

Dublin City Development Plan 2022-2028

Pre-Draft Plan Background Paper Building Height and Density



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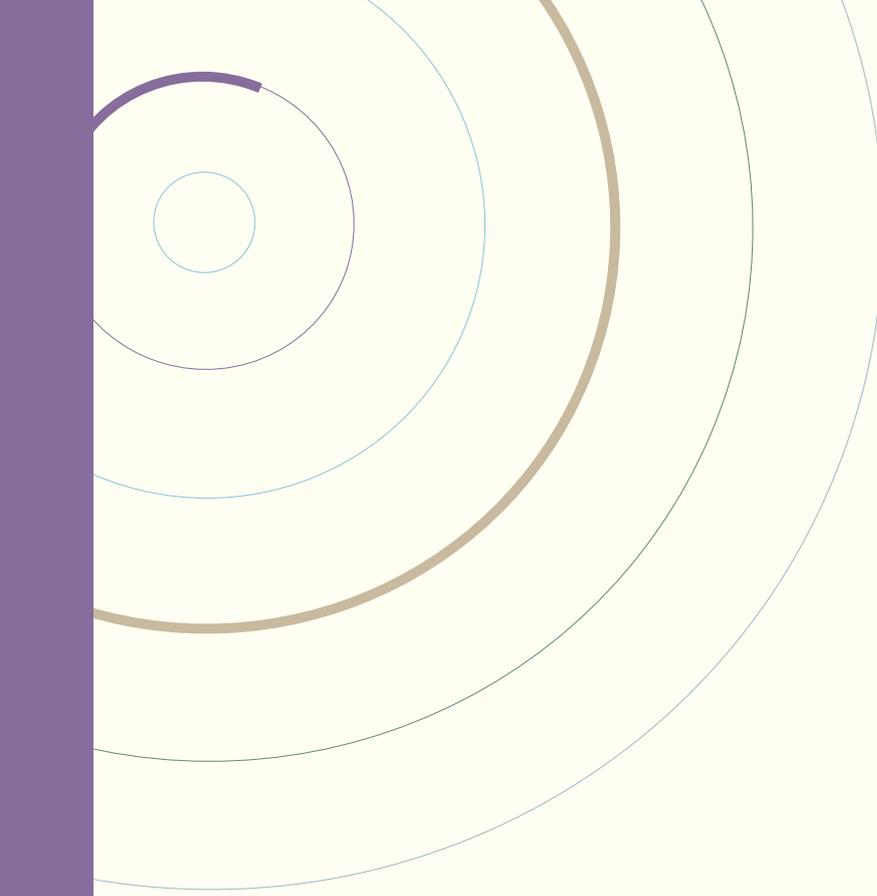
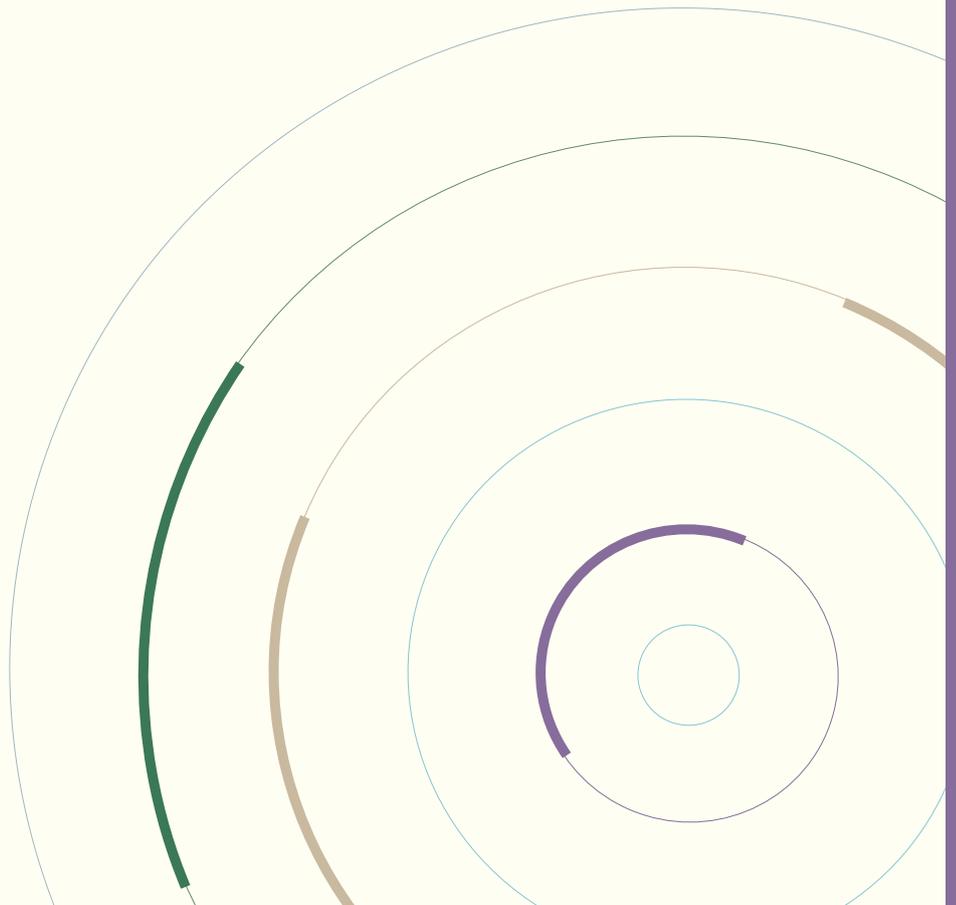


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1.0 Introduction

- 1.1 The purpose of this Background Paper is to examine relevant planning policy in relation to building height and density and to outline how such policy may inform and influence the forthcoming Dublin City Development Plan 2022-2028.
- 1.2 The paper will firstly consider the evolution of height policy in Dublin and includes a review of some relevant publications regarding building height and density. It will then set out examples of policy provisions in other jurisdictions. The implications of the Urban Development and Building Heights – Guidelines for Planning Authorities 2018 (Building Height Guidelines) will then be examined. Finally, the paper will set out possible options regarding future policy in the forthcoming draft plan.

2.0 Background

- 2.1 Extensive research has been carried out regarding how the matter of height and density should be addressed in a Dublin context. This has included the publication of two documents – Managing Intensification and Change – A Strategy for Dublin Building Height published by DEGW in September 2000 and Maximising the City’s Potential – A Strategy for Intensification and Height published by Dublin City Council in 2007.
- 2.2 These documents highlight that Dublin’s City Core is characterised by a low to medium rise built form. Densities and heights vary across the city however, and are typically much lower in the suburbs, and increase in the city centre, particularly in newer developing areas such as Dublin Docklands. The demand for increased height and density has been somewhat cyclical. During the Celtic Tiger era, there were a number of significant high density and high rise proposals, reflective of the rising value, and hope of further land value increase at that time. Many of these more ambitious schemes were refused or never came to fruition due to the economic collapse and in this regard, there remain relatively few landmark or buildings of significant height within the city. There have been some recent proposals however, for landmark buildings in the city, primarily located at significant public transport interchanges.
- 2.3 This increasing demand for greater height and density is driven by an improvement in the economic performance of the city, new types of investment models, the rising value of land and the emergence of new forms of development into the market including student accommodation, build to rent and co-living (note: the Government announced a ban on co-living proposals in November 2020). This trend for greater densification and

height has been particularly evident in more suburban areas. The advent of the SHD process and relaxation of standards with the publication of the Urban Development and Building Heights – Guidelines for Planning Authorities and the Design Standards for New Apartments – Guidelines for Planning Authorities has resulted in a number of significantly higher density residential developments in what are traditionally seen as low density suburban locations. Many of these schemes have also included buildings of significantly increased height.

- 2.4** The benefits of increasing urban densities from an environmental and sustainability perspective are now well accepted principles and it is adopted planning policy at both a national and regional level to increase density and height on underutilised lands within core urban areas in order to promote consolidation, prevent further sprawl and address climate change. It is a specific planning policy under the NPF to deliver at least 40% of all new homes nationally, within the built up footprint of existing settlements (NPO 3a).
- 2.5** Increasing density however, can also bring challenges. In some instances, such schemes can raise concerns regarding impacts on the amenities of existing residential communities and for the future occupiers of such schemes as well as how such developments integrate with the existing urban fabric. There can also be concerns regarding the capacity of existing social and physical infrastructure to absorb higher and denser developments. In terms of increased height, there can be concerns regarding potential adverse impacts on the skyline as well negative impacts on key views and areas of environmental or historic sensitivity.
- 2.6** The emphasis of the current City Plan is that Dublin City is fundamentally a low rise city and that there is a need to protect and enhance the skyline of the city and ensure that all mid-rise and taller buildings make a positive contribution to the urban character of the city and prevent visual clutter of the skyline. The existing plan includes a character based approach to development areas and in this regard, the city is categorised into the inner and outer areas as well as the Rail Hub areas within 500m of existing and proposed Luas, mainline, DART, Dart Underground and metro stations. A prescriptive approach to height is applied in such areas with height thresholds specified. The plan also identifies SDRA and SDZ's and KDC's as areas which may have the capacity for higher density development and in some instances the clustering of buildings. The plan includes specific policy guidance and criteria for the assessment of proposals for high buildings.
- 2.7** The recently published Urban Development and Building Height Guidelines, state that this prescriptive policy approach to height will no longer be considered or permitted as an appropriate planning tool (SPPR1) and notes that statutory plans shall not provide for blanket numerical limitations on building height.

- 2.8** The key challenge in the new city plan, therefore, will be to ensure that the future densification of the city takes place in a managed way to ensure that sustainable communities and neighbourhoods are fostered and that such development is delivered in tandem with the necessary social and physical infrastructure. The plan must provide for opportunities for increased density and height in a sustainable way, in a manner that contributes to compact growth whilst ensuring the highest standard of design and the protection of existing amenities and the natural and historical assets of the city. The plan must identify and promote specific locations that are appropriate for such development and also set out clear qualitative criteria to assess proposals of enhanced scale and height. Higher and denser development must be promoted in the right locations and deliver high quality living and working environments.
- 2.9** With regard the important issue of density, the plan must also consider what form of development is appropriate in order to achieve higher and sustainable densities in the city. In recent years, densities have increased significantly across the city. In Dublin Docklands under the North Lotts and Grand Canal Dock Planning Scheme, densities in the range of 200 to 250 units per hectare are achieved, whereas under the Poolbeg West Planning Scheme, densities in the range of 300 units per hectare are proposed. Under the provisions of the Strategic Housing Development legislation, permission has been granted for a number of very high density schemes in the city – some in excess of 350 units per hectare.
- 2.10** The relationship between density and height is a critical factor in densifying the city and tools such as plot ratio and site coverage can be used as part of a suite of measures to ensure higher density schemes are appropriately developed to a high standard. Appropriate higher density schemes can often be achieved by using mid-rise typologies and in this regard, higher density does not necessarily equate to high rise buildings. High quality design and placemaking are however, critical factors when developing higher density developments. A further discussion of the relationship between height and density is set out in Appendix 1.

3.0 Literature Review

- 3.1** There have been a number of relevant publications regarding height and density, including:
- Managing Intensification and Change – A Strategy for Dublin Building Height – DEWG - September 2000
 - Maximising the City's Potential – A Strategy for Intensification and Height, Dublin City Council 2007
 - Super Density – The Sequel 2015 (London Study)

- Guidance on Tall Buildings – CABE and English Heritage 2007
- Measuring Housing and Population Densities in Dublin City and County – Irish Planning Institute – Pleanail 2019

A summary of these is set out in Appendix 2.

- 3.2** A review of these key policy documents suggests that high rise buildings have a limited role to play in achieving compact growth and densification. Evidence suggests that sustainable densities can be achieved with heights in the range of 5 to 8 storeys. Where increased density is proposed, this must be balanced with the provision of high quality public realm and broad range of housing typologies. It is also beneficial if mixed use is promoted in terms of increasing density. Densification is also predicated on excellent high capacity public transport accessibility and good social infrastructure. It is acknowledged at a policy level however, that higher buildings can play a role particularly in terms of promoting urban legibility. It is acknowledged that they can be used to project an image of economic power and prestige. They should however, only be located at key specific locations and that clear policy guidance should be given as to where such buildings would be appropriate. There is a clear emphasis on the quality of design and that such proposals are underpinned by detailed justification and analysis. It is also evident that potential impacts of high buildings on historic areas needs careful consideration.

4.0 Other Policy Examples

Draft London Plan 2019

- 4.1** The Draft London Plan states that locations for tall buildings should be identified and mapped at a borough level and that tall buildings should only be permitted in these locations. It recommends that a sieving exercise is undertaken by assessing potential visual and cumulative impacts to consider whether there are locations where tall buildings could have a role in contributing to the emerging character and vision for a place. In these locations, it should be determined the maximum height that could be acceptable.
- 4.2** In large areas of extensive change, such as Opportunity Areas, the threshold for what constitutes a tall building should relate to the evolving (not just the existing) context. This policy applies to buildings over 25m in height in the Thames Policy Area, and over 30m in height elsewhere in London. It is also stated that a strategic overview of tall building locations across London will be provided and that 3D virtual reality digital modelling will be utilised to help identify appropriate areas, assess tall building proposals and aid public consultation and engagement.

- 4.3 The London Plan sets out that applications for tall buildings should address potential visual impacts including immediate, mid range and long range views. It notes that tall buildings must make a positive contribution to the character of the area and that proposals should take account of, and avoid harm to, the significance of London's heritage assets and their settings. Proposals resulting in harm will require clear and convincing justification, demonstrating that alternatives have been explored and there are clear public benefits that outweigh that harm. Guidance is also set out regarding proposals for tall buildings in the setting of a World Heritage Site and adjacent to the River Thames noting that for the latter, that tall building proposals should protect and enhance the open quality of the river and the riverside public realm, including views, and not contribute to a canyon effect along the river.
- 4.4 The plan identifies a number of functional impacts that must be considered including internal and external design, entrance location, servicing and public transport capacity. Potential environmental impacts including wind, daylight, sunlight penetration and temperature conditions, air movement and noise must be considered and where a cluster of tall buildings is proposed, the cumulative impacts must be assessed.
- 4.5 The plan states that free to enter publicly-accessible areas should be incorporated into tall buildings where appropriate, particularly more prominent tall buildings where they should normally be located at the top of the building to afford wider views across London.

Glasgow City Development Plan 2017

- 4.6 The Glasgow City Development Plan 2017 includes supplemental guidance (2018) on placemaking that provides specific design guidance for tall buildings.
- 4.7 A tall building is defined as:
- “A tall building is a building (including roof top structures and masts) that significantly exceeds general building heights in the immediate vicinity and which alters the skyline.”*
- 4.8 The plan states that tall buildings will usually be acceptable only in areas where topography, existing urban scale, height, transport infrastructure and land values make them sustainable and on sites where additional height is appropriate to its local urban context.
- 4.9 A number of specific locations are identified as being appropriate for tall buildings including within sustainable areas such as the City Centre, the

Financial Services District, parts of the river frontage and in areas with appropriate above and below ground infrastructure, public transport links and pedestrian accessibility. It is noted that tall buildings should be avoided in areas of Sensitive Urban Character unless it is demonstrated, to the satisfaction of the Council, that the particular qualities of the area would be retained; and that such proposals would avoid interruption of strategic views or competition with views of established landmarks and other significant or prominent listed buildings.

4.10 It is also advised that tall buildings should be located:

- in a way that sensitively responds to local street conditions, recognising street hierarchies, building datums and in locations where tall building material choices will be appropriate;
- in a manner that is not detrimental to local microclimate, public realm and local views; and
- in areas which are financially viable for long term adaptability of alternative uses.

4.11 It states that it is an absolute prerequisite that tall buildings are restricted to locations that can sustain their dominant built form, that protect areas of sensitive urban character, achieve excellent design quality and enhance the City's image. In this regard, the policy approach of the plan is to direct tall buildings into selected locations, rather than a scatter approach, leading to the undesirable effect of undermining urban morphology over a wide area.

4.12 The plan states that all proposals for tall buildings, whether at the preliminary or planning application stage, shall be accompanied by a Townscape Statement which provides a detailed analysis and appraisal of the site's context, a reasoned expression of the proposal's design aspirations and a quantification of its impact on the City. It also noted that for all significant views affected - near, middle and distant - images that show the proposed tall building in context with the surrounding area shall be presented. Views from pedestrian level should be a primary tool for analysis.

4.13 It is also a requirement that tall building proposals shall incorporate the highest quality building materials and robust construction technologies. In addition, it is stated that the design of tall buildings should take specific cognisance of a number of criteria including pedestrian and cycle permeability and that prominent access routes should be included along with associated high quality public realm improvements; weather and microclimate impacts; sustainability and green credentials and demonstrate the extent to which they incorporate sustainable standards in the use of passive and renewable energies; access and public transport. Tall buildings in particular should demonstrate that they are highly accessible and well-served by established or proposed public transport networks.

- 4.14** The plan states that proposals will be expected to incorporate mixed uses in a fully integrated manner that considers the need for street level frontages to be activated and encourages public access to the top levels of the building. It notes that the design of tall buildings must be flexible to future changes of use.

Draft Liverpool Local Plan 2018

- 4.15** The Draft Liverpool Local Plan notes that tall buildings are extremely important to Liverpool and outlines a number of historic buildings such as the Royal Liver buildings that play a visibly important role in the city. It states that the design of tall buildings can be as important or even of greater importance than the height of the proposal. Both however, must be justified. It is stated that tall buildings will be resisted in areas that are sensitive to their impacts. In such locations, tall building proposals must deliver a substantive justification which shows how they fit with the qualities of their immediate and wider settings, or make a significant contribution to local regeneration.
- 4.16** The plan recommends that the location of tall buildings should ideally emphasise a point of civic or visual significance over the whole area from which it will be visible. It notes that ideally tall buildings should form part of a cohesive building group that enhances the skyline and improves the legibility of the area. It is stated that it must be ensured that tall and large buildings are attractive city elements that contribute positively to the image and built environment of the city. They must be of the highest architectural quality and offer improved permeability of the site. The draft plan notes that it is the intention to prepare a Supplementary Planning Document that will provide greater detail on the design and appropriate locations for tall buildings. The plan makes specific reference to fire safety and that tall buildings must include at least 2 separate stairways.
- 4.17** The draft plan sets out a number of specific criteria that must be addressed in any proposal for a high building. These include the preparation of a comprehensive Townscape and Visual Impact Assessment, EIA Screening and justification of the proposal to a Design Review Panel. The plan also notes that proposals for tall buildings must demonstrate that they will contribute to the economic strength and resilience of the city; that they will bring benefits to the whole community and that they will provide environmental enhancements to the places and communities in which they are located including open space and green infrastructure.
- 4.18** Strategic policy is also provided regarding cumulative impacts, particularly where a cluster is proposed. It is detailed that clusters should have a clear sense of edge and should not result in the creation over time through cumulative development, of a slab block within the townscape.

4.19 With regard to the Townscape and Visual Impact Assessment, the plan states that tall buildings should reinforce the existing urban structure and hierarchy; that there must be a strong relationship to the form, proportion, composition, scale and character of the surrounding buildings and public realm and that such developments enhance the streetscape. The plan supports public accessibility to the upper floors of tall buildings and that it must be demonstrated that the building will not result in an adverse impact in terms of microclimate, wind turbulence, overshadowing, noise, reflective glare, aviation, navigation and telecommunication interference.

Draft Belfast Local Development Plan 2020

4.20 Policy DES3 of the draft plan sets out policy regarding tall buildings. The plan defines a tall building as any building 35m above ordinance datum (AOD) or those which are significantly higher than their surroundings. It is stated that tall buildings may be considered acceptable within the appropriate context where it can be demonstrated they will not have an unacceptable impact on their surroundings and where they are of high quality design in their own right while enhancing their immediate location and wider setting. They should generally be limited to areas where existing clusters of taller buildings have already been established, as well as being sited in locations within the street pattern that terminate or accentuate key vistas and where they place emphasis on areas of civic or visual importance. All applications must be accompanied by Tall Buildings Statement which should include details of the impact of the proposal on listed buildings, areas of special designation, the skyline, landmarks and key public views.

4.21 It is detailed that in general tall buildings will be permitted where they:

- a.** Are of a height and scale that is sensitive to the context of their surroundings and are proportionate to their location;
- b.** Do not have an adverse impact on the character and appearance of listed buildings, designated conservation areas, areas of townscape character (ATCs) and historic monuments/gardens;
- c.** Respect key public views and vistas within, across, into and out of the city, including important views of landmark buildings and landscape features;
- d.** Contribute to a cluster or an interesting skyline when grouped together;
- e.** Support locations of civic or visual importance including major transport nodes, civic spaces and areas of high employment;
- f.** Serve to provide an accessible pedestrian friendly environment of a human scale through the provision of active frontages, high quality landscape treatment and local public realm enhancements at street level;
- g.** Minimise the effects of overshadowing and overlooking especially within

predominantly residential areas and avoid the effects of wind turbulence and other adverse microclimatic impact; and

- h.** Comply with all necessary civil aviation requirements and not interfere, to an unacceptable degree, with telecommunications, television and radio transmission networks.

Urban Living SPD – Making Successful Places at Higher Density – Bristol City Council 2018

- 4.22** This guidance document published in 2018 provides guidance on how to optimise densities in Bristol City. The SPD sets out a range of questions that applicants of higher density schemes will need to consider when designing their development and preparing their planning submission. It is stated that the optimal density in new development is considered to be one that balances the efficient and effective use of land, with aspirations for a positive response to context, successful placemaking and liveability.

- 4.23** The guidance notes that there are many factors that determine what an appropriate density for a development site may be, including:
 - The characteristics of the site, and any development constraints;
 - The local context, and its prevailing character;
 - The scope for departing from the area’s prevailing character (more easily achieved on larger development sites where a transition of scale is possible);
 - The sites proximity to a range of employment, services and facilities;
 - The availability of good walking, cycling and public transport infrastructure which in turn can reduce the need to own a car, and hence the need to provide car parking;
 - The proposed development mix.

- 4.24** A design-led approach to optimising density is advocated which should be based on an evaluation of the site’s attributes, its surrounding context and capacity for growth and the most appropriate development form. It recommends that a Masterplan should be prepared at the outset for any significant scheme seeking to increase densities.

- 4.25** The guidance document does not set an upper limit to density but notes that schemes which propose significantly higher densities will require earlier engagement and a more collaborative approach with the Local Planning Authority to ensure all urban living objectives and other policy considerations are met. It also recommends that the applicant should prepare development envelope studies early on in the design process to allow for the early testing of open space quantum, sunlight, daylight, visual impact and wind effects and use this to inform further design development. It states that proposals

seeking to optimise densities need to demonstrate how they assist in delivering a vibrant and equitable neighbourhood - walkable, compact, green, accessible, mixed and balanced - responding positively to the existing or emerging context.

- 4.26** Detailed guidance on major development schemes (defined as 10 or more residential units or 1,000 sq. metres of commercial floorspace) is provided and best practice in relation to urban design and place making at a city, neighbourhood, block and street level is set out. The document also sets out detailed advice regarding specific criteria relevant to residential development as well as applications for taller buildings. Applicants are expected to respond to a series of key questions including for example:

Does the scheme:

- contribute towards creating a vibrant and equitable neighbourhood?
- create compact, walkable neighbourhoods that are sufficiently dense to support local services such as a convenience shop and bus stop within a reasonable walking distance?
- create vibrant, mixed and balanced neighbourhoods by introducing new building types and tenures that complement the existing offer?
- respond positively to either the existing context, or in areas undergoing significant change, an emerging context?
- provide people-friendly streets and spaces?
- deliver a comfortable micro-climate for its occupants, neighbours and passers by?

Commentary

- 4.27** It is evident from a review of these policy documents, that many cities are now providing detailed and specific guidance regarding tall buildings. This in some instances has been in the form of a supplementary design guide. In general, it is advocated that tall buildings have a limited role to play in the city fabric and should only be permitted in certain locations. Detailed guidance is provided regarding architectural design, visual impact, impacts on heritage, environmental sustainability, environmental impacts, public realm etc. A robust townscape analysis is required in most cases to support tall building proposals.

5.0 Urban Development and Building Heights Guidelines December 2018

- 5.1 This policy document published in 2018 sets out a new approach to the consideration of building height in our urban areas. The Guidelines are published under Section 28 of the Planning and Development Act 2000 (as amended). They include a number of Specific Planning Policy requirements (SPPRs) which a Planning Authority is required to have regard to and shall apply in the carrying out of their functions, including the preparation of the development plan.
- 5.2 The guidelines recognise the role that height plays in the achievement of compact cities and densification. It is noted that increased height is a significant component in making the optimal use of sites in urban areas where public transport, employment, services and retail development can achieve a requisite level of intensity for sustainability.
- 5.3 The guidelines are explicit that it is inappropriate for a Development Plan to include generic height limits across their functional areas. It is considered that this approach undermines wider national policy objectives to provide more compact forms of urban development. It is also considered that such blanket limitations can hinder architectural innovation and urban design. In this regard, SPPR1 states:

“In accordance with Government policy to support increase building height and density in location with good public transport accessibility, particularly town/city cores, planning authorities shall explicitly identify, through their statutory plans, areas where increase building height will be actively pursued for both redevelopment, regeneration and infill development to secure the objectives of the National Planning Framework and Regional Spatial and Economic Strategies and shall not provide for blanket numerical limitations on building height.” (author emphasis)

- 5.4 The guidelines set out a number of key guiding principles that must be considered at a strategic policy level. These are summarised in Appendix 1.

The Implications for the Development Plan

- 5.5 Having regard to the guidelines, the implications for the forthcoming plan, therefore, are:
- The development plan should identify locations where increase height is appropriate/promoted.

- The consideration of the appropriateness of such locations must take account of any particular environmental sensitivities.
- Key locations will include brownfield infill opportunities, old industrial areas, docklands, low density suburban shopping centres and public transport corridors.
- For sites larger than 2ha – a master planning exercise regarding their future development may be required.
- The plan must set out a series of performance criteria in which to assess high buildings. The guidelines set out a number of criteria in section 3.
- Specific guidance should be set out in the Development Plan regarding building height in historic settings.

5.6 It is considered that having regard to the guidelines, the forthcoming Development Plan will need to consider the right locations for greater densification and height enhancement. This could include:

- Locations and/or locational characteristics that are suitable for enhanced height.
- Specific locations for significant landmark/tall buildings.

5.7 The plan will also need to set out clear performance based criteria for assessing higher proposals. This could include:

- Proposals for consolidation and intensification which will include additional height.
- Proposals for landmark buildings.

6.0 The Compact City – How to Increase Height and Density?

Introduction

6.1 It is a key objective of the National Planning Framework and the Regional Spatial and Economic Strategy that significant increases in the overall density of development in urban centres is facilitated through the planning process. The concept of compact growth is promoted through the appropriate development and consolidation of strategically located urban lands and in particular, brownfield infill development. Higher density development including buildings of greater height will ensure that Dublin is a compact and vibrant city. Having higher densities allows land to be used more efficiently, helps regeneration, minimises urban sprawl and maintains the vitality and viability of local services and facilities and encourages the effective provision of public transport. Increased height however, does not always equate to greater

density. Super dense schemes with high buildings can generate problems in terms of creating successful, well designed and sustainable communities. High buildings are also less environmentally sustainable and recent research has demonstrated that a typical skyscraper will have at least double the carbon footprint of a 10 storey building of the same floor area (The Observer 12.07.2020).

- 6.2** Nonetheless, The Urban Development and Building Heights Guidelines for Planning Authorities published in December 2018 confirm that significant increases in building heights and overall density of development will be actively sought out and brought forward by our planning processes and that increasing prevailing building heights has a critical role to play in addressing the delivery of more compact growth in our urban areas through enhancing both the scale and density of development. The guidelines also note that increased building height is a factor in assisting modern placemaking and improving the overall quality of our urban environments.
- 6.3** It is acknowledged, therefore, that the forthcoming City Plan must promote more intensive forms of development including increased height and density whilst ensuring that high quality places and a good quality of life for all can be achieved. It will be important, therefore, that the plan identifies appropriate locations for such consolidation and sets out appropriate performance criteria in assessing such developments.
- 6.4** The guidelines also advocate that it is appropriate to support building heights of at least 6 storeys at street level as the default objective within the canal ring of Dublin City. In this context, it is considered that it may be appropriate for the City Plan to consider guidance that all schemes must have regard to the prevailing context within which they are situated. This is particularly important in the lower scaled suburban areas of the city where broader consideration must be given to potential impacts such as overshadowing, and overlooking. The appropriateness of building height within our historic core must also be considered, particularly in key sensitive areas of the city including the Georgian core, the Liffey Quays, medieval centre etc. Proposals for increased height in these areas must demonstrate that they do not have an adverse impact on these sensitive environments and that that they make a positive contribution to the historic context. The detailed application of performance criteria to all applications where significant height and density over the prevailing context is proposed will be important to ensure an appropriate standard and form of development.

Location

- 6.5** Some guidance is set out in the Height Guidelines regarding appropriate locations for increased building height, particularly brownfield industrial districts, docklands locations, low density suburban shopping centres and sites greater than 2ha. They also set out assessment criteria when considering appropriate locations for higher buildings including:

- Proximity to high quality public transport connectivity, including key public transport interchanges or nodes.
- The potential contribution of locations to the development of new homes, economic growth and regeneration in line with the compact urban growth principles set out in the NPF and project Ireland 2040.
- The resilience of locations from a public access and egress perspective in the event of a major weather or emergency or other incidents.
- The ecological and environmental sensitivities of the receiving environments.
- The visual, functional, environmental and cumulative impacts of increased building height.

6.6 Guidance from the UK also suggests factors that may be important in identifying locations for greater height and density including:

- The characteristics of the site, and any development constraints;
- The local context, and its prevailing character;
- The scope for departing from the area's prevailing character (more easily achieved on larger development sites where a transition of scale is possible);
- The sites proximity to a range of employment, services and facilities;
- The availability of good walking, cycling and public transport infrastructure which in turn can reduce the need to own a car, and hence the need to provide car parking;
- The proposed development mix;
- Water management in relation to the site,
- The provision of public open space and public amenities.

6.7 In this regard, it may be appropriate that the forthcoming plan includes guidance regarding key locational criteria (based on the above factors) which all proposals for increased urban scale and height must demonstrate compliance with.

6.8 To accord with the guidelines, the forthcoming plan should also identify appropriate locations where higher density (which may include buildings of greater height) will be encouraged. In accordance with SPPR1 of the Height Guidelines, the plan will not set out blanket restrictions regarding height in these locations but will advocate that such proposals must be design led and in accordance with key qualitative and quantitative performance criteria.

6.9 The previous policy document 'Maximising the City's Potential' as well as the guidance set out in the current Dublin City Plan provides a useful framework for the identification of locations where consolidation and height enhancement could be promoted. Having regard to these documents, although not

exhaustive, potential locations where such development could be promoted in the forthcoming plan include:

6.10 Strategic Development Zones (SDZ)

- North Lotts and Grand Canal Dock
- Poolbeg West
- Grangegorman

There are existing Planning Schemes for these areas which include detailed development frameworks that promote an appropriate scale, form and density of development. The North Lotts and Grand Canal Dock Planning Scheme has been amended to ensure consistency with the Building Height Guidelines and these proposed amendments are currently under consideration by An Bord Pleanála. The Poolbeg SDZ Planning Scheme was adopted after the publication of the guidelines and is consistent with them. It would be appropriate that the plan promotes development in these areas that is in accordance with the provisions and framework set out in the relevant Planning Scheme.

6.11 Local Area Plans (LAP's)

- Georges Quay
- Ballymun
- Park West/Cherry Orchard
- Ashtown/Pelletstown

Local Area Plans have been prepared for a number of areas all of which promote appropriate intensification and consolidation of these strategic areas. In these areas, proposals will be assessed in accordance with the overall objectives and policies set out in the LAP and must ensure consistency with identified performance criteria for assessing higher density proposals (see below).

6.12 Strategic Development Regeneration Areas and Other Growth Areas

Higher density development could also be considered in the following key SDRA locations:

- Heuston Station and Environs
- Liberties including Newmarket and Digital Hub
- Grangegorman and Environs
- St. James Medical Campus and Environs

- North Fringe – Clongriffin and Belmayne
- Naas Road/Parkwest

and in the following growth areas:

- NEIC/Connolly/Moore Street/Markets
- East Wall Road and Environs
- Phibsborough
- Finglas and Environs

Each of the development frameworks for these SDRA's set out in the current plan will need to be reviewed as part of the plan making process to determine appropriate locations where additional height could potentially be supported in the achievement of the compact city.

Z6 Industrial Lands

- 6.13** There are significant pockets of low intensity brownfield industrial lands in the city. Many of these sites are strategically located in city and have potential for significant intensification. They provide opportunities to develop significant new mixed use and residential neighbourhoods that will contribute the overall sustainable growth of the city. Such former industrial lands which are greater than 2ha have the potential for development of greater density and height subject to compliance with appropriate performance criteria. The plan may need to consider specific guidance on such Z6 lands.

Public Transport Corridors

- 6.14** There is recognised scope for intensification and the provision of higher densities at designated public transport stations and within the catchment areas of major public transport corridors including:
- Bus connects/QBC's
 - Luas
 - Metro
 - DART
- 6.15** Development proposals will primarily be determined by reference to the proximity of new public transport infrastructure and to the area character. Locations for intensification must have reasonable access to the nearest public transport stop. In line with national guidance, higher densities will be promoted within 500 metres walking distance of a bus stop, or within 1km of a light rail stop or a rail station in the plan. Highest densities will be promoted

at key public transport interchanges or nodes. The capacity of public transport will also be taken into consideration in considering appropriate densities. It is acknowledged that many sites along such transport corridors are smaller infill sites. Particular regard must be had to ensure that proposals are of a coherent scale and provide a sustainable and viable extension to the existing urban fabric.

Criteria for Assessment

Introduction

- 6.16** Best practice in other countries indicates that a design-led approach to optimising density should be advocated and that this should be based on an evaluation of the site's attributes, its surrounding context and capacity for growth and the most appropriate development form.
- 6.17** Guidance also recommends that a Masterplan is prepared at the outset for any significant scheme (for example on sites greater than 0.5ha) seeking to increase densities and height. This would include development envelope studies to allow for the early testing of open space quantum, sunlight, daylight, visual impact and wind effects and use this to inform further design development. Proposals seeking to optimise densities need to demonstrate how they assist in delivering a vibrant and equitable neighbourhood - walkable, compact, green, accessible, mixed and balanced - responding positively to the existing or emerging context. There may be merit in adopting a similar approach in the forthcoming plan. Consideration may also be given to a requirement that higher density proposals including enhanced building height should be accompanied by a landscape and visual impact assessment with appropriate computer generated images (CGI's) and photomontages to demonstrate how the development will assimilate appropriately with the existing urban context.
- 6.18** In considering higher density proposals including buildings of enhanced height, international best practice indicates that it is possible to create successful places based around streets and a variety of urban typologies, including houses and medium-rise apartment blocks, as well as some carefully integrated taller buildings. Schemes that use mostly mid-rise typologies can create better homes and neighbourhoods at surprisingly high densities, and are more cost-effective than other solutions. In this regard, it may be appropriate for the plan to promote innovative, mixed use development that includes buildings of between five and eight storeys, including family apartments and duplexes.
- 6.19** The Building Height Guidelines set out various development management criteria to be considered in the assessment of individual application/appeals for developments where increased height is proposed. It is considered that the forthcoming City Plan could build on these criteria and set out a series of performance based criteria for assessing higher density proposals including enhanced height.

Performance Based Criteria

- 6.20** Successful urban living and the creation of a compact city is all about forming urban areas where people can live, work and play. The use of urban land must be optimised in terms of sustainable densities. This however, must be balanced with the provision of an appropriate mix and range of uses; scale and integration with surrounding areas; high quality public realm and green infrastructure; appropriate pedestrian, cycle and public transport connections as well as accessibility to community facilities and social infrastructure. A ‘placemaking’ approach should be taken as the key focus of all higher density proposals.
- 6.21** In considering potential performance criteria, the review of the Building Height and Proposed Amendments to the North Lotts and Grand Canal Dock Planning Scheme prepared in 2019 sets out a useful baseline of performance criteria for urban scale and height drawn from relevant planning guidelines as well as the existing Dublin City Plan.
- 6.22** It is considered that these criteria could be used as the basis of the criteria to be set out in the forthcoming plan. A potential framework for the performance criteria to be used in assessing urban schemes of enhanced density and scale is set out in the table below. Further criteria for the assessment of tall land mark buildings is set out in section 7 below.

Table 1: Potential Performance Criteria in Assessing Proposals for Enhanced Density and Scale

Objective		Potential Performance Criteria in Assessing Proposals for Enhanced Density and Scale
1.	To promote development with a sense of place and character	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • respect and/or complement existing and established surrounding urban structure, character, scale and built and natural heritage, • have regard to historic settings and character, • be appropriately located in highly accessible places of greater activity and land use intensity, • have sufficient variety in scale and form and have an appropriate transition in scale to the boundaries of a site/ adjacent development in an established area, • not be monolithic and should have a well considered design response that avoids long slab blocks. <p>In proposing urban scale and building height, the highest standard of urban design, architectural quality and place making should be achieved.</p>

2.	To provide appropriate legibility	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • make a positive contribution to legibility in an area in a cohesive manner, • reflect and reinforce the role and function of streets and places.
3.	To provide appropriate continuity and enclosure of streets and spaces	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • enhance the urban design context for public spaces and key thoroughfares, • provide appropriate level of enclosure to streets and spaces, • not produce canyons of excessive scale and overbearing of streets and spaces, • generally be within a human scale and provide an appropriate street width to building height ratio of 1:1.5 – 1:3.
4.	To provide well connected, high quality and active public spaces	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • integrate into and enhance the public realm, • be appropriately scaled to provide appropriate enclosure/exposure to public spaces, • ensure adequate sunlight and daylight penetration to public spaces to ensure that they are useable and can support outdoor recreation and amenity, • ensure that potential negative microclimatic effects (particularly wind impacts) are avoided and or mitigated, • provide active ground floor uses and animate the streetscape.
5.	To provide high quality, attractive and useable private spaces	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • not compromise the provision of high quality private outdoor space, • be appropriately scaled and distanced to provide appropriate enclosure/exposure, particularly to residential courtyards. <p>Adequate sunlight and daylight should be received throughout the year to communal private spaces, particularly to courtyards to allow for play and other activities. Private communal space should be usable, safe, accessible and inviting.</p> <p>Reasonable levels of natural light should be received particularly to the windows of residential units within courtyards.</p> <p>Negative microclimatic effects should be avoided or mitigated.</p> <p>Urban scale and building height should not compromise the use of the perimeter block as an important typology that can include courtyards for residential development.</p> <p>Reasonable levels of overlooking and privacy should be retained in residential and mixed use development.</p>

6.	To promote mix of use and diversity of activities	<p>It is desirable that schemes of enhanced density and scale promote the delivery of mixed use development including housing, commercial and employment development as well as social and community infrastructure.</p> <p>Urban scale and building height should contribute to the mix of building and dwelling typologies in the neighbourhood. For residential development, a range of housing typologies suited to different stages of the life cycle should be provided.</p>
7.	To ensure high quality and environmentally sustainable buildings	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • contribute to well designed and high quality development, • be carefully modulated and orientated so as to maximise access to natural daylight, ventilation, privacy, noise and views to minimise overshadowing and loss of light, • not compromise the ability of existing or proposed buildings and nearby buildings to achieve passive solar gain, • ensure a degree of physical building adaptability as well as internal flexibility in design and layout, • maximise the number of homes enjoying dual aspect, to optimise passive solar gain, achieve cross ventilation and for reasons of good street frontage, • be constructed of the highest quality materials and robust construction methodologies, • incorporate appropriate sustainable technologies, be energy efficient and climate resilient, • have appropriate and reasonable regard to quantitative approaches to assessing daylighting and sun lighting proposals. Where appropriate, satisfactory, alternative compensatory design solutions should be provided for a failure to meet reasonable daylighting provisions, in the context of a constrained site or securing wider objectives such as comprehensive urban regeneration or an effective urban design and streetscape solution.
8.	To secure sustainable density , intensity at locations of high accessibility	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • be at locations of higher accessibility well served by public transport with high capacity frequent service with good links to other modes of public transport, • look to optimise their development footprint; accommodating access, servicing and parking in the most efficient ways possible.

9.	To protect historic environments from insensitive development	<p>Enhanced density and scale should:</p> <ul style="list-style-type: none"> • not have an adverse impact on the character and setting of existing historic environments including Architectural Conservation Areas, Protected Structures and their curtilage and National Monuments. <p>Proposals of significant urban scale and height located in proximity to such areas must be accompanied by a detailed assessment to establish the sensitivities of the existing environment and its capacity to absorb the extent of development proposed. Potential impacts on key views and vistas related to the historic environment should also be assessed.</p>
10.	To ensure appropriate management and maintenance	Proposals for enhanced density and scale should be accompanied by an appropriate management plan to address matters of security, management of public/communal areas etc.

7.0 Tall Landmark Buildings

Introduction

7.1 In light of recent trends for higher density proposals, some of which include taller buildings of greater height, it may be appropriate for the forthcoming plan to consider specific guidance regarding the development of taller or landmark buildings.

7.2 The policy documents reviewed as part of the background research to inform this paper have different definitions as to what constitutes a tall building. Some provide prescriptive height thresholds e.g. a tall building is taller than 20 metres whereas others, provide a more generalised description such as:

“Tall buildings are generally considered to be those that are substantially taller than their surroundings and cause a significant change to the skyline.”

7.3 In considering defining a taller building, it is clearly the case that a 10-storey building in a mainly two-storey neighbourhood will be thought of as a tall building by those affected, whereas in the centre of a large city it may not. Consideration will be required as to what constitutes a taller building in a Dublin context in the forthcoming plan.

7.4 It is acknowledged that taller buildings have a role to play in the future development of Dublin as a compact city. Such buildings can have advantages in terms of increasing density, promoting regeneration and facilitating urban

legibility. Appropriately located taller buildings can contribute to the development of sustainable communities and neighbourhoods particularly to optimise the capacity of sites which are well-connected by public transport and have good access to services and amenities. Tall buildings can help people navigate through the city, form memorable landmarks and act as reference points to identify key urban quarters, regeneration sites and public transport interchanges. In this regard, if well designed, they can make a positive contribution to the cityscape.

- 7.5** Conversely tall buildings can also have a significant detrimental impact on local character if the location or design is unsuitable. Tall buildings in particular, can present major visual impacts on the city's townscape character. They can also have other adverse impacts including putting undue pressures on social and physical infrastructure, impacting negatively on existing residential amenities and significant adverse environmental impacts. Tall buildings can also be deemed more unsustainable and involve more embodied energy with greater energy consumption and carbon emissions. It is, therefore, essential that such tall buildings are directed to locations that can absorb their built form without significant adverse impacts, protect areas of sensitive urban character particularly the city's heritage assets and achieve excellent quality both in terms of architectural design and environmental sustainability.
- 7.6** In this regard, the plan should consider a clear policy basis that whilst such buildings have a role to play in the fabric and evolution of the urban form of the city, their development should only be in instances where there is a compelling architectural and urban design rationale for them and where it can be demonstrated that they make a significant contribution to local regeneration and the economic, strength, performance and resilience of the city. There are limited areas in the city that are capable of sustaining the economic and environmental impact of such tall buildings.

Location

- 7.7** It would be appropriate for the plan to identify specific locations where tall buildings could be located. This may include locations with certain characteristics or specific locations such as those that are identified within existing planning policy documents including LAP and SDZ or where there is a general framework for future development such as the SDRA.
- 7.8** It would also be appropriate for the plan to outline that the onus is on the applicant to demonstrate in their application documentation that the site is appropriate for a tall building. An example of policy that could be included would be that the applicant must undertake a thorough context and urban design analysis and a Townscape Assessment including detailed modelling and photomontages. In this regard, the applicant as part of their application would need to demonstrate that any tall building proposal will not have an adverse impact on sensitive locations including conservation areas and protected structures and sensitive views. It will be important for the plan to note that even where a site may have been identified as an appropriate location for a tall building, that the proposal must meet all of the

performance based assessment criteria for tall buildings.

- 7.9** In terms of suitable locations, it is considered that tall building proposals are most likely to be appropriate in locations that are identified for large scale regeneration and redevelopment; that are well connected centres of employment; which have the capacity to create their own character and identity and where the existing character of the area would not be adversely affected by the scale, mass and height of a tall building. Generally, larger sites (2ha and over) offer the greatest potential for taller buildings, as these sites are more able to set their own context than smaller sites.
- 7.10** Locations considered appropriate for tall buildings have been identified at a local policy level within existing LAPs and SDZs. In addition, a number of the Strategic Development Regeneration Areas identify regeneration areas that are considered appropriate for the development of taller building/s. A guiding urban design framework for each of these SDRA's will be set out in the forthcoming plan and these will require further review to determine whether the provision of taller buildings would be appropriate.
- 7.11** There may be merit in suggesting an approach that there should be a general presumption against tall buildings outside of the locations specifically identified as being suitable for the provision of same unless in exceptional circumstances and where it can be demonstrated by the applicant that there is a compelling rationale for such a development. Additional criteria to consider in the assessment of such exceptional circumstances could include:
- That the tall building complies with all of the qualitative performance criteria.
 - The tall building/s will emphasise a point of particular civic or visual significance and that such a proposal will contribute in a meaningful way to the legibility of the city and contribute positively to the skyline. Any such proposal for a high building must be supported by a detailed spatial analysis demonstrating that the design and location of the tall building is appropriate and optimal.
 - The tall building will act as a strategic intervention, a catalyst for regeneration and make a significant economic or cultural contribution. The tall building proposal must also demonstrate that it is economically viable.
 - That the tall building is located in an area with excellent high frequency, high capacity public transport accessibility and excellent pedestrian and cyclist infrastructure. The onus will be on the applicant to demonstrate the capacity of public transport and the quality of existing links between public transport and walking and cycling infrastructure and the site.
 - The tall building will bring significant planning gain to the community including measures such as:
 - substantial upgrades to the public realm;
 - environmental enhancements including open space and green infrastructure to be enjoyed by residents and the wider community;

- significant new social and community infrastructure for the benefit of the wider area.
- where the tall building is for residential use, the provision of a broad range of accommodation for people living in different household sizes and throughout various life cycle stages;
- That the proposal is located in an area with sufficient social and community infrastructure and that that the development will further enhance such infrastructure.

Guidelines for Higher Buildings in areas of Historic Sensitivity

- 7.12** As required under the Guidelines, specific advice must also be provided regarding areas of historic sensitivity. Tall buildings are generally not considered appropriate in historic setting including conservation areas, the Georgian core or where the setting or a projected structure would be seriously harmed by the inappropriate location of a tall building.

Criteria for Assessment

- 7.13** The existing development plan sets out a number of criteria for assessing high buildings. In light of the guidance set out in the Urban Development and Building Heights – Guidelines for Planning Authorities, these may need to be expanded upon in the forthcoming plan. Criteria that could be considered in the plan are detailed below.

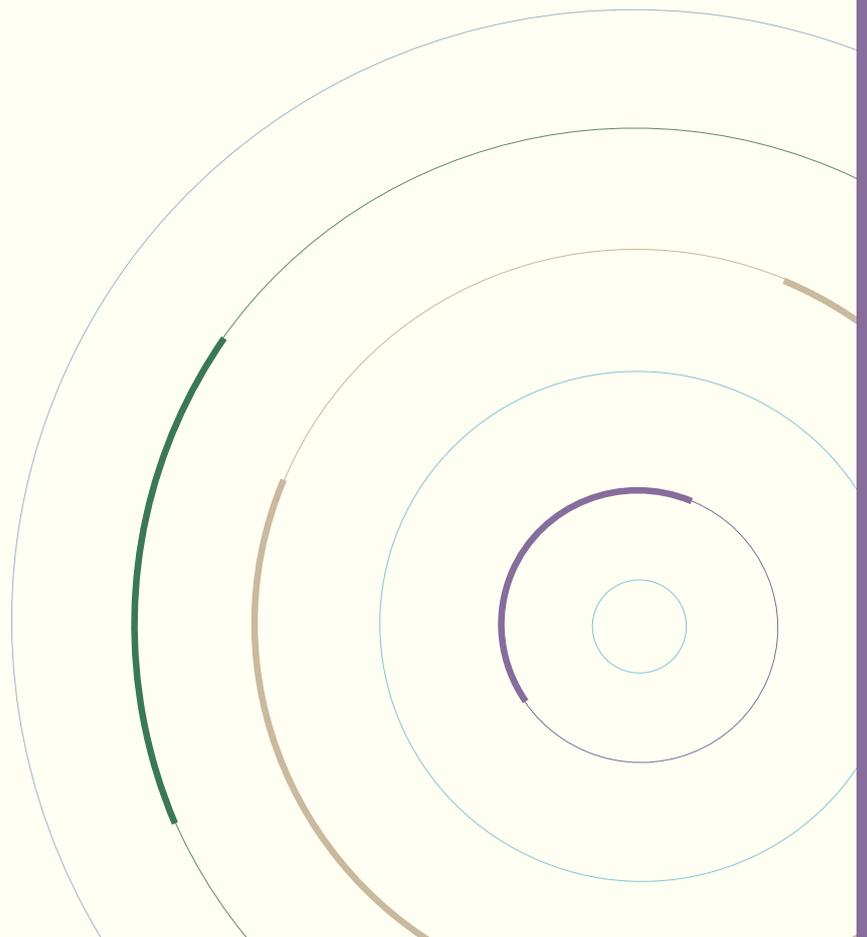
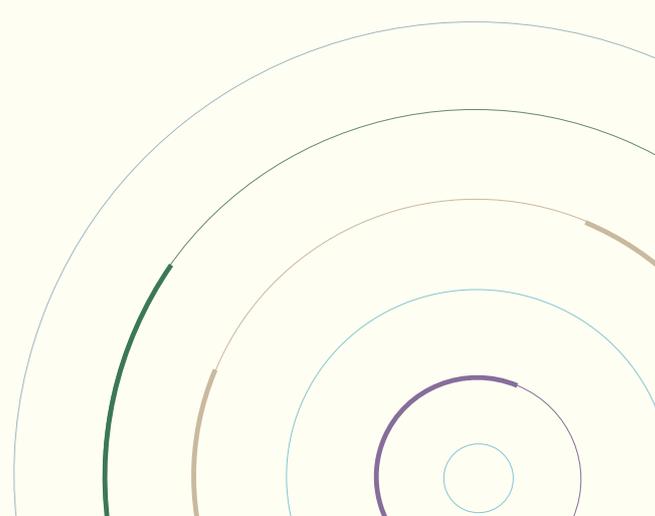


Table 2: Potential Performance Criteria in Assessing Proposals for Landmark Tall Building/s

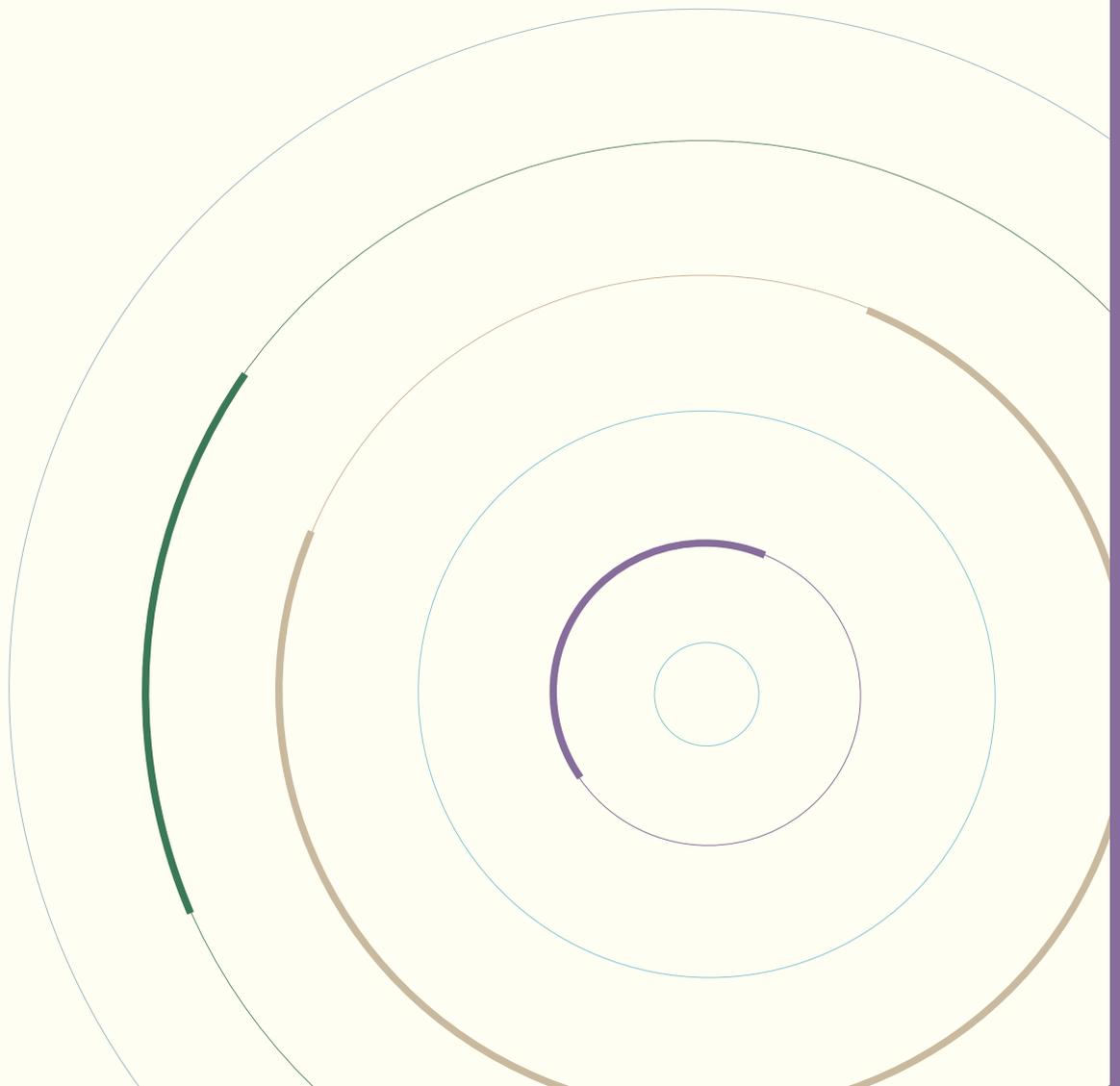
Objective		Potential Performance Criteria in Assessing Proposals for Landmark Tall Building/s
1.	Exemplary Architecture	<ul style="list-style-type: none"> • All proposals must be accompanied by a detailed design statement that demonstrates the achievement of excellent design and the highest standards for future occupants. • The development should make a significant contribution to the built environment of the city. Detailed consideration must be given to the scale, form, massing and proportions of the building. A slenderness ratio of 3:1 is desirable. • The facades must be carefully articulated and animated. This can be achieved through the use of high quality materials, colour, fenestration, reflectiveness and/or expression of depth. Large, blank or inactive gables should be avoided. • The building form and layout must have regard to the density and character of the surrounding development. The applicant will be required to demonstrate the relationship and potential impacts of the proposal to the surrounding context, including topography, built form, scale, height, urban grain, streetscape, public realm, open spaces, rivers and waterways, important views and prospects, skyline and that these factors have been considered in the design approach. • Detailed consideration will be required for all lighting proposals to ensure that they are energy efficient, contribute to the design and quality of the building whilst limiting the potential for excessive light spill, glare and sky glow. • The impact of the roofscape (including telecommunications apparatus and plant rooms) must be considered and it should be designed to make an appropriate contribution to the city's skyline. • Where a tall building/s proposal abuts a lower density areas, such sites should be planned to provide lower level buildings at the perimeter assisting the transition in scale from the tall building/s down to the surrounding context. • Where a proposal of significant height is proposed, the process of design selection should preferably be by means of an architectural competition.

2.	Sustainable Design and Green Credentials	<ul style="list-style-type: none"> • Tall buildings should set exemplary standards in terms of sustainability. Proposals should incorporate appropriate technologies and design features to minimise energy use. • The applicant must demonstrate that the design is innovative and flexible and can be adapted overtime.
3.	Public Realm	<ul style="list-style-type: none"> • The development should contribute positively to its surroundings at street level, help create a ‘sense of place’, provide appropriate passive surveillance and active ground floor uses. The design of the base of tall buildings must be of a proportion, composition and scale that appropriately defines and enhances the public realm, and provides for a safe and comfortable pedestrian experience. Particular attention must be paid to the design and location of public entrances to ensure that they are legible and accessible. • Detailed design and hard and soft landscape measures for the treatment of the public realm both within and external to the development must be provided. Opportunities to improve the permeability of the site and wider area should be maximised, particularly where increased pedestrian and cycle flows are envisaged.
4.	Environmental Impacts	<ul style="list-style-type: none"> • Applications must be accompanied by detailed technical analysis and supporting reports to demonstrate how potential environmental impacts can be appropriately mitigated and avoided. It must be proven that the development will not affect the surroundings adversely in terms of microclimate, wind turbulence, overshadowing, noise and reflected glare. • Potential impacts to sensitive bird or bat species should be considered where appropriate.



<p>5.</p>	<p>Public Safety and Functional Impacts</p>	<ul style="list-style-type: none"> • Tall building proposals must demonstrate that the development creates a pleasant, safe and healthy environment for its future occupants. The design of the building should follow best practice to minimise the threats from fire, flood and other hazards • All applications must be accompanied by an assessment on potential interference with aviation, navigation and telecommunications. • It must be demonstrated that buildings can be serviced, maintained and managed in a manner that will not cause disturbance or inconvenience to surrounding public realm. • Entrances, access routes, and ground floor uses should be designed and placed to allow for peak time use and to ensure there is no unacceptable overcrowding in the surrounding areas. • All tall building proposals must be submitted by a full transport capacity assessment. The intensity of use associated with tall buildings will only be appropriate if it is supported by an appropriate level of transport capacity to ensure good pedestrian and public transport access.
<p>6.</p>	<p>Visual Impact and Townscape Analysis</p>	<ul style="list-style-type: none"> • All applications must be accompanied by a detailed visual impact and townscape assessment. • The townscape analysis should include a detailed assessment of the existing characteristics of the built form. It should identify strategic views and present detailed verifiable fully rendered photomontages (day and night) of the proposed tall building in the context of the surrounding area (before and after). It should be demonstrated that the development makes a positive contribution to long range, mid-range and immediate views. • It must be demonstrated that the tall building/s will reinforce the spatial hierarchy of the local and wider context and aid legibility and wayfinding. • The Townscape Study should include a simulation of the building within a 3D digital model to demonstrate the impact of the proposal. • The cumulative impact of a tall building proposal in the context of other existing and proposed tall building proposals must be considered. • Tall building proposals must demonstrate the impacts on the historic context, including the need to ensure that the proposal will preserve and/or enhance historic buildings, sites, landscapes and skylines. Tall building proposals must address their effect on the setting of, and views to and from historic buildings, sites and landscapes over a wide area. It must be demonstrated that the building will have no adverse impact on the built cultural or historical heritage of the city.

7.	Tall Building Clusters	<p>In general, opportunities for singular tall buildings in the city is likely to be limited. It is acknowledged from an architectural and land use perspective that it is preferable that tall buildings are clustered and the City Council support this approach in the locations identified as suitable for taller buildings. A cohesive group of tall buildings maximises their economic and sustainable advantages.</p> <p>Where clusters of tall buildings are proposed, careful attention must be paid to the roof profile in the context of the whole cluster. Clusters of such towers should be composed with the tallest at the centre of the group, falling away to the edges.</p>
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Appendix 1: Density

Density

Introduction

In recent years there has been a move towards higher residential densities. The arguments are well known for increasing the density of development and creating more compact forms of development, consequently ensuring a mix of uses, the containment of 'urban sprawl' and achieving social and economic diversity and vitality.

The need to increase density is promoted through national and regional policy including the National Planning Framework, The Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas, Urban Development and Building Height Guidelines for Planning Authorities and the Regional Spatial and Economic Strategy.

The benefits of increased densities are many and include:

- Make more economic use of serviced land.
- Sustain existing social and physical infrastructure.
- Reduce travel demands.
- Support existing and improved quality public transport provision.
- Reflect social and demographic changes.
- Reduce social and demographic changes.
- Reduce energy demand and emissions.
- Reduce pressure for 'greenfield developments and prevent urban sprawl.
- Contribute to biodiversity and ecological protection.
- Encourage innovative design and better urban form.

Measuring Density

Density is a planning tool which helps to achieve the efficient use of land and create sustainable urban forms. However, the usefulness of density as a planning tool needs to be kept in perspective as residential density calculations only provide a crude indication of scale and massing and intensity of use. In this regard, it is important that any density standards are considered together with a range of relevant policies and standards including plot ratio and site coverage.

Plot ratio is considered the most accurate and consistent tool to be used in conjunction with density. The lack of predictability and consistency of other methods results from the fact that average size of dwellings and average per habitable room can vary

substantially (i.e. terraced townhouses versus large family houses). The bed spaces per hectare method has similar difficulties in that dwellings with similar bed space accommodation can vary substantially in size.

Another issue to consider is net and gross density. Where net density is used, it only takes residential areas into account, and omits all other desirable mixed uses. Gross density takes other land use into the calculation, but the figure is merely reduced and there is no meaningful way to measure the other uses. Thus it is difficult to assess the intensity of use of an area, how vital it might be or whether it is only active during the day. These are pertinent issues to consider when assessing higher density developments and in particular, their contribution to successful neighbourhoods and placemaking.

Form of Development

There is a general relationship between net density and the form development might take. It is evident that the higher the density required, the more it will force development to take certain forms. A study undertaken in 2012 – the London Housing Density Study, indicates that every residential development has a particular density range within which it works well and above which, certain conditions tend to become compromised; privacy, daylight and amenity space are reduced, or there is an increase in single aspect dwellings.

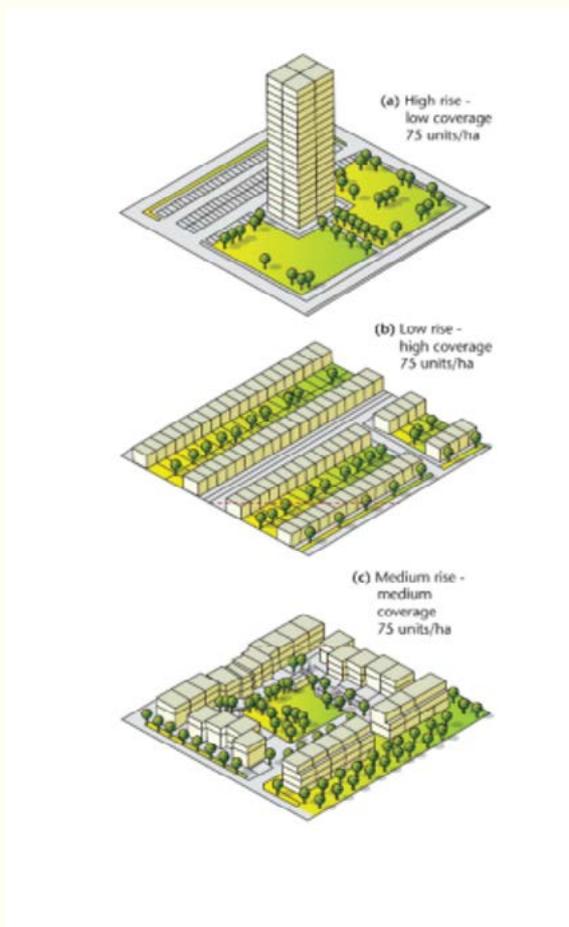
The following table gives an indication of how densities translates into height:

House Type	No. of Storeys	Plot Ratio	Equivalent Residential Density (units per ha-net)
Detached/Semi Detached	1-2	1:0.25	31
Semi Detached	2	1:0.35	43
Terraced	2	1:0.50	59
Duplex	4	1:1.00	120
Low Rise apartments	5	1:1.50	165
Apartments	8	1:2.50	280
5 storey podium + 1 no. 20 storey tower		1:2.50	280
5 storey podium +2 no. 20 storey tower		1:380	390

Source: DEGW

There is a common misconception about the relationship between height and density. It is important to note that low-medium height does not necessarily equate to low

density as the design, plot ratio and site coverage all contribute to the density of a particular built form. Conversely, a high building on a site does not mean that a development is necessarily high density. This is demonstrated in the diagram below.



Source: South Dublin Co. Co. 2020

Recent research¹ undertaken regarding density in London suggests that there are better ways of creating more and better homes. It details that high quality schemes that combine mixed tenure homes, public space and community infrastructure can have densities in the range of 150 to 350 homes per hectare using mostly mid rise typologies, combined with elements of low rise housing and some carefully located taller buildings.

It is envisaged that the forthcoming plan will need to address the issue of density but also ensure the development of viable and vibrant communities. To achieve these outcomes, there will need to be a focus not just on maximising density but on a range of qualitative criteria and the consideration of a wide range of other factors including architecture, urban design, community facilities and infrastructure, green infrastructure and quality Placemaking.

¹Super Density The Sequel, Pollard Thomas Edwards, 2015

Appendix 2: Literature Review

Managing Intensification and Change – A Strategy for Dublin Building Height – DEWG - September 2000

This report was commissioned by Dublin City Council in 2000 to formulate a strategic framework policy document regarding proposals for increased densities and higher buildings. The objective was to develop a comprehensive and dynamic policy to capitalise on the potential benefits and effects of high buildings.

Section 2.3 of the report provides useful definitions of different height thresholds including low rise, mid rise, high rise and super high rise. The report notes the arguments for high buildings. The arguments against high buildings are also set out and it is stated that many such buildings perform poorly in terms of space utilisation, cost, adaptability and external environmental factors.

The report identifies a number of distinct character areas within the city. It states that the capacity of these areas to absorb change will be governed by a number of factors including the existing pattern and scale of development, availability of sites, conservation issues and the role of new development to act as a catalyst for regeneration.

The report also notes that there are relatively few locations suitable for individual high buildings stating that such buildings primarily fill a landmark function and make no significant impact on increasing density. It is detailed that high rise clusters have the potential to add significantly to density levels, impact on city wide context, generate their own environment and create a new sense of place. It is stated that such clusters need to be highly accessible by public transport, be primarily for office use and comprehensively planned with residential development.

The report concludes that sustainable densities in the city could largely be provided in the 6-8 storey height range provided such height was a general feature of streetscape, rather than an occasional feature. It also concludes that higher buildings have a part to play as landmarks identifying activity nodes, contributing to urban legibility and providing high density, particularly in clusters with capacity to promote urban regeneration and Dublin's competitive edge. Indicative locations for individual high buildings and clusters are identified.

Maximising the City's Potential – A Strategy for Intensification and Height, Dublin City Council 2007

This document sets out a review of policy relating to height and density in the city. It notes that Dublin has achieved appropriate densities in an eight storey format but acknowledges that it is crucial that new clusters are formed and consolidated. It notes that the main tool used in the implementation of policies for a more compact city has been the Framework

Plan and that this has proved to be a flexible planning tool, facilitating the reconstruction and expansion of the city core as well as the construction of mixed use development on greenfield sites in the suburbs.

The report states that high buildings will have a part to play as landmarks, identifying key activities in the city as icons i.e. images of modernity and as high density clusters with significant capacity to promote urban regeneration.

Section 4 of the report sets out the policy framework and that it will be the policy of the Council to promote height in a selected number of locations where it can be demonstrated that it can make a significant contribution to the economic growth and development of the city and to its visual coherence and legibility.

Within the inner city, it is noted that the City Council will remain committed to the protection of the special character of the city's historic core. Higher density and higher buildings shall be determined by local context. Within the inner city, a number of high intensity clusters are also identified due to their accessibility with public transport and their capacity to generate activity and further intensity. It is noted that the future development of these clusters will be guided by Framework Development Plans.

The strategy also identifies a number of locations that have capacity to accommodate a substantial quantum of development, intensification and in limited instances height enhancement. In the outer city, intensification is directed towards eight identified Prime Urban Centres (North Fringe, Northside Shopping Centre, Finglas, Ballymun, Rathmines, Ballyfermot and Crumlin). It is also noted that a number of Framework Development Areas are identified, also suited for intensification including Pelletstown, Park West, Drimnagh, Richmond Road, Chapelizond and Whitehall. It is stated that there is also scope for intensification and increase densities along major radial routes accommodating QBC's.

It is detailed that heights will be determined by proximity to the transportation mode and that a standard height of 4 to 6 storeys will apply on sites located on a transportation corridor. It acknowledged that there may be opportunities for higher buildings that add variety and visual interest to the streetscape and that such proposals should be justified through urban design analysis. The study also identifies six major Z6 and Z7 zoned sites that have significant potential for intensification and growth. For all other sites in the outer city, it is stated that proposals for intensification and height will primarily be determined by local context. It notes however, that sites greater than 0.5ha may be able to create their own character and density.

The strategy finally sets out assessment criteria for high buildings. In particular, it is an objective to ensure that such proposals make an outstanding contribution to the regeneration of the city, to its economic and cultural life and have

no adverse environmental, economic or social impacts on the local area and the wider city and will achieve exceptional architectural design.

Super Density – The Sequel 2015

This report was prepared by four architectural practices – HTA, Levitt Bernstein, Pollard Thomas Edwards and PRP – all who have considerable experience in delivering high density housing development in the UK.

The report states that taller buildings have a role within well-connected developments. It is stated however, that it is possible to create successful places based around streets and a variety of urban typologies, including houses and medium-rise apartment blocks, as well as some carefully integrated taller buildings. The report cites a number examples of best practice and notes that all achieve densities of between 150 and 350 homes per hectare, using mostly mid-rise typologies, combined with elements of low-rise housing and some carefully located taller buildings. In this regard, the key message of the analysis is that medium-rise urban quarters can create better homes and neighbourhoods at surprisingly high densities, and are more cost-effective than other solutions.

The report sets out a number of key conclusions including:

Adopt mid-rise development to meet London’s housing needs: apartment blocks of between five and eight storeys, including family apartments and duplexes, create successful homes and neighbourhoods at surprisingly high densities, are cost-effective and perpetuate the character and street life of London. Creative combinations of mid-rise mansion blocks with taller elements can make room for family houses within high density neighbourhoods.

Resist ‘hyperdensity’: there should be a presumption against ‘hyperdense’ developments over 350 homes per hectare, which should be confined to exceptional locations and subject to exceptional justification. At these densities, even with best practice approach, it is very difficult to create the conditions that allow mixed communities to thrive.

Integrate towers with street-based typologies: taller buildings do have a role within well-connected developments, provided they are integrated with other typologies and contribute to the creation of successful streets and the public realm. Trophy towers dropped at random must be avoided: they are alien to street-based culture, socially divisive and make little contribution to meeting London’s housing needs.

Promote street life: the streets and squares of London provide an unbeatable model for successful urban living. This tradition of urban place-making must be continued, ensuring all new development begins with a coherent strategy for the public realm.

Build on London's tradition of mixed communities: larger developments should contain a balance of homes for families, the elderly and young people.

Provide a wider range of housing typologies: planning policies and standards are focused on conventional models of permanent housing for long-stay households. Alternative types of housing design and tenure are required to attract and retain London's young mobile workforce.

Harness space above public buildings: precedents show that successful new homes can be built above schools, libraries, shops, cinemas and workspace. There is much more scope to exploit air-rights to meet housing need and intensify street-life - including making better use of public-sector land.

Guidance on Tall Buildings – CABI and English Heritage 2007

This guidance document published in 2007 offers advice on good practice in relation to tall buildings in the planning process. It notes that in the right place, tall buildings can make positive contributions to city life and they can be excellent works of architecture in their own. In the right place they can serve as beacons of regeneration and stimulate further investment. It also notes however, that there have been too many examples of tall buildings that have been unsuitably sited, poorly designed and detailed, badly built or incompetently managed.

The report recommends that in identifying locations where tall buildings would and would not be appropriate, local planning authorities should, as a matter of good practice, carry out a detailed urban design study. Specific policies and locations should be included in the development plan and supplementary planning documents clearly identify in map-based form, areas that are appropriate, sensitive or inappropriate for tall buildings. In some places, historic environment considerations may be of such significance that no tall buildings will be appropriate. In areas identified as appropriate, or sensitive, to tall buildings, local authorities should consider commissioning more detailed, three-dimensional urban design frameworks. The potential impact of buildings of various heights and forms can be modelled to assess their effect on context including on other local authority areas, and on each other. This should help to inform the decision-making and place-making process. Where such a study is not feasible, the Planning Authority should require all applicants for major tall buildings to present their proposals in the context of their own urban design study for the immediate and wider areas affected.

The report also notes that local planning authorities should advise applicants during pre-application discussions what visual material will be required to determine any application, identifying views they consider significant and defining appropriate visualisation techniques. In many cases, studies showing what a scheme would look like in context at varying heights or a physical model of a tall building in relation to the wider area may be helpful. All proposals for tall buildings should be accompanied by accurate and realistic representations of the appearance of the building. These

representations should show the proposals in all significant views affected, near, middle and distant, including the public realm and the streets around the base of the building. This will require methodical, verifiable 360 degree view analysis.

The report also sets out guidance on criteria to consider when assessing buildings which are substantially taller than their neighbours and/or which significantly change the skyline. These include:

- Relationship to context.
- The effect on the historic context.
- The effect on world heritage sites.
- Relationship to transport infrastructure.
- Architectural quality of the building.
- Sustainable design and construction.
- Credibility of the design.
- Contribution to public space and facilities.
- The effect on the local environment.
- Contribution made to the permeability.

The report also advises that to be acceptable, any new tall building should be in an appropriate location, should be of excellent design quality in its own right and should enhance the qualities of its immediate location and wider setting. It should produce more benefits than costs to the lives of those affected by it.

Measuring Housing and Population Densities in Dublin City and County – Irish Planning Institute – Pleanail 2019

This research project undertaken as a final year project in the BSc in Spatial Planning Course in TUD was informed by the research question:

“Can intensification without compromising amenity be achieved in Dublin by locating high density residential development on vacant and opportunity sites adjacent to underutilised infrastructure”

The study found that Dublin City is notably more compact than Fingal, South Dublin and Dun Laoghaire with an average density of 20.6 units per ha. This was 3 times higher than DLRCC, 5 times higher than South Dublin and 9 times higher than FCC. Overall however, the research indicated that the urbanised area of Dublin City and County is characterised by low density residential development with just 9% of ED's in Dublin City with densities of 40 units per ha and above and almost two thirds of ED's (64%) have densities of 20 uph or below.

In Dublin City, density levels of up to 90 units per ha were recorded in a number of centrally located ED's but that the distance from the city centre was a strong influence on density with density dropping dramatically as the distance increased.

The data sets underpinning the research revealed that a diverse mix of land uses such as office, retail, education, health and residential has a positive impact on residential densities. The paper recommends the need for multi-use zones and

buildings as a means of increasing density levels and promoting more sustainable urban areas.

The research also indicated that density levels in ED's along public transport corridors are similar to those in the ED's that are not within 500metres of a public transport corridor. It states that the implication of this finding is significant as the data demonstrates that (high quality) public transport provisions appears to have had a very limited influence on density levels in Dublin City and County and in some case, none at all.

Compared to other cities, the paper found that the density levels in Dublin City are comparable to other European Cities of a similar size and that Dublin City is generally performing well in this regard. The city has a density of 4,700 population density per km² whereas London has a density of 4,800 and Amsterdam 4,904. The residential densities in the periphery of the city are notably low by international standards. The report recommends that the residential role of County Towns in Fingal, South Dublin and Dun Laoghaire should be strengthened as a means of increasing density.

Other key findings from the study relevant to the city include:

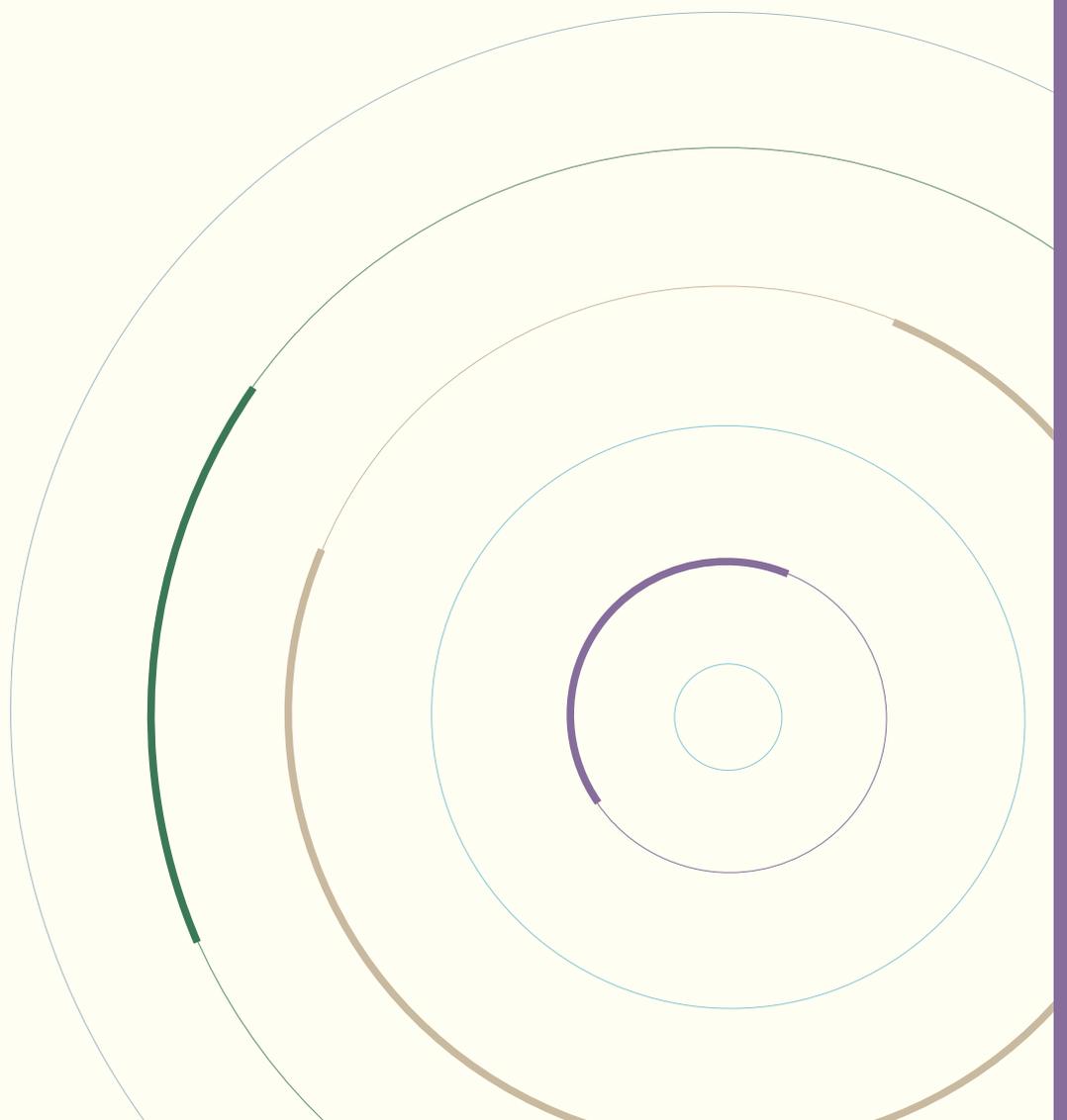
- The urban renewal schemes in the inner city and city centre have been very successful in boosting densities and increasing population. Cites Fatima Mansions as a good example of infill accommodation and upscaling of density.
- Notes that some regeneration areas such as Ballymun have achieved mixed success in terms of increased density. It is acknowledged however, that density levels may increase as development continues in this area.
- The historic areas in the inner city perform well in respect to densities with areas such as Stoneybatter achieving a density of c. 68.8 uph. These areas demonstrate that it is possible to build high quality housing at sustainable urban densities and create desirable places to live. Therefore, large apartment schemes need only be part of the solution to meeting out future accommodation needs.
- Proactive measures (such as land availability audits) of high quality public transport routes and the preparation of site development briefs) should be considered for suitable lands on public transport corridors that may become available for development.
- Proactive policies to boost densities are needed and clear measures designed to achieve greater densification are necessary – particularly in existing residential areas in the periphery.
- Recommends that more nuanced and more realistic density targets are set for different types of sites for example high density development with a minimum of 100 uph should be considered for large available sites on public transport corridors with medium densities of 45-60 uph for small infill development sites.

Urban Development and Building Heights – Guidelines for Planning Authorities – December 2018

This recent policy document sets out a new approach to the consideration of building height in our urban areas. The Guidelines are published under Section 28 of the Planning and Development Act 2000 (as amended). They include a number of Specific Planning Policy requirements (SPPRs) which a Planning Authority is required to have regard to and apply in the carrying out of their functions, including the preparation of the development plan. Key points from the guidelines include:

- It is a fundamental policy requirement that Development Plans identify and provide policy support for specific geographic locations or precincts where increased building height is required.
- Development Plans must be proactive and flexible in facilitating increased densities and building heights while also being mindful of the quality of development and balancing amenity and environmental considerations.
- Appropriate identification and siting of areas suitable for increased densities and height will need to consider the ecological and environmental sensitivity of the receiving environment and the visual, functional, environmental and cumulative impacts of increased building height must be considered.
- Examples of locations where height should be promoted include locations with the potential for comprehensive redevelopment e.g. brownfield industrial districts, docklands locations, low density suburban shopping centres. Notes that such areas particularly those in excess of 2ha should be accompanied by appropriate master planning exercises and local planning frameworks to deal with movement, public realm, design and other issues.
- In considering potential locations for increase height, other factors to consider are proximity to high quality public transport connectivity; the contribution of the location to the development of new homes in line with the principles of compact urban growth; the resilience of the location from a public access and egress perspective. Development Plans must actively plan for and bring about increased density and height of development within the footprint of our developing sustainable mobility corridors and networks.
- The Development Plan must include appropriate assessment criteria that will enable proper consideration of development proposals for increased building height linked to the achievement of greater density of development. Section 3 of the guidelines sets out specific development management criteria when considering high buildings.
- Planning Authorities must determine if increased height buildings are an appropriate typology or not in particular settings. With regard to large scale and tall buildings in historic urban areas, an examination of the existing character of a place can assist planning authorities and others to establish the sensitivities of a place and its capacity for development and change and to define opportunities for new development and inform its design.
- In driving general increases in building heights, planning authorities shall also ensure appropriate mixture of uses.

- Taller buildings are a key factor in assisting modern placemaking and can assist in reinforcing and contributing to a sense of place within a city or town centre such as indicating the main centres of activity, important street junctions, public spaces and transport interchanges.
- It would be appropriate to support the consideration of building heights of at least 6 storeys at street level as the default objective, subject to keeping open the scope to consider even greater building heights subject to certain criteria.





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