Cherrywood Planning Scheme

Review of Building Heights

Background Technical Guidance Document
January 2021

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Contents

1 Introduction

Cherrywood Development Agency Project Team (DAPT) of Dún Laoghaire-Rathdown County Council (DLRCC) has provided Loci with an outline of services required to support their Building Height Review of the Cherrywood Planning Scheme (CPS). This comprises preparation of a Background Technical Guidance Document. The review is in response to the requirements of the Urban Development and Building Height: Planning Guidelines for Planning Authorities, issued in December 2018.

DLRCC is carrying out the review having regard to the specific characteristics of Cherrywood, relevant ministerial guidelines and statutory provisions and best practice, including, inter alia, the following:

- The Urban Development and Building Heights Planning Guidelines, December 2018;
- The Sustainable Urban Housing: Design Standards for New Apartments, March 2018;
- The Cherrywood Planning Scheme, 2014 (CPS), as amended in 2018;
- The Cherrywood Town Centre Urban Form Development Framework (UFDF); and
- Best practice urban design principles (Urban Design Manual, 2009, Design Manual for Urban Roads and Streets, 2013/2019 etc.).

The review will also have regard to the carrying capacity of the planning scheme as determined by the Density Review Study and the potential to increase residential densities and plot ratios subject to good placemaking.

This report comprises the following:

- The key elements of national policy context and guidance in determining urban scale and building heights in urban areas – including a review of policy and guidance of direct relevance to planning policy in this area;
- The general principles for determining urban scale in placemaking and masterplanning – including a summary of key principles drawn from guidance and best practice.
- Key performance criteria based on the general principles for determining urban scale in placemaking and masterplanning;
- A review of the methodology for determining urban scale and building height in CPS;
- A preliminary assessment of key views and prospects and the potential impact of increased building height on these;
- Recommendations for refining the methodology and parameters for guiding and controlling building height in the CPS; and
- Identification of locations and blocks for building height control revisions.

This technical guidance document is based on the following assumptions:

- All two-dimensional, plan aspects of the current CPS will be retained;
- No recommendations for changes to building height controls will be proposed where it is considered that this must be combined with a revision to the layout of the CPS. Amendments to the proposed CPS street network, street and space layout, urban block layout or shape are not considered or proposed in this review; and
- The review will not make specific recommendations for changes to building height controls where it is clear that substantial baseline environmental or amenity studies, such as for microclimate, sunlighting and daylighting impacts, will be required. This is the case for the Town Centre, which is the subject of the UFDF and where the built form and layout of development and public spaces is carefully considered along with protection of important amenity, microclimate and daylighting and sunlighting considerations. Notably, detailed proposals for parts of the Town Centre indicate that substantial reconsideration of CPS layout and configuration would be needed, if changes are proposed to urban scale and building height.

Figure 1.1. Cherrywood as exsiting (Clockwise from top left); View of site of Tully Park on higher ground from Wyattville Link Road; View over TC3 towards Luas; View north to Carrickmines Stream Valley at Domville; View of existing frontage at Tullyvale valley frontage from Willow Place; Tullyvale frontage to Tully Vale Road; and Northern frontage of Tullyval to Domville.

No assessment is made of the implications for the density of development resulting from any recommended changes to urban scale and building height controls in CPS. It would be expected, where general increases in urban scale and building height are recommended, within appropriate urban design and CPS parameters, that density of development would also increase. Increases in density of development in CPS are expected to require additional studies and may require targeted revisions of the CPS.

2 Building height policy and guidance

This section provides a summary of relevant policy and guidance relating to urban scale and building height. Relevant policy on building height for CPS is found at National, regional, city and local level as follows:

- The National Planning Framework (NPF, DHPLG, 2018a) and Planning Guidelines at national level – these set out general policy and approaches to urban development, scale and building height;
- The Regional Spatial and Economic Strategy for the Eastern and Midland Region (The Eastern and Midlands Regional Assembly, 2019) - this sets out broad regional objectives for urban development and includes a Metropolitan Area Spatial Plan (MASP) for the Dublin metropolitan area; and
- The Dún Laoghaire-Rathdown County Development Plan, 2016-2022 (Dún Laoghaire-Rathdown County Council, 2016) sets out the county-wide policy and objectives for the Cherrywood, the Cherrywood Planning Scheme, as amended, and the UFDF, which together set out the detailed planning guidance and controls for Cherrywood.

2.1 National Planning Framework, 2018

The National Planning Framework (DHPLG, 2018a) has a number of relevant national policy objectives (NPOs) that articulate a sustainable approach to settlement strategy and urban development. The NPF highlights the need for compact growth (NPO2a), generally increased intensity and density of development (residential and commercial) in key areas (NPO6), proper use of brownfield resources with targets (NPO3 a, b and c), and the creation of attractive, well-designed and livable neighbourhoods (NPO 4), of adequate scale and quality (NPO5).

NPO13 is notable in requiring a performance-based approach to matters such as building height, subject to high quality outcomes, public safety and the environment. It states:

> *In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected.*

2.2 Planning Guidelines (PGs)

Planning Authorities and An Bord Pleanála are required to have regard to planning guidelines and to apply any specific planning policy requirements (SPPRs) of the guidelines, within the meaning of Section 28 (1c) of the Planning and Development Act 2000, as amended, in carrying out their functions. SPPRs take precedence over any conflicting, policies and objectives of development plans, local area plans and strategic development zone planning schemes. Where such conflicts arise, such plans/schemes need to be amended by the relevant planning authority to reflect the content and requirements of these guidelines and to properly inform the public of the relevant SPPR requirements.

Current PGs are of particular relevance to this review are:

- *Urban Development and Building Heights: Planning Guidelines for Planning Authorities* (DHPLG, 2018b);
- *Sustainable Residential Development in Urban Areas Guidelines for Planning Authorities* (DEHLG, 2009a) and the accompanying *Urban Design Manual: A Best Practice Guide.* (DEHLG, 2009b);
- *Quality Housing for Sustainable Communities: Best Practice Guidelines for Delivering Homes, Sustaining Communities*, DCLG, 2007;
- *Sustainable Urban Housing; Design Standards for New Apartments – Guidelines for Planning Authorities* (DHPLG, 2018c); and
- *Design Manual for Urban Roads and Streets* (DTTS and DECLG, 2013).

Urban Development and Building Heights

Urban Development and Building Heights (DHPLG, 2018b) These guidelines were issued to support national policies on compact urban development and long-term, strategic development. They outline wider and strategic policy considerations and a performance criteria approach (s.1.6). The guidelines require that increased building height be considered in all urban contexts, subject to ensuring the highest standards of urban design, architectural quality and place-making outcomes (s.1.3). The guidelines emphasise the importance of securing effective mixed use (including residential development) in higher density development (s.1.19).

The guidelines also highlight the need to consider complementary policy and guidance, notably; *Sustainable Urban Housing; Design Standards for New Apartments – Guidelines for Planning Authorities* (DHPLG, 2018c), *Sustainable Residential Development in Urban Areas Guidelines for Planning Authorities* (DEHLG, 2009a), the accompanying *Urban Design Manual: A Best Practice Guide* (DEHLG, 2009b), and *Design Manual for Urban Roads and Streets* (DTTS and DECLG, 2013).

In relation to development plans, the PGs acknowledge the non-linear relationship between height and density, stating that (s.2.3): 'While achieving higher density does not automatically and constantly imply taller buildings alone, increased building height is a significant component in making optimal use of the capacity of sites in urban locations where transport, employment, services or retail development can achieve a requisite level of intensity for sustainability.'

The guidelines are principally aimed at statutory development plans that have been (s.2.6) '…overly restrictive maximum height limits in certain locations and crucially without the proper consideration of the wider planning potential of development sites and wider implications of not maximising those opportunities…' and they now require development plans to be (s.2.7): '…more proactive and more flexible in securing compact urban growth through a combination of both facilitating increased densities and building heights, while also being mindful of the quality of development and balancing amenity and environmental considerations.'

It is important to note that DLRCC have taken a comprehensive, place-based and integrated approach to the wider development potential of Cherrywood, while securing quality of development and balancing amenity and environmental considerations. This approach is considered in more detail later in this report.

The guidelines also state that (s.2.9) '…an urban design statement addressing aspects of impact on the historic built environment should be submitted along with a specific design statement on the individual insertion or proposal from an architectural perspective addressing those items outlined

above.' The CPS makes provision for the integration of the built and cultural heritage through its objectives and masterplanning.

The guidelines contain three, specific planning policy requirements (SPPRs) of particular relevance to this study:

SPPR1
'In accordance with Government policy to support increased building height and density in locations with good public transport accessibility, particularly town/ city cores, planning authorities shall explicitly identify, through their statutory plans, areas where increased 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.'

It is important to note that this SPPR explicitly relates to redevelopment, regeneration and infill development within the context of existing town and city cores. CPS would be defined as new strategic urban development in a greenfield, suburban location.

Notwithstanding, it should be noted that the CPS and the UFDF do not utilise blanket numerical limitations on height. DLRCC have included a variety of building height controls in CPS and UFDF, which are closely-related to location and centrality/accessibility. The general approach to urban scale and height controls in CPS is discussed later in this report.

SPPR 2
'In driving general increases in building heights, planning authorities shall also ensure appropriate mixtures of uses, such as housing and commercial or employment development, are provided for in statutory plan policy. Mechanisms such as block delivery sequencing in statutory plans could be utilised to link the provision of new office, commercial, appropriate retail provision and residential accommodation, thereby enabling urban redevelopment to proceed in a way that comprehensively meets contemporary economic and social needs, such as for housing, offices, social and community infrastructure, including leisure facilities.'

The CPS and UFDF have ensured an appropriate mix and distribution of uses across the planning scheme based on the basic urban structure of Cherrywood (Town Centre, the Village Centres and other functional areas). The CPS uses a block delivery sequencing approach of a similar nature to the Docklands Planning Schemes, which are footnoted in this SPPR as best practice (2).

In relation to development management, the PGs sets out a range of criteria for the assessment of projects:

- At the scale of the relevant city/town;
- At the scale of district/ neighbourhood/ street; and
- At the scale of the site/building.

While the criteria relate to the development management process, rather than the plan-making process, they are used in this report to inform the collation of a set of performance criteria. The scale of the relevant city/town and the scale of district/neighbourhood/street categories are particularly relevant to CPS.

The scale of the building category is also relevant with regard to daylight, ventilation, views, overshadowing and loss of light, and appropriate and reasonable regard to quantitative performance approaches to daylight provision, although these elements can only be considered in a more general manner in CPS (excepting the UFDF for the Town Centre).

SPPR 3

'It is a specific planning policy requirement that where;

(A) 1. an applicant for planning permission sets out how a development proposal complies with the criteria above; and 2. the assessment of the planning authority concurs, taking account of the wider strategic and national policy parameters set out in the National Planning Framework and these guidelines; then the planning authority may approve such development, even where specific objectives of the relevant development plan or local area plan may indicate otherwise.

(B) In the case of an adopted planning scheme the Development Agency in conjunction with the relevant planning authority (where different) shall, upon the coming into force of these guidelines, undertake a review of the planning scheme, utilising the relevant mechanisms as set out in the Planning and Development Act 2000 (as amended) to ensure that the criteria above are fully reflected in the planning scheme. In particular the Government policy that building heights be generally increased in appropriate urban locations shall be articulated in any amendment(s) to the planning scheme

(C) In respect of planning schemes approved after the coming into force of these guidelines these are not required to be reviewed.' (Author's italics)

This review is being carried out on foot of SPPR3, and the criteria as set out in these PGs are integrated, as appropriate, into a comprehensive set of urban design performance criteria (drawn from planning guidelines, plan policy, best practice and CPS). This is used to evaluate the general approach to urban scale and the specific provisions for building heights in CPS.

Sustainable Residential Development in Urban Areas: Guidelines for Planning Authorities, 2009

Urban Development and Building Heights (DHPLG, 2018b) should be read in conjunction with these guidelines, which provide overarching and comprehensive guidance for residential development. These guidelines are supported by the accompanying *Urban Design Manual* (DEHLG, 2009b), which provides detailed criteria to be considered in the design of residential development. The guidelines deal with higher density development (mainly apartment development) issues and relevant factors including, acceptable building heights, avoidance of overlooking and overshadowing, provision of adequate private and public open space, including landscaping and safe play spaces, adequate internal space standards in apartments, suitable parking provision close to dwellings, and provision of ancillary facilities, including childcare. These guidelines were taken into account in the preparation of CPS.

The guidelines do not provide guidance on general urban scale, but they address the development of taller buildings (s.5.3) and require particular sensitivity in relation to the design and location of apartment blocks, which are higher than existing adjacent residential development. The guidelines suggest, as a general rule, that where taller buildings are acceptable in principle, building heights should taper down towards the boundaries of a site within an established residential area.

The guidelines also suggest (s.5.3) that Planning Authorities in cities and larger towns should also '…consider whether a buildings heights strategy, involving public consultation as part of a statutory plan process, would provide clearer guidance for potential developers on where, and in what circumstances, taller residential buildings would be appropriate within their areas.'

The guidelines address the issue of increased densities in different contexts. Locations such as Cherrywood would be included in the 'Public transport corridors'' category of the guidelines (s.5.8c), given the existence of light rail services (Luas). The guidelines suggest that the return on the investment in public transport should be achieved by including higher density development within the walking catchment of public transport (in this case defined within 1km of the Luas stops). The guidelines require that higher densities are located in closer proximity to public transport point of access, with densities reducing with distance from the point of access. Minimum densities are to be

set out in the Local Area Plan (in the case of Cherrywood, CPS). The guidelines recommend setting of maxima for car parking to reflect greater accessibility to public transport.

Important safeguards for higher density development, which could be applied to public transport corridors, are included in s.5.6 and are as follows:

- 'compliance with the policies and standards of public and private open space adopted by development plans;
- avoidance of undue adverse impact on the amenities of existing or future adjoining neighbours;
- good internal space standards of development;
- conformity with any vision of the urban form of the town or city as expressed in development plans, particularly in relation to height or massing;
- recognition of the desirability of preserving protected buildings and their settings and of preserving or enhancing the character or appearance of an Architectural Conservation Area; and
- compliance with plot ratio and site coverage standards adopted in development plans.'

The guidelines further identify 'acceptable building height' as an important criterion to be considered in design, which is to be further addressed in the accompanying *Urban Design Manual* (DEHLG, 2009b). What constitutes 'acceptable building height' is not, however, specifically addressed in that Manual.

In summary, these guidelines provide a basis for a more comprehensive, performance-based assessment of building height for residential (and mixed use) development. They recognise the role of areas such as Cherrywood as public transport corridors where higher density can be achieved, subject to important safeguards. The guidelines reinforce the role and importance of a vision of the urban form of the town or city as expressed in development plans, and compliance with proper standards for plot ratio and coverage. They also set out important 'safeguards' which should be considered in planning for increased urban scale and building height.

Urban Design Manual

The *Urban Design Manual* (DEHLG, 2009b) is the companion guide for *Sustainable Residential Development in Urban Areas: Guidelines for Planning Authorities* (DEHLG, 2009a). The manual is based around 12 Criteria (with indicators) at three different spatial scales (neighbourhood, site and home) that have been drawn up to encapsulate the range of design considerations for residential development. The manual promotes increased densities of appropriate mix and density, of quality design and with appropriate connections to transport. It also suggests that increases in scale should be gradual with transition from established, existing urban scale, with taller buildings located away from the edge of the area.

In relation to urban scale, the manual suggests that:

- Urban context and connections should inform mixed use and appropriate density and will require quality of design.
- Buildings, gardens and public spaces should be laid out to exploit the best solar orientation.
- Views, local landscape and urban form and focal spaces are essential in achieving distinctiveness.
- Good street and space interface is necessary to integrate design of buildings and public space.
- Units should be adaptable and energy efficient to address climate change (including passive solar gain).
- Privacy and amenity are important considerations along with aspects of detailed building design and managing car parking.

Notably, under efficiency, the Manual states that (p.43), '…designers will need to consider how the homes can be designed to make the best use of passive warmth and light provided by the sun though solar orientation. As well as orientating homes to take advantage of solar gain, areas of open space should also be sited to take advantage of sunlight, communal or district CHP and renewable power generation.'

Quality Housing for Sustainable Communities: Best Practice Guidelines for Delivering Homes, Sustaining Communities, 2007

This guidance covers a range of aspects of guidance for housing, spanning the initial briefing stage to the management of the completed project. The guidance does not provide any generic guidance on urban scale or building heights, as it defers to the current Local Area Plan or Development Plan on these matters.

The guidance recognises the general role of building size and scale (s.3.4, p.24) stating: 'The size, configuration and scale of a development in relation to its surroundings, has a bearing on its:

- sustainability (in terms of energy efficiency and adaptability);
- relationship with the surrounding urban structure; and
- contribution to neighbouring public space and streetscapes.'

The guidance also deals with a comprehensive range of aspects of layout and design including the role of the local area plan, the design approach, building sustainable communities, design for sustainability, design for safety and security accessibility, vehicular and pedestrian circulation, services, community facilities and the public realm. The guidance recommends (s.4.2, p.30) that architects should '…promote the concepts of enclosure, clear separation of public/private realm and good permeability as the means to achieve a high quality living environment.' It also recognises the importance of scale in the enclosure and framing of urban space.

The role of apartments in providing housing in many cities and towns is also recognised. The guidelines recommend that special attention be given (s.4.3.6) to: 'Disposition of apartment buildings on site and the relationship between heights of buildings and distances between them so as to provide:

- maximum opportunity for dual aspect and cross ventilation for habitable rooms;
- an adequate amount of public open space and useable private space; and
- acceptable views from habitable rooms and apartments while maintaining a satisfactory degree of privacy.'

In relation to sustainability (s.4.4.1), the guidance recommends: '…achieving energy efficiency both at construction stage and during the lifetime of the scheme, e.g., by climate sensitive design which takes account of the orientation, topography and surrounding features so as to control wind effects, while optimising the benefits of daylight and solar gain;'

In relation to microclimate (4.4.2), the guidance addresses wind, and daylight and sunlight. It recommends that designers have regard to: '…scope for optimising daylighting and solar gain for dwellings, through the disposition and orientation of buildings;' and '…the scope for optimising the advantages of shelter and direct sunlight through the location and orientation of play areas, courtyards and gardens, relative to existing features such as buildings, walls, trees, hedges, both on and adjacent to the site;'

In summary, the guidance highlights matters, which are important considerations in considering urban scale and building height. The guidance is general in nature, highlighting important relationships between scale, building height, orientation and distance between buildings and important issues such as access to sunlight and overshadowing, and wind.

Design Manual for Urban Roads and Streets

The *Design Manual for Urban Roads and Streets* (DTTS and DECLG, 2013 and 2019) provides comprehensive guidance for the assessment of streets and roads, design of networks, classification, and detailed design. It combines technical street design guidance with more general elements of urban design. Building height and urban scale are an important part of street and space design and are considered under the heading of streetscape (s.4.2). More specifically, DMURS describes the important relationship between building height and street width, and its crucial role in providing enclosure to streets and spaces.

DMURS states (s.4.2.1): 'Enclosing streets with buildings helps to define them as urban places, creates a greater sense of intimacy and promotes them as pedestrian-friendly spaces that are overlooked. This sense of intimacy has been found to have a traffic-calming effect as drivers become more aware of their surroundings.'

The sense of enclosure is closely related to urban context. DMURS states (s.4.2.1) that:
'Designers should seek to promote/maintain a sense of enclosure on all streets within cities, towns and villages (see Figure 2.1). In this regard, it sets out a range of enclosure ratios, based on the width of street to building height and the continuity of frontages provided by buildings and landscape (trees). DMURS recommends:

- A strong sense of enclosure in large centres (this might apply to the Town Centre) with a building height to street width ratio greater than 1:2 and street wall that is predominantly solid (allowing for intermittent gaps only).
- A good sense of enclosure in other local centres and neighbourhoods (this might apply to most other streets in Cherrywood) with a building height to street width ratio of 1:3 and a street wall that is 75% solid, provided a continuous line of street trees are planted along the street.
- A good sense of enclosure in wide streets (such as boulevards), provided by planting of continuous rows of large closely planted street trees.

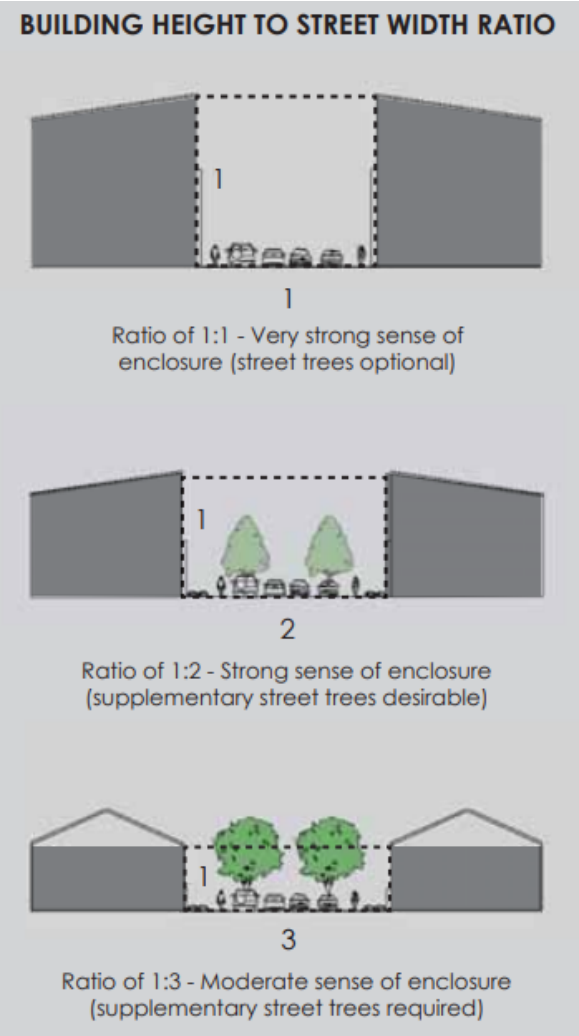


Figure 2.1. Figure 4.7 of DMURS showing appropriate street enclosure ratios.

DMURS expands on the dynamic relationship between height and width (4.2.1):
'The relationship between building height and street width is also key to creating a strong urban structure, by increasing building heights in proportion to street widths. This will also promote greater levels of sustainability and legibility by placing more intensive development along wider/busier streets, such as *Arterial and Links* streets, to support public transport routes and highlight their importance as connecting routes, respectively. Additional building height may also be used at junctions to create a 'book end' effect. This approach will assist in slowing vehicles as they approach junctions and will improve legibility by highlighting connecting routes throughout the network.'

While DMURS does not mention maximum enclosure ratios, it does suggest a maximum ratio of 1:1 to provide for very strong enclosure, with a minimum of 1:3 to retain street enclosure across the various contexts and streets. This is appropriate to CPS. It should also be noted that a consistent and continuous ratio, where building height exceeds street width, is likely to create excessive enclosure, a sense of overbearing, and in the extreme case a 'canyon effect'. Excessive street enclosure is also likely to give rise to problems around adequacy of street space, daylighting and sunlighting, and privacy.

Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities, 2018

The guidelines update the *Sustainable Urban Housing, Design Standards for New Apartments: Guidelines for Planning Authorities* (DECLG, 2015) (some aspects of these remain in operation) and are also to be read in conjunction with other, related guidelines. The guidelines recognise the suitability of apartments in central and accessible locations (s.2.4) and promote performance-based standards to ensure well-designed, high quality outcomes (s2.23). They also reference issues around building height and separation distances and a need for more flexible approaches.

The guidelines include important standards and safeguards for building and space design, including requirements to:

- Deliver at least 33% of the units as dual aspect in more central and accessible and some intermediate locations, such as in SDZ areas (s.3.17). It should be noted that this will have an impact on urban block sizes, if corridor typologies are prevalent along perimeter block frontages.
- Enable a greater proportion of smaller unit types and increasing the maximum the number of apartments per floor to 12 per individual stair/lift core. This may impact on the number and frequency of entrances at ground floor, and the nature and quality of the street/building/interface.
- Provide private amenity space in the form of gardens or patios/terraces for ground floor apartments, and balconies at upper levels (s.3.35). Where provided at ground level, private amenity space shall incorporate boundary treatment appropriate to ensure privacy and security. Private amenity space should be located to optimise solar orientation and designed to minimise overshadowing and overlooking.

Notably, the guidelines promote the perimeter block and the benefits of central residential courtyards (s.4.14), with particular reference to the needs of children (s.4.13) and states (s.4.11):

> Communal amenity space may be provided as a garden within the courtyard of a perimeter block or adjoining a linear apartment block. Designers must ensure that the heights and orientation of adjoining blocks permit adequate levels of sunlight to reach communal amenity space throughout the year. Roof gardens may also be provided but must be accessible to residents, subject to requirements such as safe access by children. These facilities offer a satisfactory alternative where climatic and safety factors are fully considered, but children's play is not passively supervised as with courtyards. Regard must also be had to the future maintenance of communal amenity areas in order to ensure that this is commensurate with the scale of the development and does not become a burden on residents.

In relation to development management, the guidelines address the provision of reasonable levels of natural light in new apartment developments (s.6.5), recognising it as '… an important planning consideration as it contributes to the liveability and amenity enjoyed by residents.' They state that: 'In assessing development proposals, planning authorities must however weigh up the overall quality of the design and layout of the scheme and the measures proposed to maximise daylight provision with the location of the site and the need to ensure an appropriate scale of urban residential development.'

The guidelines also state (s.6.6) that: 'Planning authorities should have regard to quantitative performance approaches to daylight provision outlined in guides like the BRE guide 'Site Layout Planning for Daylight and Sunlight' (2nd edition) or BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting' when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision.' And (s.6.7) 'Where an applicant cannot fully meet all of the requirements of the daylight provisions above, this must be clearly

identified and a rationale for any alternative, compensatory design solutions must be set out, which planning authorities should apply their discretion in accepting taking account of its assessment of specific. This may arise due to design constraints associated with the site or location and the balancing of that assessment against the desirability of achieving wider planning objectives. Such objectives might include securing comprehensive urban regeneration and or an effective urban design and streetscape solution.'

While these development management provisions do not relate directly to the plan-making process, they are relevant in a more general sense to masterplanning for SDZ planning schemes.

Other guidelines

Other planning guidelines are of more general relevance to this review and may be important when considering other issues, such as retail development, childcare, flood risk management, architectural heritage, general development management and development plan processes.

2.3 Regional-level

The Draft Regional Spatial and Economic Strategy, 2018 (RSES) for the Eastern and MIdlands Region (s.4.4), includes the consolidation of the city and suburbs as a key strategy and highlights the potential for significant re-intensification of employment lands within the M50 ring, including at Cherrywood, to complement the Docklands and city centre business district. Cherrywood is included as part of the Metropolitan Area Strategic Plan (MASP) of the RSES, and it is included in the Metrolink Corridor (s.5.4). The upgrade of rail on the southern section of the corridor will support new and emerging districts in the south county, including Cherrywood. The MASP includes LUAS Green Line Capacity Enhancement in advance of Metrolink and a potential extension of the Luas Green Line to Bray (s.5.6). The MASP also identifies significant potential for housing, employment and retail in Cherrywood.

2.4 Local level

The Dún Loaghaire-Rathdown County Development Plan, 2016-2022

The development plan includes broad strategy for the County, broad policies in key areas and specific objectives for Cherrywood. The overall strategy includes Cherrywood as a key local strategy for the County [s.1.1.3.3 (a)]: 'The Cherrywood area represents the most significant and strategic development node in Dún Laoghaire-Rathdown.'

The core strategy and the settlement strategy designate Cherrywood as a key future development area (Figure 1.1 and s.1.3.2.1) with part-serviced land with the potential for 7,700 units (since updated).

Figure 2.2. Core Strategy of the Development Plan

The sustainable communities strategy includes the Housing Strategy, and policies for residential development (Cp2). Section 2.1.3.3 deals with density: 'Where a site is located within circa 1 kilometre pedestrian catchment of a rail station, Luas line, BRT, Priority 1 Quality Bus Corridor and/or 500 metres of a Bus Priority Route, and/or 1 kilometre of a Town or District Centre, higher densities at a minimum of 50 units per hectare will be encouraged.' And: 'As a general rule the minimum default density for new residential developments in the County (excluding lands on zoning Objectives 'GB', 'G' and 'B') shall be 35 units per hectare.'

Chapter 8 of the development plan deals with the principles of development, including a set of urban design principles (s.8.1.1.1), contained in Policy UD1, which include:

- Permeability;
- Vitality;
- Variety/diversity – mix of uses;
- Legibility - Landmarks – buildings or places that provide local character and act as reference points; and
- Robustness – building adaptability.

These are expanded on using the methodology contained in the Urban Design Manual (2009) at the following levels:

- Neighbourhood;
- Site; and
- Home.

The development plan also includes a policy on design statements (Policy UD2) and public realm design (Policy UD3), and requires that, in general terms, a density of 50 dwellings per hectare (dph) is achieved within 1km of public transport (e.g. Luas).

The Cherrywood Planning Scheme, 2014 (CPS) and the Town Centre Urban Form Development Framework (UFDF), 2017

The current *Cherrywood Planning Scheme* was approved in 2014. The CPS was amended in 2018 (Amendments 1-4). The amendments provide for the new apartment guidelines in the text of CPS, and the revision of quanta for residential development (revised range of between 6,196 and 8,786 units in total). A detailed *Urban Form Development Framework* (UFDF) was approved in 2017 for the Town Centre.

The Planning Scheme lands cover approximately 360 hectares, the majority of which are currently undeveloped and rural in context. CPS contains a vision and concepts, which have relevance to urban scale and building height in Cherrywood.

The overarching vision for the Planning Scheme is:

- To create a sustainable place with a rich urban diversity, which respects its historical and natural setting while also facilitating innovation and creativity.
- To spatially develop a cohesive and diverse community with a strong identity and environmental integrity.
- To contribute to the economic growth of the County through the development of a vibrant economic community anchored around the Town Centre.
- To provide a safe and friendly environment where people can live, work and play within an envelope of sustainable, integrated transport with a primacy of soft mode of transport throughout.

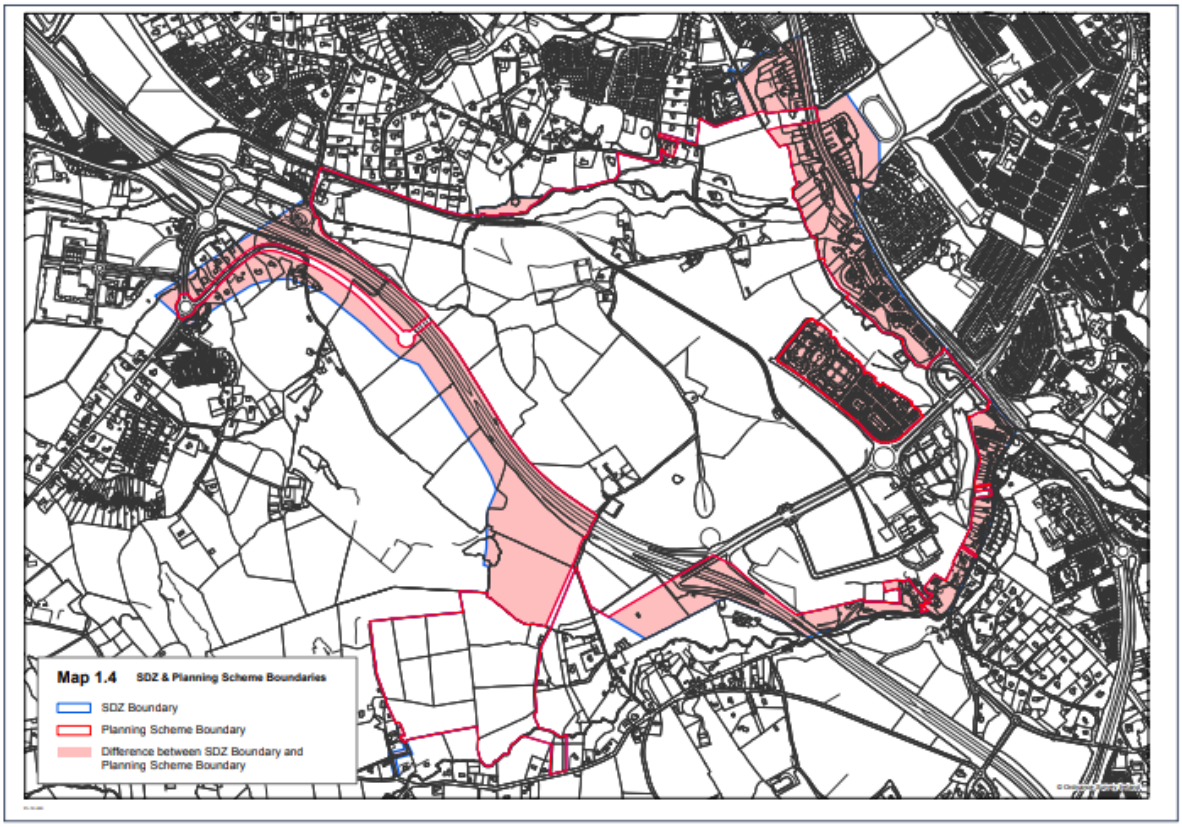


Figure 2.3. SDZ and Planning Scheme areas (Map 1.4 of CPS)

The CPS is structured around 7 chapters, with supporting documentation. Chapter 1 sets out the planning and development context for CPS.

Chapter 2

Chapter 2 sets out the nature, type and extent of development that will be permitted in the Planning Scheme area and establishes a framework for the built form in Cherrywood. It sets out overall quantum of primary land uses (Figure 2.4) and supporting land uses, and introduces the Town Centre, the 3 village centres (i.e. Lehaunstown, Priorsland and Tully), high-intensity employment, commercial development, residential areas, education, green infrastructure and built heritage.

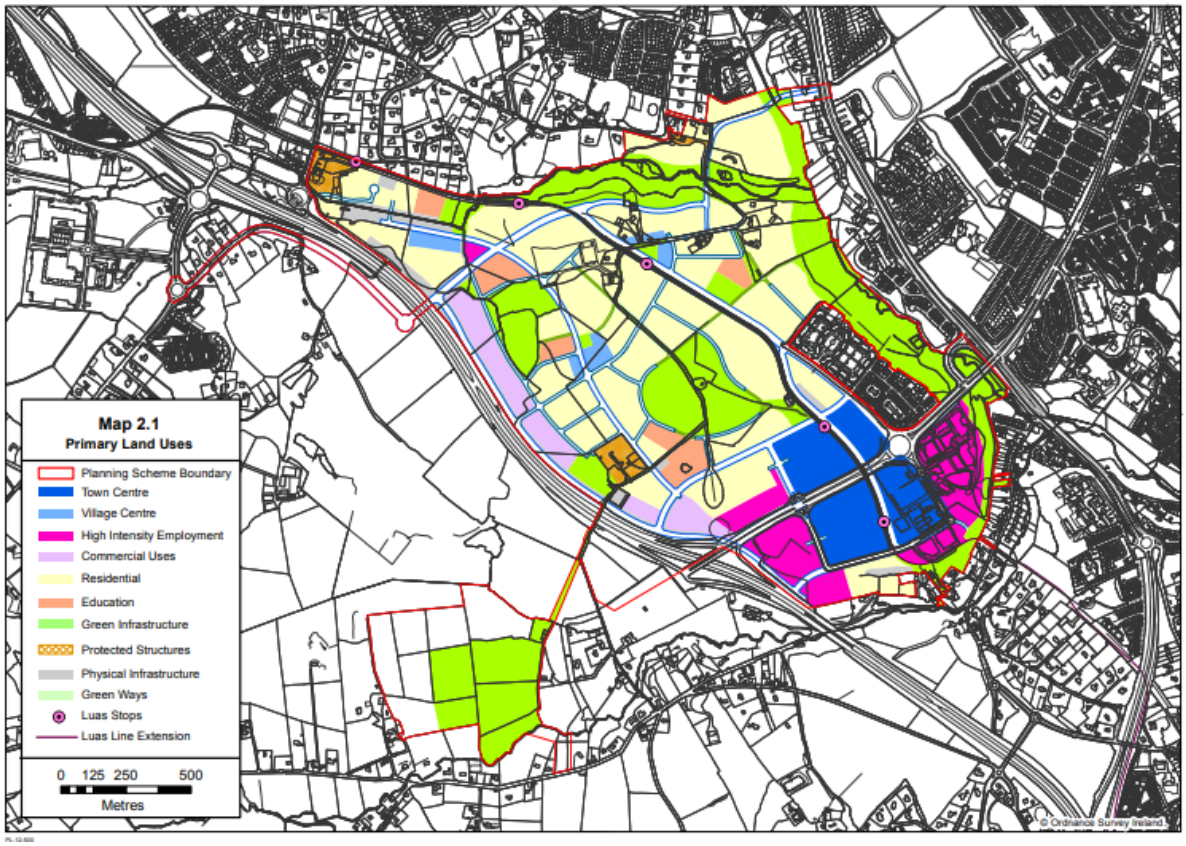


Figure 2.4. Designation of primary land uses (Map 2.1 of CPS)

Density and quantum

The density and intensity of development is also described in this Chapter. This is shown for each area and urban block (see CPS Map 2.2)

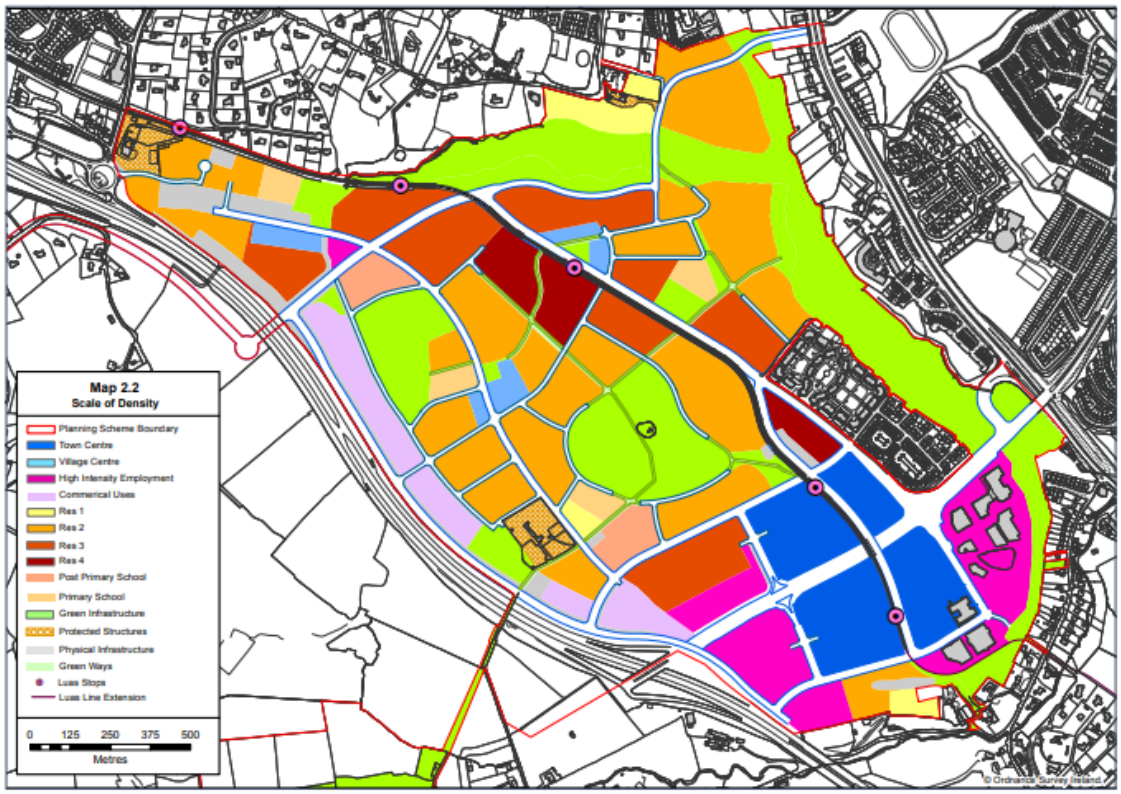


Figure 2.5. Density map (Map 2.2 of CPS)

Overall quantum is described for each major land use and this is further detailed for the Town Centre and the Village Centres. The Planning Scheme uses the plot ratio method to estimate development potential and to generate the quantum controls (see CPS Table 2.4).

Table 2.4: Town and Village Centre Plot Ratio Ranges

	Min Plot Ratio	Max Plot Ratio
Cherrywood Town Centre	1:1.7	1:2.3
Tully	1:1.5	1:2.2
Lehaunstown	1:1.4	1:2
Priorsland	1:1.3	1:2

Figure 2.6. Plot ratios for the Town Centre and Village Centres (CPS Table 2.4)

Table 2.2 of the CPS includes overall ranges for development quantum by land use, including Town Centre, Village Centres, employment, other commercial uses, residential and education, and Class one open space. Table 2.3 of the CPS provides more detailed overall development quantum figures for residential, retail, high intensity employment and other non-retail, commercial uses.

Table 2.2: Overall Development Quantum Range

Development Type	(A) Min Quantum	(B) Max Quantum	(C) Development Permitted/ Constructed Feb 2012	D= (B-C) Balance Max Future Quantum
Town Centre Sq.m	286,894	362,909	7,247	355,662
Village Centre Sq.m	41,855	61,625	--	61,625
High Intensity Employment Sq.m	267,550	350,000	96,000	254,000
Commercial Uses Sq.m	77,000*	--	--	77,000*
Residential	Circa 6,196	Circa 8,786	600 units	Circa 8,186
Education	4 primary 2 post primary	4 primary 2 post primary	--	4 primary 2 post primary
Class One HA	27	29.7	0	29.7

NOTE: There is double counting in this table as the figures for the mixed use Town and Village Centres include high intensity employment and residential, which are also included in the totals for these uses.

NOTE: A minimum quantum figure is shown for the floor area dedicated to Commercial Uses. Building height will be the restriction on sites dedicated to this land use.*

Table 2.3: Town and Village Centre Development Quantum Ranges

(See Page 10)

	Net Site Area HA	Min/Max Gross Retail Floor space Sq.m	Min/Max Gross Residential Floor space Sq.M	Min/Max High Intensity Employment Gross Sq.m	Min/Max Non Retail Uses Net Sq.m	Community Sq.m
Cherrywood Town Centre	16.1	34,394/ 40,909	120,000/ 150,000	82,800/ 109,000	47,500/ 60,000	2,200/3,000
Tully	1.2	4,000/ 6,060	12,000/ 18,000	750/ 1,000	750/ 1,000	250/500
Lehaunstown	0.9	1,515/ 3,790	9,000/ 12,000	700/ 1,000	700/ 1,000	250/500
Priorsland	0.9	1,290/ 2,275	9,000/ 12,000	700/ 1,000.	700/ 1,000	250/500
MAX TOTALS	19.1 HA	41,199/ 53,034 sq.m	150,000/ 192,000 Sq.M	84,950/ 112,000 sq.m	49,650/ 63,000 sq.m	2,950/ 4,500 sq.m

In Table 2.4 below are the stated plot ratio ranges for the Town Centre and Villages in accordance with the quanta above.

Note: Gross residential floor area includes the floor area of the individual apartments and the communal rooms and circulation areas associated directly with the residential development. It does not include the private open space/balconies associated with individual apartments.

Figure 2.7. Development quanta for the overall area and the Town and Village Centres (CPS Tables 2.2 and 2.3)

Residential quanta are further described for primary land uses for the Village Centres and specific sites.

Site Coverage

Notably, CPS specifies site coverage controls for the Town Centre and Village Centres. In residential plots the safeguarding of sunlight and daylight is achieved through open space standards and maximum heights. The CPS states that (s.2.6.4) 'Site coverage standards are utilised in order to avoid the adverse effects of over development on a site and its surrounding area, thereby safeguarding sunlight and daylight within the site and/or on adjoining sites.' It is noted that, site coverage controls

are particularly important in securing adequate internal areas such as private courtyards in medium to high density contexts.

Table 2.7: Site Coverage for the Town Centre and Village Centres

Land Use	Min	Max
Town Centre Mixed Use	50%	80%
Village Centre Mixed Use	40%	60%

Figure 2.8. Site coverage controls for the Town and Villages Centres (CPS Table 2.7)

Form of Development

Form of Development includes the provisions for building height control in the CPS. The controls are based on a range in the number of permissible storeys. These controls are applied largely on a whole-of-block basis, with a small number of blocks including different controls.

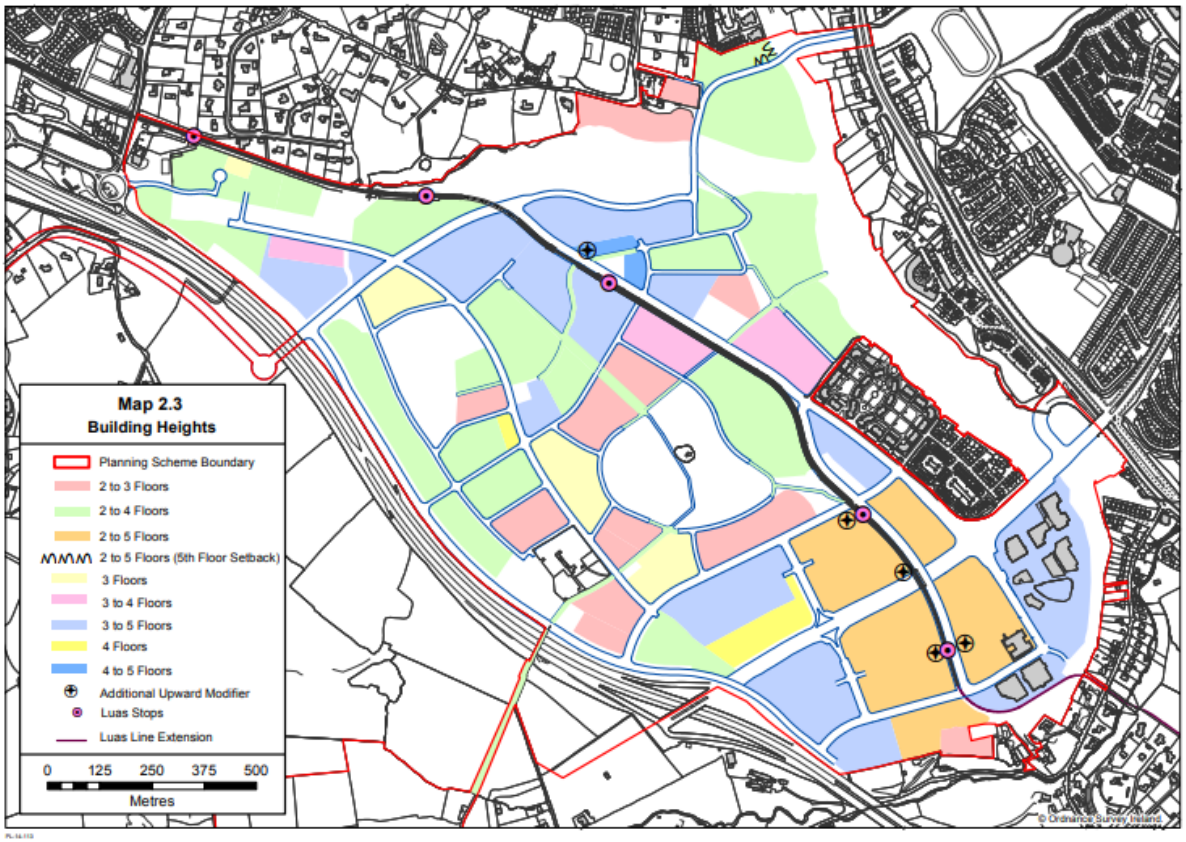


Figure 2.9. Building height controls for the CPS (CPS Map 2.3)

The Form of Development section covers the basic principles for quality residential development and sets out specific objectives (s.2.8) relating to distinctiveness and legibility, character areas, permeability etc. Notable principles are:

> 'PD 9 To provide for principal frontages in each development plot to define strong streetscape elements, turn corners on public roads, and enclose and overlook amenity open space areas and green routes. These are identified on Map 2.4 and are indicative in length to allow for sufficient flexibility in breakages and access points.
>
> PD 12 To ensure a sustainable built form with best practice sustainable design, construction methods and materials, which has regard to solar effect, wind tunnelling prevention and

microclimate. Adaptable residential building design, which is responsive to changing technical/economic and social conditions, is generally encouraged.

PD 13 To ensure that frontage widths of individual buildings and massing allow for their successful integration into the streetscape.'

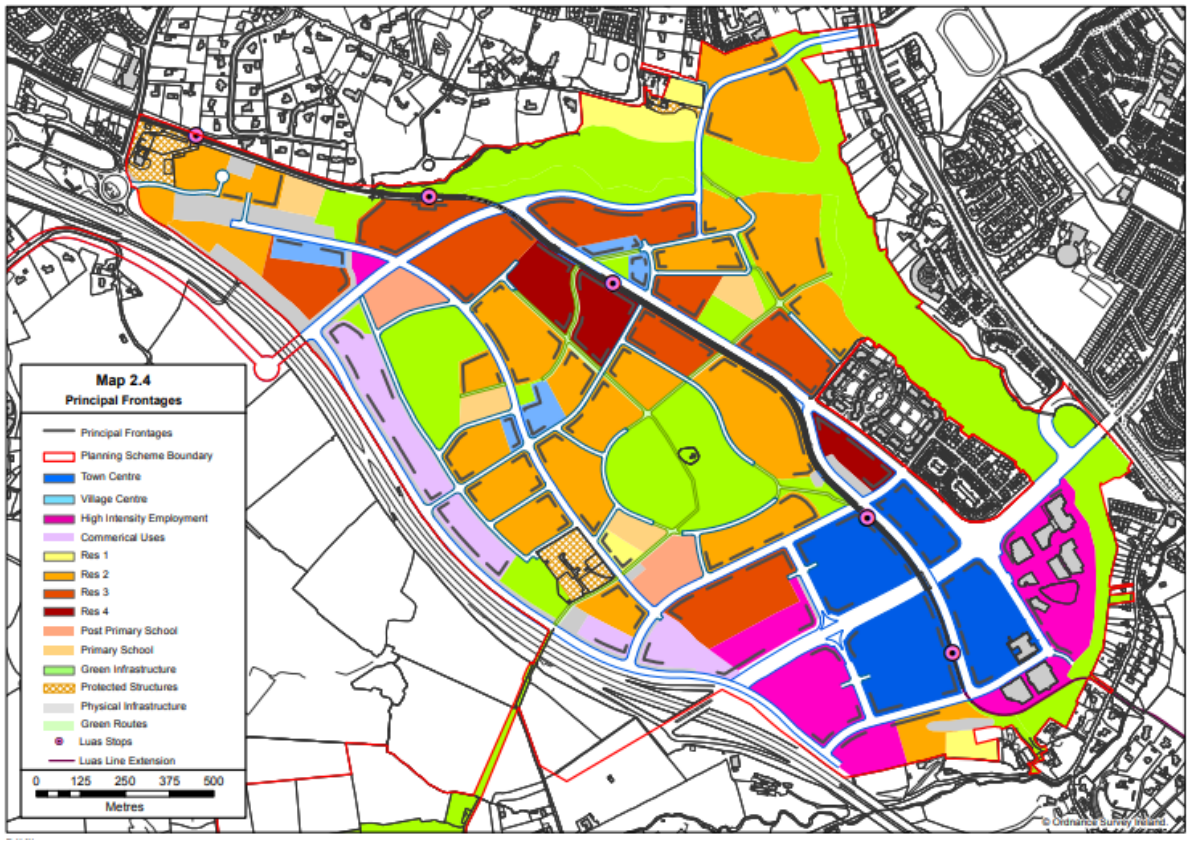


Figure 2.10. CPS principal frontages (CPS Map 2.4)

Section 2.8.2 deals with skyline. It states: 'Due to the undulating landscape the skyline will be an important feature in Cherrywood. Regard must be given to roof profiles, roofing materials and visual interest in the preparation of planning applications. Applications will be required to demonstrate how this is addressed.'

Section 2.9 addresses building height as follows:
'The topography of Cherrywood is widely varying throughout with 3 Valleys and the high point at Tully Church. Building height in Cherrywood will respect and reflect the local topography, the location and context of the site, scale and use of adjoining buildings and the microclimate it creates. In the Town Centre and Village Centres, additional height is acceptable to provide legibility and clarity to make these areas distinctive. Taller buildings can also be acceptable as local landmark and feature buildings to articulate important locations such as Luas stops and at entrance points to the Town Centre, as outlined in Table 2.11 and Map 2.3. The ground level of the Town Centre will alter across the Town Centre lands so as to join at grade with the Luas Line. The new ground level will be the level from which building heights will be determined in the Town Centre (see Chapter 6). Where a building addresses two streets, building height will be measured from the higher street.'

This section also includes specific objectives around building height:

> 'PD 21 To allow building height within the range of storeys identified on Map 2.3. These heights have been informed by the characteristics of each site and are the maximum permissible on each development plot.
>
> PD 22 Local landmark and feature building elements over the stated building heights are acceptable at important locations, where they contribute to the visual amenity, civic importance and legibility of the area. These buildings are identified by the use of upward modifiers in Table 2.11 and act as focal points or gateways, emphasising hierarchy and urban activity in the Town and Village Centres and public transport nodes, at locations identified in Map 2.3
>
> PD 23 It is an objective to encourage the use of 'adaptable' ground floor residential units with a greater internal floor to ceiling heights of 4 metres, along the Grand Parade and adjacent to Cherrywood Town Centre where increased overall building heights are proposed.'

Table 2.11: Building Height Ranges

Primary Development Land Use	Min No. Floors	Max No. Floors	Max Height* of storeys in Metres	Additional Upward Modifier (see Map 2.3 for Location)
Town Centre	2	5	21	1-3 Storeys
Village Centres	3	5	18	1-2 Storeys
High Intensity Employment Lands	3	5	20	None
Other Commercial Uses Lands	2	4	16.5	None
Res 1	-	3	10	None
Res 2	2	5	16	None
Res 3	2	5	16	None
Res 4	3	5	17	None
Education	-	3	13	None

**NOTE: The max height is based on the following averages of external measurement per floor. Residential floor height is 3.1m and 4.1m for ground floor units within Res 4 area. Floor height for all other uses is 4.1m.*

Figure 2.11. CPS building height ranges (CPS Table 2.11)

CPS also includes provisions to protect views and prospects (S.2.11). These are classified as:

- External views (including to the coast and marine horizon, Killiney Hill, Carrickgollogan, Ticknick, the Dublin and Wicklow Mountains);
- Internal views (including Lehaunstown/Lehaunstown Park House and Tully/Tully Church); and
- Local skyline views formed by river and stream corridors (including the northern and southern edges of Druid's Glen and the Glenamuck Stream (northern section of the Plan Area), the western enclosure/side of the Cabinteely Stream (north east section of the Plan Area), the enclosure of the Loughlinstown River within the Plan Area (eastern section of the Plan Area and the enclosure of Bride's Glen (south-eastern section of the Plan Area).

Chapters 3, 4 and 5

Chapter 3 details the broad range of built heritage in Cherrywood and establishes guidelines for their protection and future development.

Chapter 4 identifies the existing infrastructure in the area and sets out the services required to provide for the quantity of development envisaged in Cherrywood. It also includes the transport strategy for Cherrywood. The chapter also provides the route structure and hierarchy for the CPS. Typical cross sections are shown for these roads. These extend from the back of footpath to the back of footpath and do not include building frontage.

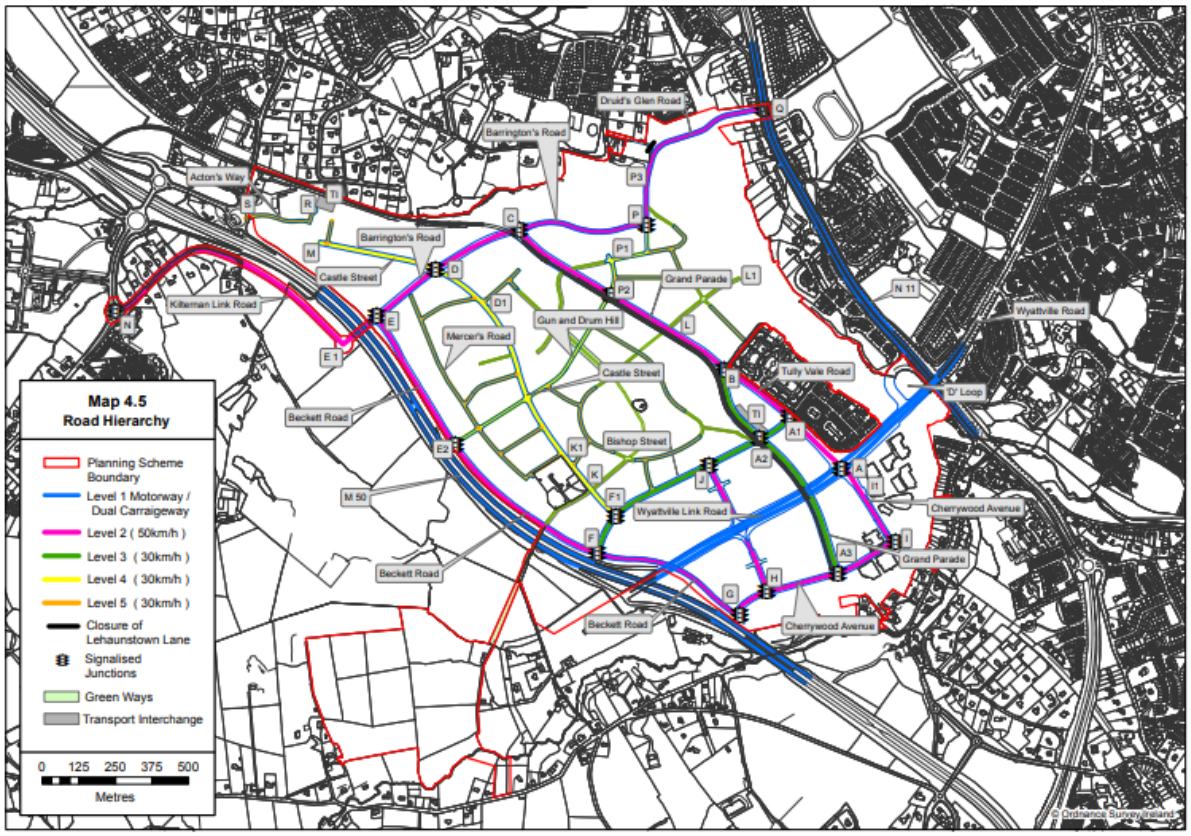


Figure 2.12. CPS route hierarchy (CPS Map 4.5)

Figure 2.13. A typical road section – Castle Street (CPS Chapter 4)

Chapter 5 identifies the existing green infrastructure in Cherrywood and details the scheme's open space strategy, a green linkages plan and biodiversity actions.

Chapters 6 and 7

Chapter 6 divides the Plan into 8 Development Areas and sets out in greater detail on the extent, scale, nature and form of each of these development areas. It includes the specific design challenges, provides a land use area for specific uses, a breakdown of requirements for community use, retail, commercial and local infrastructure including roads. The eight Development Areas are: Area 1: Lehaunstown; Area 2: Cherrywood; Area 3: Priorsland; Area 4: Domville; Area 5: Druid's Glen; Area 6: Bride's Glen; Area 7: Macnebury; and Area 8: Tully.

The Development Areas include provisions for building height, for example, DA10 for the Town Centre, which allows building height will be measured from the higher street, where a building addresses two streets, and objectives for Tully around building height, passive supervision and overshadowing.

Chapter 7 sets out the sequencing of Development Areas and the phasing of development and services within Cherrywood.

The Town Centre Urban Design Framework Plan (2017)

The *Town Centre Urban Design Framework Plan* (UFDF) provides more detailed masterplan for the Town Centre area. The overall quantum of development in the Town Centre is prescribed in the CPS and controlled by plot ratio and site coverage. The UFDF provides block-level urban design controls and covers four, larger development parcels/quadrants (TC1-4).

The UFDF provides clarity and greater masterplanning detail relating to:

- Land use mix and distribution;
- Urban form and grain;
- Block layout, urban grain and design approach; and
- Building height.

The UFDF provides more detailed block layout plans and indicative cross sections, which indicate approaches to the level differences inherent to the local topography and to the existing and planned local infrastructure.

Figure 3 Block Numbers within the Town Centre

Figure 10: Sections CC and DD, TC3 to TC4

Figure 2.14 Block layout and block numbers (UFDF Figure 3) and indicative an indicative section (UFDF Figure 10)

Building height, scale and massing are dealt with in s.3.3 of the UFDF (and shown in Figure 2.14) where it states:

> 'The UFDF is required to identify the height, scale, massing and building typologies within the Town Centre, as defined in Section 6.2 (c) of the Cherrywood Planning Scheme. The design of buildings, in terms of their height, scale and typology shall ensure quality accommodation and levels of amenity, in terms of acceptable levels of daylight and sunlight provision. In this regard, the development shall be guided by the principles of "Site layout planning for daylight and sunlight: a guide to good practice, (2011, BRE Document BR 209) in conjunction with ''Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities', DECLG, 2015 and "Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns and Villages)", DEHLG, 2009. A shadow, daylight and sunlight assessment will be required at planning application stage. Any development shall also be assessed having regard to Section 4.7 of the UFDF which relates to micro climate for amenity space.'

The UFDF summarises building heights as follows (3.3.2 Building Height):

> 'The building height (min-max) range within the Town Centre is between 2 & 5 storeys. In recognising the conditions which will arise from building on different levels, Objective DA10 of the Planning Scheme states that, where a building addresses two streets, building height will be measured from the higher street which means that parts of a building can exceed 5 storeys to address ground levels. Map 5 'Building Height' and the Section drawings (Figures 9, 10 & 11) illustrate the scale, massing and building heights of the blocks for the 4 no. Town Centre quadrants. The design of the Town Centre in terms of scale, massing and building height, shall seek to achieve the density and critical mass which will create an appropriate urban character for the Town Centre. It shall also ensure to create a local environment that is not negatively impacted on by the micro climate created, in particular by creating wind tunnels or excessive shade.'

The UFDF makes provision for 'upward modifiers' of the CPS, of up to 3 storeys above the general building height control. There are no other provisions in the CPS for increases in general building heights. The specific locations of the upward modifiers have been refined in the UFDF. They are described in the UFDF as follows (3.3.3 Upward Modifiers):

> 'The application of upward modifiers are provided for at 4 no. locations across TC1, TC3 and TC4 ... Upward modifiers allow a local increase in height of up to 3 storeys. The urban design benefits comprise improved legibility, more diversity in roof profile and enhanced character in the appearance of an urban development. The permitted locations are limited and are selected on a number of criteria: proximity to major public transport infrastructure; addressing and enclosing civic spaces; impact on neighbouring buildings; and civic or cultural importance of the development. The UFDF identifies these locations whereby the urban design benefits are best realised within the Town Centre. In some circumstances these locations differ from those illustrated on Map 2.3 of the Planning Scheme but are considered not to materially alter Objective PD22 of the Planning Scheme and are considered to best realise the overall objective as defined below: PD22: Local landmark and feature elements over the stated building heights are acceptable at important locations where they contribute to the visual amenity, civic importance and legibility of the area.'

Map 5: Building Height

Figure 2.15. Building height controls by block and part-block (UFDF Figure 10).

The UFDF expands on the logic for the upward modifiers in each parcel in the Town Centre as follows:

'***TC1*** The Cherrywood Square area is the most appropriate location for the application of higher building elements as it marks the point of arrival and introduction to the Town Centre. In this case, the use of an upward modifier is important to improve the legibility of the urban form, to differentiate the space from others by virtue of an increase in building height and by providing a more prominent emphasis in the hierarchy and legibility of the urban form. In Cherrywood Square, the residential building A1, facing the Square to the east, is assigned the upward modification in building height to combine with the two adjoining 5 no. storey retail/commercial office buildings in block B1 to form a coherent front or enclosure to Cherrywood Square and signify the main entrance into Cherrywood Town Centre. The space itself needs to be considered as a unified element, conceived as an urban set piece, and that the building heights and massing that define and enclose this space, shall be complementary in scale and appearance. Particular attention shall be given to elevation treatment to create interest and instil human scale. The upward modifier, in this case, to the residential block A1, is continued around the corner onto Bishop Street. This is an important urban design element, firstly to consolidate the enclosure of Cherrywood Square but also to address and frame the area which extends towards the entrance to Tully Park. The resultant building is eight storeys in height on two flanks and of an appropriate scale and physical presence to address these spaces and an important approach to the Town Centre. Block A1 steps down in height to the south and west corners to engage with the lower scaled streets on those sides. The Planning Scheme permits a second upward modifier in TC1. The location of this will act as a complementary local landmark and entrance into the North West of Town Centre from Tully Park. A residential element of six storeys sits on the west part of block B5, a two to three storey commercial building, to form an eight storey tower. This residential tower is located at the intersection of 'Civic Street' and the diagonal street lying on a desire line leading up to Bishop Street Square and ultimately Tully Park located on the hill above the Town Centre to the north. The function of this higher building is to signal the Town Centre location when viewed from a distance and especially from the higher ground of the park and residential developments to the north-west and to mark this important pedestrian and cycle route into the Town Centre. The application of these upward modifiers, in the locations described above, utilising the 2 no. upward modifiers designated for TC1, delivers on the purpose intended and greatly contributes to realising the urban design objectives of the Planning Scheme and improving the ultimate urban form of the Town Centre.

TC2 There is no proposal for an upward modifier on TC2.

TC3 The purpose of upward modifier at block TC3-1 is to mark the location of the Bride's Glen Luas stop, its public function and to address the civic space to be created around the stop. The building height here will provide a visual landmark when viewed from street level from Grand Parade to the north, Cherrywood Avenue to the west and east and from within TC3.

TC4 The upward modifier within TC4 is also located at Bride's Glen Square, opposing that in TC3. Block F1 increases in height to eight storeys on its south-west corner (and 9 storeys where it addresses the lower street) to mark the location of the Luas stop and civic space and at the culmination of one of the east-west internal streets through TC4. The building steps down to 5 no. storeys for the remainder of the perimeter block enclosing a landscaped courtyard within.'

3 Sunlighting and Daylighting

3.1 General

Analysis of sunlighting and daylighting is basic and preliminary in nature at this planning scheme/masterplanning stage of the planning process. This is because:

- The CPS includes outline block volumes, based on height control ranges, within which buildings can be considered, rather than specific building footprints and volumes;
- Final building layout, form, massing, frontage, and orientation (including building footprints, private spaces, internal layouts, land use mix, elevations and windows etc.) is not yet known and cannot be accurately anticipated at this planning stage; and
- The local topography is undulating and steep in some areas, requiring site-specific and building design solutions; and
- The CPS covers a very large land area.

As the CPS does not include specific detail around block massing (with accurately predictable building lines and frontages) detailed shadow analysis (apart from very basic urban block perimeter shadow analysis) cannot be carried out. This assessment can be done at the later development management stage when final block layout, footprints and building massing have been determined.

At this stage, masterplanning relies on general 'rules of thumb' to ensure appropriate sunlighting and daylighting. These are:

- Appropriate urban block sizes and dimensions to provide adequate back-to-back distances with reference to surrounding building heights;
- Adequate street widths to accommodate frontage building heights and ensure appropriate enclosure ratios;
- Adequate urban space dimensions to accommodate frontage building heights and ensure appropriate enclosure/exposure ratios; and
- CPS site coverage and plot ratio controls.

Detailed sunlighting and daylighting studies are required for individual proposals at the development management stage, in line with CPS and the relevant planning guidelines (notably, DHPLG, 2018b). At development management stage a full and detailed quantitative and qualitative analysis should be presented in line with guidelines such as *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice* (BRE, 1991) and/or *BS 8206-2:2008: Lighting for buildings. Code of practice for daylighting* (British Standards, 2008).

3.2 Sunlight and Daylight & Shadow Review of the Town Centre Planning Application

Cherrywood Town Centre Development: Review of Sunlight, Daylight & Shadow Report (CSC) was carried out in 2017 for a planning application in the Town Centre. This was a peer review of studies carried out by the landowners for the planning application. The peer review was prepared in line with *Site Layout Planning for Daylight and Sunlight: A guide to good practice. Second Edition* (BRE, 2011). It considered impact on existing neighbours (at Tully Vale Road and Cherrywood Business Park), the impact of shadow on proposed shared residential amenity spaces, civic amenity spaces and civic amenity areas, and daylight to unit rooms using the Average Daylight Factor (ADF).

Existing neighbours
The report finds that, for neighbouring properties, the proposed development meets guidelines for daylight to existing neighbours and is unlikely to cause negative impact in terms of availability of sunlight. In relation to shadowing of amenity spaces, the analysis results for the nearby properties show that all tested amenity spaces receive at least 2 hours of sunlight on the 21st March and as such are considered to be in line with the BRE guidance requirements.

Shadow (sunlight)
In relation to the proposals for the Town Centre in the UFDF, the report assesses shadow (sunlight) for shared amenity spaces, civic amenity spaces and some private amenity spaces (such as balconies) and internal daylight to proposed units (using Average Daylight Factor) with consideration of room depth. Sunlight to living rooms was not tested.

Sunlight to shared amenity spaces
In relation to sunlight to shared amenity spaces, a block-by-block assessment was provided (with the exception of TC3 as detailed proposals were not available for this parcel). Amenity spaces were tested to ensure that a defined percentage of the space receives at least 2 hours of sunlight on 21st March. The report found that satisfactory shared amenity space is provided, which will receive adequate light. However, it should be noted that some of the ground level courtyards (the primary and most effective amenity spaces) will receive no, or low levels of, sunlight (A1,2 and 3) with extensive areas remaining in shade. Rooftop terraces have been provided to compensate for this.

This is not considered to be a like for like provision/compensation. Rooftop terraces are not as accessible to residents, and do not provide the same utility as ground-level, internal courtyards. This may point to sub-optimal, urban block layout and design in this relatively unconstrained greenfield location. In the cases of Blocks F2 and 3, and C1 and 2, external shared space (generally spaces in front of the blocks) has been added to the calculation of private amenity space in order to meet acceptable guidelines. Again, this space is not considered of equivalent function or utility. Other blocks (F 1, 2 and 3) receive good light, due to their orientation and treatment of the southern block perimeter (i.e. being open or lower in scale).

Sunlight to civic amenity spaces
The report finds that sunlight to civic amenity areas (including Bishop's Square, Cherrywood Square, Town Square, Town Centre Link, TC3 Civic Square and Bride's Glen) is adequate and that light will be received by most areas on the designated test day, 21st March. Designated civic amenity spaces were examined individually against the desirable figure of over 50%. Notably, results for the Town Square are poor (38%), with significant areas remaining in shadow.

Daylight to internal areas
Daylight to rooms was assessed using the Average Daylight Factor (ADF). The report sets out industry standards and revises these downwards (1.0% for Bedrooms and 1.5% for living rooms/areas). The report outlines compliance levels for units and suggests a relaxed standard (0.8% for bedrooms and 1.2% for living rooms). This has the effect of increasing the number of compliant units. The report showed overall compliance of between 94% and 96%, with greatest levels of non-compliance at ground floor levels.

DLRCC sought clarification of these ADF figures by way of a Further Information request. The response included a DLRCC relaxation in the ADF standard (for bedrooms and living rooms) and compensatory measures, such as enlarged windows. The report found increased levels of compliance (96-98%), although many ground floor units, in particular, would still not meet the relaxed standard.

The analysis of daylighting and sunlighting shows results typical of a higher-density urban centre. Sunlighting and daylighting standards are met in most instances, however, there are instances where private amenity spaces and daylighting to internal areas do not meet generally accepted guidelines. Compensatory measures are proposed for overshadowed courtyards (e.g. roof terraces and the inclusion of external shared spaces such as streets and lanes) and poor daylighting to rooms (Relaxation of ADF and larger windows). It should be noted that this has occurred in a relatively unconstrained, greenfield suburban context, and is justified on the basis of the need to develop this strategic land.

The analysis suggests that any increase in building height in the Town Centre based on the current street and space network and block layout would result in a deterioration in sunlighting and daylighting conditions. A substantial and comprehensive review of the street and space network and the sizing and shaping of urban blocks, streets and spaces would, therefore, be required before additional height could be considered in the Town Centre. As this is outside the current scope of this technical guidance document, any recommendations for changes to urban scale and building height controls are limited to the other Development Areas of the CPS.

4 Best practice in urban design

The key objectives of urban design and the essential considerations around urban scale and building height are addressed in some detail in established and acknowledged international best practice guidance and publications.

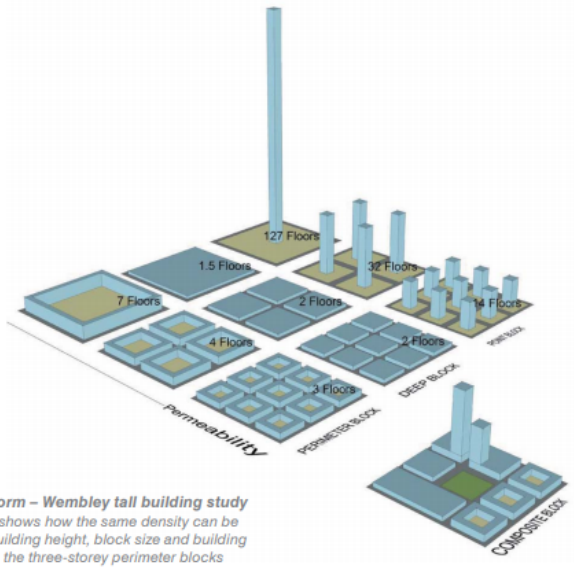
4.1 Building height and density

The relationship between building height of urban density is addressed in best practice urban design guidance. 'Density is considered as just one aspect of built form. Building height, block size and building typology will all affect the character of an area and the perceptions of density.' (English Partnerships, 2000)

Increased height does not necessarily result in increased density (English Partnerships, 2000; and Corporation of London and CABE, 2005). Cheng (2009: p.10) has argued that increased building height will lead to reduced plot ratio in locations of low sun obstruction, assuming reasonable controls for daylight and sunlight are maintained. (Note: Dublin would fall into this category with its low solar obstruction angle/maximum solar elevation).

English Partnerships (2007: s.2.4.2) state: 'High buildings can be less efficient in terms of the ratio of net to gross areas. Nor does a building need to be tall to be a landmark. The contribution that a tall building makes to the look of the street will depend on how it meets the ground.' In addition, higher density must be appropriate to context, quality of design and materials and quality of public spaces (English Partnerships, 2007).

The Corporation of London and CABE (2005) argue that a successful high density scheme is a combination of many factors, including: '…good quality units (insulation, private outside spaces - balconies etc.), connectivity, scale and integration with surrounding areas, proximity to good public transport, priority for pedestrians and cyclists, high quality open space for visual relief and recreation, clear demarcation between public and private spaces, adequate car parking, that does not dominate public space.'



Density and urban form – Wembley tall building study
This analysis by REAL shows how the same density can be delivered by varying building height, block size and building depth. In this example, the three-storey perimeter blocks deliver the same density as the 22-storey (check) point block (7,200m² / ha).

Figure 4.1. The Wembley tall building study referenced in English Partnerships, 2007, showing comparative studied in building height and density.

4.2 General context and urban character

Best practice guidance addresses general context and urban character as essential in the consideration of urban scale and taller buildings. High building is often a reflection of many factors including market demand accessibility, site availability and urban character (Worthington, 2002). Building height and massing are important aspects of urban scale and overall urban form with potentially positive and negative impacts on views and vistas and skyline. The character of a skyline is composed of the massing of blocks and the shape of roofs, as well as by the height of buildings (DETR, 2000). The skyline created by the roofs of buildings not only adds visual interest, but also conveys particular activities (churches or civic centres for instance) and concentrations of uses (such as clusters of office buildings indicating the business centre) (English Partnerships, 2000).

For many urban situations, medium-rise buildings provide an optimum form, because of their ability to accommodate a range of uses, (which generally decreases beyond four storeys), the potential for medium-high densities, as well as generally lower energy demands and construction costs (English Partnerships, 2000).

4.3 Landmark buildings

High-rise buildings can be used to emphasise key locations - rising above areas with a more uniform profile. Tall buildings have a positive role to play in signifying locations of civic commercial or visual importance, or focal points of urban activity (English Partnerships, 2000). A building should only stand out from the background of buildings if it contributes positively to views and vistas as a landmark. Buildings, which have functions of civic importance, are one example (DETR, 2000). Local landmarks, such as corner buildings, can provide identity and points of orientation. Making them higher than the surrounding buildings will emphasis their importance (DETR, 2000).

4.4 Street enclosure

Street width and building scale have an important relationship with each other and must be considered in tandem (DETR, 2000). Streets and spaces should be scaled to foster a sense of urbanism so that streets, squares and parks are defined by appropriately scaled buildings (English Partnerships, 2000; DETR, 2000; English Partnerships, 2007). English Partnerships (2000) recommend enclosure ratios (street width to building height) of 1.1.5 to 1: 1.3 for streets, 1:1 to 1:1.5 for mews and 1:1.4 to 1:1.5 for squares. Notably, these represent a more generous and lower figure within the range suggested by DMURS (DTTS and DECLG, 2013).

4.5 Quality of public spaces

Urban scale and building height have an important relationship with public spaces and street life (English Partnerships, 2000). Public spaces should be protected from downdraughts from tall buildings, as well as from lateral winds (DETR, 2000). Meaningful contact between buildings and public space can only be sustained at lower levels of up to 5 or 6 storeys (Gehl, 2001). Loss of outdoor life and reduced 'outdoor hours' and summer season (by up to two months) can result from poor sunshine and wind conditions caused by over-scaled buildings.

4.6 Sustainability and adaptability

Taller buildings give rise to concerns about sustainability, notably in relation to solar gain, heat loss to other buildings and spaces, and environmental performance of nearby buildings. (English Partnerships, 2000). In our climate, access to sunlight (solar gain) is important, and in general terms 'the more sun the better' (Schmidt III & Austin, 2016; Roaf, 2005). With good urban and building design, high levels of penetration can be achieved in high-density contexts, with careful consideration of roofscape and building height (English Partnerships, 2000). Other microclimatic issues relate to the spacing of buildings and blocks and development of stand-alone high buildings and include wind (downdraft, eddies and channelling), building heat loss and frost pockets (English Partnerships, 2000; DETR, 2000; Gehl, 2001).

5 Principles and performance criteria for urban scale and building height

5.1 Principles

The NPF and recent planning guidelines (DHPLG, 2018a and 2018b) have emphasised the need to use performance criteria as opposed to generic or blanket controls when considering urban development and building heights. In all cases, performance criteria should be based on a robust set of urban design principles.

A set of urban design principles for determining and reviewing general urban scale and building height is presented here based on the review of policy, guidance and best practice urban design, as follows:

- To ensure a shared vision within a plan-led process.
- To protect and promote the essential urban context, character and sense of place of the area.
- To provide high levels of local and wider-area legibility.
- To provide appropriate continuity and enclosure of streets and spaces.
- To contribute to well-connected, high quality and active public spaces.
- To ensure high quality, attractive and usable private spaces.
- To promote mix of use and diversity of activities.
- To ensure high quality, sustainable buildings.
- To secure sustainable density and intensity at locations of high accessibility.

5.2 Performance criteria

The performance criteria for determining and reviewing general urban scale and building height were developed from the principles, as follows:

Urban design objectives		**Performance criteria**
1	To ensure a shared vision within a plan-led process.	Urban scale and building height should be considered as part of a larger, area-based vision or building heights and skyline strategy, involving public consultation within a statutory plan process.
		Urban scale and building and height should not compromise any designated views and prospects
2	To protect and promote the essential urban context, character and sense of place of the area.	Urban scale and building height should respect and/or complement existing and established surrounding urban structure, character, urban scale and built and natural heritage.
		Urban scale and building height should reflect the importance and the function of places. Increased urban scale should be located in central locations, such as highly-accessible focal spaces and places of greater activity and land use intensity.
		Urban scale and building height should generally 'taper down' to the boundaries of a site/adjacent development in an established area.
		In areas of greater urban scale and building height, the highest standards of urban design, architectural quality and place-making outcomes should be achieved.
3		Urban scale and building height should make a positive contribution to legibility in an area in a cohesive manner.

	To provide high levels of local and wider-area legibility.	Urban scale and building height should provide variety in scale and form to create visual interest in the streetscape.
		Urban scale and building height should reflect and reinforce the role and function of streets and spaces.
		Groups or clusters of higher buildings should be of sufficiently close proximity and height to be distinct and unified in the skyline.
		Urban scale and building height should contribute to local visual interest or legibility, such as at corners.
4	To provide appropriate continuity and enclosure of streets and spaces.	Urban scale and building height should enhance the urban design context for public spaces and key thoroughfares.
		Urban scale and building height should provide appropriate levels of enclosure to streets and spaces.
		Urban scale and building height should not be over-enclosed producing 'canyons' or overbearing of streets or spaces.
		Urban scale and building height should generally be within a human scale, allowing meaningful human contact between all levels of buildings and the street or space.
		Urban scale and building height should not compromise the use of perimeter blocks, given its importance in enclosing streets and spaces.
5	To contribute to well-connected, high quality and active public spaces.	Urban scale and building height should integrate into, and enhance, the public realm.
		Urban scale and building height should provide appropriate enclosure/exposure to public spaces.
		Adequate sunlight and daylight should be received to focal/social spaces to ensure they are usable and can support outdoor activities.
		The negative, micro-climatic effects and cumulative effects on public outdoor space (in particular, of lateral wind and downdraft) of greater urban scale and building height, should be avoided or mitigated.
6	To ensure high quality, attractive and usable private spaces.	Urban scale and building height should not compromise high quality, private outdoor space.
		Buildings should be appropriately-distanced, having regard to building height, to maintain appropriate enclosure/exposure, particularly to residential courtyards.
		Adequate sunlight and daylight should be received throughout the year to shared/communal private spaces, particularly to courtyards, to allow for play and other activities.
		Reasonable levels of natural light should be received, particularly to the windows of residential units within courtyards.
		Negative micro-climatic effects and cumulative micro-climatic effects (in particular, of wind and downdraft) should be avoided or mitigated.
		Urban scale and building height should not compromise the use of the perimeter block as an important typology that can include high quality courtyards for residential development.
		Urban scale and building height should not result in unacceptable levels of overlooking and loss of privacy in residential and mixed use developments.

7	To promote mix of use and diversity of activities.	Urban scale and building height should not compromise the delivery of residential use within mixed use developments including commercial and employment uses.
		Urban scale and building height should contribute to the mix of building and dwelling typologies in the neighbourhood.
8	To ensure high quality, sustainable buildings.	Urban scale and building height should contribute to well-designed, high quality development.
		'Monolithic' or long slab blocks should be avoided, particularly as urban scale and building height increases.
		Urban scale and building height should be carefully modulated and orientated so as to maximise access to natural daylight, ventilation and views and minimise overshadowing and loss of light.
		Urban scale and building height should have appropriate and reasonable regard to quantitative approaches to assessing daylighting and sunlighting (i.e. BRE and BS guidance and standards).
		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 wider planning objectives, such as comprehensive urban regeneration, and effective urban design and streetscape solutions.
		Urban scale and building height should not compromise the ability of existing or proposed buildings and nearby buildings to achieve passive solar gain.
		Urban scale and building height should not compromise a degree of physical building adaptability.
		Greater building height, at higher density, should maximise the number of homes enjoying dual aspect, to optimise passive solar gain, achieve cross-ventilation and maintain good street frontage.
		Urban scale and building height should contribute positively to views and vistas from housing.
9	To secure sustainable density and intensity at locations of high accessibility.	Urban scale and building height should contribute to area-wide, sustainable urban density.
		Urban scale and building height should closely reflect increased density and intensity at locations of higher accessibility.

Table 5.1. Urban design performance criteria for urban scale and building height

6 Review of methodology for determining building height in CPS

Urban scale refers to a more general and area-wide approach to building height, whereas building height is usually more specific to location and is usually managed by specific controls. This section will consider the approaches to both in the CPS and the UFDF, based on the principles and performance criteria outlined in Section 5.

6.1 Urban scale

Approaches to urban scale in plans are usually underpinned by a statement and a spatial concept setting out the overall rationale for building height. The CPS includes the general rationale and objectives behind the decisions around urban scale and includes local topography, proximity to public transport and the urban structure based around the Town Centre and the Village Centres. In general terms, greater urban scale in the CPS responds to higher degrees of centrality and accessibility and/or the importance of function within Cherrywood. Provision is also made to mark areas of higher accessibility (Luas stops) with higher buildings (Upward modifiers).

6.2 Building height control

There are a number of methods for setting out building height controls or objectives in masterplans and Planning Schemes. Stated controls are always related to a plan (normally with supporting sections or 3-dimensional drawings). Building height controls can be set out at different levels of detail, including:

- Sectors (including a number of specified urban blocks);
- Individual urban blocks (whole-of-block);
- Parts of urban blocks;
- Defined frontages to streets and spaces; and
- Individual buildings - usually taller landmark buildings within specified urban blocks or frontages.

SDZ Planning Schemes in Ireland have tended to use block-based or frontage-based height controls. The frontage-based approach allows different approaches to height to each frontage to reflect changing street and space contexts. It also allows for greater variety in building height and urban form.

The CPS uses a broader approach to building height control, which is based on sectors comprising smaller parcels/quadrants (e.g. Town Centre), individual urban blocks, parts of urban blocks and individual buildings (upward modifiers only). In some cases different building height controls are applied to different parts of the development parcel to reflect different frontage conditions. The UFDF applies the CPS building height controls to detailed building footprints. This provides a high level of prescription.

Figure 6.1. Excerpts of building height controls CPS (lhs) and UFDF (rhs).

6.3 Maximum building height and building height ranges

Maximum building height is always included in SDZ Planning Schemes, as this is a requirement of the legislation (Part IX of the Planning and Development Act, 2000, as amended). Setting maxima for building height is also standard practice in masterplanning.

It is typical for building height to be described in terms of number of floors/storeys. Specific figures (usually in metres above the street frontage) can also be used instead of, or in conjunction with, the number of storeys. This is usually measured to the building shoulder, which is the top of the front wall of the upper most floor, excluding any parapet. These figures are estimated from the number of storeys. It is common to include flexibility around building height by providing for ranges. Given the prescriptive nature of Planning Schemes, these ranges are narrow, typically providing for ranges of between one and two storeys. A PS may also clarify a minimum building height. This ensures that under-scaling of development is avoided.

The CPS is in line with standard practice in this regard as it provides for ranges (between minimum and maximum no. floors) of between 1 and 3 floors. It also sets out maximum overall height of storeys based on typical floor-to-floor dimensions. In contrast, the UFDF is more prescriptive in relation to building height controls in the Town Centre, providing controls along specific frontages and parts of frontages.

Table 2.11: Building Height Ranges

Primary Development Land Use	Min No. Floors	Max No. Floors	Max Height* of storeys in Metres	Additional Upward Modifier (see Map 2.3 for Location)
Town Centre	2	5	21	1-3 Storeys
Village Centres	3	5	18	1-2 Storeys
High Intensity Employment Lands	3	5	20	None
Other Commercial Uses Lands	2	4	16.5	None
Res 1	-	3	10	None
Res 2	2	5	16	None
Res 3	2	5	16	None
Res 4	3	5	17	None
Education	-	3	13	None

**NOTE: The max height is based on the following averages of external measurement per floor. Residential floor height is 3.1m and 4.1m for ground floor units within Res 4 area. Floor height for all other uses is 4.1m.*

Figure 6.2. Building height controls CPS (lhs) and UFDF (rhs).

6.4 Residential and commercial building heights

Building height controls normally distinguish between residential and commercial/non-residential uses. This is because residential floor-to-floor dimensions are normally less than commercial or non-residential floor-to-floor dimensions. Typically, a figure of 3m (floor-to-floor) is used to estimate overall residential building height. A figure of 4m (floor-to-floor) is often used to estimate overall commercial or non-residential building height. The CPS is in line with this practice.

Provision is sometimes made for increased floor-to-floor height (4-5m) at ground floor level on active street frontages, to allow for ground floor commercial uses, such as retail and services. There is a significant scale difference between residential and non-residential buildings of the same number of storeys and this increases with the number of storeys.

The CPS includes an objective (PD 23) '... to encourage the use of 'adaptable' ground floor residential units with a greater internal floor to ceiling heights of 4 metres, along the Grand Parade and adjacent to Cherrywood Town Centre where increased overall building heights are proposed.'

6.5 General provisions

A PS can include general provisions for increased building height. These normally provide for:

- Additional set-back storeys (beyond general limits) - to complete a roofscape or to improve variety of streetscape.
- Increase building height at certain locations, such corners, junctions or focal/prominent locations.

These provisions are usually considered on a case-by-case basis in the development management stage. Additional set-back storeys are sometimes permitted to subject to requirements for quality and variety of urban form and roofscape, avoiding negative impacts on street and space proportions, daylight and sunlight etc. The general provision for an additional storey usually comes with a requirement for a set-back to protect such things as street and space scale, sunlighting and daylighting. This can lead to very marginal increases in density and may not protect longer views and vistas. The CPS does not include a general provision for additional set-back floors. This provides more certainty in terms of outcomes, and it is noted that the CPS includes other objectives to manage roof form/roofscape.

Increased building height at certain locations, such corners, junctions or focal/prominent locations can greatly aid local legibility and, if appropriately designed, can have very limited impacts on the environmental conditions of streets and spaces (e.g. sunlighting and daylighting, and wind).

In addition, height increases in selected locations could be explored based on consideration of the CPS urban block structure, indicative street sections and the designated views and prospects (This is explored in greater detail in the following sections of this review). Additionally, potential height increases could be spatially-targeted by aligning them with the designated principal frontages of the CPS.

6.6 Landmark buildings

The specific locations of taller landmark buildings are normally identified in a PS. It is normal practice to identify the location within a specified urban block. Maximum building height is normally specified for taller, landmark buildings. It is also common to include a provision requiring slender proportions in any taller building (avoiding slab or monolithic form, and emphasising verticality), by specifying maximum horizontal/plan dimensions, or height to width ratios.

The CPS identifies locations for 'upward modifiers', with four in the Town Centre and one at Lehaunstown. These allow for localised increases in building height of up to an additional three storeys. This provides for up to 8 storeys at both Lehaunstown (4-5 storeys) and the Town Centre (2-5 storeys). In the case of the Town Centre, up to 9 storeys is permitted in the UFDF under DA10 (higher street frontage provision).

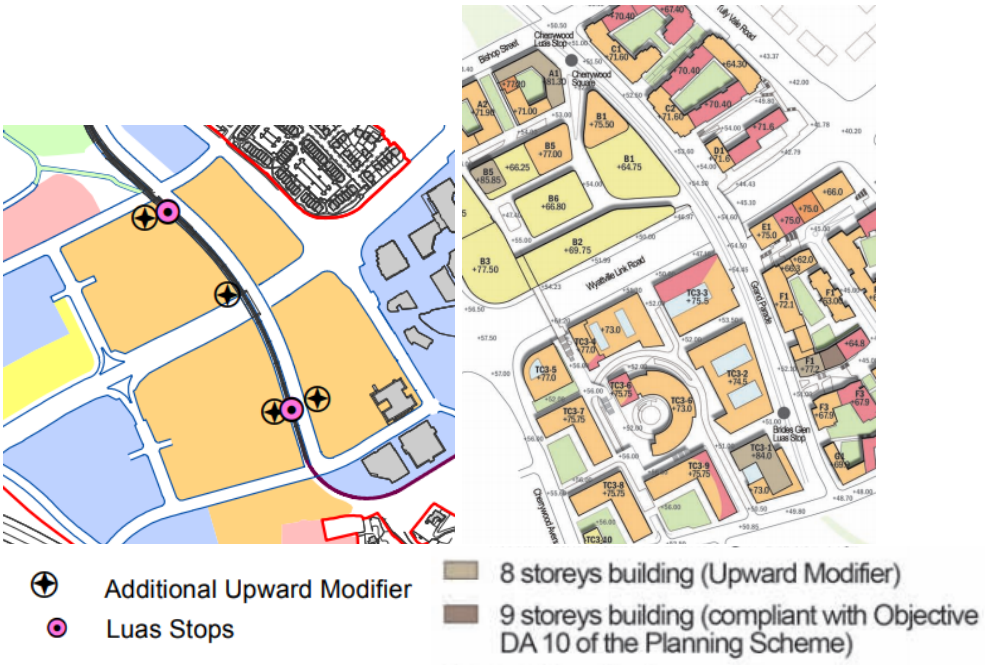


Figure 6.3. The upward modifiers in the CPS (lhs) and UFDF (rhs).

6.7 Conclusion

The general approach to urban scale and building height in the CPS and UFDF is considered to be broadly robust and appropriate to purpose. Any refinement of the approach would need to align with the block-based approach to building height control. There is scope to consider targeted building height increases, subject to assessment, based on the designated, principal frontages of the CPS. In addition, general criteria around the treatment of corners and the potential for an additional floor to contribute to local legibility should be considered.

The UFDF is, by its nature, prescriptive around building heights. No change in the approach to the control of building height is proposed for the UFDF, given the purpose of the UFDF and its relationship to the CPS. The opportunity may in the future arise, within the context of a more comprehensive revision to the UFDF, to provide greater flexibility around building height (for example building height ranges and building heights). However, any revision in terms of urban scale and building height in the Town Centre UFDF would most likely require a comprehensive review of the urban and block structure, and have regard to inter alia, daylight and sunlight penetration, plot ratio, land-use mix, overall quantum and infrastructure carrying capacity (Refer also to Section 7.9 UFDF).

7 Overall review of urban scale and building heights

This section provides an overall assessment of the CPS based on the urban design objectives and performance criteria, set out in Section 4 of this report. As stated earlier this report will not make specific recommendations for urban scale or building height in the Town Centre (UFDF area).

7.1 To ensure a shared vision within a plan-led process.

The principles for the planning and development of Cherrywood are underpinned by the County Development Plan. Urban scale and building height for Cherrywood have been determined by a process of plan preparation, consultation and formal adoption of the CPS. The CPS sets out robust vision, principles and themes, and a clear strategy for urban scale and building height for Cherrywood. The CPS been the subject of public and community consultation and scrutiny, and adoption by the elected members and finally approved by An Bord Pleanála after holding an oral hearing. The UFDF provides a detailed framework for building height control which has been robustly justified and assessed.

7.2 To protect and promote the essential urban context and character/sense of place.

The CPS seeks to respect and complement the surrounding, existing and established urban structure, character and built and natural heritage. Urban scale has been cognisant of nearby existing development and provision has been made for appropriate transitions in scale. Urban scale and building height in CPS generally tapers down to the boundaries of the area where it borders existing development.

Urban scale and building height in CPS reflect the importance of the function of places. Urban scale reflects the context of the Village Centres and the Town Centre, and higher buildings (upward modifiers) are located in the Town Centre and the Village of Lehaunstown. Urban scale and building height in the CPS also respond to changes in local topography and the external and internal views, and local skyline views.

Urban scale and building height controls in the CPS have been informed by reference to important views and prospects (as set out in s2.11). In particular, external views from Tully Church and Environs and internal views between Tully Church and Environs and Lehaunstown House have been considered in determining building height in adjoining and adjacent urban blocks.

A preliminary analysis of the existing views and prospects and the potential impact of increased building height (beyond those included in the CPS) was carried out as part of this review (See Appendix One). This analysis focused on the external and internal views and prospects from Tully Church and Environs. It involved the identification of key axes for views and prospects from Tully Church and Environs, the preparation of indicative transects (potential outline of buildings on the local topography) and the consideration of the impact of potential increases in building height on these views and prospects.

In summary, the analysis identifies:

- The location of the key axes of the views and prospects from Tully Church and Environs;
- The important distant landscape elements of the significant views and prospects (including Bray Head, the Sugar Loafs, Carrickgollogan, Ticknock/Three Rock, Killiney Head, Killiney Bay/The Irish Sea);
- Less significant, closer landscape elements of the views and prospects (including lower slopes/foothills (e.g. Rathmichael and Kilternan), and the suburban landscape (to the north, east and south east);

- The essential topography and setting of the local river and stream corridors;
- The impact (using transects along selected axes) of existing building height controls and potential increases in building height controls on distant and closer landscape elements and on internal views from Tully Church and Environs to Lehaunstown House.

The analysis indicates that:

- Existing building height controls provide good views and prospects to significant distant landscape elements. Existing building height controls will obscure broader views to the less significant views and prospects to lower slopes/foothills.
- Increases of building height in urban blocks immediately to the south-west, west and north-east of Tully Church and Environs will negatively impact on views and prospects to important distant landscape elements (notably to the Sugar Loaf, Carrickgollogan and Ticknock/Three Rock);
- Modest increases (typically one storey) in selected frontages of more distant urban blocks to the south-west, west and north-east of Tully Church and Environs are not likely to negatively impact on views and prospects to the important distant landscape elements.
- Increases of building height in specific urban blocks immediately to the south-west and west of Tully Church and Environs will negatively impact on internal views and prospects from Tully Church and Environs to Lehaunstown House;
- Less significant views and prospects to lower slopes/foothills will be largely obscured from Tully Church and Environs using existing CPS building height controls.
- In general, significant views and prospects to the north, east and south east will not be obscured by existing building height controls or modest increases (typically 1-2 storeys) in building height controls.

In addition to consideration of views and prospects, any increase in urban scale should be based on sound spatial planning and urban design concepts. The spatial concepts indicate where increases in overall urban scale could be explored. In the case of CPS it is suggested that these are:

- The centrality and character of the Villages and Town Centre;
- Close proximity and accessibility to Luas stops; and
- Coherence and continuity of scale to key streets (selected Level 1 to 4 routes) and frontages.

The spatial rationale behind these concepts and their relationship to CPS is shown in Figure 7.1 (below).

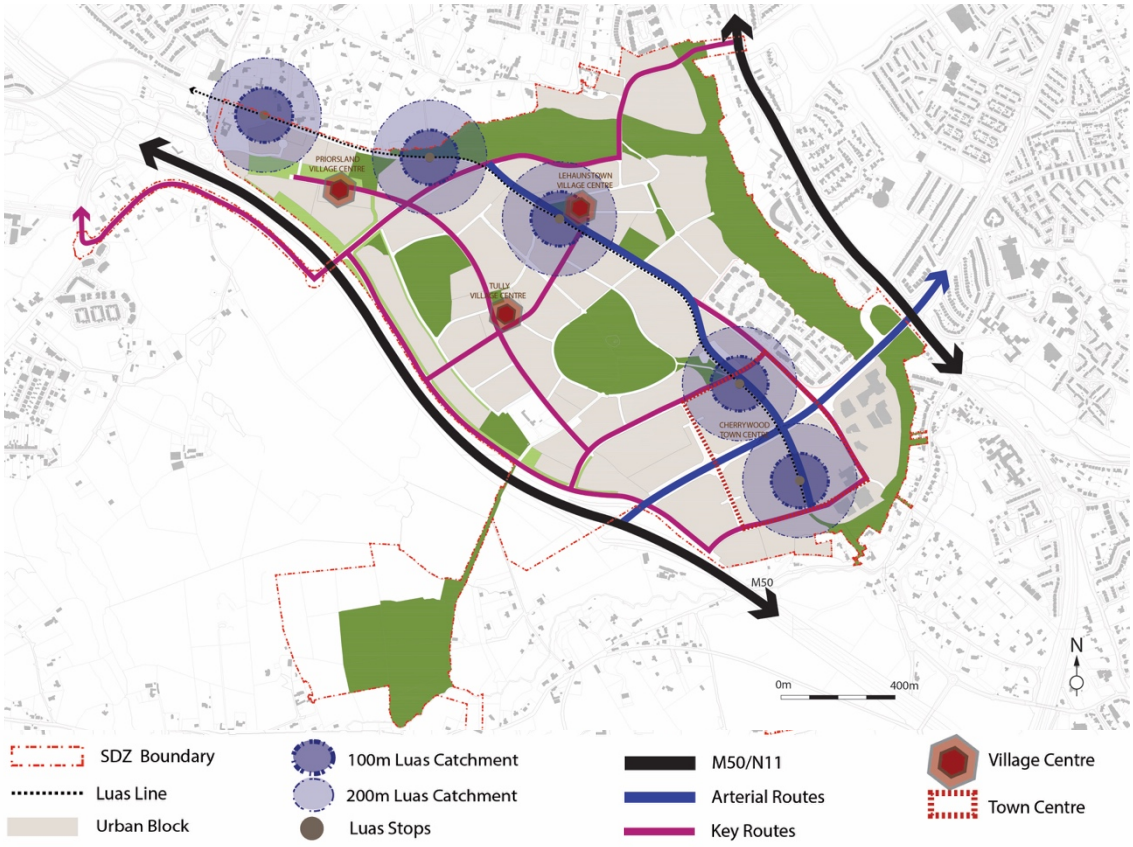


Figure 7.1 The combined spatial concepts.

In determining potential increases in building height controls other considerations will be important. These include:

- Transitions in scale to existing development;
- Appropriate and good street scale and proportions;
- Appropriate and adequate urban block dimensions;
- Protection of views and prospects; and
- Nearby 'scale-sensitive' land uses, such as schools, community and leisure/recreation uses.

Recommendations for changes in building height controls are shown in the Section 8 of this report.

7.3 To provide high levels of local and wider-area legibility

Urban scale and building height controls in CPS provide variety in scale, generally at the level of the individual block. Urban scale and building height in CPS will make a positive and coherent contribution to legibility in the area. Upward modifiers are the current concept for 'above-context', taller buildings in CPS. Three of these are loosely clustered in the Town Centre (with further detail provided by the URDF) and one is located at Lehaunstown. The upward modifiers allow for buildings of up to 8 storeys (up to 9 storeys is proposed in the UFDF, as a result of street level differences). These buildings will function as local landmarks given the height of the surrounding, context buildings. These higher buildings will be of similar height, with none being dominant in terms of scale.

Any changes to building height controls in the Town Centre are likely to require revision of the logic and arrangement of urban blocks, spaces and land uses within the UFDF. Any such changes would need to be supported by detailed daylighting and sunlighting and microclimatic analysis, and a range of other studies (e.g. telecommunications, aviation, ecology etc.).

Provision is made in the CPS to reduce the height of elements of the block within the permitted height ranges. This allows for variety in building scale. This option is not often availed of as development proposals tend to present maximum heights where ranges are allowed.

The objectives in the CPS around roofscape will be important at development management stage in securing some variety in the streetscape and avoiding continuous and monotonous building frontage (horizontality).

Where increases in building height, beyond the current control in the CPS, are proposed a general provision could be included in the CPS limiting the extent of the increase on the frontage and/or requiring careful articulation of the roofscape/roof form. This could be facilitated by a selective approach reflecting the designated principal frontages of the CPS.

In addition, a general provision in the CPS for an additional floor (of limited extent) at key intersections to main streets with principal frontages, could assist in articulating block and street frontages.

Locations have been designated in the CPS for 6 schools (2 post-primary and 4 primary). To date, one primary School at Tully Church and Environs/Castle Street has been completed. Building height controls vary for these schools (2-3 floors, 2-4 floors, and 3 floors). It is considered that school building height could be harmonised to 2-4 floors for the remaining, yet to be developed 5 schools, to allow the potential for modest increases in scale. This would be appropriate to, and reinforce their role, as local focal points and landmarks. In considering the higher elements of school buildings, regard should be had to any potential impact on views and prospects, and other urban design and local amenity issues, as part of the development management process.

7.4 To provide appropriate continuity and enclosure of streets and spaces

The CPS allows for continuity of frontage for most streets and public spaces. Maximum building heights are likely to provide for appropriate street and space enclosure. While full street sections are not included in the CPS, our initial analysis shows that street enclosure ratios are likely to be within those set out in DMURS. In dealing with proposals at development management stage the Development Agency will need to be mindful of the 'underscaling' of streets (not providing adequate enclosure) at the minimum building height within the permitted range.

Urban scale and building height in CPS is within a human scale and allows meaningful contact between buildings and the street or space, with greater scale along important streets and spaces. Increases in building height above the human scale in the PS are localised. The approach of CPS is robust in this respect and should be continued.

There is potential in the CPS to provide a more coherent building scale along the main streets (Levels 1 to 4) in the CPS where adequate width is available in the street. This could involve modest increases in building height along the principal frontages of some sections of these streets (further detailed in Section 8 of this report).

It is recommended that full street sections for key streets are prepared and included in the CPS, to ensure that appropriate enclosure ratios and quality of public/street space are maintained and that overbearing or 'canyon' streets and spaces are avoided.

A general provision in the CPS for an additional floor of (limited extent) at key intersections to main streets with principal frontages, could also assist in strengthening urban form and local legibility.

7.5 To provide well-connected, high quality and active public spaces

Urban scale and building height controls in the CPS provide appropriate enclosure/exposure to public spaces and support the development of well-connected, high quality and active public spaces. The general approach of the CPS is robust in this respect and should be maintained.

There is potential to reinforce the centrality of focal public spaces in CPS through modest increases in building height that will deliver modest increases in levels of space enclosure. Increases in building height at active public spaces will require appropriate analysis at the development management stage, including detailed sunlighting and daylighting studies. Increases in building height, beyond the existing controls in the CPS, should not be permitted where negative, micro-climatic effects on public outdoor space (in particular from lateral wind and downdrafts) are likely to result.

7.6 To provide high quality, attractive and usable private spaces

Excessive urban scale and building height can compromise the quality of private outdoor space. It can also affect the enclosure/exposure of residential courtyards. Adequate sunlight and daylight should be received throughout the year to communal private spaces, particularly to courtyards, to allow for play and other activities.

Detailed sunlighting and daylighting studies should be required at the development management stage, where it appears that adequate sunlight and daylight would not be received throughout the year in residential courtyards and, in particular, play areas. Detailed sunlighting and daylighting studies should also be required at development management stage, where it appears that reasonable levels of natural light would not be received, particularly to the windows of residential units within courtyards.

Negative micro-climatic effects and cumulative effects (in particular, from lateral winds and downdrafts) should be avoided or mitigated. Designers should be required to have regard to microclimatic issues and to include design measures (including a reduction in building height and enlargement of the urban block, and enhanced planting) to mitigate these.

In all cases, increases in urban scale and building height should not compromise the use of the perimeter block typology. Perimeter blocks can be undermined by expanding building footprints on flexible rear building lines and this can result in inadequate back-to-back dimensions. Substantially increased building height can also undermine the general arrangement of building massing on the perimeter.

Reasonable levels of overlooking and privacy should be retained in residential and mixed use development of greater urban scale. This will require appropriate back-to-back distances and careful building layout within the urban block.

7.7 To promote mix of use and diversity of activities

Urban scale and building height should not compromise the delivery of mixed use, including housing, commercial and employment uses. Urban scale and building height should contribute to the building and dwelling typologies in the neighbourhood. The general approach of CPS is robust in both respects and should be maintained.

Urban scale and building height should contribute to well-designed, high quality development. Ensuring quality at greater building heights will be an important issue at development management stage. The general approach of CPS is robust in this respect and should be maintained.

Urban scale and building height should not compromise the physical adaptability of buildings. When considering maximum building heights, proposals should show how a degree of building adaptability will be retained.

Additional building height, at higher density, should maximise the number of homes enjoying dual aspect, to optimise passive solar gain and cross-ventilation (in accordance with the provisions of the appropriate planning guidelines). Where additional building height is proposed, it may be necessary to increase the proportion of dual aspect units, to address issues relating to passive solar gain (daylighting and sunlighting) cross-ventilation and streetscape.

Urban scale and building height should contribute positively to views and vistas from housing. Additional building height should not detract from reasonable access to views and vistas from housing.

7.8 To secure sustainable density, intensity at locations of high accessibility

Urban scale and building height should contribute to sustainable urban density, particularly at locations of higher accessibility. The general approach of CPS is robust in this respect and should be maintained, however, the spatial concepts show the potential for modest increases of urban scale, which could facilitate localised increases in density.

7.9 UFDF

The UFDF has been developed to a high level of prescription. As discussed in earlier sections, the UFDF represents a considered comprehensive development where layout and building heights have been considered in tandem. The daylighting and sunlighting studies indicate that the current building heights secure acceptable outcomes for daylighting and sunlighting to shared amenity spaces, shared spaces and civic spaces and individual buildings. The studies also indicate that any increase in building scale is likely to have negative consequences for sunlighting and daylighting.

Any increases in urban scale and building height in the Town Centre would require a comprehensive review of the urban and block structure. This may include the size, orientation and shape of urban blocks, streets and spaces, and internal amenity spaces. Increased building height in the Town Centre is likely to require larger urban blocks, wider streets and spaces, and larger internal spaces to meet acceptable daylighting, sunlighting, and street and space enclosure. As stated earlier (section 3) this would require a substantial review of the CPS. This is likely to constitute a substantial and material alteration of the CPS/UFDF, and for this reason, recommendations for changes to urban scale and building height are not made for the Town Centre UFDF area.

7.10 Detailed recommendations

Detailed recommendations for changes in building heights are contained in the following section.

8 Recommendations for revisions to urban scale and building heights

8.1 General

All general provisions around urban scale and building height in the CPS should be retained.
The spatial concepts, and the urban design analysis in this review indicate potential for additions to the building height controls in the CPS.

8.2 Building height control

It is recommended, given the nature and composition of the CPS, that the block-based approach to building height control be retained. A change to a frontage-based approach would require a new level of detail around such elements as building lines, footprints and volumes. This would be would require significant changes to the CPS and would give rise to delay in the planning and development process for CPS.

Given increases in typical floor-to-floor dimensions in residential and commercial development in recent years, it is recommended that the specific dimensions (metres) for overall height in Table 2.11 of the CPS are updated. An increase of 10% in this overall height dimension (rounded upwards to the nearest metre) should be adequate to accommodate the recent and any anticipated increases in typical floor-to-floor dimensions.

8.3 Building height ranges

No change to CPS building height ranges is recommended.

8.4 Potential for increase in building heights at selected frontages

The analysis has shown the potential for modest increases in building height in selected frontages. These frontages largely correspond to the principal frontages identified in Map 2.4 of the CPS. Additional height could be accommodated at these frontages subject to meeting a set of criteria, to ensure appropriate development outcomes.

The analysis shows that the increases in building height, are location and frontage-specific (see Figure 8.1), and could provide for:

- One additional floor; or
- One to two additional floors.

8.5 Locations for potential additional floors

The locations for potential additional floors are shown in Figure 8.1 (below). The following, principal frontages on the following streets have potential for additional floors:

- Selected frontages on Barrington's Road;
- Selected frontages on Druid's Glen Road;
- Selected frontages on Castle Street;
- Selected frontages on Gun and Drum Hill;
- Selected frontages on Bishop Street;
- Selected frontages on Beckett Road;
- Selected frontages on Cherrywood Avenue (excluding Town Centre frontage);
- Selected frontages on Tully Vale Road (excluding Town Centre frontage); and
- Luas frontage north of Grand Parade/Barrington's Road intersection.

Other non-principal frontages with potential for additional floors are shown in Figure 8.1.

8.6 Criteria for additional floors

It is recommended that additional floors are permitted only where they meet important planning criteria, and where planning and development outcomes are enhanced. These criteria should be fully developed and included in the CPS, and should, inter alia, cover:

- Application to the identified street or space frontage only. This will be limited to the depth of the proposed frontage building and, in any case, should extend no more than 20m backwards from the frontage (as normally defined by the front building line).
- Appropriate articulation of the roof form and roofscape. This may include disaggregation of additional floors, variation in building/floor heights, and limiting the extent of additional floors along frontages.
- Maintenance of appropriate street proportions and enclosure. This will need to be supported by detailed street and block sections and studies.
- Maintenance of appropriate continuity and enclosure of public space. This will need to be supported by detailed street and block sections and studies, and an assessment of the impact on microclimate and sunlighting and daylighting.
- Maintenance of appropriate continuity and enclosure of private and semi-private amenity and courtyard spaces. This will need to be supported by detailed block sections and studies, and an assessment of the impact on microclimate and sunlighting and daylighting.
- Appropriate regard to the amenity of neighbouring properties and / or sites in terms of shadow impact, overbearing or other amenity consideration.
- A clear and additional contribution to design quality, in terms of design rationale and execution, quality and durability of materials and attention to, and execution of, detailing.
- The maximisation of adaptable and sustainable unit typologies in the additional floors – for example, by maximising passive solar access through the use of dual aspect residential units, and/or ensuring potential for passive ventilation.
- Protection of the designated views and prospects in the CPS. This may require careful positioning and/or articulation or disaggregation of additional floors.

Set-back from the front or rear wall of the building of additional floors may be required, where studies indicate that this is necessary to meet any criterion.

Proposals which include additional floors, must clearly demonstrate that the increase in floors and scale has been considered as an integral part of an overall and coherent design approach to the building/development. Proposals will need to show how scale, articulation of massing, roof form and elevational treatment have been considered from the design rationale and concept to the detailed design stages. The simple addition of floors to existing proposals (with or without planning permission) should not be considered as adequate in meeting this requirement.

In all cases where additional floors are proposed, the CPS should require appropriate studies and statements to support applications for additional floors.

8.7 Schools

School building height controls should be harmonised to 2-4 floors for the remaining 5, undeveloped schools in Cherrywood, to allow the potential for modest increases in scale (where lower controls are in place) (see Figure 8.2). In considering the higher scale of school buildings, particular regard should be had, at development management stage, to the potential to develop a building of landmark quality to contribute to local legibility and any potential impact on views and prospects.

8.8 Upward modifiers

No change is recommended to the CPS provisions for upward modifiers.

8.9 Street enclosure and sections

Indicative street sections should be prepared for the main street typologies in the CPS. Currently, basic road sections, without frontage buildings are shown. These sections should also include typical building set-backs and building lines. Indicative street sections will also assist in considering the appropriateness of additional floors and floor setbacks, based on the criteria set out for additional floors (Section 8.6). Indicative street sections, based on the road sections of the CPS were prepared as part of the review analysis and are included in Appendix Two of this report and are recommended for inclusion in the CPS.

8.10 Conclusion

The recommended refinements to the building height controls of CPS represent a targeted approach based on a strong urban design rationale. In addition, the recommendations are considered compatible with the current method for building height control in the CPS.

The recommended provision for potential additional floors, will inevitably give rise to the potential for additional density of development. An assessment of the implications for density of development is not included in the scope of this review. However, the recommendations in this report clearly identify where increases of density of development may result. The recommendations also provide the basis for an assessment of the nature of the increase in density of development, given their application to specific frontages.

Figure 8.1. Recommended, refined building height controls

Figure 8.2 Recommended, refined building height controls for the proposed Schools

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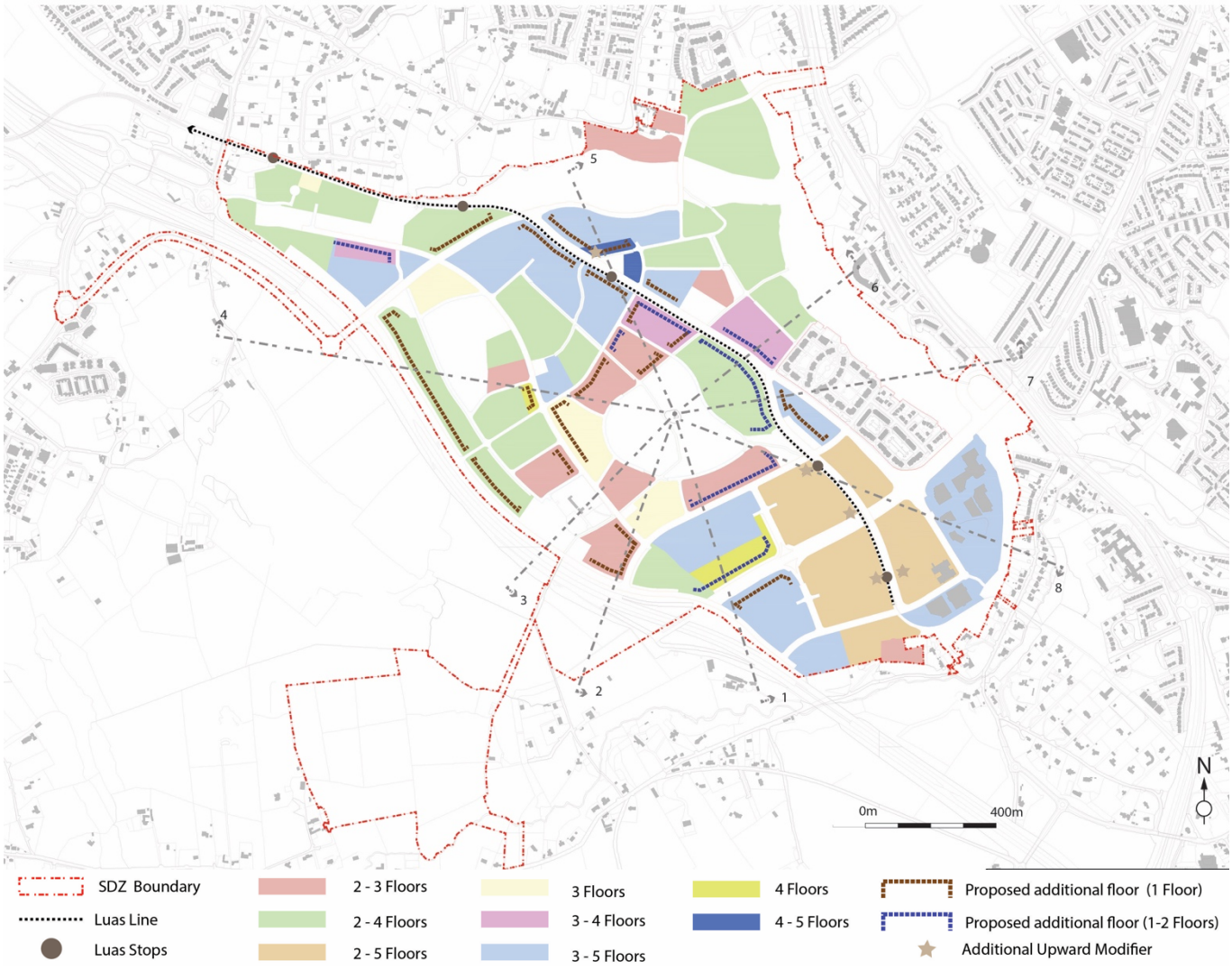
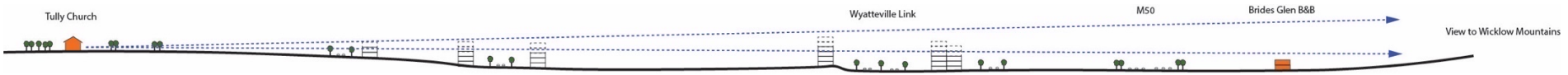
Appendix One - Location of Transects and Transects for views and prospects from Tully Church and Environs

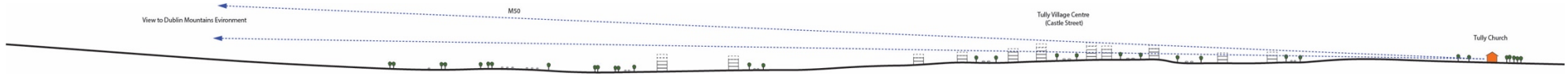




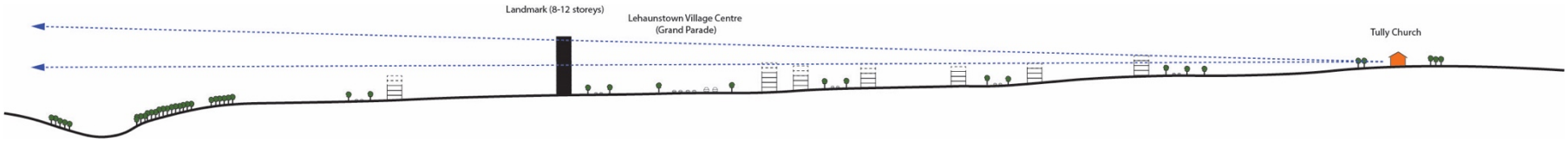
Section 1-1

Section 2-2

Section 3-3



Section 4-4



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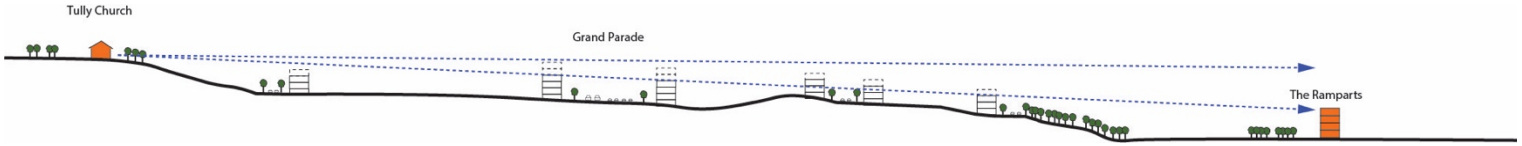
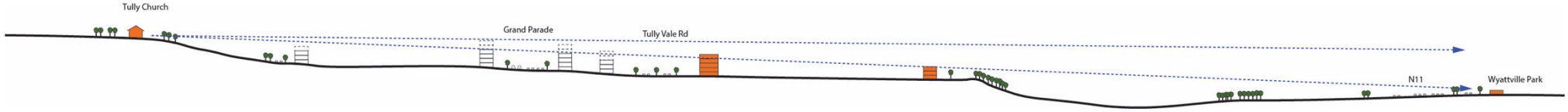
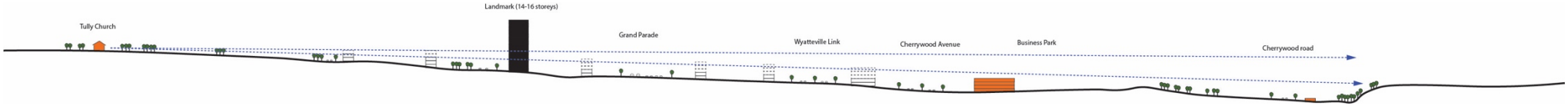


Section 6-6

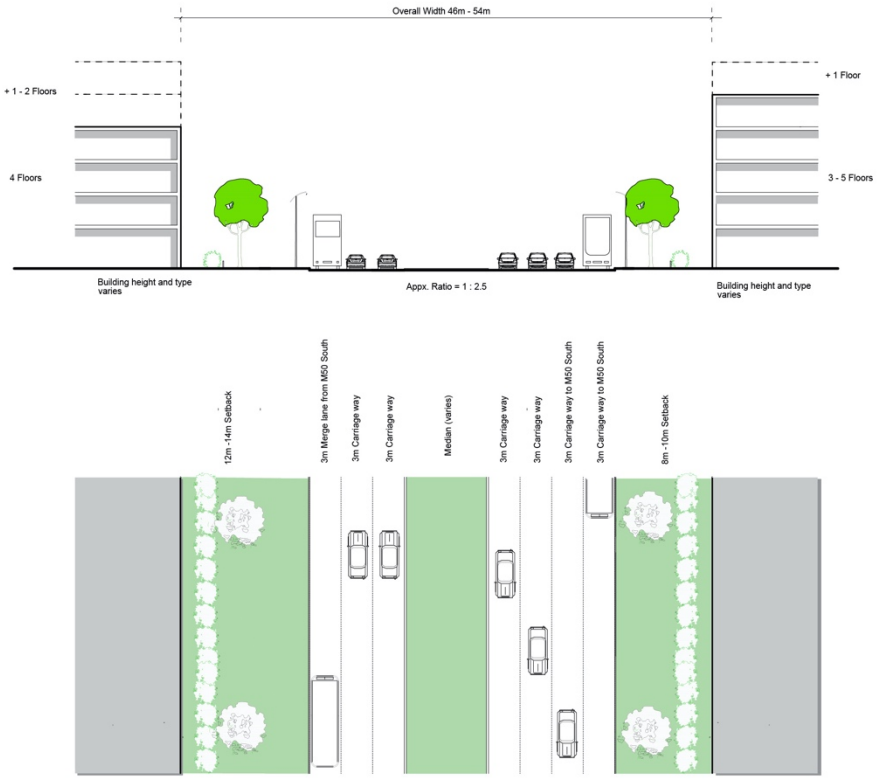


Section 7-7

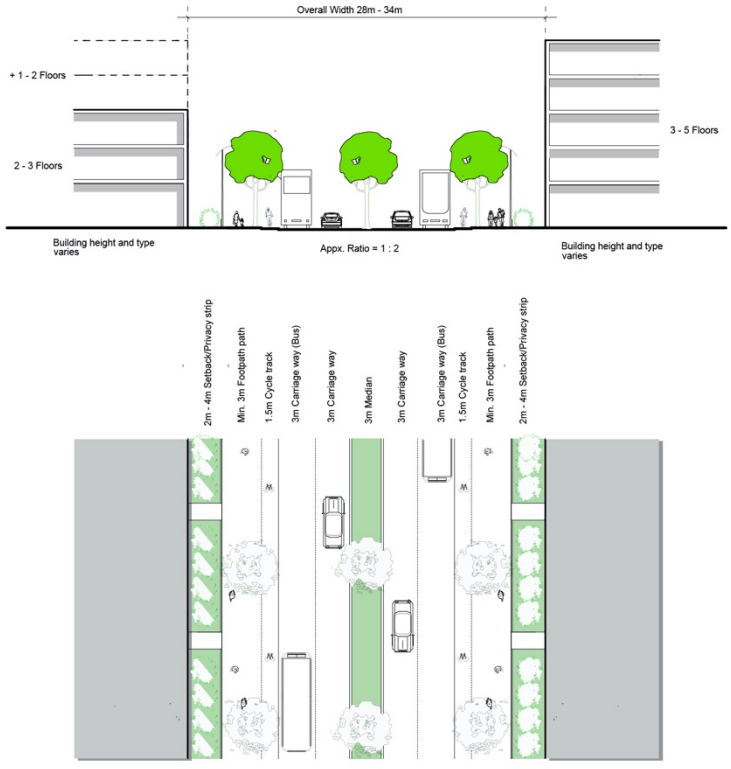


Section 8-8

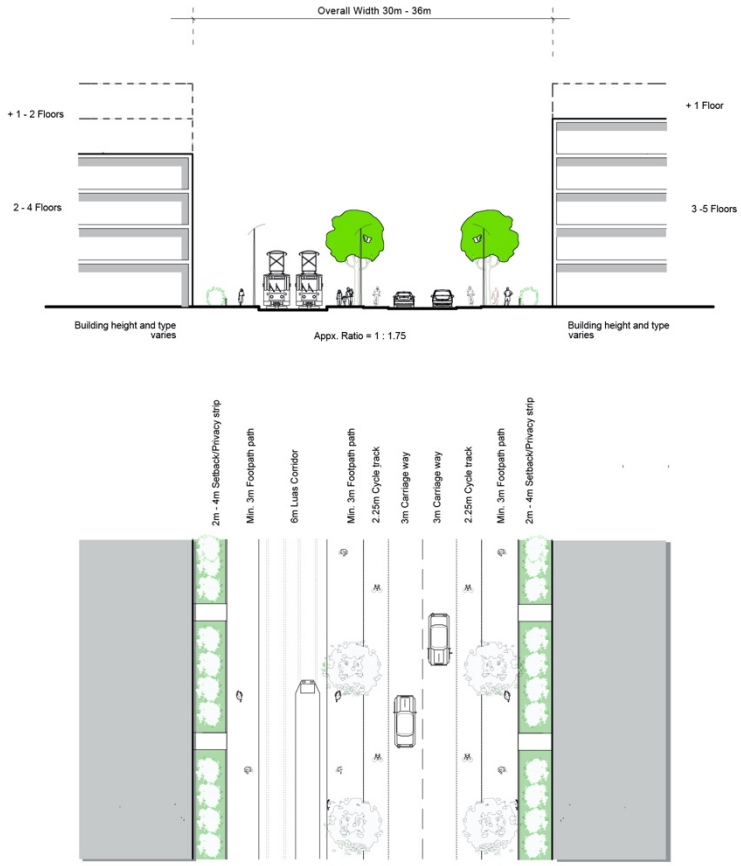
Appendix Two – Indicative Street sections (not to scale)



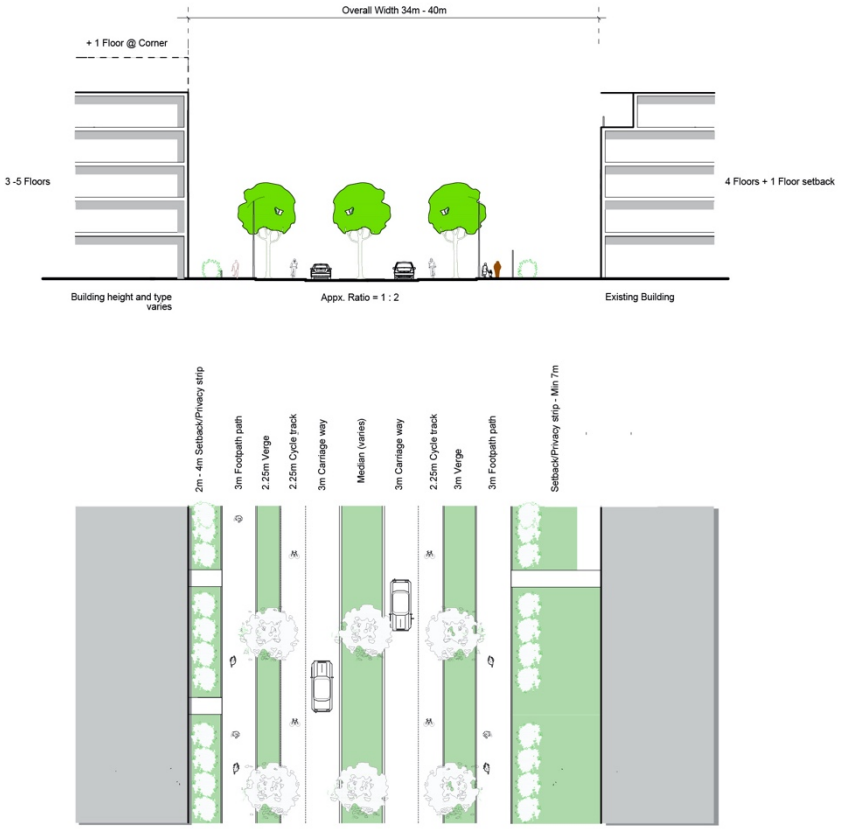
SECTION 1 - WYATTVILLE LINK ROAD



SECTION 2 - BISHOP STREET



SECTION 3A - GRAND PARADE



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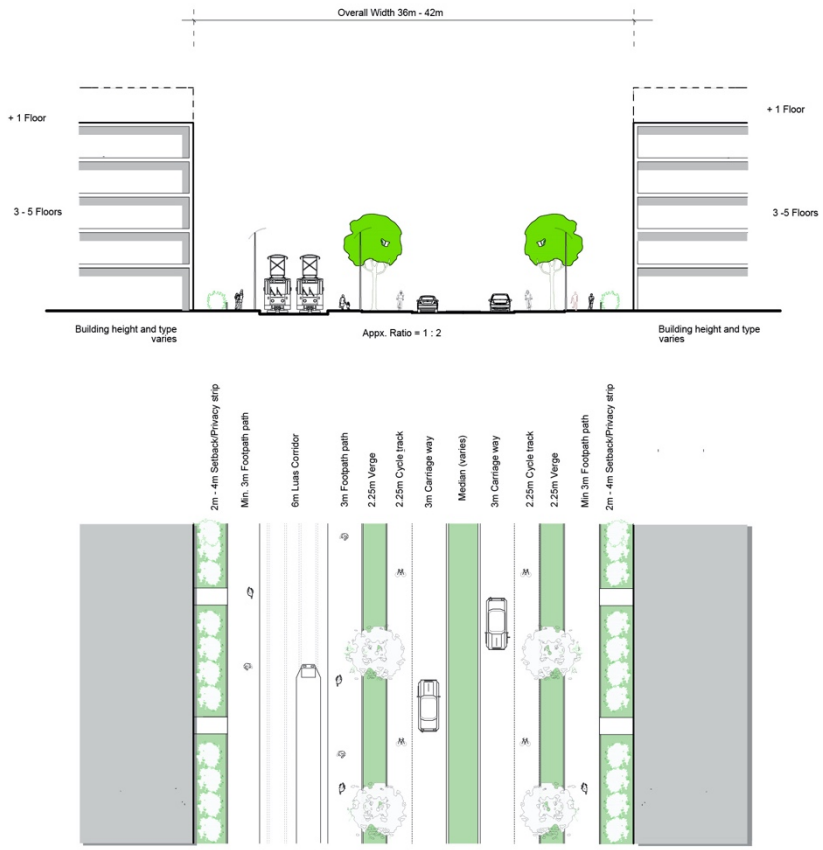

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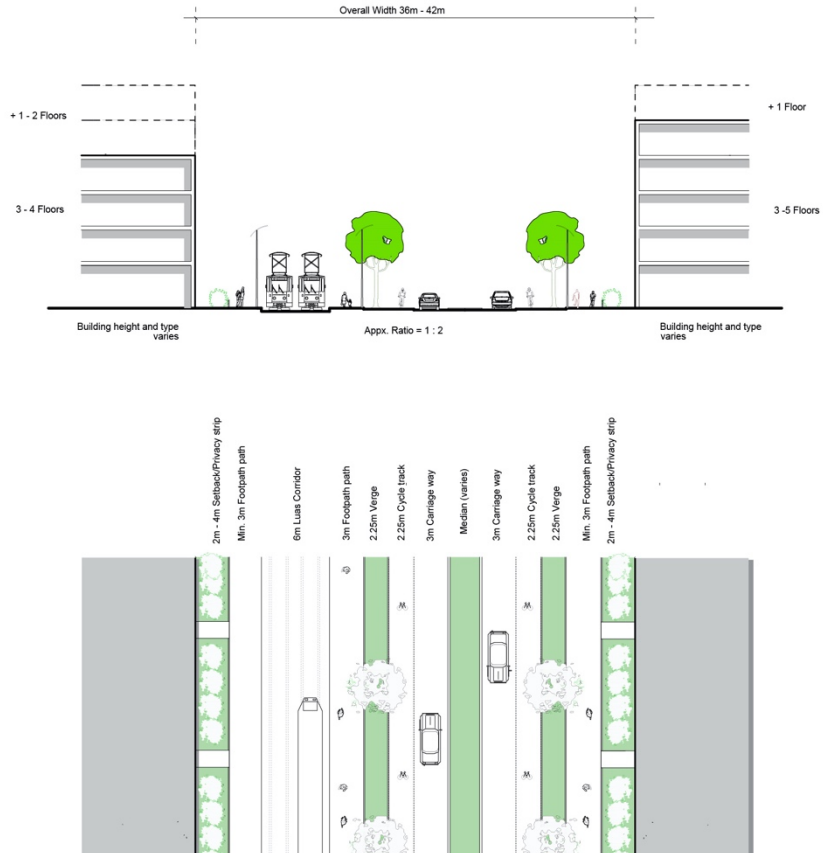

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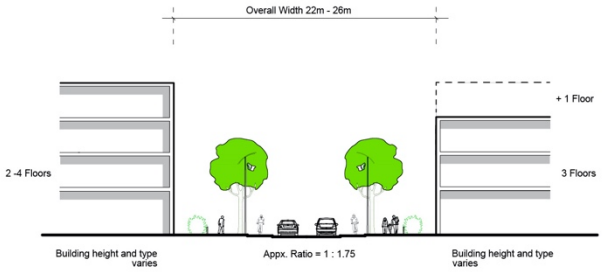
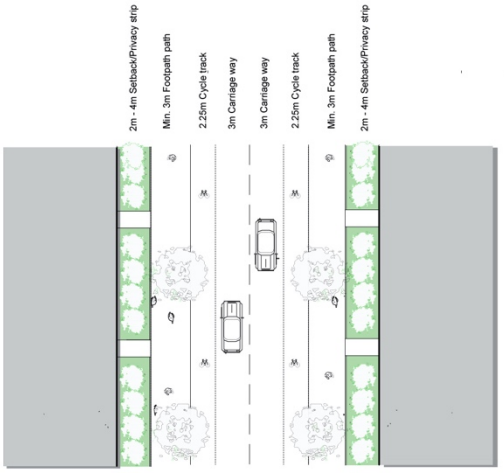
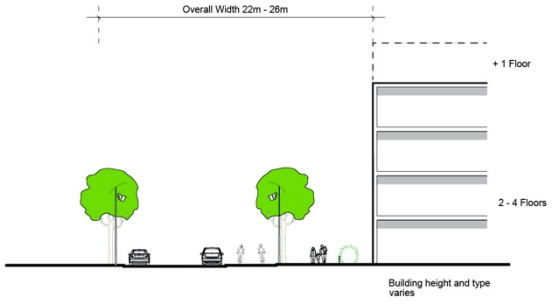
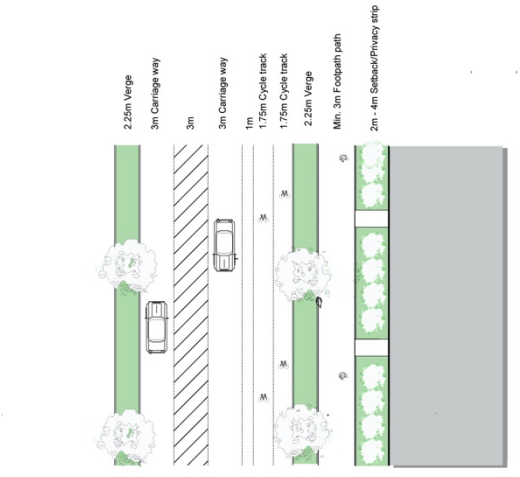


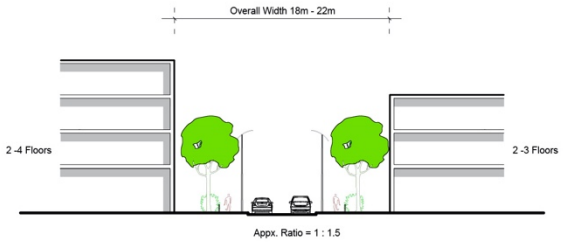


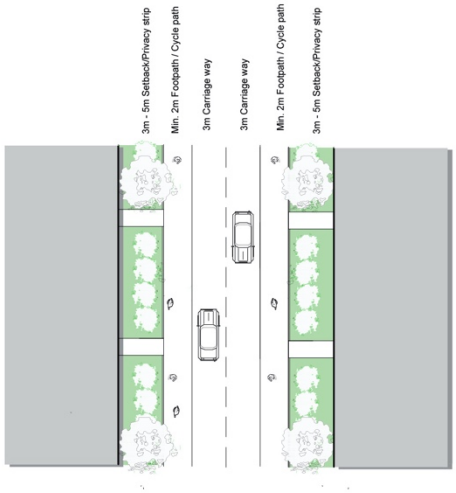
SECTION 5 - CASTLE STREET





SECTION 6 - BECKETT ROAD





SECTION 7 - LOCAL NEIGHBOURHOOD STREET

Report ends.