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Surveyors Declare

Sustainability Resource Guide

To support you in your journey towards a sustainable built environment.

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Introduction

Surveyors Declare is a public commitment by Surveyors to incorporate sustainable business practices in their day-to-day operations and to encourage and support, clients and colleagues towards sustainability.

The Surveyors Declare Sustainability Resource Guide will act as an important document for Surveyors who have signed up in support of the Declaration. This resource guide is intended as additional guidance for Surveyors to understand the different issues, resources and opportunities available currently for the implementation of sustainable development in their professions.

This is the first publication of this resource guide, and it will be reviewed and amended going forward as appropriate.

Why Sustainable Built Environment?

Similar to many other sectors, climate change and the built environment have a mutual impact on each other. Climate change and global warming affect how and where structures and infrastructures are developed. While construction activities emit and consume resources that contribute to climate change and eventually result in floods, droughts, severe storms and other effects. We must therefore change how we build and manage our environment to reduce this overall impact.

Moreover, according to the recent RICS Sustainability Report 2022, the demand for green buildings is continuing to increase globally and that is impacting both values and rents, with a significant share of contributors suggesting that non-green real estate assets are being subjected to a brown discount. The report also found that there is an increase in climate risk assessments by investors on their built assets, suggesting that climate issues are now rising up the agenda and could be influencing the behaviour of key market players.

Did you know?

40% - 50% of the resources extracted globally will be for developing the Built Environment according to UNEP.



By 2060, it is anticipated that the amount of material utilised on a global scale would have more than doubled, with the building and construction industry accounting for one-third of this increase. In the next few decades concrete alone will be responsible for 12% of global emissions.

37% of Ireland's greenhouse gas emissions are from the built environment.

With 15.7 MtCO₂eq operation emission and 6.9 MtCO₂eq embodied carbon (equivalent to the carbon sequestered by 338 million matured trees in a year), Ireland's built environment emission has one of the top three sectoral emissions contributing to climate change.



Nearly 30% of the global biodiversity loss is due to the building sector, according to a World Economic Forum report released in 2020

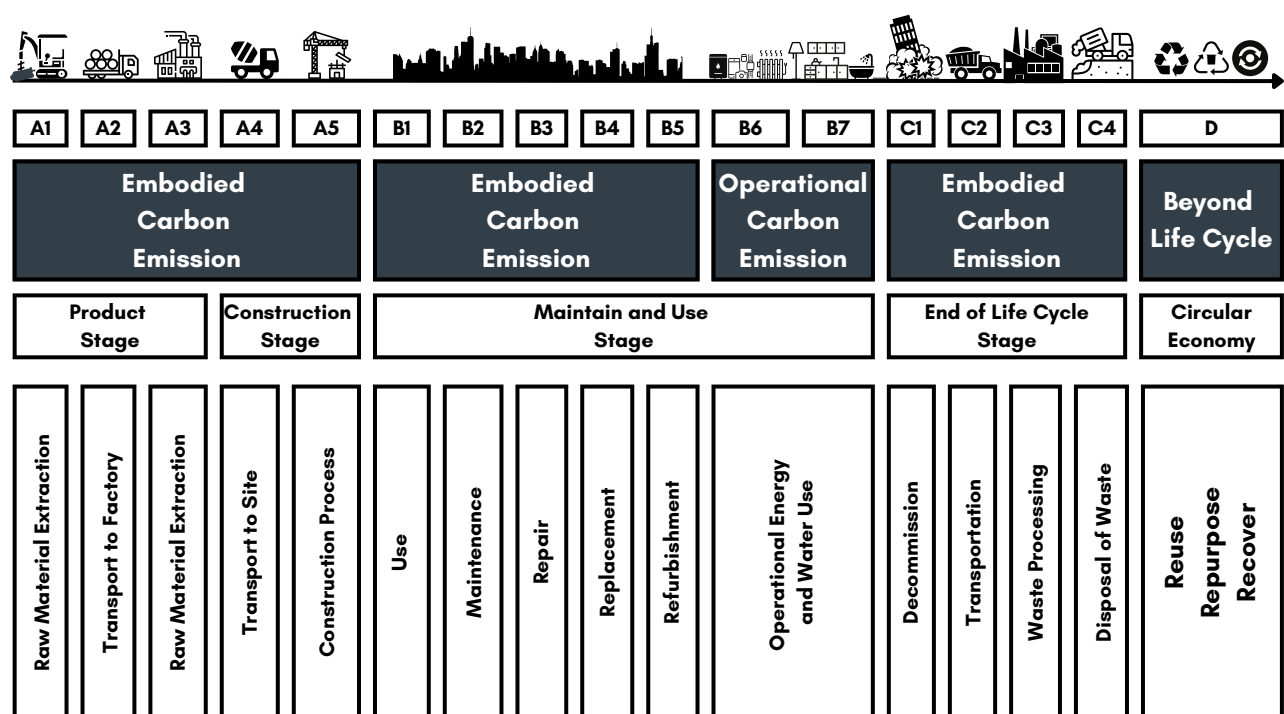


Current take-make-waste practices in the built environment place a heavy burden on biodiversity. By 2030, the growth of urban areas worldwide could endanger 290,000 km² of natural habitats, an area greater than Ecuador.

How does a building emit?

Carbon emissions arising from the built environment are attributable not only to the use of built assets – **operational emissions** (Scopes 1 and 2) – but also to their construction – **embodied emissions** (Scope 3), together known as the **Whole Life Carbon Emission** of a building asset.

Operational emissions result from energy consumption in the day-to-day running of a building, while embodied emissions arise from producing, procuring and installing the materials and components that make up a structure. These also include the lifetime emissions from maintenance, repair, replacement and ultimately demolition and disposal.



Different Scopes of Emission

Scope 1: Direct GHG emissions from energy use (combustion) on site.

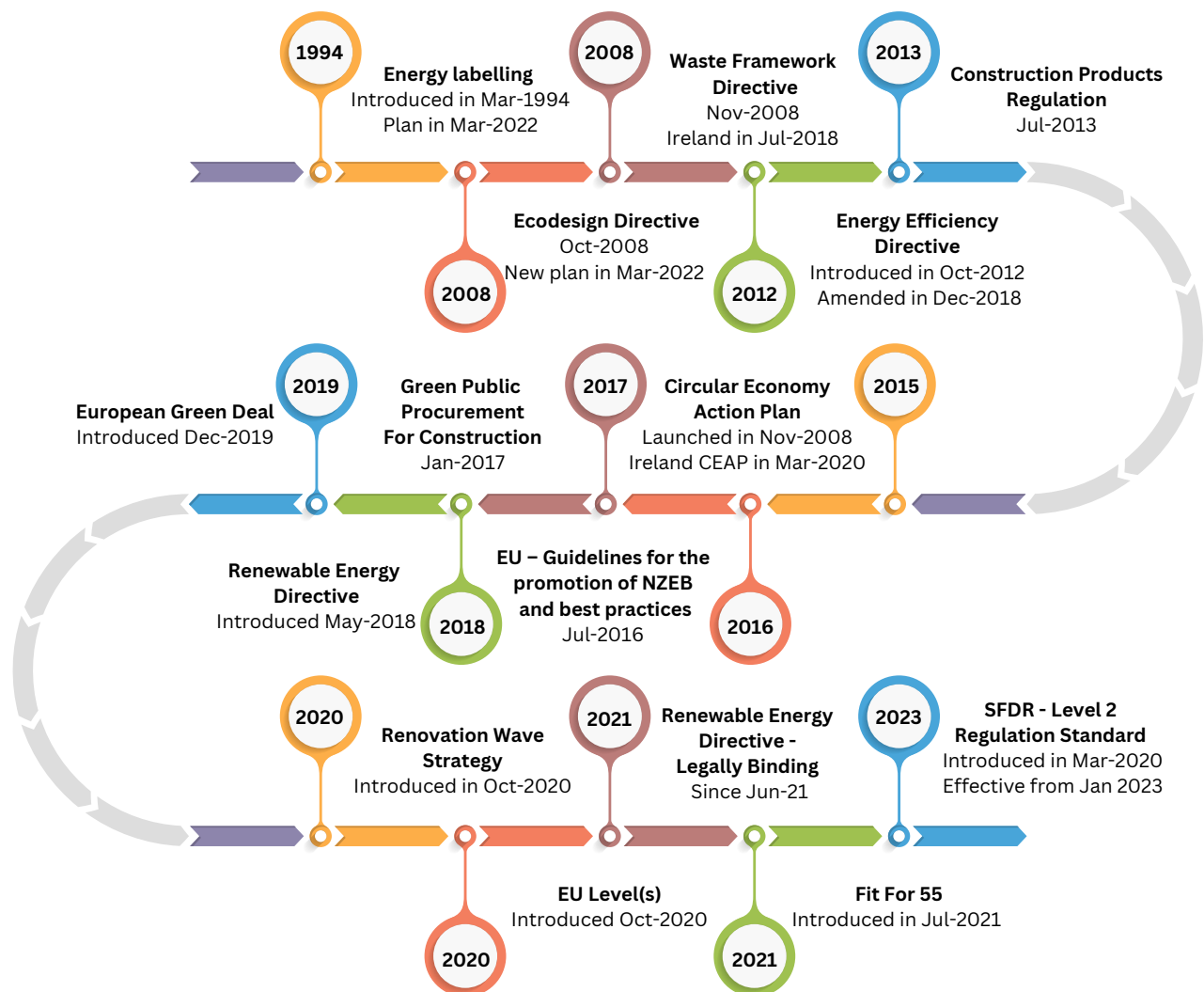
Scope 2: Indirect GHG emissions arising from the use of purchased electricity, heat, or steam.

Scope 3: Other indirect (embodied) GHG emissions, according to the GHG Protocol.

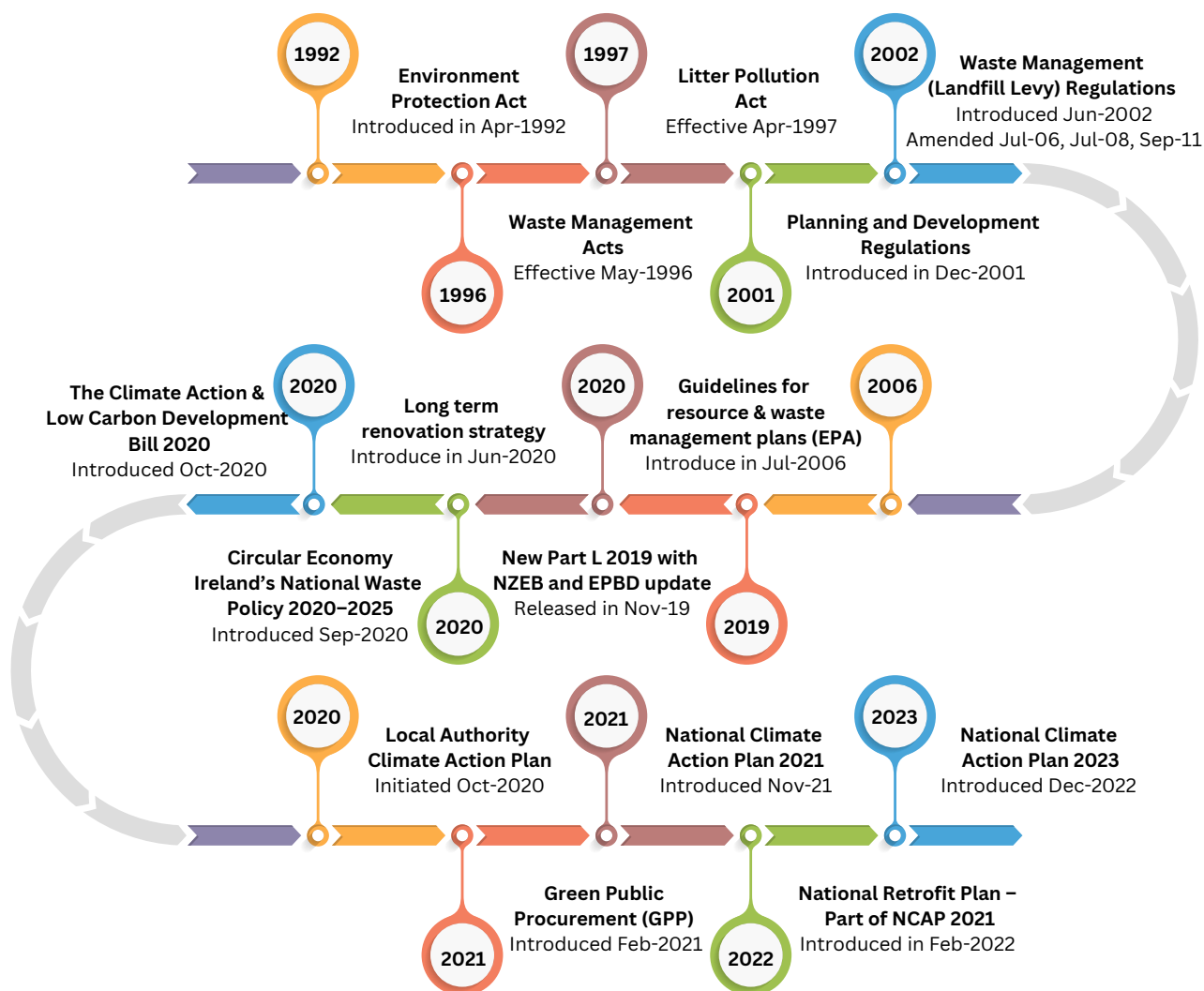
Sustainability Drivers

The UN Conference on the Human Environment led to the United Nations Environment Programme (UNEP) creation in 1972. UNEP's formation marked a turning point in recognising the need for international action on environmental concerns. Since then, the UN and several other bodies have advanced the sustainable development agenda and pushed environmental sustainability as a key tenet of growth. The UN established the 2030 Agenda for Sustainable Development in 2015, which includes 17 Sustainable Development Goals (SDGs) for eradicating poverty, preserving the environment, and guaranteeing prosperity for all. It acts as one key guide for international cooperation toward a sustainable future.

Following are a few drivers regarding a sustainable built environment:
European Level



Ireland Level



European Green Deal

European Commission signed a Green Deal in 2019 to transform the EU into a modern, resource-efficient and competitive economy, ensuring sustainable development. The strategy's stated goals for the Built Environment industry are to improve material efficiency and lessen the effects of the sector on the environment, with a focus on encouraging circularity principles throughout the life cycle of structures. The plan is anticipated to guarantee consistency across policy areas connected to, for instance, the environment, energy, the control of building and demolition waste, digitalization, and skills.

National Climate Action Plan

EU nations must reduce greenhouse gas emissions by at least 55% by 2030 in accordance with the European climate law and by 2050, the EU wants to be carbon neutral. The National Climate Action Plan (NCAP) of Ireland lays out a strategy for acting decisively to cut our emissions in half by 2030 and achieve net zero by 2050, as the country pledged. Climate Action Plan 2021 includes a commitment to introduce life-cycle assessment requirements for buildings and construction products and processes, as well as a commitment to developing a certification for recycled construction products. The 2023 commitments include designing and constructing all new dwellings to the Nearly Zero Energy Building (NZEB) standard by 2025, and Zero Emission Building (ZEB) standard by 2030, retrofitting and installing heat pumps.

Renovation Wave & Long-Term Renovation Strategy (LTRS)

Through the Renovation Wave strategy, the EU wants to ensure that renovations result in greater energy and resource efficiency and that renovation rates at least double in the following ten years. Based on the same, Ireland released its own Long Term Renovation Strategy. The strategy aims to renovate 500,000 homes and instal 600,000 heat pumps by the year 2030 and Surveyors have a lead role to play in this plan.

Circular Economy Action Plan

Through the Green Deal, the European Commission pledged in March 2020 to provide a new Circular Economy Action Plan. A technical body has been set up to deal with the sustainability of construction projects at the European level and at the Country level for the governments to create a clear strategy for creating a circular economy across the different sectors. A number of the documents the committee has produced, including EN 15643:2021 and EN 15978:2011 Sustainability of construction works – Framework for Assessment of Buildings and Civil Engineering Works and Assessment of Environmental Performance of Buildings – have been adopted as Irish standards by NSAI.

EU Taxonomy

In the context of the European Green Deal, a classification system known as the EU Taxonomy for sustainable activities was developed to make it clear which investments are environmentally sustainable. The commission has been developing this to assist investors in reallocating capital towards more sustainable technologies and services. These investors may significantly affect the cityscape and the built environment's sustainability by developing or acquiring assets that have low embodied and operational carbon emissions. The taxonomy gives the criteria through Article 8 ("light green") funds "promote environmental or social characteristics", while Article 9 ("dark green") funds constitute "environmentally sustainable investments".

EU Level(s)

A voluntary reporting framework called Level(s) was developed to increase the sustainability of buildings. Level(s) offers a collection of standard measurements and indicators for gauging the environmental performance of commercial and residential structures while accounting for their entire "life cycle." It concentrates attention on six major areas: water use, health and comfort, resilience and adaptation, greenhouse gas emissions, and cost and value.

Energy Performance of Buildings Directive (EPBD)

To achieve a highly efficient and decarbonised building stock by 2050, to stabilise investment decisions and to make the stakeholders aware of choices for saving energy, the EU has established a legislative framework, Energy Performance of Buildings Directive 2010/31/EU and the Energy Efficiency Directive 2012/27/EU. The suggested actions will speed up renovation, especially for the worst-performing structures in each nation. The updated directive will modernize the existing building stock, enhancing its accessibility and resilience. Additionally, it will promote the improvement of air quality, the digitalisation of building energy systems, and the development of infrastructure for sustainable transportation.

Sustainable Finance Disclosure Rule (SFDR)

The Sustainable Finance Disclosure Rule (SFDR) is a European regulation that was introduced to enhance the openness surrounding sustainability claims made by financial market participants, to prevent greenwashing, and to improve the market for sustainable investment products. The SFDR is a critical pillar of the EU Sustainable Finance agenda, having been introduced as a key component of the European Commission's 2018 Sustainable Finance Action Plan and the Taxonomy Regulation. Although Financial Market Planners (FMPs) should have made best-effort disclosures in their 2022 annual reporting, the SFDR RTS (regulatory technical standards) was effected on January 1, 2023.

Green Public Procurement

Green Public Procurement (GPP) was introduced in Ireland in 2010 with the publication of the National Action Plan on Sustainable Public Procurement by the Irish Government. GPP helps reduce emissions, and waste, and improve efficiency. In Ireland, GPP for building means using eco-friendly materials, less energy, and waste management.

Bioeconomy

The Bioeconomy is an economic system that uses renewable biological resources to produce food, feed, energy, and goods while minimizing waste. By promoting green practices and reducing reliance on fossil fuels, it can create local jobs and support economic development in rural areas. In the Built Environment industry, the economy can provide sustainable solutions for materials, construction processes, and waste management. For example, bio-based materials such as timber can replace traditional building materials, while the organic waste generated can be used as a source of energy and for manufacturing many other by-products. By integrating Bioeconomy principles, the industry can reduce its environmental impact and contribute to a more sustainable and regenerative future. Bioeconomy, with a focus on rural areas, was one of Sweden's priorities when its EU Council presidency term began in 2023.

Green Building Certifications

BREEAM

The **Building Research Establishment Environmental Assessment Method** is a well-established UK-based internationally applied scheme for the evaluation, rating, and certification of sustainability.

LEED

The **Leadership in Energy and Environmental Design** is a US-based internationally applied scheme for the evaluation, rating, and certification of sustainable buildings by the US Green Building Council (USGBC).

HPI

The **Home Performance Index** was created by the Irish Green Building Council (IGBC) to make sure that wider sustainability concerns are assessed and taken into consideration for a building.

WELL

WELL certification measures building features that affect human health and well-being, such as air and water quality, and lighting. It is becoming increasingly popular among developers, architects, and building owners.

GRESB

Global Real Estate Sustainability Benchmark assesses the sustainability performance of real estate and infrastructure, providing ESG data to capital markets and supporting members for sustainability.

Seeking the aforementioned certifications ensures an entire project's sustainability since they consider the whole life cycle of a building.

Other Certifications

- DGNB
- Living Building Challenge (LBC)
- Passivhaus Certification



Tools for Sustainability

Tools are used for describing, monitoring, predicting and evaluating the impact of sustainability. Following are some of the tools used to ease the implementation of sustainability measures.

BIM

More than a tool, Building Information Modelling (BIM) is a process that supports the development and management of information on a building asset. There is a misconception that BIM is useful only in the designing and pre-construction phases but BIM is useful at the different stages of the building lifecycle. Construction can be completed more quickly, safely, and with less waste when BIM data is used. BIM data is also used to operate, maintain, and eventually decommission buildings more affordably and sustainably.

Check out the following SCSI Resources: [SCSI BIM Information Guide](#)
[The Value of BIM and Information Management](#)
[5D BIM Design Evolution For Quantity Surveyors](#)
[BIM and Cost Planning](#)

LCA & LCC

Life Cycle Assessment (LCA) is used to determine the possible and potential environmental impacts of a product/building throughout its lifecycle i.e. from the extraction of raw materials to the end of life of the building asset. It is a standardised method under ISO 14040 and ISO 14004. Global Warming Potential, eutrophication, and impact on health are some of the unit measures. Life Cycle Costing (LCC) on the other hand is just an assessment of all economic costs that are related to a certain building, either directly or indirectly occurring in the life cycle which can also include monetary impacts of environmental externalities.

Check out the following SCSI Resources: [SCSI Guide to Life Cycle Costing](#)
[Measuring the carbon cost of buildings across their entire lifecycle](#)
[IGBC Carbon Designer Ireland](#)

Last Planner System

It is a production planning system created to produce a predictable workflow and quick learning in project planning, design, construction, and commissioning. With an increase in the criteria for sustainability in the development of projects, lean methods have demonstrated their capacity to reduce the negative effects of construction on the environment, the economy, and society.

Other Tools:

- Sustainability Assessments – EN 15643:2021 and EN 15978:2011
- Environmental Resource Guide (ERG) by the American Institute of Architects
- Urban Design Manual 2009 – Department of Environment, Heritage and Local Government
- Social, Sustainability and Community Impact Assessments (Surveys)
- Equity Assessment (Surveys)
- WHO Quality of Life
- Calvert Henderson QoL indicators

Where do I begin?

Please note that certain points listed under a specific profession may be applicable to various practices and should not be considered exclusive to that particular profession

Quantity Surveyor

- **Using sustainable materials:** Can promote the use of sustainable materials in construction, such as recycled materials, FSC-certified wood, regenerative materials and low-carbon concrete.
- **Whole Life Cycle Costing:** Effectively calculate the carbon emission from the projects and suggest measures for emission reductions.
- **Encouraging energy efficiency:** Advice on energy efficiency measures in buildings, such as insulation, etc.

Building Surveyor

- **Sustainable in Project:** Having a holistic approach to analysing the building. Consideration of climate change includes being aware of sustainable rating systems like BREEAM and Ska Ratings and discussing, upgrading rainwater goods and applying sustainable practices with their clients. Additionally, advise clients on energy efficiency to improve their BER rating and consider sustainable regulations such as Part O, P, R, and S when designing.
- **Sustainable Office Practices:** Working from carbon-neutral offices, using renewable energy sources, avoiding paper usage and opting for electronic storage, and reviewing report templates to ensure sustainability sections are included.
- **Eco-Friendly Inspections:** Choosing eco-friendly options when travelling to sites, such as electric vehicles or public transport if possible. Virtual meetings when possible.

Project Management

- **Resource Optimization:** Reducing Reworks through lean construction and management principles.
- **Reducing Paper Usage:** Digitising blueprints, drawings, and specs.
- **Site Sustainability:** Implement appropriate construction and environmental management plans on sites and educate the labourers.

Planning & Development

- **Appropriate Assessments (AA) and Environmental Impact Assessments (EIA):** Evaluate the environmental effects of development and suggest mitigation measures.
- **Planning for Biodiversity:** Help address the loss of biodiversity wherein requirements may impact development planning and design.
- **Sustainability Rating Systems:** Should be considered early in the building and master planning design stages.

Valuation Surveyor

- **Sustainable Property Valuation:** Valuation surveyors must include sustainability criteria such as assessing buildings' energy efficiency and environmental impact.
- **Red Book:** Effective use of The New Red Book Changes In Valuations.

Property Management & Facilities Management Surveyor

- **Waste, Water and Energy Management:** Can help to reduce energy and water consumption and waste generation by implementing sustainable technologies and practices such as LED lighting, renewable energy generation, energy & water meters etc.
- **Green Procurement:** Making sure that the supply chain is sustainable by procuring eco-friendly products.

Residential and Commercial Agent Surveyor

- **Use of Green Leases:** Incorporating green clauses in leases to ensure sustainable leasing and use of an asset.
- **Sustainable Operation:** Reducing the impact on business operations by preventing the use of paper and reducing resource consumption.

Geomatics Surveyor and Minerals Surveyor

- **Environmental Impact Assessment:** Can conduct EIA to identify potential environmental risks associated with projects and recommend ways to mitigate to protect the natural habitats.
- **Sustainable Operation:** Reducing the impact on business operations by preventing the use of paper and reducing resource consumption.

Upskilling Courses

Please note that the SCSL is providing these for informational purposes only and do not endorse or accredit any of these courses. The information provided is correct at the time of publishing but is subject to change

Course Name	Institution	Delivery	Duration	Fee
<u>Certificate in BIM and Lean Construction Management</u>	ATU	Online	1 year	€3,500– €4,000
<u>Certificate in Energy Conservation and Environmental Services</u>	ATU/DASBE	Blended	1 year	€250
<u>MSc in Built Environment Regulation</u>	ATU/DASBE	Blended	1 year	€2,000– €2,500
<u>PG Diploma in Science & Circular Economy Leadership for the Built Environment</u>	ATU/DASBE	Online	1 year	€550-- €600
<u>Introduction to Lean Construction and the Last Planner System</u>	CitA	Offline		-
<u>Certificate in Renewable Energy</u>	DkIT	Blended	1 year	€950– €1,000
<u>Renewable Energy Systems (QQI LEVEL 5)</u>	LCFE	Online	10 weeks	€200– €250
<u>Energy Efficiency In The Home QQI Level 5 (Cappamore Campus)</u>	LCFE	Online	10 weeks	€200– €250

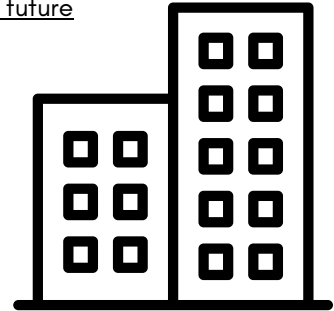
Course Name	Institution	Mode	Duration	Cost
<u>Lean Construction Ireland ("LCi) Belt Courses</u>	LCi	Blended		-
<u>NZEB Ventilation Systems</u>	LOETB	Blended	4 days	Funded
<u>NZEB Fundamentals</u>	LOETB	Online	1 day	Funded
<u>Certificate in nZEB Design</u>	SETU	Blended	1 year	-
<u>Certificate in Energy Sustainability</u>	SETU		12 weeks	€350- €400
<u>BSc in Energy Management (Buildings)</u>	SETU		1 year	€2,000- €2,500
<u>PG Cert in Building Performance [Energy Efficiency in Design]</u>	TU Dublin	Online	1 year	€2,500- €3,000
<u>Masters in Sustainable Energy Systems Management</u>	TUS	Blended	16 months	-
<u>Certificate in Near Zero Energy Buildings</u>	TUS/DASBE	Online	8 Months	-
<u>Fundamentals in Energy Renovation of Traditional Buildings</u>	TUS/DASBE	Online	30 weeks	-
<u>NZEB Retrofit</u>	NCTC Mount Lucas	Offline	1 day	Funded

SCSI Sustainability CPDs

To access the CPDs, please make sure you are logged in to the [SCSI website](#).

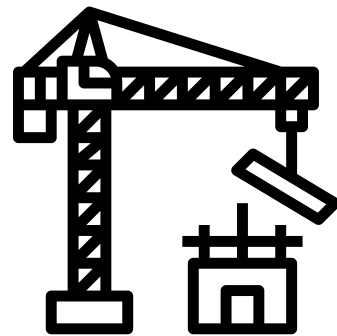
Property

- [Asset Management: A Focus on Sustainability](#)
- [Sustainable finance & ESG – what does this all mean for the Real Estate Industry?](#)
- [Smart Buildings: The real estate revolution for a sustainable and user-centric future](#)
- [A Briefing on the New Red Book Changes](#)
- [An Introduction to the WELL Building Standard](#)
- [Developing Climate Change Law](#)
- [Waste Management, Recycling & Sustainability](#)
- [Sustainable Energy Communities & Energy Master Plans](#)
- [Remote Building Monitoring and Sustainability](#)
- [Valuations And Sustainability – Items To Consider For The Report](#)
- [Indoor Air Quality And Getting Back To Work Safely](#)



Construction

- [Cost-Efficient Net Zero with Measurable ESG](#)
- [Retrofitting and Sustainability](#)
- [The Future of Sustainable Building Design](#)
- [Introduction to Building Renovation Passports](#)
- [SCSI Guide to Life Cycle Costing](#)
- [Competitive Dialogue – An Innovative Public Procurement Solution](#)
- [How To Embed Sustainability In Your Procurements](#)
- [Reporting On Sustainability: A Guide For Building Surveyors](#)
- [IGBC Carbon Designer Ireland](#)
- [The Value of BIM and Information Management](#)
- [Bringing Embodied Carbon Upfront](#)
- [Near Zero Energy Building NZEB Performance for B](#)
- [Overview of the LEED Green Building Rating System](#)
- [Application of Part L of the Building Regulations to energy retrofit, extensions and renovations](#)
- [Construction Contracts and the Green Agenda – how are the Contracts likely to respond?](#)
- [Measuring the carbon cost of buildings across their entire lifecycle](#)
- [Creating the Circular Economy for the Built Environment](#)



Land

- [Sustainable Mobility and Climate-Proofing Our Communities](#)
- [Waste Management, Recycling & Sustainability](#)
- [Sustainable Energy Communities & Energy Master Plans](#)
- [Sustainable Cities](#)



Others

- [Scaling Up Our Approach to Sustainability](#)
- [Property & Construction Sustainability](#)
- [Climate Action – Things are Hotting Up!](#)
- [The Green Future of Buildings](#)
- [Sustainable Cities](#)
- [Sustainable Data](#)



Sustainability Grants

Home and Business Energy Upgrades by SEAI

Ireland set a target of renovating 500,000 existing building stock and improving the energy rating to a BER B + by the year 2030. To aid the strategy the Sustainable Energy Authority of Ireland (SEAI) has made available three different schemes for improving the energy efficiency of buildings through renovation. Check out SCSl's [Real Cost of Renovation Report](#) to know more about government initiatives and incentives.

Home Energy Grants:

- [Individual Energy Upgrade Grants](#)
- [Fully Funded Energy Upgrades](#)
- [One Stop Shop Service](#)

Business Energy Grants:

- [EXEED Certified Energy Management](#)
- [Better Energy Communities Scheme](#)
- [Accelerated Capital Allowance Scheme](#)
- [Support Scheme for Renewable Heat \(SSRH\)](#)
- [Energy Contracting Support Scheme](#)

Grants are available for various renovation and energy improvement activities such as attic insulation, wall insulation, heating control upgrade, solar thermal solutions, solar PV panels, and heat pump systems and for assessing the Building Energy Rating (BER) post renovation. As a Construction Industry Surveyor, you can register yourself as a Technical Advisor (or) Registered Contractor (or) Project Coordinator with the SEAI.

Please check the following links to know more about how to register yourself with the SEAI and the eligibility criteria.

- [Contractors | Register With SEAI | SEAI](#)
- [Technical Advisor | Register With SEAI | SEAI](#)
- [Community Grant Project Coordinators | SEAI](#)

Vacant Property Refurbishment Grant

This is a program that helps vacant properties be reused in a sustainable way. The program, which is funded by the Cro Cónaithe (Towns) Fund, aids in reclaiming derelict and underutilized structures for residential use and ensures that the current housing stock is utilized to the best extent possible. Additionally, it is giving residents of Ireland's cities, towns, villages, and rural areas new housing options, fostering those places' continued development and expansion. Check out more information [here](#).

Grants for Upskilling

Government regulation, climate change, and technology all play a role in the transition to a green economy by energizing the demand for green goods and services from consumers. This transition inevitably increases the requirement for personnel to receive up or down-skilling in order to meet future needs.

- DASBE is a collaborative effort from HEIs and Industry Leaders for the upskilling needs of the construction sector. They have a number of NZEB and related programmes that are partially funded and available either fully online or in blended mode. Check out their website to know more about the courses and the funding: [DASBE Programmes](#)
- Springboard+ offers free or partially funded higher education courses for people who are unemployed and in general for people who want to upskill. The programme covers a range of part-time courses, from certificate to master's degree levels (NFQ). The majority of the programs are part-time and last for one year or less. Check out their website for details about the courses: [Springboard](#)
- SOLAS is the government agency that oversees the development of a world-class Further Education and Training (FET) sector in Ireland and develops the skills that will drive Ireland's future. FET is fully funded and available to all. Please check the NZEB courses part of the Green Skills initiative by SOLAS: [Green Skills](#)

Acronyms Glossary

Acronym Full Form

ASHP	Air-Source Heat Pump
BEM	Building Energy Modeling
BER	Building Energy Rating
BIM	Building Information Modeling
BREEAM	Building Research Establishment Environmental Assessment Method
BRP	Building Renovation Passport
CLT	Cross-laminated Timber
COP	Coefficient Of Performance
CSR	Corporate Social Responsibility
EAHP	Exhaust Air Heat Pump
ECI	Environmental Cost Indicator
EER	Energy Efficiency Ratio
ELR	Envelope Leakage Ratio
EMS	Environmental Management Systems
EPA	Environmental Protection Agency
EPBD	Energy Performance of Buildings Directive
EPD	Environment Product Declaration

Acronym Full Form

EPR	Extended Producer Responsibility
ERV	Energy Recovery Ventilator
ES/ ESTAR	Energy Star
ESG	Environmental Social Governance
GHG	Greenhouse Gases
GRESB	Global Real Estate Sustainability Benchmark
GSHP	Ground-Source Heat Pump
GWP	Global Warming Potential
HPI	Home Performance Index
HRV	Heat Recovery Ventilator
HVAC	Heating, Ventilating, & Air Conditioning
IAQ	Indoor Air Quality
ICMS	International Construction Measurement Standards
IEA	International Energy Agency
IECC	International Energy Conservation Code
IEQ	Indoor Environmental Quality

Acronym	Full Form
IPCC	Intergovernmental Panel on Climate Change
LCA	Life Cycle Assessment
LEED	Leadership in Energy & Environmental Design
LEED AP	LEED Accredited Professional
MVHR	Mechanical Ventilation with Heat Recovery
NEAP	Non-Domestic Energy Assessment Procedure
NZEB	Net Zero Energy Building
PEF	Product Environmental Footprint
POE	Post Occupancy Evaluation
PPE	Personal Protective Equipment
PV	Photovoltaic
SDG	Sustainable Development Goal
SFDR	Sustainable Finance Disclosure Regulation
VOC	Volatile Organic Compounds
ZEB	Zero Energy Building

BuzzWords Glossary

Words	Meaning
Anthropocentric	Anthropocentric is an idea that regards humans as the most significant or central beings in the universe.
B-corp	B-Corporation is a private certification for businesses' ESG performance.
Biophilic Design	It is a design strategy aiming to enhance building occupants' sense of connection to nature. These buildings make use of aspects like natural lighting, ventilation, and other natural elements to give people a more beneficial and healthier indoor atmosphere.
Brown Discount	Due to the rising demand for "green" structures, properties that are less environmentally friendly or energy efficient may lose value. This value decline is referred to as a "brown discount."
Carbon Budget	It is the total quantity of emissions, expressed in tonnes of CO2 equivalent, that a country or region is allowed to emit during a given time period.
Carbon Footprint	It is the total quantity of carbon dioxide (CO2) emissions produced by an individual or an entity like a building, corporation, country, etc.
Carbon Neutral	The process of balancing off all carbon emissions.
Carbon Offset	It is a process of funding of an equivalent reduction in carbon dioxide elsewhere to make up for your emissions.
Carbon Sequestration and Sinks	Natural or artificial reservoirs called "carbon sinks" take in and store carbon through the process called "carbon sequestration".
Circular Economy	It is a form of economy that promotes the recycling and repurposing of materials and goods, particularly as a strategy to maintain ecologically responsible or sustainable production.
Decarbonization	It is the process of a business sector or an organization, such as a government, reducing its carbon footprint, primarily its greenhouse gas emissions.
Embodied Carbon	Embodied emissions arise from producing, procuring and installing the materials and components that make up a structure. This also includes the lifetime emissions from maintenance, repair, replacement and ultimately demolition and disposal.

Words	Meaning
Embodied Energy	It is the energy used while producing, procuring, installing, repairing, maintaining and decommissioning a building.
Green House Gases	The gases that trap heat in the earth's atmosphere are referred to as greenhouse gases (GHGs), such as CO ₂ , Methane, Nitrous Oxide
Green Lease	A lease that includes provisions requiring both the owner and the tenant to take specific actions to ensure the property is operated or occupied sustainably, such as by using energy-saving technologies, reducing waste, and using water wisely.
Mass Timber	They are dense layers of durable wood that serve as load-bearing structural components.
Net Postive	An approach where an entity invests more in the community, the environment, and the economy at large than it consumes.
Net Zero	Reducing greenhouse gas emissions as closely as feasible to zero, with any leftover emissions being reabsorbed from the atmosphere by oceans and forests.
NZEB	A building that uses very little energy, if any at all.
Operational Carbon	The quantity of carbon released while a structure is in use or functioning.
Passive House	It is a concept that maximizes heat inputs into the building and minimizes heat losses from the building, which eliminates the need for a traditional heating system.
Payback Period	It is the amount of time it takes for an energy system to produce as much energy as it cost to manufacture and instal the system.
Regenerative design	Regenerative design creates buildings and communities that actively improve the health and wellbeing of both humans and the natural environment, by regenerating the natural systems and resources they depend on.
Split Incentives	Traditional lease agreements frequently result in the issue of "split incentives" between the owner and tenant, whereby the owner pays for upgrades that result in energy savings while the renter benefits from lower utility expenses.
Whole Life Carbon Assessment	The assessment of carbon emissions produced by the materials, construction, and usage of a building over the course of that building's life cycle, including its demolition and disposal, are known as Whole Life-Cycle Carbon (WLC) emissions.

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