Local Plan building heights technical paper

Introduction

1.1. The Council is preparing a new Local Plan for the Borough of Bexley. The Local Plan, along with the Mayor's London Plan and other adopted policy and guidance documents, comprises the Development Plan for the area.

1.2. The Draft Local Plan contains strategic, non-strategic and site allocation polices along with supporting text. Chapter 4 includes a series of policies to secure the highest quality of design, to protect the best aspects of Bexley's character and to enhance character across the borough, and how new development is expected to achieve this. Recognising the impact that building heights has on local character, the chapter includes a policy on building heights and tall buildings.

1.3. DP12 Tall building and building heights establishes maximum heights which development proposals are normally expected to follow within different parts of the borough and requires proposals for taller buildings to submit alternative design options. P arts 4 and 5 of the policy define what constitutes a 'tall building' within Bexley and identifies suitable locations for those buildings, subject to more detailed consideration.

1.4. The approach to building heights is highly justified by evidence produced to support the Draft Local Plan, including primarily the Urban Morphology Study and the Local Character Study. It also reflects the Council's broader strategic approach to development and growth, as set out in the Draft Local Plan's strategic policy (SP1) and the adopted Bexley Growth Strategy.

1.5. The purpose of this technical paper is to set out the evidence which justifies the approach to tall buildings and building heights within the Draft Local Plan. In particular, the paper justifies the maximum building heights and explains the suitable locations for tall buildings.

The policy

1.6. Policy DP12 Tall buildings and building heights sets out the Council's approach to building heights within new developments. Building heights, like all aspects of design, should protect the best of Bexley's character and represent high quality design. The ambition of the policy is to achieve higher levels of residential density through alternative and more traditional housing typologies whilst ensuring that building heights in new developments respond positively to local context.

1.7. The policy therefore encourages development at a human scale, for example by requiring development proposals for taller buildings to submit alternative design options to demonstrate whether similar densities can be achieved using more traditional typologies including terraced housing, maisonettes, and courtyard apartments. Further, where a tall building is proposed, the applicant must demonstrate how the proposal meets a number of criteria.

1.8. The full draft policy is included in Appendix 1. The policy has two main aspects: borough-wide building heights and tall buildings.

Borough-wide building heights

1.9. DP12 parts 1 to 3 set out the Council's approach to building heights within new developments across the borough.

1.10. Part 1 establishes maximum building heights which new developments should normally follow. There are three different maximum heights, for different parts of the borough. The policy is clear that these are maximum heights and are taken as a guide; design decisions on height should be outputs of numerous considerations and buildings should not be designed to achieve certain heights. As with all design issues, height must be highly justified.

1.11. Part 1(a) sets a maximum building height for tall buildings of 45 metres, roughly equivalent to up to 15 residential storeys. As set out later in the policy, tall buildings are defined as those exceeding 25 metres, or the equivalent of 8 residential storeys. Tall buildings are suitable only within identified locations in Abbey Wood and Belvedere.

1.12. Part 1(b) sets a maximum building height of 25 metres, or equivalent to up to 8 residential storeys, within the borough's sustainable development locations. These are the locations identified by the strategic policy (SP1) as best able to accommodate all types of development and its supporting infrastructure. Sustainable development locations are areas with relatively high public transport accessibility and are centred around town centres and railway stations.

1.13. Part 1(c) sets a maximum building height of 15 metres, or equivalent to up to 4 residential storeys, for all other parts of the borough.

Tall buildings

1.14. The Mayor's London Plan Policy D9 Tall buildings requires borough Development Plans to define what is considered a tall building within local areas and to identify locations suitable for tall building development. Draft Local Plan DP12 Part 4 satisfies this requirement by defining any building greater than 25 metres (8 residential storeys) as a tall building. Part 5 notes that locations suitable for tall buildings are within and near the town centres of Abbey Wood Village and Belvedere; the detailed locations are mapped in the Draft Local Plan and illustrated by Figure 1.

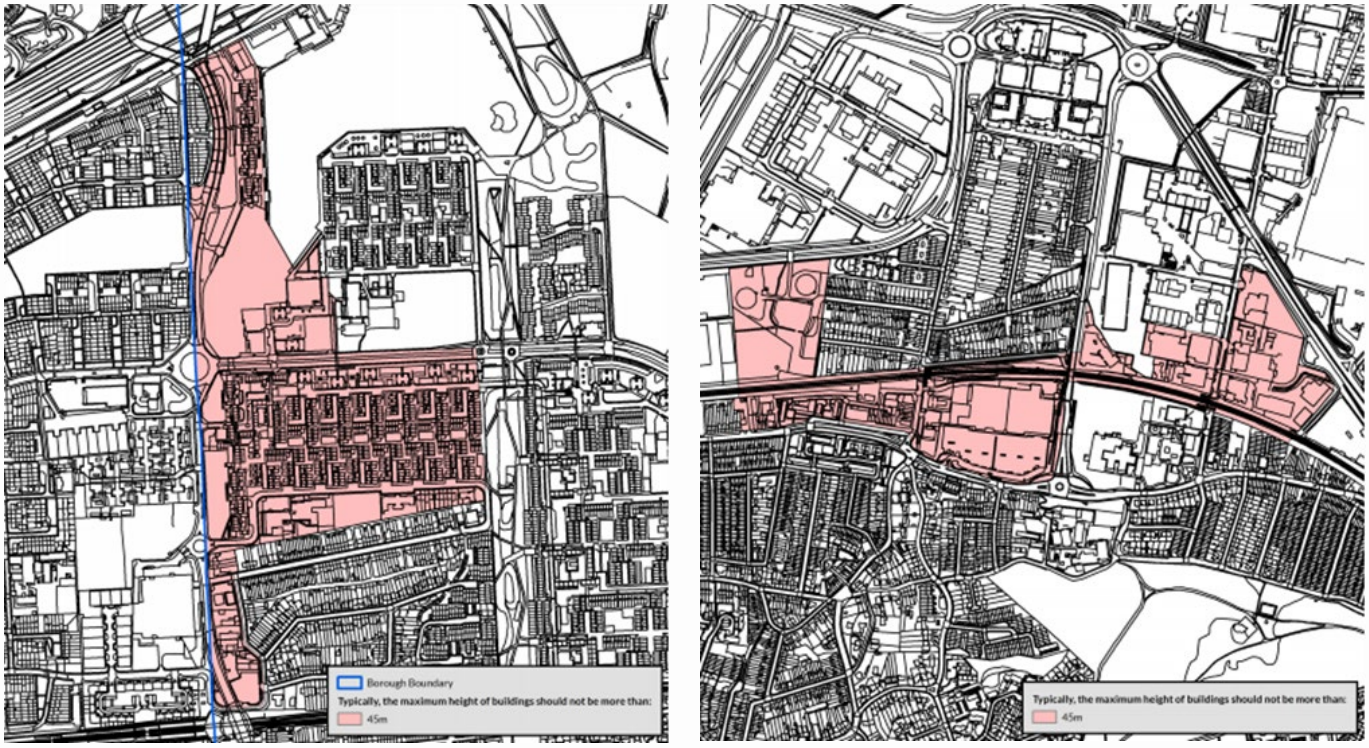

Figure 1: Locations suitable for tall buildings at Abbey Wood and Lower Belvedere (Draft Local Plan Figures 4 and 5)

Key evidence

Urban Morphology Study

1.15. The maximum building heights are informed extensively by analysis of prevailing building heights across the borough. This data is taken predominantly from the Urban Morphology Study (2019). The study, undertaken by We Made That and Troy Planning & Design, in collaboration with London Borough of Bexley, utilised detailed Geographical Information System (GIS) mapping of relevant characteristics of the borough, to produce a highly detailed and robustly evidenced visual and written descriptions of built environments across Bexley.

1.16. The study maps nine aspects of built character: building typology; townscape/urban grain/block pattern; building heights; densities; plot sizes; building styles; historic and environmental assets and constraints; public transport accessibility and other infrastructure accessibility; and other LiDAR data.

1.17. Based on data sets which served as sources or proxies for the nine characteristics, each characteristic was mapped from the raw data at an agreed unit of spatial analysis ('islands'). The characteristics were mapped at island level individually and then overlaid in a variety of combinations, to provide a series of visual representations of the borough's built environment. The visualisations were supplemented by written descriptions and analysis.

1.18. Building heights were taken from the Ordnance Survey Master Map's building heights data. The raw data included metric height of all buildings and structures from the ground level to the tallest point, potentially including features such as chimneys and antennae.

1.19. To provide a more accurate picture, the study translated the raw data into storeys, based on an assumption that three metres in height is equal to one storey. This approach also ensured that those features such as antennae would not skew the results, because they are unlikely to be greater than three metres and therefore would not count as an additional storey.

1.20. The study found the borough is heavily dominated by two-storey buildings, reflecting the predominance of semi-detached dwellings. Supplementary desktop research identified a clear presence of bungalows within the one to two story islands, where in some cases they are the dominant typology. The majority of islands are two-storey, followed by one to two storey and then three storey. Four storeys and higher islands represent a small proportion of the built environment and are concentrated in and around town centres and industrial locations. Island below a single storey (typically areas of garages or small sheds) occur least frequently.

1.21. The map of building heights across the borough is shown in Figure 2.

1.22. Interestingly, the study shows that building heights are often a function of other characteristics. For instance, overlaying building heights and land uses shows that residential areas are mostly two storeys whilst town centres and industrial areas have higher frequencies of three storey, and four storeys and higher islands. This suggests that additional height is more likely to be appropriately accommodated in these areas, even if the existing prevailing height is relatively lower.

1.23. In another finding, a side-by-side analysis of building heights with building typologies shows that most four and higher storey islands are dominated by flatted buildings, and most two storey islands are comprised predominantly of semi-detached dwellings. The strong correlation between height and typology suggests that heights are higher in areas with higher-density typologies.

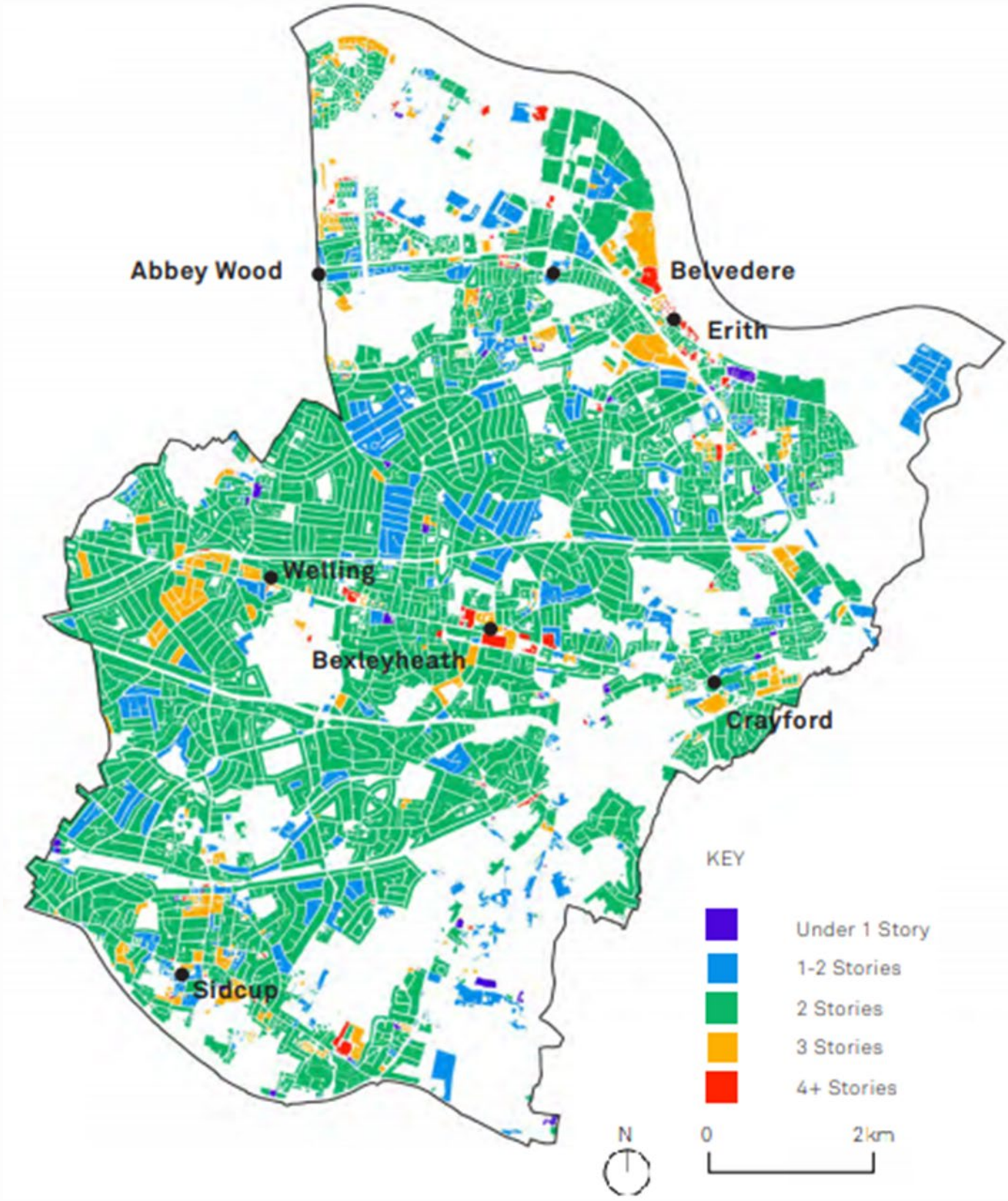

Figure 2: Predominant building heights across Bexley (Urban Morphology Study, 2019)

1.24. The study further analysed building heights by calculating variations within each island, based on the standard deviation from the metric used in the source data. The study concludes that there are relatively high levels of variation in building heights within relatively small geographic areas. The variations are most pronounced within town centres, where deviations in height ranged up to 19 metres, but even within the two storey islands there was typically two to three metres difference in

height. The greater the deviation, the more appropriate differences in height are likely to be in principle, subject to detailed design consideration.

1.25. The map of variations in building heights is shown in Figure 3.

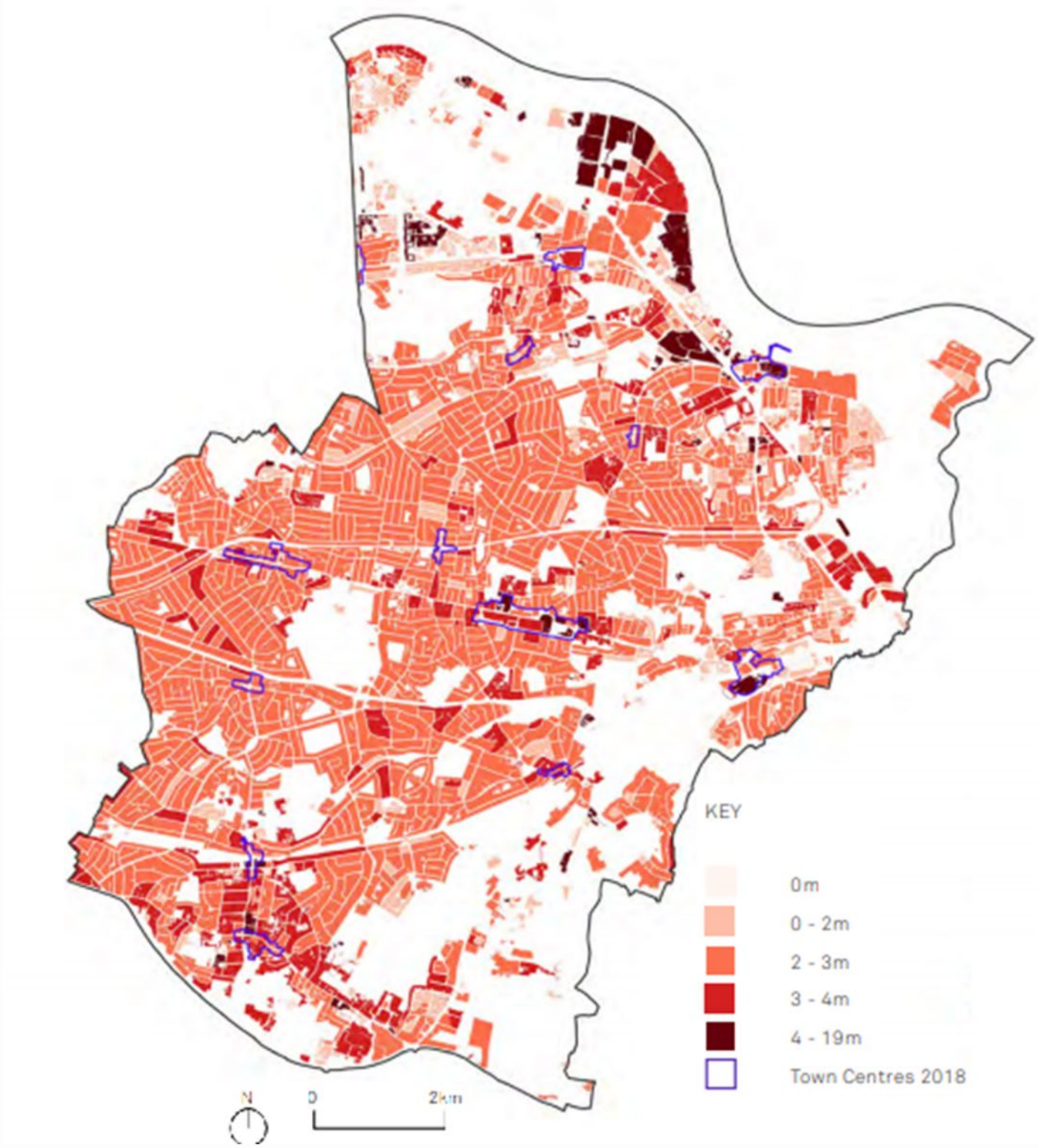

Figure 3: Variations in building heights across Bexley (Urban Morphology Study, 2019)

1.26. The Local Character Study includes a detailed study of existing residential typologies within the borough based on common principles that are constitutive of character. The typical building heights for each typology is one initial indication of where a new build consisting of a given typology is likely

to be appropriate, given the existing predominant building height, subject to further detailed analysis of local character.

1.27. The urban design analysis represented by the typologies study has informed the maximum building heights, particularly in terms of determining which new-build typologies are likely to be appropriate adjacent to and near existing typologies.

Growth Strategy

1.28. The Bexley Growth Strategy (2017) sets out the Council's ambitions for growth within the borough and establishes a vision for what that growth looks like.

1.29. To support the development of higher density development which respects the existing character of the borough, the Growth Strategy sets out a series of urban design principles and suggested typologies. The principles and typologies do not represent a departure from the typologies that currently characterise Bexley, but seek to reimagine them in a higher density context.

1.30. With regards to building heights, the Growth Strategy indicates a preference for mansion blocks of typically four to eight storeys as the borough's tall buildings of choice. The document explains that this building type will achieve the desired increase in density without overwhelming the distinct suburban character of Bexley. Elsewhere, the urban design principles note that 'tower block' tall buildings might be appropriate but only where highly justified, and that existing tower blocks do not constitute precedents.

Maximum building heights

1.31. The maximum building heights established by Draft Local Plan policy DP12 Part 1 reflect a detailed analysis of prevailing building heights across the borough and an urban design assessment of how new development can respond positively to that context.

Up to 15metres in height

1.32. DP12 Part 1(c) sets out that developments across most of the borough should normally not exceed 15 metres, or equivalent to up to four residential storeys. This expectation applies across the borough, except for within sustainable development locations or those locations identified as suitable locations for tall buildings.

1.33. The Urban Morphology Study clearly shows that two storey buildings predominate the borough. This is particularly the case within the residential hinterlands outside of town centres. The maximum building height within these locations is therefore calibrated to reflect the predominance of two storey dwellings.

1.34. A maximum building height of up to four storeys is considered to respect the existing context whilst allowing for a more intensive utilisation of land. Two, three and four storey buildings can achieve very similar appearances and consist of the same typologies. Urban design analysis also suggests that locating a four storey building adjacent to a two or three storey building does not tend to cause visual domination, adverse impacts on daylight/sunlight, or other design concerns.

1.35. Furthermore, the Urban Morphology Study found a significant degree of variation within predominantly two storey areas. Two-storey islands typically exhibited variations of two to three metre differences in building heights. This suggests that on a street dominated by two-storey semi-detached houses, a three storey property would not represent a variation beyond the norm.

Up to 25 metres in height

1.36. DP12 Part 1(b) sets out that developments within sustainable development locations should normally not exceed 25 metres, equivalent to up to 8 residential storeys.

1.37. Sustainable development locations are centred around town centres and railway stations. The Urban Morphology Study clearly shows that these are the areas where existing building heights are four storeys and higher. Additional analysis finds that islands with higher levels of public transport accessibility, a key criterion for the identification of sustainable development locations, are more likely than those with lower levels of public transport accessibility to have islands with prevailing building heights of four storeys and higher. Finally, areas with higher density typologies are more likely to have taller buildings. Buildings up to eight storeys are therefore more likely to represent a positive response to existing character and context.

1.38. Further, the Urban Morphology Study's building heights variation exercise shows that areas within sustainable development locations are more likely to have greater variations in height within each island. Every designated major and district town centre contains at least part of an island where variations in height range from four to 19 metres. This suggests that the broader range of heights considered acceptable would more likely be appropriate. The greater variations allows for the use of differences in height which, if not done abruptly, can create visual interest and successfully navigate transitions.

1.39. The development of buildings up to eight storeys in sustainable development locations is supported by the residential typologies set out in the Local Character Study, which indicate that typologies of up to eight storeys are likely to be appropriate in areas with predominantly four storeys and greater in height. These include the three 'flatted' typologies (spare, medium, and dense).

1.40. In addition to positively responding to existing local character and context, the maximum building height also reflects the higher levels of density appropriate for these locations. These areas have been identified for their capacity to support more intensive development, in part because of the existence of existing services and facilities and public transport accessibility. Development up to eight residential storeys can facilitate increased densities whilst respecting existing character and context and providing high quality design at a human scale, including with typologies such as mansion blocks, stacked maisonettes, and perimeter blocks.

Up to 45 metres in height

1.41. DP12 Part 1(a) sets out that developments within areas identified as locations suitable for tall buildings should not normally exceed 45 metres, or equivalent to up to 15 residential storeys.

1.42. This maximum height is based on an urban design assessment of the tallest buildings that are likely to be appropriate within the borough. It reflects the maximum building height suggested by the Growth Strategy, which suggests that whilst mansion blocks of four to eight storeys in height are the Council's preference for taller buildings, there will be a few locations in the borough appropriate for focussed cluster of towers of approximately 15 storeys.

1.43. The few existing tall buildings within the borough suggest that heights greater than 15 storeys are not acceptable in principle. The tallest building within the borough, Marlowe House in Sidcup, stands at 16/17 storeys, but was completed in 1966 and is no longer considered an acceptable precedent for height within the borough. In fact, all of the existing buildings taller than 12 storeys were completed by 1971 at the latest, and are 1960s/70s era tower blocks clustered in Thamesmead as well as two examples within Erith town centre.

1.44. More recent approvals suggest that building heights between nine and 13 storeys are more typical. Nonetheless, given the ambition to achieve high levels of growth within the tightly drawn areas, the Council has determined that buildings up to 15 storeys could be appropriate, subject to detailed urban design analysis and other considerations through the development management process.

1.45. The maximum building height is justified by urban design ambitions for tall buildings. The broad range considered acceptable can accommodate a number of different heights within and across sites which, if not done abruptly, can create visual interest and successfully navigate transitions.

1.46. Tall buildings are also considered one means to contribute to achieve urban design ambitions including way-finding purposes and creating iconic buildings. Finally, it should be noted that the maximum building heights within the appropriate locations are not considered to establish a uniform approach across the locations, but rather to allow for the restrained use of tall buildings as appropriate in key locations on the site, where this is the output of other design considerations.

Tall buildings

Definition of tall buildings

1.47. DP12 Part 4 defines tall buildings as those taller than 25m, or equivalent to up to eight residential storeys in height. The definition is important because any development with a proposed building taller than 25 metres will be considered in principle acceptable only within those locations identified as suitable for tall buildings. These proposals will also be subject to the additional considerations for tall buildings set out in DP12 part 4 as well as in London Plan Policy D9 Tall buildings.

1.48. The definition is based on analysis of evidence of the existing built environment, including prevailing heights, and urban design assessments of the likely appropriate heights within the borough.

1.49. The Local Character Study includes a detailed study of existing residential typologies within the borough based on common principles that are constitutive of character. The study describes the typical heights for each typology. Of the common typologies within the borough, the majority are one to three storeys in height, which is reflective of the findings of the Urban Morphology Study. The tallest heights amongst the existing residential typologies are three to eight storeys (Flats Dense), followed by two to six storeys (Flats Medium).

1.50. Bexley is relatively unique within London for its lack of existing and planned tall buildings. The London Tall Buildings Survey 2020 (April 2020) by New London Architecture found that Bexley is just one of seven London boroughs with no consented schemes with buildings of 20 or more storeys.

1.51. It is therefore considered that any building taller than eight storeys will not be typical of the existing built environment or existing typologies within Bexley, and should be defined as a 'tall building' for the purposes of London Plan Policy D9 and Draft Local Plan Policy DP12.

Locations suitable for tall buildings

1.52. The Draft Local Plan maps out locations where tall buildings are considered to be suitable in principle, subject to detailed design proposals as part of development schemes.

1.53. These locations are tightly drawn around Abbey Wood Village local centre and Lower Belvedere district centre. Both town centres are new designations, representing the Council's ambition to encourage new sustainable development within these areas. The areas have been identified as

appropriate for higher density development in response to the significant uplift in public transport connectivity represented by the arrival of the Elizabeth line (Crossrail). Terminating at Abbey Wood, Crossrail will be just one stop on the existing Network Rail line from Belvedere. Crossrail brings these areas to within 11/14 minutes of Canary Wharf and 23/26 minutes of the West End, respectively.

1.54. The Council's ambitions for growth within Abbey Wood and Lower Belvedere is set out in the Growth Strategy (2017). The document sets out a vision for Abbey Wood as a new local centre anchoring a wider residential area, which will be renewed to provide high quality accommodation well served by local services and facilities, including access to improved green and digital infrastructure. It envisions Lower Belvedere as a new neighbourhood that will be created around the railway station and new town centre, providing a range of improved residential accommodation and served by a variety of local services and facilities.

1.55. Given the ambitions for growth within these areas, they are identified as being locations suitable for tall buildings. The locations are also identified because there is existing and planned high levels of public transport accessibility and access to other services. These ambitions are reflected in other designations and projects.

1.56. Abbey Wood is a key area within the Thamesmead and Abbey Wood Opportunity Area (OA). OAs are identified by the Mayor of London in the London Plan as significant locations with development capacity to accommodate new housing, commercial development and infrastructure linked to existing or potential improvements in public transport connectivity and capacity.

1.57. Thamesmead and Abbey Wood OA is subject to supplementary planning guidance for the area set out in an opportunity area planning framework (OAPF), adopted in 2020. The OAPF principally sets out an ambition for estate regeneration including intensified growth at higher densities than currently found, achieved in part with tall buildings. Abbey Wood is also included within the Abbey Wood/South Thamesmead Housing Zone, where funding and other support are provided by the Mayor of London to unlock significant housing potential.

1.58. Lower Belvedere falls within the Bexley Riverside OA.

1.59. The detailed locations are based on an urban design analysis of the areas around Abbey Wood Village and Lower Belvedere town centres. When determining the appropriate height of buildings, the Council considers issues including but not limited to: the location within the settlement hierarchy; prevailing building heights; the width of streets and spaces between buildings; the prominence of the site due to surrounding buildings and topography; local views; and environmental conditions at street level.

1.60. The detailed areas were also identified because urban design analysis indicates that they are not sensitive to taller buildings and they are locations where development would not cause overshadowing of homes, gardens, streets, and/or areas that could be developed in future.

Appendix 1: Draft Local Plan Policy DP12

DP1 Tall buildings and building heights

Borough-wide building heights

1. Typically, the maximum height of buildings shall not normally be more than:
   a) 45 metres within and near the town centres of Abbey Wood Village and Lower Belvedere, as set out in Part 2 of this policy;
   b) 25 metres in sustainable development locations as identified on the key diagram (Figure 1) outside of Part 3a of this policy; and,
   c) 15 metres across the rest of the borough.

2. For development proposals that include buildings taller than 15 metres, applicants must submit design appraisals with alternative options to demonstrate whether similar densities can be achieved using more traditional and human-scaled typologies including terraced housing, maisonettes, and courtyard apartments.

3. The proposed heights for buildings should reflect other design and policy requirements, including the requirement to have regard to the existing or emerging character and context of the area.

Tall buildings

4. Tall buildings in Bexley are considered to be more than 25 metres in height and must comply with the tall buildings policy in the London Plan. In addition, the applicant must demonstrate:
   a) sufficient access to public transport;
   b) access to local services and facilities, depending on the number and type of residents expected;
   c) the proposal will not have an adverse impact on local character, including heritage assets;
   d) the design considers topography;
   e) the proposal will not create adverse environmental impacts, including flood risk, creation of a wind tunnel, loss or lack of daylight and sunlight;
   f) the design is of the highest architectural quality; and
   g) the proposal will integrate into its surroundings at all levels, particularly at street level and into the skyline.

5. Suitable locations for tall buildings are within and near the town centres of Abbey Wood Village (defined in Figure 4) and Lower Belvedere (defined in Figure 5).