

Irish Green Building Council Submission

DRAFT 'Urban Development and Building Heights Guidelines for Planning Authorities'

September 2018

The following document is the Irish Green Building Council's (IGBC) response to the Department of Housing, Planning, Community and Local Government on the draft 'Urban Development and Building Heights Guidelines for Planning Authorities'.

Introduction

The IGBC was launched in 2011 and is comprised of over 120 organisations and businesses from the entire value chain of the built environment on both the demand and supply sides. These include educational institutions, professional institutes, NGOs, local authorities, contractors, architects, engineers, energy companies, property investors/developers as well as leading national and transnational companies. A full list of our 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 organisations transitioning their activities towards more sustainable practices
- Be central to alignment of the policies of organisations seeking to achieve sustainability in the built environment

In 2016, the IGBC built a community of close to 200 key stakeholders to co-design an ambitious National Renovation Strategy (NRS) for Ireland. This work completed as part of [Build Upon \(H2020 project\)](#) led to the publication of a [comprehensive set of recommendations for a better NRS](#). Since the completion of this project, IGBC has further engaged with key stakeholders to implement some of these recommendations. As part [EeMAP \(H2020\)](#), IGBC is working to develop the principles of an energy efficient mortgages for Europe. It has also worked on better incentivising building professionals to upskill in renovation as part of the SEAI funded [ECCoPro project](#). Through the years, our members have repeatedly highlighted the need for better Integration of urban regeneration and retrofit policies – [see the open letter recently sent to Ministers Donohoe, Murphy and Naughten](#).

After extensive research and consultation with the industry, the IGBC has developed the [Home Performance Index](#) label to encourage quality and excellence in residential developments. The Home Performance Index includes 28 indicators that directly or indirectly impact planning, quality of life and our environment. These include credits for better land use, including use of brownfield land, better public transport and measuring the walkability of the surroundings. It recognises trades offs such as the desirability of better use of land versus maximising daylight, encouraging optimisation towards the most sustainable development.

At international level, IGBC is an established member of the [World Green Building Council](#) and is [Renovate Europe national supporting partner in Ireland](#).

In this submission, the Irish Green Building Council offers general comments on various key areas within its remit of providing leadership in the transition to a sustainable built environment.

General comments

IGBC views an increase in density in Irish cities, towns and villages as a critical part of the transition to a sustainable, low carbon built environment. Density is essential to maximise resource use - through better use of infrastructure, to make sustainable transport options viable, to reduce embodied carbon emissions, to protect land for biodiversity, and to minimise soil sealing and allow for carbon sequestration. In addition, density has positive health impact for people by reducing car dependency and supporting active healthy lives (encouraging walking and cycling). However, the emphasis should be less on height but on density and freeing up unnecessary wastage of land in our metropolitan areas.

The first questions that should be answered are: What is the purpose of the guidelines? How are these backed up across all departments (including fiscal policy) to ensure that they achieve their objective? Without such backup, the guidelines will remain aspirational and developers will choose not to develop in certain areas.

The guidance should also clarify what it is trying to achieve with tall buildings. There is not necessarily a correlation between very high buildings (>12 stories) and delivery of an increased number of housing units. There may be other reasons why higher buildings are desirable such as creating land marks to mark key approaches to a town, city or suburban hub. Density per hectare is a more useful indicator if the intention is to ensure more units are delivered.

Density versus height

1.5 – [Paris has very few high-rise buildings and achieves density through mixed-use, medium heights, 6-8 stories over a much larger area](#). Dublin has similar heights in a very small centre but is surrounded by a much greater area of extremely low density. Increasing the heights in the relatively small area of central Dublin will deliver very little. The potential to deliver homes at scale is far greater if we redevelop and transform car dependent neighbourhoods into walkable ones with good public transport.

Density is as much related to layout of roads and distances between buildings as it is to heights. It is preferable to set densities per hectare rather than rely just on heights. A move to planning based around people rather than cars would enable greater densities, by reducing the standard 22m privacy between opposing windows, and narrower carriageway widths. Schemes such as the [Home Performance Index Silver](#) certified George's Place in Dun Laoghaire show that good densities of well in excess of 50 units to the hectare are possible with just two story housing when coupled with good place making.

There needs to be forward and proactive planning for a future with greatly diminished car ownership in the metropolitan areas. This will be driven by technology enabled initiatives such as car sharing (e.g. Gocar), peer to peer car rental (e.g. Fleet), Uber, driverless cars, better cycling infrastructure and of course better public transport. Carsharing is shown to eliminate the need for up to 26 cars for each car provided. These together offer

great potential to free up space from surface parking around supermarkets, shopping centres, cinemas, schools, government and local authority offices, as the necessity for car parking will largely become defunct. This affords greater opportunities to look at the distances between homes in lower rise development. This also creates opportunities to remake streets, to improve quality of life with tree planting and pocket parks.

If the 20th century was the era of the resource intensive linear make, break economy, the 21st century is the century of circular thinking and of the sharing economy. Future planning policy and design of streets needs to more proactively reflect this.

Suburban density

There is far greater potential to provide higher density in the suburbs than in the centres.

The suburbs of our major towns and cities need densification and consolidation if they are not to suffer from depopulation brought about by smaller household size and an ageing population. Reduction in population density in these areas makes the provision of vital infrastructure such as schools, and public transport even more challenging, and leads to loneliness and isolation of the elderly.

The option to vertically/horizontally extend semi-detached or terraced housing, subdivide them vertically/horizontally could be explored. The additional unit could pay for the entire cost of the development. We suggest developing guidance and case studies for the most common building types found in the suburbs as done in the [document Bringing Back Homes](#) published in August. There is currently an overly conservative planning approach to our sprawling suburbs which often have little cultural value but which have greater potential to increase housing density.

Fiscal and other Incentives for density

The publication of these guidelines is welcome. However, these will only work if they are supported by crosscutting fiscal and other incentives. Very few apartments are currently being built in Ireland. Making heights obligatory in area plans does not mean they will be delivered. Developers need to see them as viable! Viability is also related to what purchasers will pay. This is also related to the quality of place making and amenities offered to the home buyer.

It was made clear at the seminar organised in the Custom house on the 18th September that there was strong cultural and political resistance to increased heights and density. However, culture is an outcome of long-term policy of encouraging very low density.

Government and Local authorities must take a leadership role and ensure that they themselves deliver on the proposed heights and densities suggested. They should review the very low density suburban social housing that it is currently funding in some cases under 30 units to the hectare.

There is little incentive for homeowners to purchase homes in higher density developments or for developers to build them if they carry higher development costs per unit – See [SCSI report- The real cost of apartment delivery](#). If a homeowner can avoid management charges and access higher loan to value ratio for buying low density homes then they will choose low density.

This requires tipping the balance for the home purchaser to make it financially more attractive to buy in denser development and for the developer to build to higher

densities. Over the long-term fiscal policy needs to change homebuying culture to favour density over traditional type homes with front and back gardens. Land like water is scarce and all must be conditioned to use it wisely.

Dwellings with more efficient use of land could attract lower stamp duty, and lower property tax by moving to a site valuation approach. Taxation should encourage the release of underutilised land. Sending clear price and tax signals is the best way to change culture.

Incentives through sustainable investment

The [EU's high level expert group on Sustainable finance](#) is intending to steer public and private finance towards sustainable investment. This includes encouraging or requiring banks to provide fiscal incentives such as Green Mortgages for home buyers where they receive discounted interest rates for more responsible purchases.

IGBC has participated in the [EeMAP project](#) with the European Mortgage Federation to develop a discounted mortgage for more energy efficient homes. 40 European banks are participating in the pilot - No Irish Banks are yet participating. IGBC has recently submitted a follow up proposal for H2020 funding with 12 other European participants and supported by a number of European banks, which would develop a certified green mortgage product based on the [Home Performance Index](#) for new houses. This would be based on overall approach to sustainability including better land use and density. Support for such initiatives is vital to changing Irish cultural norms.

Rights to renewables - The guidance also needs to consider the rights to renewables, where a taller building would overshadow a lower building and thus remove the overshadowed building to meet its energy needs from renewables. The RIAI have already submitted a paper on the importance of this to the department of housing. Guidelines need to be developed as to how homeowners are compensated where their potential renewables are compromised.

Height, climate change, resource use and embodied carbon

As our buildings become more energy efficient, embodied carbon² needs to be taken far more seriously than currently. It needs to be part of Ireland 2040 planning framework and climate mitigation strategy if Ireland is to reach its 2030 and 2050 climate targets.

There is an optimum height where there is diminishing return on living space provided. Greater heights mean more lifts, as well as reinforced foundations and structures. This in turn increases costs, resource consumption and potentially carbon emissions for construction. Very tall buildings generally have a higher cost in both economic and carbon emissions for usable area delivered.

Furthermore, it is important to avoid unintended consequences of changing guidelines. Increase in heights should not lead to higher rates of demolition. The risk is that the guidelines (as currently written) could make it more attractive for developers to invest in redeveloping existing high value central sites with relatively small increase in floor area but massive emissions of embodied carbon from the resultant new construction.

Studies carried out by [Sturgis on Life Cycle Carbon](#) have shown for one UK apartment block that 50 % of the regulated life cycle carbon was attributable to the construction of the block before it was even occupied. This is down to the production of the materials,

² The carbon emitted during the manufacture of products and construction

transport and construction activities. Many countries (e.g. Finland and the Netherlands) have already or are about to introduce regulation on embodied carbon. Ireland will need to consider it soon.

A study on building heights related to embodied carbon should be carried out to determine relationship. This [article gives a good overview of how embodied carbon would be impacted by increased heights](#), i.e. via underground parking structures and additional lifts and stairs.

The relationship between resource consumption, embodied carbon, density and infrastructure needs to be further studied and additional research funding provided to make policy decisions. IGBC has been providing leadership through its [EPD Ireland](#), Environmental Product Declaration programme. It has provided training in building Life Cycle Assessment (LCA) and embodied carbon, including to Dublin City Council's architect and surveying divisions allowing them to make informed decisions on redevelopment impacts of carbon emissions versus refurbishment of existing stock.

Density Heights and quality of life

The Danish urbanist Jan Gehl recommends 4 – 6 stories as the optimum height for living quality in cities to maintain verbal and visual contact with the street. Increasing existing suburbs to at least 4 stories would deliver good quality family living and greatly increased densities.

The requirement for schemes to measure the quality of the development against metrics such as Home Performance Index is one way of ensuring that homes to higher densities are built to adequate quality with good access to amenities such as parks, schools and services. One way encouraging homebuyers to see the advantages of higher densities is to demonstrate how their lives can be improved, by living in highly connected communities and save on commuting times.

Measuring Quality

The [Home Performance Index](#) has been developed for new homes some of the indicators can play a positive role in ensuring that both homes and neighbourhood are attractive and sustainable.

It recognises that there can be trade-offs in some cases between high density, daylight, open space and acoustics and it is the optimisation of different indicators that allow good development rather than rigid rules. There is little point in having super energy efficient homes that are car dependent and lead to unhealthy life styles. In particular, the following considerations should be taken into account:

1. Good quality, healthy, bright dwellings with excellent daylighting, thermal comfort and adequate private space
2. Guaranteeing excellent acoustic privacy between dwellings
3. Walkable distance to amenities, education, health facilities and transport

This may require renewal of public spaces so that people feel safer, happier and more likely to use them, as well as improvement of public footpaths and links to local cycling and public transport networks.

The Gold level standard of Home Performance Index requires that the home is not only highly energy efficient, aware of its full embodied footprint and maximises health and wellbeing, daylight and indoor air quality. It must also be in a highly connected walkable neighbourhood, use land efficiently and preserve biodiversity. The challenge is to achieve all of these at the same time.

Yours faithfully



Pat Barry

CEO Irish Green Building Council