

**Submission by the Irish Green Building Council to the Department of Housing,
Planning, Community and Local Government
“Ireland 2040 – Our Plan”**

March 2017

The following document is the Irish Green Building Council’s (IGBC) response to the Department of Housing, Planning, Community and Local Government on the first public consultation on Ireland’s National Planning Framework.

The IGBC was launched in 2011 and is comprised of organisations and businesses from the entire value chain of the built environment. These include educational institutions, professional institutes, NGOs, local authorities, contractors, architects, engineers, energy companies, as well as leading national and transnational companies. A full list of IGBC members is [available here](#).

The Objectives of the Council are to:

- provide a source of leadership for sustainability and quality in the built environment
- promote and assist in the provision of credible metrics for measuring progress towards the end goal of sustainability
- provide a source of resources to companies transitioning their activities towards more sustainable practices
- be central to alignment of the policies of organisations seeking to achieve sustainability in the built environment

More specifically, the IGBC has been involved in two projects that are highly relevant to “Ireland 2040”:

- The [Home Performance Index](#) label was developed by IGBC after extensive research and consultation with the industry to encourage quality and excellence in the development of new homes. The HPI certificate demonstrates that the home has been designed and constructed with care to minimise environmental impacts, ensure low running costs and enhance the health and wellbeing of the occupants. It includes 28 indicators that directly or indirectly impact planning and climate change, e.g. access and walkability. The system received funding under the Environment Protection Agency’s Green Businesses Scheme.
- The IGBC has worked in close cooperation with the Department of Communications, Climate Action and Environment (DCCA) to build a community of close to 200 key stakeholders to co-design an ambitious national renovation strategy for Ireland as per article 4 of the Energy Efficiency Directive 2012/27/EU - [Build Upon Project](#).

Executive Summary

1. The IGBC welcome the recognition that business as usual i.e. overdevelopment and sprawl is not a desirable option and poses a challenge to the continuing prosperity and well-being of Irish citizens. However, if we really want our country to be the best it can be, business as usual is not only “not a desirable option”, it is simply not an option.
2. Harnessing the planning system in order to maximise the role it can play in relation to climate change, demographic changes, improving people’s quality of life and well-being and preventing further overdevelopment and sprawl makes perfect sense. The recently launched [Home Performance Index \(HPI\)](#) with its 28 indicators covering categories as diverse as land use, surface water run-off, access to amenities, options for transportation, universal design, as well as health and wellbeing, could be used either at planning stage by local authorities or within a certification system by developers to reach these objectives.
3. The need for an absolute minimum of half million new homes represents a unique opportunity for Ireland’s construction industry to become a global leader in quality and sustainability. The HPI (or some of the HPI indicators) can play a positive role in ensuring that both homes and neighbourhood are sustainable.
4. Two-thirds of our existing properties are likely to be standing in 2050. There needs to be an expanded vision and long-term strategy for existing buildings and brownfields. The strategy must ensure we make the most of the available sites within the core centres and increase the occupancy of underutilised buildings.
5. Poor policy coordination at the right level and high administrative fragmentation have hindered integrated land-use planning in Ireland for several decades. The IGBC thus welcome the importance given to the coordination of specific “sectoral” areas, including across local authority boundaries, into an overall strategy but believe this should be carefully implemented and monitored.
6. Settlement patterns are often the cumulative result of individual actions and cannot be fully understood without analysing individual stakeholders’ decision and how they aggregate up over time and space. The strategy should therefore be co-designed and implemented by a broad variety of stakeholders from both private and public sector. A similar process was successfully used by the Department of Communications, Climate Action and Environment to co-design the next version of Ireland’s National Renovation strategy – please [click here](#) for further details.
7. Current pressures such as the housing crisis should not mean lowering standards or allowing the vision to be undermined.

In this submission, the IGBC offers comments on a number of key areas within its remit of providing leadership in the transition to a sustainable built environment.

Ireland's National Planning Challenges

The IGBC welcome acknowledgement that in the absence of an agreed and effective National Planning Framework, it is likely that current trends of dispersed and fragmented settlements will continue.

This type of settlements contradict sustainable development goals and can have various environmental impacts. These include land and natural resources consumption, soil sealing, energy consumption and a decrease in biodiversity. Furthermore, urban-generated commuter settlement patterns have often created demand for uneconomic and inefficient infrastructure and service provision in suburban and extra-urban green-field locations. This has resulted in people travelling longer distance, often by car, which has contributed to car dependence and traffic congestion. It often also has a detrimental impact on people's health and wellbeing, with increased levels of obesity and chronic diseases.

Settlement patterns are often the cumulative result of individual actions and cannot be fully understood without analysing individual stakeholders' decision and how they aggregate up over time and space. However, the planning and development process should be managed in a way so that the right developments occur in the most suitable places and at the right time, ensuring sustainability and best use of scarce resources.

The Home Performance Index was developed to address the issues of quality and sustainability, to provide good quality housing and neighbourhoods and to future-proof Irish housing stock. The framework was developed in conjunction with University College Dublin (UCD) for designing, assessing and certifying new residential developments. It is made up of 28 indicators, many of them highly relevant to the design of the successor of the National Spatial Strategy (NSS). The system, or some of the indicators, could be used by local authorities to set clearly measurable requirements for the performance of new developments.

"If successful and if adopted widely by the industry players and home buying public, the HPI could be in widespread use in new housing developments within a few years with substantial environmental, economic and occupier benefits..." - EPA project evaluation

The HPI creates an holistic set of indicators that is divided into three main categories based on the Environmental, Economic and Social pillars of sustainability. In addition, two extra categories, Quality Assurance and Sustainable location are used in the planning and procurement process. Their relevance to the next version of the strategy is described in greater details below.

- The ***Environmental category*** contains indicators that measure the ecological footprint of the development. This includes indicators for global warming potential, residential density, loss of biodiversity, impact on ecological systems, water use, surface water run-off and quantity of land consumed.

The IGBC welcome the emphasis on density and brownfield developments. Building at higher densities makes more efficient use of land and energy resources, creating a consolidated urban form which fosters the development of compact neighbourhoods and a critical mass which contributes to the viability of economic, social, and transport infrastructures. However, this should not be limited to town and city centres. The outer suburbs of cities like Dublin and Cork also need densification and consolidation if they are not to suffer from depopulation brought about by smaller household size. Generally speaking, a greater focus on the existing building stock is required.

- The **Social category** relates to health and wellbeing of the occupants. This includes daylighting and walkable neighbourhoods – See the section on “people’s health and well-being” for further details.
- The **Economic section** relates to the running costs to the occupants and the long-term value stability of the dwelling, such as its capacity to adapt to changing family circumstances.

Housing needs to account for changes in demographics such as smaller and older households. The strategy needs to avoid reacting to market led demand for a certain type of low density family dwelling based on temporary demographics. All residential development should take a longer term perspective and build in the flexibility (universal design) that ensures optimal occupancy across a 100 year life cycle. Adding to an unbalanced and underutilised stock to answer to temporary market pressure should be avoided.

- The **Sustainable location category** measures how well the house relates to existing transport infrastructure and the accessibility of amenities. It also assesses the key risks on the site such as flooding.

As households become smaller and older, we need to better take into account the type of communities, services and amenities, they will need – access to amenities and options for transportation. Furthermore, as Ireland is exposed to extreme weather due to climate change, flooding risks must be better taken into account.

- **Quality**

The need for an absolute minimum of half a million new homes by 2040 presents a unique opportunity to transform Ireland’s construction sector into a global leader in quality and sustainability. Quantity should not be achieved at the expense of quality. We need to ensure all new built and renovated building are high quality developments.

Factors leading to settlement dispersal are extremely diverse. Yet, poor quality of apartments developed in the early 1990’s in Dublin contributed to a negative perception of density in Ireland. There is also a perceived higher quality of life in the commuter belts when measured against concerns related to anti-social behaviour, traffic, or access to some services in urban areas. However, higher density developments can be associated with high quality – For examples of same please see [Brueckner, Thisse and Zenou, 1999](#).

A copy of the HPI technical manual with further details on each indicator is [available here](#).

People's Health and Well-Being

Over the last few years, the IGBC in conjunction with the World Green Building Council has conducted extensive research on the impacts of the built environment on people health, wellbeing and productivity.

Here is a short sample of some of the [Better Places for People](#) Campaign key findings:

- *Health & Wellbeing*
 - \$100 M benefit to hospital patients with a good view
 - Homes with access to a garden or short distances to green areas are associated with less stress and a lower likelihood of obesity
- *Productivity*
 - Staff salaries and expenditures make up the bulk of operational expenses associated with occupying an office building (> 85% of total workplace costs are spent on salaries and benefits).
 - 90% of employees say their attitude about work is affected by the quality of their workplace environment
 - People performed better on administrative tasks with a view of nature versus a view of concrete
 - A better view out the window increased productivity at a call centre 7-12%

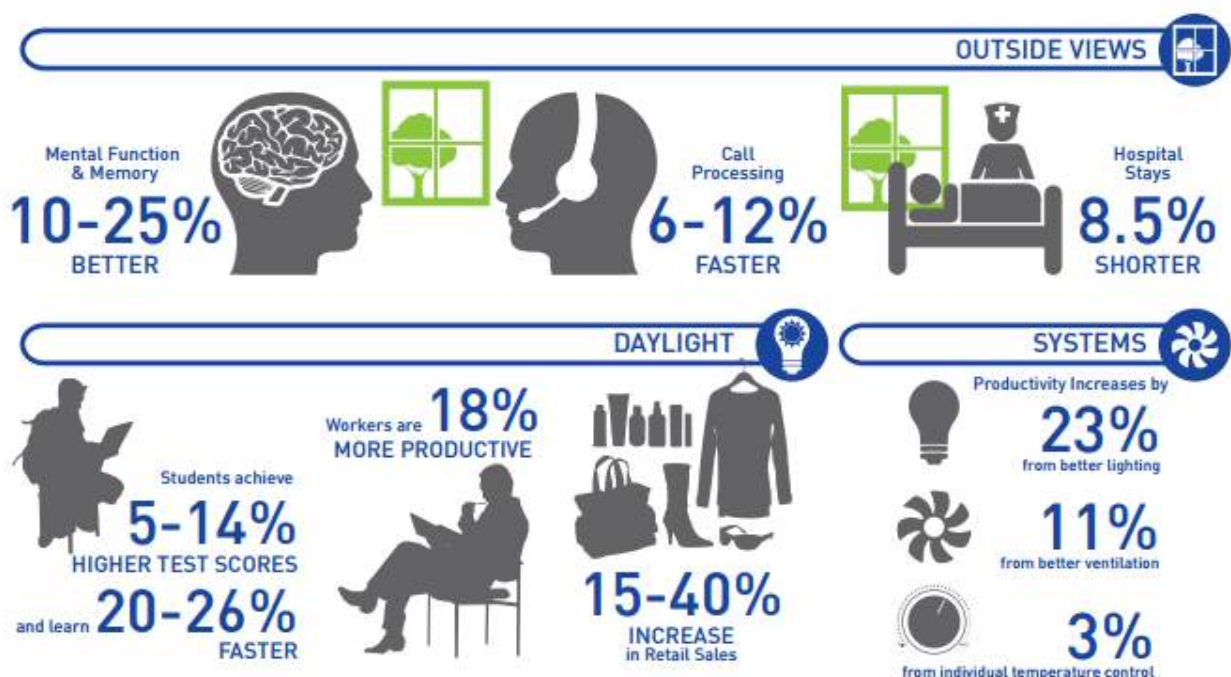


Fig. 1: Value analysis of the operational costs and productivity and health benefits of greener buildings – Source: [World Green Building Council, 2013](#)

How we “make” places can have a huge influence on people’s health and wellbeing, but also on workers’ productivity. For all these reasons, we believe that options for transportation and access to amenities, including parks and open spaces, are key. While our population is ageing and the average household size reducing, better planning could reduce elderly citizens’ isolation and improve their mental health.

The [Home Performance Index](#) provides a simple way of measuring and improving the quality of sites and development. The Sustainable location part of the tool measures access to amenities, alternative transport and services such as schools, healthcare, public parks and sports facilities. In particular, it could be used to measure how development improves access to amenities by creating greater permeability in urban neighbourhoods. Tools such as the HPI are key in creating and maintaining environments that encourage people to make more active, healthier choices.

The IGBC, in conjunction with the World Green Building Council, is hoping to do further work on this topic and would be delighted to work in close cooperation with the Department of Housing, Planning, Community and Local Government on the impact of the built environment on people's health and wellbeing.

A Place-Making Strategy

Despite an increase in discourses and legislation promoting more compact settlements over the last 15 years, the lack of coordination between policies designed and implemented at different levels, and the fragmentation of the decision-making process have, directly or indirectly, contributed to disperse and fragmented settlement patterns.

More specifically, better coordination and integration between relevant policies, such as energy, transport, urban planning and housing is needed. For instance, in the Greater Dublin Area (GDA) the development of new motorways have continually pushed employment related housing demand to areas of further distances from Dublin. For all these reasons, an integrated cross-departmental approach is needed to develop and implement the strategy.

Existing administrative boundaries of cities such as Dublin, Cork, Galway and Limerick now fail to reflect the reality of their contemporary housing and labour markets. For instance, the spatial pattern of Dublin's influence stretches over 100 kilometres from Dublin through Leinster and into south Ulster. All these local authorities, because they are responsible for a broad range of local development functions, including economic development and planning, housing, mobility and traffic management, will be critical implementers of the strategy. As such, they need to better work together to address transboundary challenges and ensure the mistakes of the past in terms of planning and transport are not repeated. This would also be in line with the growing recognition across Europe that central cities need the peripheries to "develop, or quite simply to keep their place in the rank of world cities" ([Phelps et al., 2006](#)).

In brief, the strategy must be planned and multiscale, it must better connect national and local actions, and avoid a piecemeal approach.

A business as usual scenario could significantly impact Dublin's competitiveness and attractiveness as a place to live and in which to invest. Dublin does not compete with other Irish towns and cities for investment, it competes with cities such as Vancouver or Malmö. A sustainable and liveable Dublin is key in attracting investment and talent. The decisions made now about land use in Dublin will have a long-term effect on the ability of citizens to live sustainable lifestyles in the future. The [HPI](#) and some of the HPI indicators can play a positive role in making our towns and cities more sustainable and attractive.

Bringing under-utilised stock into use is essential. Making the most of the available sites within the core centres and increasing the occupancy of underutilised buildings is key. It may be necessary to consider site area, or site value based taxes to encourage owners to bring to market corner sites back lands etc. This would increase the supply of development land within the confines of cities.

Nevertheless, a compact sustainable city should not be confined to the central areas. The occupancy density of outer suburbs is falling with household size. This leads to further reduction in population density that makes the provision of vital infrastructure such as schools, and public transport even more challenging. In particular, the option to vertically extend semi-detached or terraced housing by up to two floors and subdivide them horizontally could be explored. Removing the roof, adding a concrete or CLT floor and using this as a platform to construct an additional apartment is one scenario that would achieve both the retrofitting (energy efficiency) and the densification on a single development. The additional unit could pay for the entire cost of the development. The great energy renovation challenge offers an opportunity to remake, adding density, modern design and character to the Irish suburbs. Another interesting case study is the transition from one storey suburban homes for large families to dense multi-storey apartment blocks for a changed demographic of smaller families made by the Colombian city of Medellin in just two decades - This was largely driven by land area based property taxes.

Ireland's Unique Environment – Sustainability

The IGBC is delighted that a full chapter of the document is dedicated to sustainability and that issues such as air quality, waste water management and vulnerable habitats are explicitly mentioned. Many of the environmental challenges we face are indeed related to poor planning and disperse settlements.

Although, we generally have good air quality and many rivers and lakes with good quality water, much more could be done and must be done.

Together the residential and transport sectors currently account for 29.9% of Ireland's greenhouse gases emissions.

For new developments, the [HPI label](#) can improve both building and transport energy uses:

- The Sustainable location category measures how well the house relates to existing transport infrastructure and the accessibility of amenities, thus driving demand for development located in more compact areas.
- The Environmental category contains indicators that measure the ecological footprint of the development. This includes indicators for global warming potential, loss of biodiversity, water use and embodied environmental impacts of materials used in construction.
- The Quality Assurance category contains indicators to assess the process for the design and Construction of the dwellings, and a testing regime to ensure that this results in the design intent. This is particularly important, as there is considerable evidence in Ireland and across Europe of a large gap between the predicted and actual performances.

However, existing buildings and neighbourhoods should not be forgotten. Two-thirds of our existing properties are likely to be standing in 2050. There needs to be an expanded vision and long-term strategy for existing buildings and brownfields. The strategy must ensure we make the most of the available sites within the core centres and increase the occupancy of underutilised buildings. Several recommendations to make our existing buildings more energy efficient were made as part of the [national renovation strategy consultation process](#). As previously mentioned deep energy renovations could also be used to increase density.

Construction and demolition (C&D) are responsible for 36% of waste generated worldwide. In the EU alone, 821 million tonnes of C&D waste were generated in 2012. Over the last five years, the IGBC has collaborated extensively with the industry to integrate resource efficiency and eco-design considerations into their operations. As we are starting to design and build houses again, it is important that we do things differently this time and ensure that quality and sustainability are built into the next phase of our housing stock. There is increasing level of demolition taking place. New Development needs to justify large scale demolition of existing buildings based on lifecycle carbon not just operational carbon.

However, it does not make sense to apply this where low density housing with poor occupancy density are replaced with high quality, higher occupancy housing close to public transport. Building at higher densities makes more efficient use of land and energy resources, creating a consolidated urban form which fosters the development of compact neighbourhoods and a critical mass which contributes to the viability of economic, social, and transport infrastructures. Where the embodied impacts of demolition are clearly offset by better land and energy use, there should be no issue with demolition. Where demolition is proposed calculation of the environmental and embodied impacts should be requested to ensure that it is justified on environmental grounds.

Under the HPI scheme two indicators relate to waste management:

- The Waste management indicator which aims at minimising construction waste and at diverting waste from landfill
- The flexibility and adaptability indicator which aims at future proofing developments to avoid wasteful and inefficient use of resources

In addition, the IGBC is currently developing a [national carbon and embodied environmental impact database for construction products used in Ireland](#). This should help in better measuring embodied CO2 in various buildings.

Many of the environmental changes associated with fragmented and disperse settlements result from the use of impervious construction materials. By definition, impervious surfaces increase precipitation runoff and erosion, and alter the hydrology of the local watersheds. These impervious surfaces replace vegetation, fragment habitats and alter the terrestrial water cycle. The IGBC thus welcome the importance given to waste water management, flood risk planning, but also ecosystems and biodiversity. Over the last few years we have been working in close cooperation with our members to minimise the impact of building development on existing site ecology and to improve the overall quality of landscaping in residential development - One of the HPI indicator directly relate to ecology (loses of biodiversity and impacts on ecosystems). Furthermore, HPI include water consumption, as well as surface water runoff indicators and assesses the flooding risk on new development sites.

Planning for better quality, more sustainable, homes and neighbourhoods is not only good for the planet, it is good for people and makes economic sense. Both, the construction of half a million new homes and the renovation of our existing building stock, present unique opportunities:

- to transform Ireland’s construction and property industries into global leader in quality and sustainability;
- to improve Ireland’s competitiveness
 - Directly: Energy efficiency is now widely recognised as the first fuel and could significantly reduce energy needs
 - Indirectly: As previously mentioned, better quality buildings and neighbourhoods have a positive impact on people’s health, wellbeing and productivity;
- to improve Ireland’s attractiveness.

Equipping Ireland for Future Development – Infrastructure

Please see comments made under the “A place-making strategy” section: This can only be achieved through better coordination of relevant policies (e.g. energy, public transport, urban planning) at the right level. A comprehensive national framework that connects national and local initiatives and integrate a cross-departmental approach is more than ever needed to develop and implement the strategy.

Enabling the Vision – Implementing the National Planning Framework

The IGBC welcomes the comprehensive consultation process that has been designed by the Department, the importance given to the implementation phase and the recognition given to the role of both public and private investments.

While consumer preferences and market forces contributed to disperse and fragmented settlement patterns, they did not operate in vacuum. Consumers `choice has for instance been supported by public policies favouring new build green-field. Research have shown that dispersed suburbanisation is the cumulative result of individual stakeholders' actions which interplay and aggregate up over time and space. Against this background, it’s clear that a broad variety of stakeholders should be involved in designing and implementing the strategy.

The methodology used to co-design an ambitious national energy renovation strategy as part of the [Build Upon project](#) could potentially be replicated. Both strategies require cross-party buy-in and coordinated actions across sectors. Close to 200 key stakeholders from across Ireland took part in this comprehensive process, which was perceived as highly successful. This means that all these stakeholders are now strongly committed to implementing the strategy together.



"Build Upon has played a key role in creating a collaborative space for action"

- Maroš Šefčovič, Vice President for the European Commission



"Build Upon project has allowed policy makers to devote more attention to solutions to issues rather than identifying them"

- Ken Cleary, Energy Efficiency & Affordability, DCCAE



"What they are doing is exactly what I want to see happening, pulling people together and matching up the technical expertise that they have with the enthusiasm we are finding more and more in people and communities"

Minister for Communication Energy and Natural Resources - Alex White



"The IGBC successfully brought together a wide range of diverse stakeholders to identify and propose solutions to the challenges and opportunities we face in upgrading our homes. The final set of recommendations represents the collective wisdom of this process and its conclusions will be pivotal to the creation of Ireland's climate and energy plans"

- Denis Naughten, Minister for Communications, Climate Action and Environment



"With the support of projects like BuildUpon I am confident we can convert our ambition into real actions to reduce emissions, and bring about the transformation required if we are to decarbonise our economy."

Minister Sean Canney

The strategy must be defined and implemented in a transparent, fair and inclusive way. It must include a detailed implementation plan assigning responsibilities. More specifically, we recommend that an open and collaborative approach is taken for the implementation of the strategy to provide key stakeholders with opportunities to engage.

As continuous improvements will be needed to address weaknesses and to keep up with best practices, the ongoing strategy process should be smart and adaptive. This could for instance be achieved through central coordination and the setup of a collaborative implementation platform.

Finally, as the only way to tackle these challenges is alignment of all activities, it may make sense to increase citizens' engagement. In fact, citizens should be empowered and feel part of the solution. However, citizens must first be equipped with the right information to make informed decisions. For new homes, the HPI can provide homebuyers and home occupiers with relevant information in terms of accessibility (public transports and amenities), energy, water uses, etc.