

IRISH GREEN BUILDING COUNCIL'S SUBMISSION – DRAFT BIOECONOMY STRATEGY 2026 – 2030

1. What does a successful bioeconomy in Ireland look like to you by 2030 and 2035?

According to the 2026 Climate Action Plan Progress report, agriculture was responsible for 37% of national emissions in 2025 (EPA provisional estimates), making it the largest GHG emitting sector in Ireland. Projected reductions in emissions from agriculture up to 2030 are short of what is required to meet national or EU targets.

Developing the bioeconomy for construction materials in Ireland can allow us to diversify farm incomes away from more carbon-intensive activities and support a just transition.

A significant opportunity lies in expanding the use of low-carbon, bio-based materials (e.g. hemp, straw, flax) in construction. Fast-growing bio-based materials not only sequester biogenic carbon throughout a building's lifespan but also provide economic benefits by adding value to agricultural crops, creating rural employment, and reducing dependence on imported materials.

With the right suite of policy measures, by 2035 a successful bioeconomy for construction materials could support the diversification of farm income, innovative new businesses and supply chains, a reduction in agriculture-related GHG emissions (not to mention building and industry related GHG emissions) and thriving rural economies.

Also, as all EU member states will introduce Lifecycle GWP targets for buildings in the coming years (Energy Performance of Buildings Directive), market opportunities for innovative biobased materials should increase. Anecdotal evidence from colleagues in other European countries that already have Lifecycle GWP targets (e.g. France, Netherlands) suggests this is already starting to happen.

2. What actions should be prioritised (in terms of time to delivery) over the lifetime of the strategy? Please identify your top 5 actions from the draft strategy.

The IGBC has identified the following actions from the draft strategy which we believe should be prioritised. We believe these can and should be acted on swiftly, as much background work has already been done.

ACTION 1.1.1: Establish national cascading-use guidance and a decision framework to prioritise higher value uses while protecting food and energy security and environmental sustainability.

This underlying action is critical to ensure sustainability and prevent unintended adverse effects as Ireland's bioeconomy develops.

B4 Implement the recommendations of the final report from the interdepartmental and industry Timber in Construction Steering Group

Now that the recommendations have been finalised and published, they should be swiftly funded and implemented. Right now, it is unclear how the implementation of the actions in the report will be funded.

B6 Identify a public building to be used as a pilot to showcase innovation in bio-based building technologies.

Public bodies need to lead by example on climate action, and by doing so, they can also contribute to growing capacity and skills in the bioeconomy for construction materials.

B7 Incorporate the use of biobased building materials in training for construction and engineering via Springboard funded programmes and in consultation with Engineers Ireland

Collaboration is not just needed with Engineers Ireland but with other relevant industry bodies including and education providers including Solas, NZEB Centres of Excellence and other ETBs, higher education bodies, as well as professional institutes such as the Construction Industry Federation, ACEI and the Royal Institute of the Architects of Ireland.

B8 Incorporate growing crops for construction materials as part of agricultural training

B10 Establish a partnership between the agriculture, forestry, and construction sectors

3. Are there any actions or priorities within the draft bioeconomy strategy where you believe your organisation, sector or community could act as a lead or supporting partner.

We believe the Irish Green Building Council may be able to act as a supporting partner on some actions related to developing the bioeconomy for construction materials.

A5 Promote public procurement and market development initiatives that encourage the uptake of sustainable biobased agricultural products

The IGBC has an established Green Public Procurement Community of Practice with key stakeholders, as well as offering GPP training and guidance, and could leverage these to promote public procurement of biomaterials and tackle key barriers.

B4 Implement the recommendations of the final report from the interdepartmental and industry Timber in Construction Steering Group

Having sat on the Steering Group and work on this topic for almost a decade IGBC can provide support and guidance with implementation.

B5 Identify where the main opportunities arise for Ireland to lead and contribute to European standards development and effective adoption pathways. Potentially, this may include, for example, for biobased construction materials for timber, hemp, straw, miscanthus, and mycelium.

IGBC could help to coordinate industry engagement via our extensive membership, as well as international connections through the World GBC and experience in large scale stakeholder engagement process*, acting as a neutral partner. *For instance, over 200 key stakeholders were involved in the development of “Building a Circular Ireland” roadmap – which includes a full section on biobased materials.

B10 Establish a partnership between the agriculture, forestry, and construction sectors

The IGBC is currently coordinating, with Munster Technological University, the Irish Materials Working Group which has a focus on biomaterials and includes all these sectors.

We also engaged with these sectors during the stakeholder consultation for our Building A Circular Ireland roadmap.

Given our expertise we are eager to provide input wherever possible into the development of the bioeconomy for construction materials in Ireland, supporting the development and implementation of impactful, practical and implementable actions.

4. Does the draft strategy reflect the key opportunities and challenges for Ireland's bioeconomy? If not, what changes would you recommend?

Opportunities

Agriculture is a significant industry in Ireland and supporting diversification within the industry while sustaining rural incomes will be essential for achieving Ireland's climate targets and ensuring a just transition. An opportunity lies in expanding the use of low-carbon, bio-based materials in construction. Fast-growing bio-based materials [not only sequester biogenic carbon throughout a building's lifespan](#) but also provide economic benefits by adding value to agricultural crops, creating rural employment, and reducing dependence on imported materials

The introduction of Global Warming Potential limit values for the construction of new buildings through the updated Energy Performance of Buildings Directive (EPBD) (European Commission, 2024b) will increase demand for low-carbon materials. Published Environmental Product Declarations in Ireland show that bio-based materials generally have lower embodied carbon to produce than concrete, steel, or plastic-based alternatives (EPD Ireland).

There is also an opportunity to increase the use of timber in Irish construction if current barriers are addressed, especially considering the recent publication of recommendations by the Government's Timber in Construction Steering Group, which need to be swiftly implemented. Ireland's timber harvest is set to double by 2035, providing a strong foundation for expanding the domestic timber supply chain. However, afforestation levels must increase to meet future demand (Government of Ireland, 2024).

There is also significant potential to extract greater value from agricultural by-products generated from existing crops. Materials such as straw from tillage farming and wool from

sheep farming can be used to develop products for the construction industry. For example, natural insulations can be produced from hemp, wool, straw, reeds, verge grass, elephant grass, seagrass, flax, and mycelium. These materials also serve as complementary components in timber construction systems. Additionally, straw and miscanthus can be processed into panel board products, offering eco-friendly alternatives to traditional plywood.

Expanding the use of bio-based materials offers multiple benefits, including social sustainability within communities and reduced reliance on imported materials. Certain crops can even be used as break crops, helping improve soil structure (Teagasc, 2017). The Irish state has had a long tradition of establishing new rural industries to achieve social and economic co-benefits of employment and supply chain resilience, including Irish Sugar, Bord na Mona, and Medite Smartply. Given the need to decarbonise construction and the implementation of the Energy Performance of Buildings Directive, this offers an opportunity for Irish farmers regarding diversification (The Housing Commission, 2024).

Challenges

There is a need to act on both supply and demand to stimulate the bioeconomy for construction materials in Ireland.

One of the primary challenges is the existence of both real and perceived regulatory barriers that currently limit the use of both timber-frame construction and innovative construction products from other biobased materials. (See response to Q11 for more on regulatory barriers).

However, at the same time demand for biobased materials must also be stimulated through green public procurement, government grants etc.

The final report and recommendations of the Timber in Construction Steering Group provides a roadmap for overcoming regulatory barriers and stimulating the development of the timber construction sector in Ireland.

A similar comprehensive and strategic approach is now needed for other construction biomaterials.

5. How should progress under the Bioeconomy Strategy be measured, and what outcomes or indicators should be used to assess whether the strategy is delivering on its objectives?

For the construction materials bioeconomy this could include indicators such as square footage of timber frame construction each year (vs standard construction), economic value of Ireland's biobased construction materials industry, or number of new homes built incorporating Irish biomaterials. However, more detailed analysis would be needed first to choose the most useful indicators.

As the implementation of this strategy should be as transparent as possible, the launch of an online dashboard showing progress in relation to each action is suggested. Regular review of the strategy's impact and relevance would also ensure the actions remain fit for purpose.

6. How can the strategy encourage greater public awareness and understanding of the bioeconomy? What information, education or engagement activities would be most effective?

- Engage in exemplary demonstration projects to build experience in the use/ specification of biobased construction materials – e.g. similar to the Kildare County Council DemoHouse in the Maynooth Decarbonising Zone, but with a primary focus on biobased construction materials. These should be opened to the public through open-house type events.
- Integrate the structural design of timber, as well as the best practice design for durability and fire performance of timber and bio-based materials, into all undergraduate construction courses, as well as into construction and retrofit training programmes delivered through NZEB Centres of Excellence and ETBs. For

those already working in the construction sector, Continuous Professional Development (CPDs) via relevant professional institutes is needed in the same skillsets.

7. How should Ireland ensure sustainable, efficient and circular use of biomass from land, sea and organic waste streams?

- As proposed in the draft strategy, establish national cascading-use guidance and a decision framework to prioritise higher value uses while protecting food and energy security and environmental sustainability
- Link the introduction of biobased construction materials with the introduction of Lifecycle GWP targets for buildings – this will help to prioritise use of the lowest carbon materials, prioritise reuse of buildings and encourage leaner and more efficient design. This is important to ensure that the introduction of biobased construction materials succeeds in lowering the overall climate impact of development, rather than just being an “add on” to business-as-usual
- Mandate pre-development audits to justify demolition and pre-demolition audits at the planning stage, where demolition is permitted, to ensure buildings are not demolished unnecessarily and to capture any materials that could be reused when buildings are demolished
- Pilot ‘take back schemes’ from construction site waste products, including biobased materials, to promote circular use
- Streamline the implementation of Articles 27 (By-products) and 28 (End-of-waste) of the Waste Directive to better support the reuse of materials and create a functioning market for secondary raw materials.

8. Are the proposed five key sectors the right areas of focus for Ireland’s bioeconomy to 2030?

No comment

9. Are there any key sector actions that should be added, removed, combined or revised?

Sector B Biobased Construction currently does not contain any actions related to overcoming regulatory barriers to the use of biobased materials. See our response to Question 12 below for examples of key actions that could be added in this regard.

10. What opportunities exist for the key sectors that the draft strategy does not include?

Please see the Opportunities we listed in response to Q4.

11. What barriers are preventing these key sectors from moving from research and demonstration to wider deployment and commercial scale?

To develop the bioeconomy for construction materials, there is a need to act on both supply and demand for biobased materials simultaneously. This means tackling regulatory barriers, providing support for the development of new industries, upskilling relevant sectors and raising awareness about these materials. This is the approach taken by the Timber in Construction Steering Group and it provides an excellent template to replicate for other biobased materials.

- One of the main barriers to the use of innovative biomaterials in construction relates to inconsistent understanding and application of Building Regulations Part D and associated Technical Guidance Document (TGD) D - Materials and Workmanship, particularly Requirement D3 (“proper materials”). While Requirement D3 sets out a number of options for demonstrating that a material is a proper material, and TGD Part D provides guidance on several ways of

demonstrating that materials meet this requirement, these provisions are understood and applied inconsistently across building professionals and local authorities. In the case of innovative products, there is no clear pathway for demonstrating compliance in practice, and the current wording may unintentionally imply that all such products require an Irish Agrément Certificate.

- Technical Guidance Documents are often treated in practice as the primary route for proving compliance with building regulations, rather than as guidance on how compliance can be achieved
- The National Standards Authority of Ireland (NSAI) Agrément certification process is perceived as time-consuming and costly, particularly for smaller manufacturers; difficulties developing and accessing standards and national annexes.
- Building professionals' concerns around liability, insurance coverage and long-term performance may contribute to risk-averse decision-making and reliance on more familiar materials.
- Inconsistent training and qualification standards among building control officers, and limited knowledge of innovative products among key actors
- Lack of national accredited testing facilities for innovative materials, and an underdeveloped supply chain for innovative products.

In addition to a greater use of Green Public Procurement to support demand, and the development of exemplar projects by public bodies, the **introduction of a multi-annual fund (€30 million per annum) open to all three parts of supply/production/demand stakeholders** to kickstart support for farmers, the development of production of low-carbon materials, and re-use facilities, as well as the development of pilot projects to build capacity in the industry must be considered.

Question 12. What further measures would most help scale sustainable development in these sectors?

- To further develop the market for timber in Irish construction, swift funding and implementation of the recommendations of the Timber in Construction Steering

Group is now needed. A similar collaborative cross-sector approach to the Timber in Construction Steering Group could be implemented to develop the market for non-timber biobased products in Irish construction. This should look at both supply and demand aspects.

- To support consistent understanding and application of TGD Part D, in order to facilitate use of innovative biobased construction materials, a Regulatory Learning Sandbox should be developed. This is an approach for facilitating coordinated and systemic regulatory learning across institutions. It is proposed as a short-term solution to be implemented over a period of 15 to 18 months. The regulatory learning sandbox provides a structured yet flexible environment in which stakeholders can collaborate to discuss, test, and share knowledge on the understanding and application of regulations, in this case, TGD Part D. The Regulatory Learning Sandbox will aim to:
 - Improve clarity and consistency in the understanding and application of TGD Part D, without compromising safety and health.
 - Enable informed and uniform use of the flexibility provided under the existing regulatory framework among building professionals, including building control officers, architects, engineers, and assigned certifiers.
 - Support the testing and comparison of compliance approaches in practice.
 - Facilitate collaboration and build trust between stakeholders.
 - Capture and disseminate regulatory learning beyond individual projects.
 - Reduce uncertainty in compliance pathways, supporting the wider use of innovative products while maintaining safety, performance and regulatory compliance.
- Accelerate the restructuring of the NSAI to enable faster certification of innovative systems and establish technical frameworks for the re-certification and reuse of secondary construction products.
- Develop a roadmap to enable the wider use of innovative construction products while ensuring safety, performance, and regulatory compliance: a roadmap to consolidate and coordinate actions, with clear

responsibility for delivery, milestones, and funding routes across government, regulatory bodies, industry, and other key actors.

- Introduce a multi-annual fund (€30 million per annum) open to all three parts of supply/production/demand stakeholders to kickstart support for farmers, the development of production facilities, and the development of pilot projects to build capacity in the industry.
- Develop an infrastructure of ‘eco-park’ business clusters and collection hubs that combine bioeconomy processing and cluster companies to maximise value extraction from agricultural products for food, chemicals, and construction materials.
- Develop and implement a public procurement strategy for bio-based materials to support demand (e.g. Minimum % requirements for biomaterials).
- Introduce Life Cycle Global Warming Potential (LCGWP) limit values for new buildings ahead of the EPBD deadlines (2030) to drive demand for bio-based materials. The timely publication of the LCGWP roadmap in January 2027 as per the requirements of the EPBD is key in that regard to provide certainty to the industry.
- Review the existing licensing process for industrial hemp production.
- Advocate for the development of specific European Standards for bio-based products. For example, bio-based insulation has different characteristics from fossil or mineral-based insulations. Develop national standards or a range of standards to promote and develop bio-based materials and processes.
- Implement the findings of the Wool feasibility report and support the development of facilities for the production of insulations and other materials available from wool.
- Engage in exemplary demonstration projects to build experience in the use/ specification of these materials.
- Increase targets for using a significant percentage of locally produced bio-based materials in construction
- Engage in the development of an ‘Insurance Playbook’ for the use of Mass Timber Insurance in Ireland. F2. Consider developing similar playbooks for other novel bio-based building systems, similar to The Mass Timber Insurance Playbook.

- Consider financial support through grants/reduction in Value Added Tax (VAT) for innovative low-carbon materials, including bio-based materials.
- Review SEAI grants criteria for insulation materials to accept alternative methodologies as per TDG D to encourage best practice and a greater use of biobased construction materials – this was done as part of the SEAI Traditional Homes Pilot but should now be scaled up.