

## Climate Action Plan 2019

23<sup>rd</sup> September 2019

Dear Minister Bruton,

The Irish Green Building Council (IGBC) welcome the publication of the climate action plan and we pledge to work with government in the delivery of the actions therein. This week is World Green Building week 23<sup>rd</sup> – 29<sup>th</sup> September and we take the opportunity to respond following consideration of the action plan over the summer.

The recent climate strikes by our children send a clear message to government that there are no longer excuses for putting off decisions that may be unpopular and that may inconvenience some of our citizens in the way they live, where they live and travel.

The IGBC is [a unique network of nearly 150 organisations](#) spanning the entire value chain of the built environment. We represent all stakeholders in the construction and property sector from building owners, developers, architects, engineers to local authorities. As a member of the World Green Building Council, we draw on best practices internationally in delivering high quality, sustainable homes and commercial buildings. The Irish Green Building Council is working to transition the Irish Built environment to sustainability.

We are delighted to enclose a copy of our report carried out with World Green Building Council – **Bringing Embodied carbon upfront – Co-ordinated action for the building and construction sector to tackle embodied carbon**. The report represents a turning point for the sector, setting out a roadmap to net zero carbon emissions by 2050 across the building sector and presenting a call to action to radically transform processes right along the planning and construction supply chain. This sets out one additional clear action that should be included in the National climate action plan.

We set out our comments as follows

1. General Comments on Built environment and Transport action plans, and key actions that we consider are missing from these plans;
2. The existing actions to which IGBC can contribute or is already working on.

## 1. General comments

### 1.1 Built Environment

We welcome the many necessary and vital actions to stimulate the energy renovation industry and the commitment to serious action on upgrading our building stock.

However, we believe a whole systems approach to the built environment is necessary if Ireland is to reach its climate target. This should consider how location and planning impacts resource consumption, transport, land use and embodied carbon as these are all intertwined. We attach a diagram – appendix 1 - which illustrates the connections between all the sectors and how actions in one sector can impact carbon emissions in other sectors. We should prioritise actions that also demonstrate additional co-benefits in other sectors not just single sector issues.

### New Buildings

We welcome the implementation of the nearly Zero Energy Building (nZEB) standard this year. However, the Government could do far more than what is required as part of the Energy Performance of Building (EPBD) directive. We will be adding 25- 30% to the existing stock of buildings over the next 30 years. This represents a fantastic opportunity to move to a more sustainable built environment. But we must ensure these are designed and built to the best possible standard now to avoid the need for retrofit in ten years-time, and to avoid the massive emissions associated with embodied carbon at construction stage.

In particular we would like to see **action 57** brought forward particularly for new commercial buildings.

The current Irish definition of nZEB is a relative benchmark, comparing Air Conditioned (AC) buildings to AC buildings rather than an absolute energy benchmark based on function. This means the nZEB definition for AC buildings which is a 60% improvement over 2008 regulations is nowhere close to 'nearly Zero'. The methodology for compliance needs to be reviewed to ensure that buildings are in fact designed to be as efficient as they can be for the particular site on which they sit rather than a one size fits all. We recommend a review of the current regulations and compliance methodology and propose that a more ambitious definition of nZEB for non-residential buildings be implemented within 2-3 years.

The Scottish Government and a number of high-profile European cities such as London have committed to Net Zero Carbon Buildings by 2030, which includes not only the operation of the buildings but the embodied carbon inherent in their construction. This is the level of ambition that we would like to see in the plan.

### **Embodied carbon in construction**

Whilst embodied carbon emissions from the manufacture of products and construction of buildings is touched upon in a number of actions, such as in **Enterprise section - Action 36 and 34**, and **Land Use forestry and Agriculture -Action 118**, there are no actions in Built Environment itself. This is a major omission from the plan.

Climate abatement for products should not be left to just Cement producers and other manufacturers as the entire construction value chain will be required to play its part. Carbon abatement is as much connected with the quantity of material used as with the carbon intensity of the product. Embodied carbon from the mining, harvesting, transport and production of construction materials and the construction process itself, accounts for 11% of all global emissions - 8 % which is due to cement manufacture, all before the buildings or infrastructure are used.

Several European governments have already moved forward with ambitious policies. Embodied carbon calculation is already required as part of building regulations in the Netherlands. It will be in legislation in 2020 in France and 2025 in Finland and targets already included in city plans such as Oslo. We are also informed by our UK Green Building Council colleagues that the UK government is looking at this seriously also to be included in regulation.

We attach the report we developed with the World Green Building Council which was released this week which calls for a 40% cut in embodied carbon emissions by 2030 in order to be on track for zero emissions by 2050. *Bringing Embodied carbon upfront – Co-ordinated action for the building and construction sector to tackle embodied carbon.*

We call on government to action the central requirement for the report which is endorsed by over 80 leading organisations around the world.

### **Action 1 required**

Bring forward the ambition for all new buildings to be Net Zero Carbon buildings by 2025 and all buildings Net Zero Carbon by 2050.

**Action 2 required**

Convene all sectors to co-create a national roadmap for specific and time-bound actions that all key actors can commit to for achieving net zero embodied carbon by 2050 with a minimum 40% reduction by 2030.

**1.2 Transport and Built environment**

Transport and the Built environment are very closely intertwined, poor planning decisions result in higher transport carbon emissions. The Irish Green Building Council welcome the actions related to public transport and cycling. But we are extremely concerned at a lack of confidence in the success of these actions indicated by the intention to still have 1 million cars albeit electric on the road in 2030. If the actions on the National development plan, cycling infrastructure, and public transport are implemented in an effective, coherent and urgent manner, we should aim to drastically reduce our total national car fleet from above 2 million to well below 1 million and closer to 500,000 by 2030.

Transport is Ireland's second and fastest growing source of carbon emissions. This is predicted to grow significantly by 2030. While support for EVs is welcomed, we do not believe this is the single silver bullet. All urban areas should prioritise mobility solutions, in which walking comes first, bicycles second and public transport third. Cars, including EVs should only come in fourth place but preferably only in 'pay per use' schemes such as carsharing.

Quality sustainable urban environments are key to action in climate change but in order to create liveable safe and connected towns and cities, we must make more space for walking, cycling, light vehicles, frequent public transport and biodiversity. We can only do this by taking away space from the car. Simply electrifying cars won't remove their worst impacts, namely their space guzzling impact on towns and cities which prevents people walking and cycling, prevents redevelopment of extensive car parks as green space, high-quality denser communities connected by viable public transport, prevents children having the freedom to cycle and play freely in their neighbourhood. Even when not used they consume space.

Economically this would also help redirect household expenditure and credit currently tied up in car purchase towards renovation of homes enabling greater levels of finance to flow to decarbonising our homes.

We should look to initiatives currently taking place in cities like Helsinki, Oslo and Paris to entirely free towns and cities of need for car ownership. All new housing proposed under the National Development Plan must be planned around the concept of car free communities. The careful integration of new developments into existing suburbs should enable sufficient densification and improvement in public transport and alternative walking/cycling infrastructure to enable existing communities to be less dependent on cars. This more integrated approach would also help to meet the 40% cut needed in embodied carbon for construction. By combining car reduction measures with improved public transport, the current road building programme can be radically scaled back resulting in huge embodied carbon savings and freeing up investment for public transport and cycle infrastructure. The elimination of the need to construct an underground car park in an urban area can result in an immediate 7% reduction of total life cycle carbon savings for the building. (source Bionova )

**Action 78 Set up a car scrappage scheme.** We are concerned that actions such as this, simply lock in car ownership and fail to drive behavioural change. It would be preferable instead to offer a cash incentive to car owners to give up car ownership entirely for continuous period of five years as part of a co-ordinated strategy to achieve radical reduction of the national car fleet. This could form part of SSI savings type scheme which could be recouped at the end of the five years to invest in energy renovation. It goes against

the ethos of resource conservation, and is unlikely to recoup a significant carbon saving when the full life cycle of the vehicle including manufacturing is considered.

Housing density and a proactive approach to limiting excessive home size play a large part of reducing emissions. Emissions result not only from the energy within buildings but from excess resource consumption, displacement of land for sequestration, excess energy consumption from operation of larger sub optimal homes and transport to access them. We estimate the carbon impact of a typical large one-off rural house can be up to 4 times or more the carbon impact of a moderately sized home located in a walkable community close to public transport links, when embodied carbon, operational carbon and transport carbon are considered.

#### **Action 1**

**Set out actions to enable the transformation of all towns and cities to car free zones.**

#### **Action 2**

**Set out actions to reduce the need for disconnected car dependent rural housing.**

## 2. Actions where IGBC can assist

We note that the Irish Green Building Council has not been named as a key partner in any of the actions. However, we will play a key role in implementing many of the actions related to the construction sector. We set out how we can or already are helping deliver the actions through our existing programmes. We would also like to highlight where we see gaps in the climate action plan.

**Action 15: Implement National Planning Framework** – IGBC is committed through its tools such as [Home Performance Index](#) to measuring compliance of new homes with the NDP in its commitment to sustainable compact growth. It is not enough to set out policy this must be monitored and 3<sup>rd</sup> party verified through tools such as the Home Performance Index. The Index provides over 30 indicators linked to the UN Sustainable Development goals. Taxonomy and financing policy should only incentivise the construction of homes that can clearly demonstrate compliance with national policy on compact growth, sustainable transport and efficient use of resources.

**Action 30- 31- Microgeneration** – We welcome the commitment to support microgeneration and are committed to supporting this through our tools such as Home performance Index which encourages home builders to go well beyond current nZEB standards to energy positive homes.

**Action 32 – Deliver Smart Metering Programme** – We welcome this as essential to developing use of renewable energy systems. IGBC is integrating the EU smart readiness indicator into its Home Performance Index to encourage the take up by developers of smart metering, and to ensure Irish citizens are at the centre of our transition to a low carbon society, becoming prosumers.

**Action 34 - Engage with the cement and food and drink industry sectors to identify measures to support the achievement of identified potential abatement in these sectors** - IGBC can assist in this action in relation to the cement sector.

IGBC is working with World GBC to bring about a 40% reduction in embodied carbon from the construction sector by 2030 and Net Zero carbon by 2050. Embodied carbon in the construction sector is responsible to 11% of global emissions, 8% of which is from the production of cement.

We are calling on Government to work with IGBC on the development of a National roadmap on embodied carbon including its integration into Buildings regulations as has already happened in the Netherlands,

France, Finland, or is expected to in the UK. The development of a national roadmap will help drive innovation in the construction sector.

IGBC has received EU funding under the Life programme to promote the use of embodied carbon and Life Cycle Assessment calculation by construction professionals and the integration in public procurement over the next 3 years.

It is not enough to leave it to the Cement sector to decarbonise its own industry this must be through the whole value chain working together.

**Action 36: Prioritise decarbonisation as part of enterprise agency strategies and drive the decarbonisation agenda across their respective client bases. Seek to grow the number of client companies engaging in supports for Environmental Product Declaration initiatives.**

The Irish Green Building Council can assist in the delivery of this action and has established an Environmental Product Declaration Programme [EPD Ireland](#) in 2018 with assistance from the EPA. To date we have verified and published 15 EPD for over 40 products. IGBC has already met with Enterprise Ireland to assist them in the delivery of this action.

In order to drive uptake over the coming years we are promoting EPD to specifiers and already [some of the largest development companies and procurers in Ireland have committed to use of EPD on their construction sites, including Hammerson, Hines, IPUT, Dublin City Council and Transport Infrastructure Ireland.](#)

IGBC has been awarded funding under the EU Life funded project LifeforLLL(s) over the coming three years to promote the use of EPD and their use in Life Cycle assessment in the construction sector and within Green Public Procurement.

IGBC call on the relevant government departments and agencies including, Office of Government Procurement, Office of Public works, HSE estates and the Department of Education Building Unit to work with us to integrate the use of EPD into tenders.

**Action 42: Work with all business representative groups, including IBEC, Business in the Community, ISME, SFA, Chambers Ireland, and others to create partnerships of companies that sign up to a low carbon trajectory**

The Irish Green Building Council should be included as the key organisation working with over 140 businesses in the construction sector.

**Action 43: Consolidate data on current retrofit volume and depth to get a full picture of energy efficiency and carbon savings funded by public bodies and those supported by the Energy Efficiency Obligation Scheme across the residential, commercial and public sectors**

IGBC is working with local, national and European stakeholders to develop a multi-level framework that contains a suite of milestones and measurable progress indicators for building renovation strategies, integrating data and insights from the local authority level. The Framework will serve as a tool for Local Authorities in delivering the EPBD and ensure that local initiatives are aligned with national and European policies. In Ireland, IGBC is working with Dublin City Council as “pilot” city, and Carlow, Cork, Dun Laoghaire Rahdown, and Kilkenny County Councils as follower local authorities. This work is funded by the EU’s H2020 funding programme. [Read more.](#)

**Action 45: Maximise the potential for BER and DEC data to help households and businesses decarbonise their buildings**

- **Review the BER certificate and introduce improvements to provide more guidance to homeowners**

- **Develop a tool to deliver a roadmap to individual homes to achieve BER B2, cost optimal and NZEB**

IGBC is currently developing and piloting a Building Renovation passport as part of a project funded by SEAI. This will enable homeowner to carry out a long-term phased renovation and ensure that the data on work carried out stays with the house via a renovation logbook. Building Renovation Passports are masterplans for retrofit and include a record of work.

- **Develop a roadmap to require that non-domestic rental property meet a minimum BER standard by a defined future date.**

The Irish Green Building Council has conducted an extensive stakeholders consultation on proposed approaches to dealing with energy efficiency upgrades in rental properties as part of a SEAI funded project in 2018-2019. The results of this consultation are [available here](#).

The report is divided into two sections: commercial and residential sectors. Each section presents an overview of the Irish market and of regulatory and contractual approaches which have been taken in other jurisdictions to tackle the split incentive issues, as well as a set of suggested recommendations for Ireland.

**Action 47: Establish a One-Stop-Shop model for energy efficiency upgrades**

IGBC is currently working on implementing a One Stop Shop platform 'Turnkey Retrofit' funded by H2020 together with NUIG and partners in France and Spain. This will see an operational platform available for homeowners to renovate their homes by the end of 2021.

We ask Government agencies to collaborate to ensure the success of the model including providing funding through the platform which will be open source to all high-quality renovation providers, qualified renovation advisors and financial product providers.

**Action 50: Skill-up current contractors/other industry players in deep retrofit, NZEB and new technology installations.**

**Support relevant professional bodies in the development of training specifications/courses for the design of NZEB and Deep Retrofit buildings**

IGBC is currently working with the main construction bodies on the implementation of a national accreditation system for Holistic deep energy renovation to make it easier for homeowners to identify those with the skills for renovation. We are also launching a platform to assist professionals and construction workers to identify the training needed.

However, the construction institutes have stated that in order for them to invest their members time in this Government agencies must commit to actively support the initiative by promoting any accreditation through procurement or grants policy.

**Action 53: Identify additional options for targeted financing for energy efficiency retrofits in the domestic and commercial sectors**

IGBC has been working on the H2020 EEMAP project to develop Energy efficiency mortgages and is currently working on the Horizon 2020 Smarter Finance for families initiative to connect green mortgages with green homes. This is intended to support all of the climate actions supported by the National development Plan, including energy efficiency, compact growth and reducing transport emissions via use of 3<sup>rd</sup> party accreditation of green mortgages using the [Home Performance Index](#).

**Action 56: All new buildings (public and private) to be NZEB**

This is already required under the EU EPBD directive since 2010 and we do not consider the implementation of the directive to be sufficient.

*Commercial buildings:* We are calling for a tighter definition to be implemented before 2025 - see 1.1.

*Public buildings:* We are calling for all new public buildings to achieve a Net Zero carbon definition based on a greater level efficiency and a greater level of on-site renewables. Organisations such as Salesforce and

Kingspan are already constructing their new HQ in Ireland to the International Living Futures Institute's Zero carbon standard.

*Residential buildings:* IGBC is currently developing a Net Zero carbon standard for new residential development which will be released in November of 2019 to coincide with the nZEB standard coming into place. This is being integrated into the [Home Performance Index](#).

**Action 63: Address the split incentive issue in the rental market. A special advisory group will make recommendations**

IGBC has developed a set of recommendations through engagement with stakeholders across the sector in June 2019. The recommendations are [available here](#). The report is divided into two sections: commercial and residential sectors. Each section presents an overview of the Irish market and of regulatory and contractual approaches which have been taken in other jurisdictions to tackle the split incentive issues, as well as a set of suggested recommendations for Ireland.

**Action 65: Develop and establish a climate-action toolkit and audit framework for Local Authority development planning to drive the adoption of stronger climate action policies in relation to the patterns and forms of future development**

We are working with local authorities to provide them with the tools such as

- The [impact framework for renovation](#) - H2020 funded Build Upon 2 project. This will allow local authorities to better measure the impacts of their renovation policies and to identify best practise.
- [Home Performance Index](#) which beyond energy in use and embodied carbon provides indicators for density and land use patterns
- Life Cycle Assessment tools to enable better use of resources in planning infrastructure and buildings.

**Action 118: Work with industry stakeholders to increase the use of low carbon materials, taking into account international best practice.**

This will require working with the construction industry stakeholders including IGBC to drive uptake of low carbon materials. This is why an additional action in the Built environment section is required.

This action should engage with IGBC's work on Life Cycle Assessment of buildings and the EU Life funded LifeforLLL(s) project.

**Action 138: Support the development of eco-design and circular economy opportunities for Irish enterprises to reduce waste over the full lifecycle of products**

This should engage with IGBC's work on Life Cycle Assessment of buildings and the Life funded LifeforLLL(s).

**Action 148: Mandate the inclusion of green criteria in all procurements using public funds, introducing requirements on a phased basis and provide support to procurers as required**

IGBC has received funding under the EU Life funding programme (LifeforLLL(s) project) to integrate the EU commission's Level(s) indicators for sustainable construction into Public procurement. Level(s) is the European framework for sustainable building. More specifically, the project will seek to mainstream indicators such as Life Cycle Assessment, Life Cycle Costing and Indoor air quality (IAQ). This aims to build the capacity of professionals and public procurers and provide clear guidance both technical and legal on the integration of these indicators.

# Appendix 1

## CROSS CUTTING ACTIONS AND OUTCOMES FOR RADICAL REDUCTION IN CARBON EMISSIONS FROM THE BUILT ENVIRONMENT

