and conditions of these User Terms and that you agree to abide by them each time you access and use the Register.

If you do not agree to these Register Users Terms, please refrain from accessing and using the Register. Note that use of the Register is also subject to our [general website terms](#).

We reserve the right to at any time and without liability to withdraw, suspend or amend any aspect or feature of the Data, Site and/or the Register without notice or liability. We will not be liable if for any reason the Register is unavailable at any time or for any period. Access to our Site, the Data and/or the Register is provided on an "as is" basis. We also reserve the right, in our sole discretion, to change,

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modify, add or remove portions of these User Terms at any time. You should check these User Terms periodically for changes as by using the Register after we post any changes to these User Terms, you are agreeing to accept those changes, whether or not you have reviewed them.

THE REGISTER

The Secretariat, on behalf of the National Steering Group (“Operator”, “we”, “us” and “our”) operate a register of Renovation Advisors and Renovation Installers (the “Register”) on the Site through which building professionals and construction workers aged 18 years or over who offer energy renovation services in Ireland can become registered members of this Site in accordance with the procedure [set out here](#). Once an applicant has been accepted, such applicant then becomes a “Register Member” and certain details of such Register Member become available for consultation by Users.

The Register is made available to members of the public or other users of the Site for the sole purpose of enabling such users to identify relevant building professionals and construction workers for the purpose of engagement on an energy renovation project, for procuring renovation services from such building professionals and construction workers or for obtaining information relating to such services (the “Users”). All other uses of the Register, or of the data contained within the Register, is strictly prohibited including but not limited to any use of the Register for any other purpose, including extracting or replicating any of the Data or other information appearing on the Register for professional or commercial purposes or for the purposes of marketing to or advertising to Register Members without our express permission.

USERS

The data relating to each Register Member that is published on the Register is comprised solely and exclusively of data furnished by each such Register Member (the “Data”) and is published by the Operator for information purposes only.

In particular, we do not guarantee the accuracy, authenticity, integrity or quality of the Data or that such Data is complete, accurate or up to date. We take reasonable measures to check the identity of each Register Member, but we do not independently verify the Data or the skills or training of any Register Member. It is the responsibility of each User to verify the accuracy and currency of any Data on the Register and no reliance should be placed by any User on any of the Data or on any other material that is made available to Users on or through the Register or which is generated from the Register. We disclaim all liability and responsibility arising from any reliance placed on such Data and/or materials by any user of the Register, or by anyone who may be informed of any of the Data or other content. We accept no responsibility for keeping the information appearing on the Site and/or the Register up to date or complete, nor do we accept liability for any failure to do so. You understand that all Data and other information publicly posted or privately transmitted through the Site is the sole responsibility of the person from which such Data originated and that we will not be liable for any errors or omissions in any Data or as a result of any Member’s or User’s use of the Site.

INDEMNITY

You agree to indemnify and keep indemnified, our parent, subsidiaries, officers, directors, shareholders, agents and employees, including costs and legal fees, from any claim or demand made by any third party due to or arising out of (i) your use of the Register, (ii) reliance placed by any third party on any Data, (iii) the breach of these User Terms by you, or (iv) the infringement by you of any intellectual property, identity or other right of any person or entity arising out of your use of the Register.

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We reserve the right, at your expense, to assume the exclusive defence and control of any matter for which you are required to indemnify us and you agree to cooperate with our defence of these claims. You agree not to settle any matter without our prior written consent. We will use reasonable efforts to notify you of any such claim, action or proceeding upon becoming aware of it.

9.h. Membership of the National Renovation Upskilling Committee

- Pat Barry, CEO, Irish Green Building Council – Chair
- Seamus Hoyne, Limerick Institute of Technology
- David McHugh, Association of Consulting Engineers of Ireland
- John Egan, Construction Industry Federation
- Eileen O'Connor / Kevin McCann, Department of Communications, Climate Action and the Environment
- Sean Armstrong / Simon McGuinness, Department of Housing, Planning and Local Government
- Dee Kehoe / Carrilee Hilt, Engineers Ireland
- Ruaidhri Neavyn, Higher Education Authority
- Paul Tobin, Institute of Professional Auctioneers and Valuers
- Gary O'Sullivan, National Standards Authority of Ireland
- Sandra Campbell, Royal Institute of the Architects of Ireland
- James Lonergan, Society of Chartered Surveyors Ireland
- Conor Hanniffy, Sustainable Energy Authority of Ireland
- Michael O'Brien, Waterford and Wexford Education and Training Board