MAYOR OF LONDON

London Plan Guidance

Characterisation and Growth Strategy

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London Plan Policy	Policy D1 London's form, character and capacity for growth Policy D2 Infrastructure requirements for sustainable densities Policy D3 Optimising site capacity through the design-led approach Policy D9 Tall buildings Policy HC1 Heritage conservation and growth Policy SD9 (Part B) Town centres: Local partnerships and implementation
Plan making	Planning authorities and neighbourhood planning groups should undertake a borough or neighbourhood-wide character assessment to understand the characteristics, qualities and value of different places within their plan area. This assessment should inform plan making for documents that form part of the development plan for an area, including neighbourhood plans, forming the foundation of area-based placemaking strategies. These should also assess the capacity for change and growth in the different parts of the plan area. This includes identifying the different character types and character areas within an area, and identifying if there are locations where tall buildings may be appropriate.
Planning Application type and how the London Plan Guidance will be applied	Not directly applicable; however, a character assessment and growth strategy should be used to inform the design and capacity of a site (see Optimising Site Capacity: A Design-led Approach and Small Site Design Codes LPGs).
Who is this guidance for?	Planning authorities and neighbourhood planning groups should use this guidance at the plan-making stage to undertake a borough or neighbourhood-wide character assessment, and formulate a growth strategy and future area-wide vision for their local area. Specialists in urban characterisation, including social and built heritage and conservation officers, should be involved in the process set out in this document, and as such should refer to this guidance.

1 About this document

1.1 What is a characterisation and growth strategy?

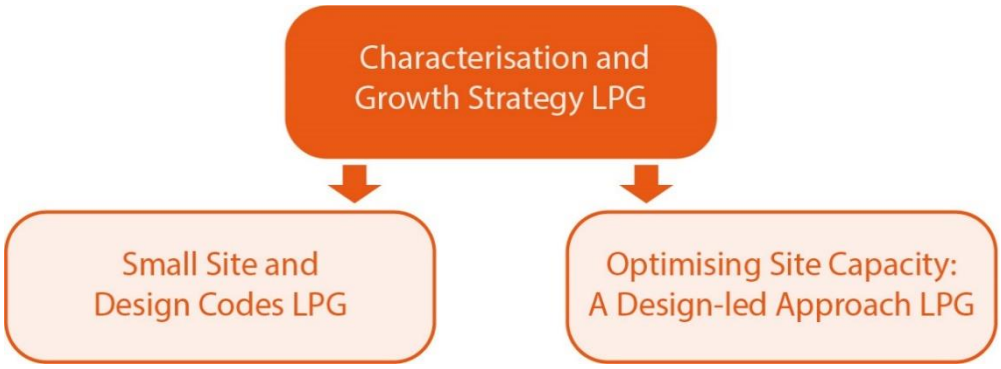
1.1.1 This guidance sets out the first step to a character-based, design-led approach to planning for development, and managing how a place changes over time. This includes identifying both the social and physical character of a neighbourhood or area within a borough to determine its capacity for growth. London Plan Policy D1 (London's form, character and capacity for growth), part A, requires boroughs to undertake an area assessment to define the characteristics, qualities and value of different places within the plan area to develop an understanding of different areas' capacity for growth. For the purposes of this guidance, this area assessment is referred to as a 'character assessment'. This process is a key part of the evidence base for local plans. A borough/neighbourhood-wide character assessment and growth strategy can be broken into three stages. These are shown in Figure 1.2.

1.1.2 **Character assessment (or study):** the process of urban characterisation created by considering the physical, social, cultural, perceptual, aesthetic and economic elements of a place. These combine to create a local identity for areas that share memories, association and activity. The assessment uses both qualitative and quantitative methods and is made up of:

1) a character survey and analysis (stage one)
2) evaluation and appraisal of this information (stage two).

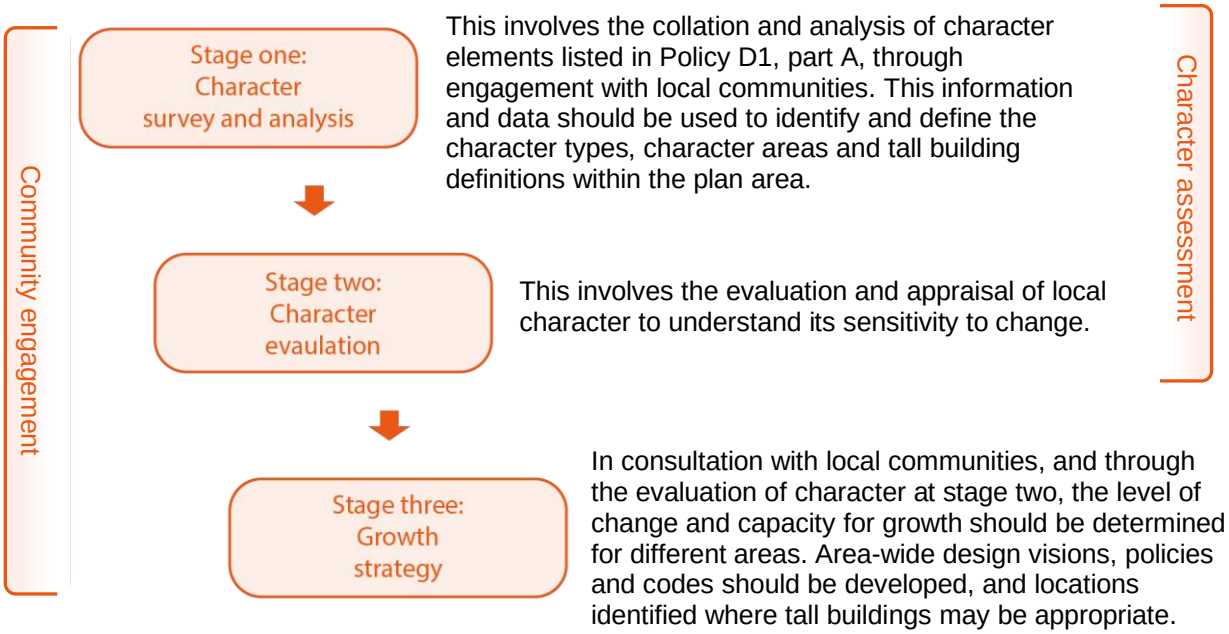
1.1.3 **Growth strategy:** Reflecting on the character assessment, a growth strategy (stage three) should be developed. This will form the basis of future local or neighbourhood plans, design codes, town centre strategies and site capacity assessments. This process involves identifying areas suitable for different levels of change and their capacity for growth; and should include the development of area-wide design visions and policies, with the involvement of local communities. Locations where tall buildings may be appropriate should also be identified as well as locations where they are not.

Figure 1.1 Relationship between the design LPGs



1.1.4 A character assessment and growth strategy should be used to inform development plan policies and the design-led approach to potential site allocations (see Optimising Site Capacity: A Design-led Approach LPG) and development of small sites (see Small Site Design Codes LPG). As the look, feel and use of places changes around the clock, the process of characterisation should also identify and reflect the changes in character that occur through the day and night, and across the week. This could mean considering how the use, character and accessibility of a place (e.g. operating hours of businesses, access to public transport, parks and public spaces) change to understand the needs of those who work at night and sleep during the day.

Figure 1.2 Stages of a character assessment and growth strategy



1.2 Digital approach to data collation and mapping

1.2.1 Geographical Information System (GIS) mapping and digital interactive tools should be used when undertaking a character assessment to assist public involvement and the presentation of findings. In particular, GIS software can be used to gather, manage, analyse and present the character of their local authority area in a single, layered digital map. This will allow maps and data to be updated on a periodic basis, as well as being easily and publicly accessible on interactive web-based maps.

2 Stage one: Character survey and analysis

2.1 Collation of character elements

2.1.1 The first stage is to collate information and evidence relating to the borough or neighbourhood's character. This may include existing information/data that is held or the identification of gaps in this data. A character assessment should cover the following elements listed in Policy D1, part A, of the London Plan (2021), as set out in Table 2.1.

Table 2.1 Character elements listed in Part A of Policy D1

Elements of character	GLA available data source
1) Demographic make-up and socio-economic data (such as Indices of Multiple Deprivation, health and wellbeing indicators, population density, employment data, educational qualifications, crime statistics) 2) Housing types and tenure 3) Urban form and structure (for example townscape, block pattern, urban grain, extent of frontages, building heights and density) 4) Existing and planned transport networks (particularly walking and cycling networks) and public transport connectivity 5) Air quality and noise levels 6) Open-space networks, green infrastructure, and water bodies 7) Historical evolution and heritage assets, including an assessment of their significance and contribution to local character. See the National Heritage List for England and the Greater London Historic Environment Record. 8) Topography and hydrology 9) Land availability 10) Existing and emerging Development Plan designations 11) Land uses 12) Views and landmarks 13) Social, cultural and commercial characteristics. This includes identifying the places and spaces that are valued by the community/different groups that contribute to a sense of place and identity. These are often intangible, but may also include commercial activity, town centres or business clusters that are not identified through the broad Development Plan designations, but which contribute to a sense of place, e.g. Green Street in Newham. The presence of formal and informal social infrastructure should be identified as part of this element.	Demographic analysis Demographic projections Planning Data Hub Census information scheme COVID-19 Resilience Dashboard Population Projections Explorer Long Term Labour Market Projections London's Economy Today Medium Term Economic Forecast Safestats London Rents Map London Public Land Map London Building Stock Model London EV charge points London Air Quality Map London Heat Map London Climate Risk Map London Cool Spaces Map London Urban Heat Island Map London Solar Opportunities Map London Street Trees Map London Green Cover Map London Green Infrastructure Focus Map London's Natural Capital Map London Schools Atlas High Streets Data Service and Partnership London Street Market Map Night Time Observatory London Cultural Infrastructure Map Young Londoners Fund WebCAT/TfL cycle routes

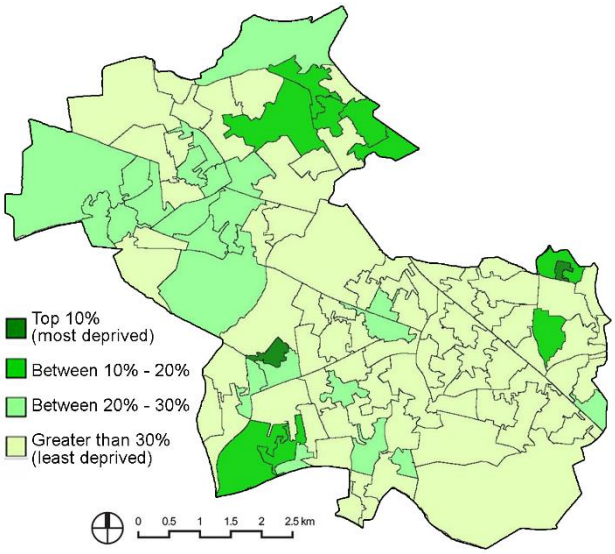


Figure 2.1 Demographic make-up and socio-economic data

Understanding local demographic make-up and socioeconomics is important to understanding the character, identity and needs of a place. This should include statistics on socioeconomics such as the Indices of Multiple Deprivation; population density; Joint Strategic Needs Assessments data; employment data; qualifications of the population; crime data; and demographics.

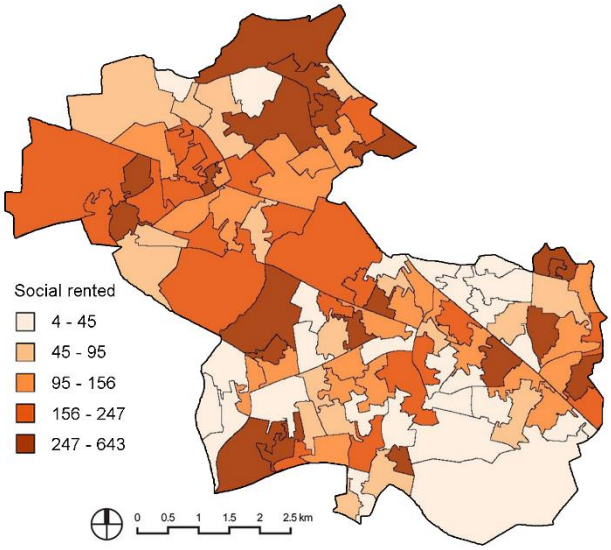


Figure 2.2 Housing type and tenure

Housing type and tenure can provide insight into an area's identity, character and history. The provision of a mix of housing types and tenures is important for delivering mixed and inclusive communities.

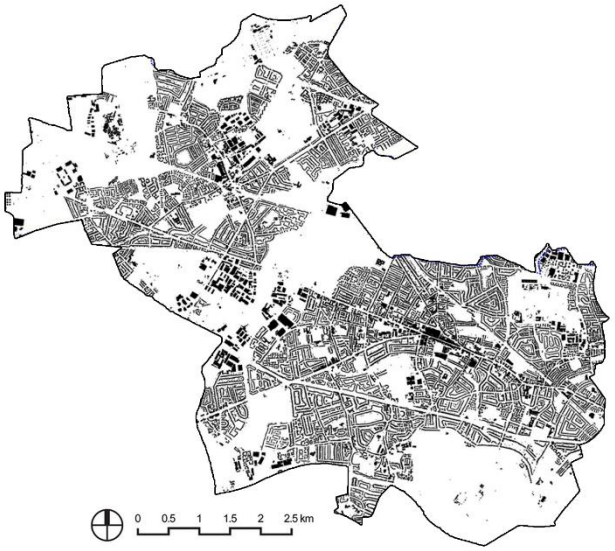


Figure 2.3i Urban form and structure – Built form

Data on the built form of an area should be surveyed and collated. The use of figure-ground plans can be helpful in understanding the relationship between built and unbuilt space. These can support an understanding of the existing urban grain, building coverage and built form of an area.

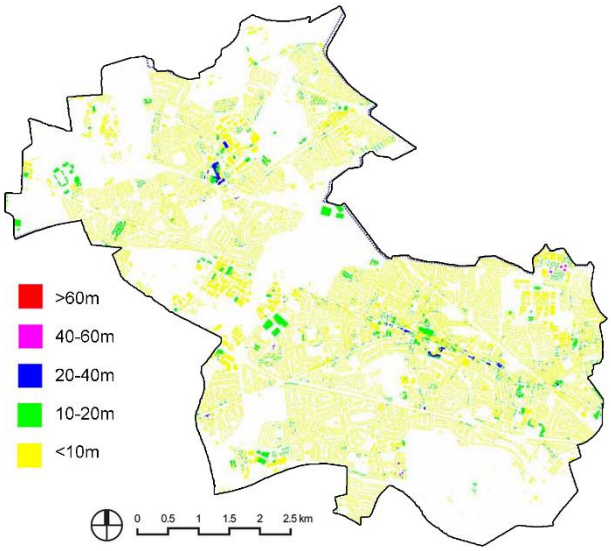


Figure 2.3ii Urban form and structure – Building height

A detailed assessment of building heights is important to understand the physical character of an area. Heights are also significant when determining the sensitivity of areas to different building heights of proposed future development. This information should inform the definition of a tall building in all parts of the borough (see section 3.3).

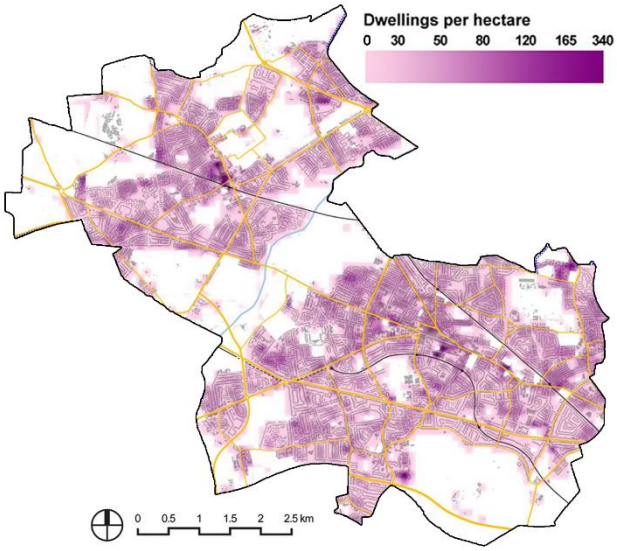


Figure 2.3iii Urban form and structure – Housing density

Density is an important characteristic of the built environment. In addition to an assessment of building heights, typologies and building pattern, it can provide a useful analysis of an area's built form. Housing density can also identify areas where greater intensification may be feasible and appropriate.

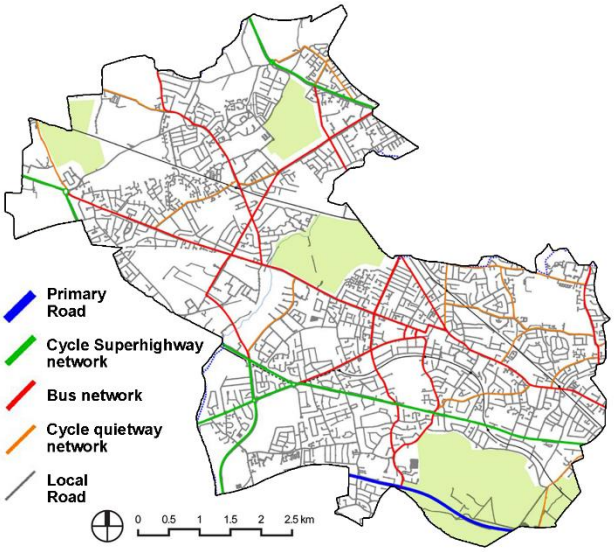


Figure 2.4i Existing and planned transport networks

Understanding the existing street patterns and hierarchies, in relation to how important streets are both for movement and as places, is critical to assessing the potential of linking new development with existing streets and infrastructure. This should include mapping the cycle and bus network, and future planned transport projects (See TfL's Strategic Cycling Analysis). Road safety data can identify where action is needed.

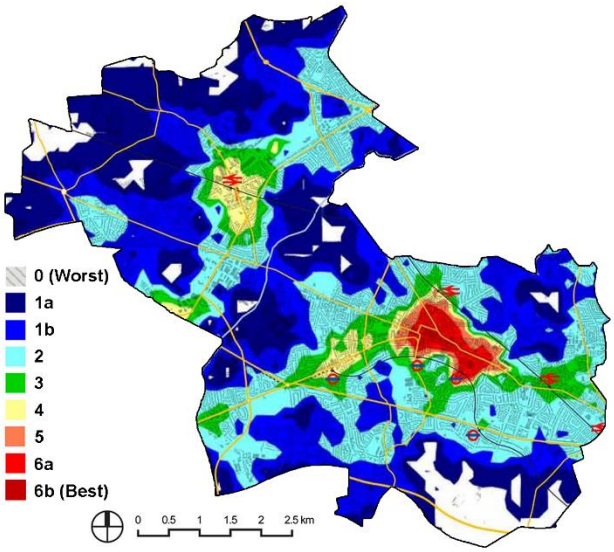


Figure 2.4ii Public transport connectivity

Connectivity measures such as Public Transport Access Level (PTAL) and Time Mapping should be used to identify opportunities or potential barriers to site optimisation. While areas of good connectivity tend to be suitable for higher levels of growth, identifying areas of poor connectivity may be useful in understanding where additional infrastructure is needed to unlock growth in these areas.

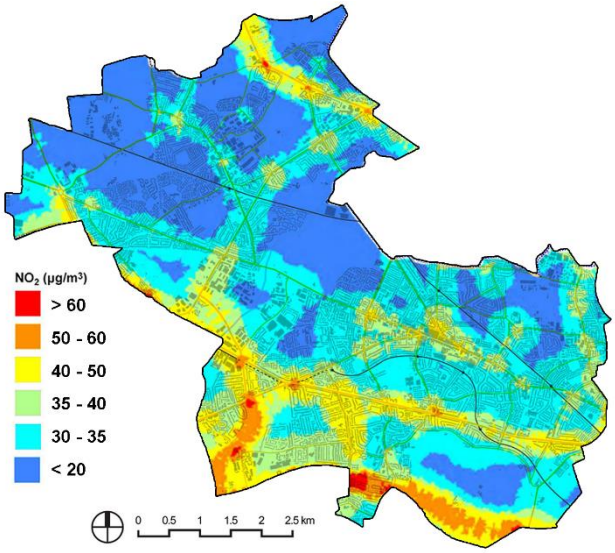


Figure 2.5i Air quality

Mapping local air quality can identify the risks, opportunities and constraints imposed by local air quality conditions. In areas of poor air quality, boroughs should identify ways in which new development and infrastructure can improve these conditions.

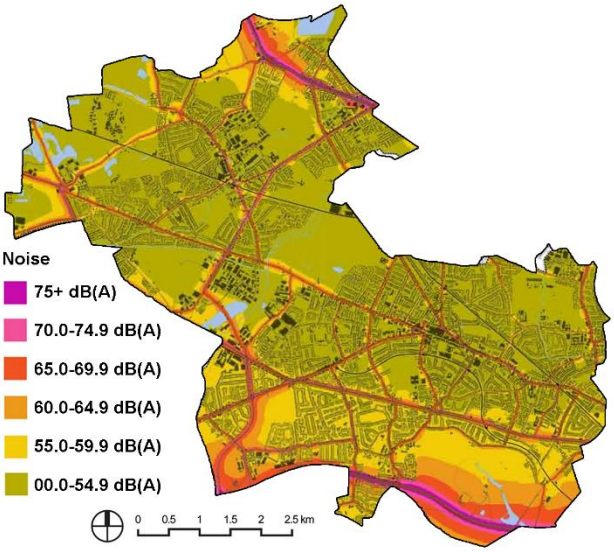


Figure 2.5ii Noise/sound levels

Places have “soundscapes”, just as they have “landscapes”, which can be of high or low quality. Sound can be positive or negative depending on the listener and the context. Sound type and level, from a range of sources, should be measured and its impact on the character of a place should be mapped, with ‘tranquil’ or ‘vibrant’ areas identified. In areas with high levels of unwanted sound, boroughs should identify ways in which new development and infrastructure can improve these conditions.

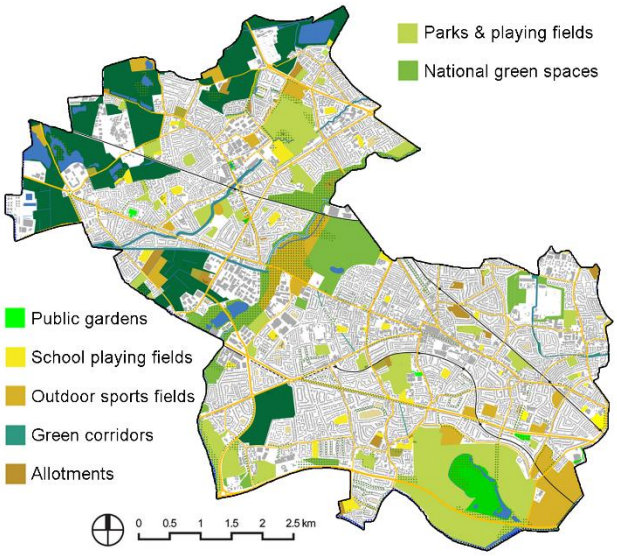


Figure 2.6i Open space networks and green infrastructure

Mapping green infrastructure can assist in understanding the locations that have a lack of green open space, or may be at risk of the urban heat island effect. It may also help identify areas that are important for well-being, social interaction, supporting biodiversity, sustainable urban drainage and reducing the urban heat island effect. This includes areas of formal and informal urban green spaces.

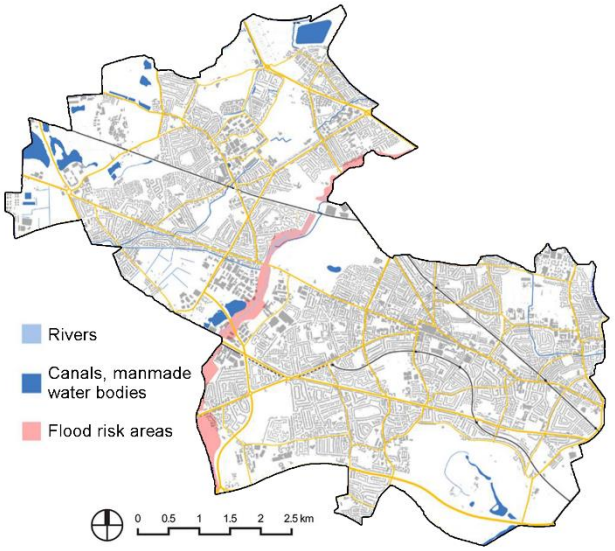


Figure 2.6ii Blue infrastructure and flood risk

Mapping waterways and blue infrastructure is important in understanding the landscape, ecology and local amenity of an area. This can be influenced by business, culture and leisure activities associated with waterways. Flood-risk mapping can help determine the relative probability of flooding, the location of water courses, existing flood defences and areas benefiting from flood defences.

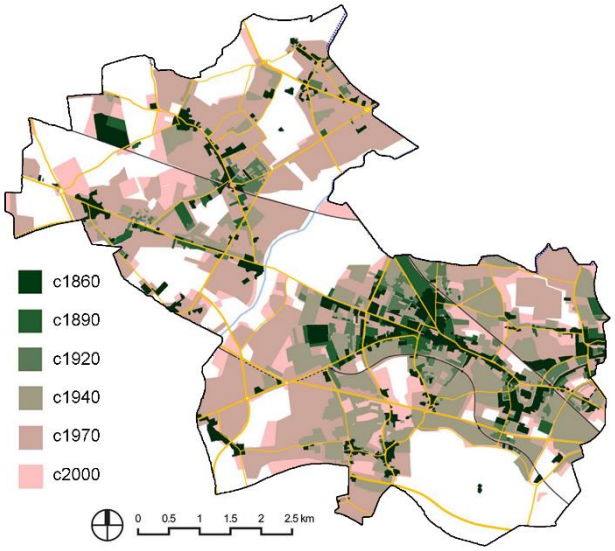


Figure 2.7i Historic evolution and urban growth

Historic maps of urban growth provide insight into how street patterns and urban centres have developed and evolved over time. This understanding can help identify relevant heritage assets requiring conservation and enhancement, and enhance future developments. Overlaying historical information with other forms of evidence may help reveal valued characteristics, or how new development may offer an opportunity to reinstate historic street patterns.

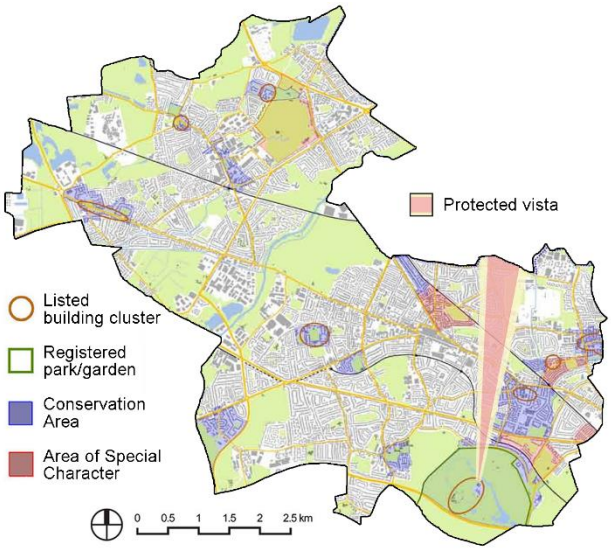


Figure 2.7ii Heritage assets

Heritage assets provide valued traces of the development history of an area; and contribute to the continuity of an area's identity and people's sense of belonging. Identifying and mapping social and built heritage assets and strategically protected views (including their extended background setting) are significant in providing an insight into an area's sensitivity to change. Mapping should include all non-designated and designated heritage assets.

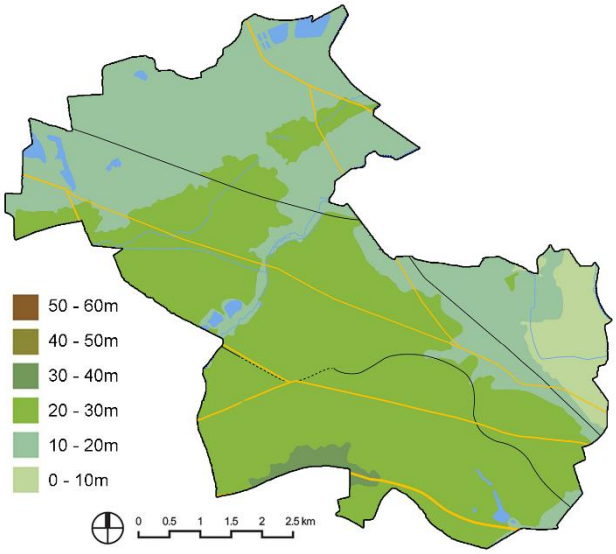


Figure 2.8 Topography and hydrology

Topography underlies and often determines the morphology of development in an area. This can also aid understanding of where and what building heights may be sensitively and practically accommodated. Where slopes are significant, they can limit street orientation. The identification of geological deposits can also assist in understanding natural hazards such as flooding and ground instability.

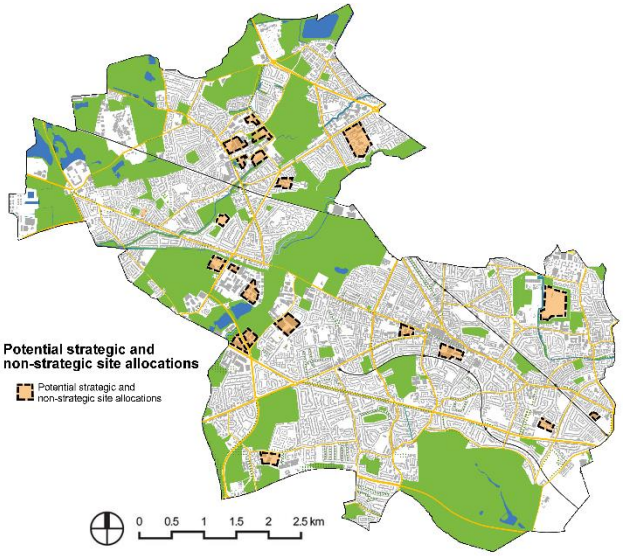


Figure 2.9 Land availability

The availability of land for residential development should be carried out through a Strategic Housing Land Availability Assessment (SHLAA). This process will determine the quantity and suitability of land potentially available for housing development (shown as the potential strategic and non-strategic site allocations opposite).

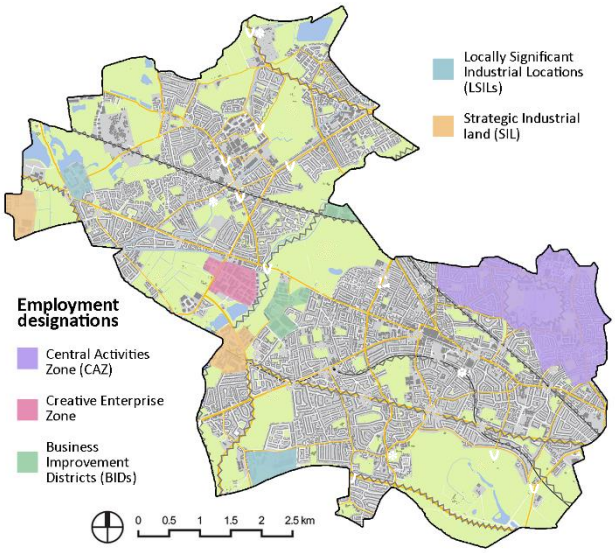


Figure 2.10 Existing and emerging Development Plan designations

Adopted and emerging Neighbourhood, Local and London Plan designations should be mapped. This map should be kept up to date throughout the analysis, and incorporate any aspects that are changed. It should include town centre, industrial or other commercial designations; Green Belt and Metropolitan Open Land (MOL); and local designations such as areas of special character or clusters.

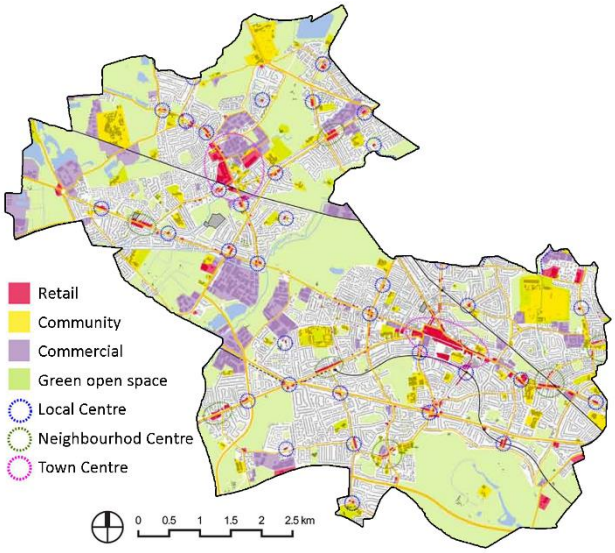


Figure 2.11 Land uses

Mapping land use and how land use activity varies over the day and night can be an important tool in understanding the character of an area. Insights into the mix of uses, at both ground and upper levels, can help identify local centres that are important to the '15-minute city' concept, and the liveability and sustainability of an area. Mapping land use and use classes can also highlight locations of industrial land, as well as community uses.

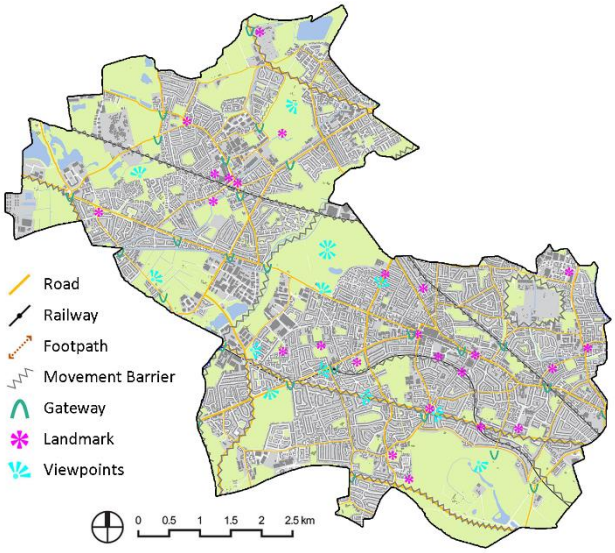


Figure 2.12 Views and landmarks

Legibility is the degree to which a place can be easily understood, remembered, described and, above all, moved through. This includes important landmarks and viewpoints, which are locally valued and provide a sense of location and local distinction within the larger townscape. Mapping movement can be important to identify key barriers to movement such as railway lines and roads.

Social, cultural and commercial characteristics

2.1.2 The social, cultural and commercial characteristics of a place are important contributors to its sense of place and identity. These can be compiled through the collection of 'Active Data'[1] and displayed on social value maps.

2.1.3 **Active data:** co-created community maps and data gathered from engagement with communities and stakeholders. It includes the collection of community-generated insight and dynamic data from engagement methods such as sentiment analysis and digital consultation platforms.

2.2 Character types

Typological approach to characterisation

2.2.1 Having collated the elements of character related to the built form of an area, practitioners should follow a typological/type-based approach within their character studies. This is a system of classification applied to urban fabric according to physical characteristics, e.g. land use, built form and historic origins, rather than a purely area-wide analysis that reviews the history of an area. This offers the most flexibility in terms of both the information that can be presented, and the uses to which it can be put.[2] A typological approach will enable the identification and mapping of 'character types' that will occur in several different places within the same borough or neighbourhood (see Figure 2.14).

2.2.2 **Character types:** the basic unit of historic characterisation, and the building types or typologies within an area. Types are generic, not geographically specific, and can occur in more than one location in the borough or neighbourhood. These types should be identified via the London Historic Character Thesaurus (LHCT). Examples include the *Metroland Estate* (see Figure 2.13 for the definition) and *Basic Terrace* types.

2.2.3 Each character type shares common features and characteristics such as their historical origins; block pattern/urban grain; and architectural styles and details. Where appropriate, these types will also form the basis of a coding plan for a borough or neighbourhood-wide small site design code.[3] Each of the identified character types should be analysed to identify its strengths, weaknesses, opportunities and threats.

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[1] See Better Places Toolkit for further information on active data.

[2] LUC, Historic England: London Plan review – Project No. 3: Characterisation of London's historic environment, August 2016

[3] See Small Site Design Codes LPG for further information on area-wide design codes.

London Historic Character Thesaurus

2.2.4 Practitioners should use the LHCT when identifying character types. This allows holistic consideration and monitoring of character, and how it is changing, across Greater London. This aims to address issues of inconsistency between boroughs' assessments (for example, giving different names for the same thing or boroughs being characterised at different levels of detail) by providing a clearly defined set of terms with which to record London's character. Articulating the character of different building types, and adopting a consistent approach and shared language, will facilitate an understanding of context, distinctiveness and what is truly significant about an area. This will also lead to detailed London-wide characterisation data. For further details on how to use the LHCT, see Appendix 1 and Appendix 2.

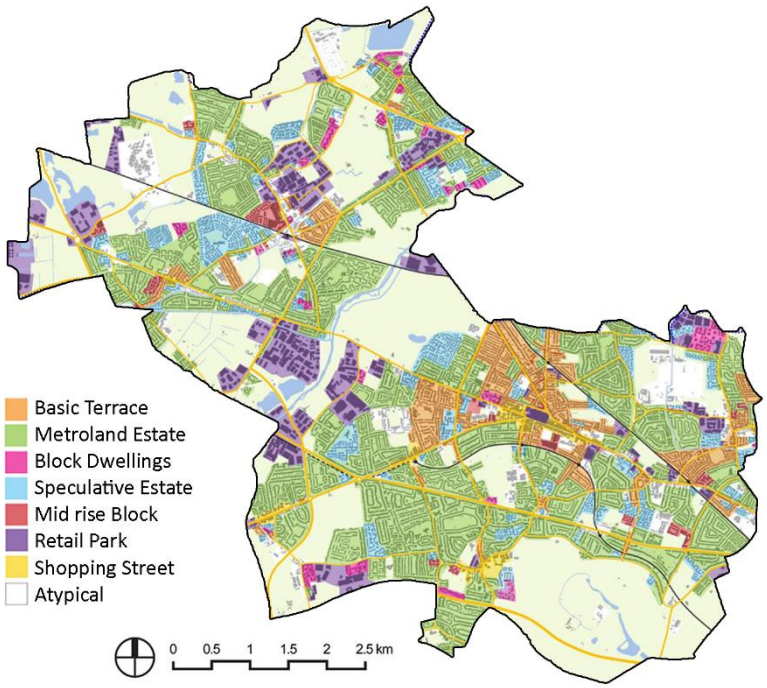
Figure 2.13 Screenshot of the Metroland Estate definition within the LHCT

Broad type	Intermediate type	Narrow type
Urban Settlement	Housing Estate	Metroland Estate

Narrow type scope note

Development of private houses on large tranches of land with easy access to suburban rail. Consisting of semi-detached dwelling houses with private front and rear gardens, inspired by the Garden Suburb movement. Typically in an applied half-timbered 'Tudorbethan' style, although Art-Deco inspired, restrained Moderne also features. Details and material finishes often higher quality or more decorative than contemporary estates designed for the working class, such as stained and leaded windows, 'sunburst' glazed doors. They were constructed from the 1910s with the majority built in the interwar period. Initially they were built by the Metropolitan Railway Country Estates (a subsidiary of the Metropolitan Railway Company founded to develop land owned by the company near their lines) but other speculative developers took up the style and built similar estates around the fringes of London near rail or underground lines.

Figure 2.14 Example map of character types



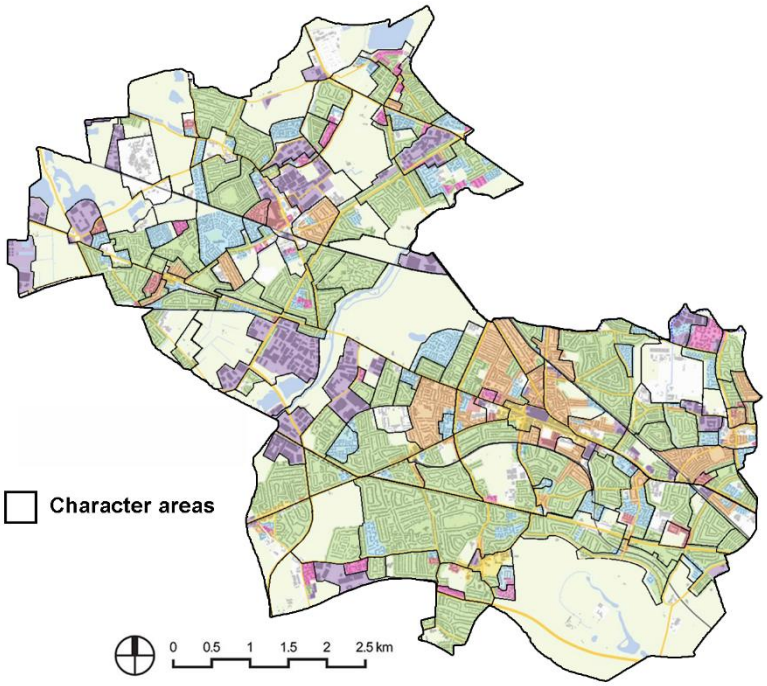
2.3 Character areas

2.3.1 Following the collation and analysis of character elements, and the defining of character types, the information should be reviewed, interpreted and evaluated to establish a set of distinct character areas or unique places within the plan area. This should involve an analysis of how the different elements of character interrelate and overlap, to reveal the distinct features and qualities which, in agreement with local communities, define each of those places as unique. The mapping of character areas in this way is critical for assessing an area's sensitivity to change and developing an area-wide vision with which local communities can identify (see section 4.5).

2.3.2 **Character areas:** single unique geographical areas and places that may contain a number of character types. Their boundaries tend to be based on a locally recognisable community, neighbourhood or town centre (such as Brixton town centre). Where a neighbourhood area has been designated, character area boundaries should be consistent with neighbourhood area boundaries.

2.3.3 When identifying character areas, the social, cultural and commercial elements of character are as important as the physical characteristics. This includes both the 'macro' socioeconomic data and the 'micro' social, cultural and commercial data (such as 'active data' – see paragraph 2.1.3). This can also highlight issues of segregation, exclusion and inequality, and the risks of displacement, which will be important to address when planning for change.

Figure 2.15 Example map of character areas



Defining boundaries of character areas

2.3.4 As set out above, practitioners should consider both physical and social characteristics when defining the boundary of each character area. These boundaries may be in places where, for instance, there are hard edges such as a river, stream, road or open space; but may also be in places where there is a noticeable change in the identity, sense of place, or association within an area. While this is a subjective process, surveying the opinions of local residents, businesses and other users of an area is an important part of it (see section 0). Other boundaries may be in locations where there is a noticeable change in the land use, character type, age of buildings or architectural style. The boundaries of character areas do not need to align with local ward boundaries if the character area assessment dictates otherwise. Given the role of conservation areas to manage areas of special character, these may also be appropriate boundaries of character areas.

2.4 Tall building definition

2.4.1 Boroughs should use the analysis of building heights across the borough to define in their development plan what is considered a tall building for their area, as required by part A of Policy D9 of the London Plan on tall buildings. This definition should identify the height at which a building becomes substantially taller than its surroundings, and causes a significant change to the skyline. Where there are areas or clusters of existing tall buildings within a borough, the height of these buildings should not be considered in isolation from the height of the wider area when considering what height is 'substantially taller than its surroundings'. This is because these building are already considered tall, and basing a definition solely on what is considered tall in relation to them would result in an inappropriately high definition.

2.4.2 Boroughs are not encouraged to use the definition as a way to control the height of buildings that are slightly higher than the prevailing height. It will be more effective to use design policies other than a tall building policy to manage these heights.

2.4.2 The whole borough needs to be covered by a tall building definition and this should be shown on a digital map. Often this can be in the form of one borough-wide definition; but, where considerable variations in context heights exist, different definitions can be used for different regions to reflect changes in building height across the borough. However, it is expected that boroughs will not have more than a few different tall building definitions for the whole borough. As a result, it must be clear if a proposed development in any part of the borough is a tall building or not, and thus determine if Policy D9 of the London Plan or any local tall building policy apply.

2.4.3 The definition should be stated as the total height of a building in metres from ground level to the top of the building including any rooftop equipment. A height expressed as an Above Ordnance Datum (AOD) level can also be

used, but this is likely to be less practical in boroughs with significant changes in elevation. The definition should not be less than 6 storeys or 21 metres[4] as measured from ground to the top of the building.

2.4.4 Tall building definitions should avoid using a relative height (such as 'twice the prevailing height') or subjective terms (such as 'substantially higher than the neighbouring buildings'). Not only are such definitions unclear, they could also result in a building of less than 6 storeys being considered a tall building, which would not be in accordance with Policy D9 of the London Plan. Multiple definitions should not be used for the same area. The tall building definition should not be misinterpreted to mean that all buildings up to this height are automatically acceptable. Such proposals will still need to be assessed in the context of the whole of Policy D9, together with the rest of the development plan as a whole and any other material considerations.

2.4.5 Boroughs should also consider the cross-borough/boundary implications of their tall building strategy, and collaborate with relevant boroughs where necessary. This process should consider views including strategic and local views (including their extended background setting areas), World Heritage sites, other heritage assets and the character of nearby neighbourhoods.

[4] This figure of 21m assumes a floor-to-ceiling height of 3 metres for the uppermost storey, and is equivalent to the London Plan definition of 18m from ground level to floor level of the uppermost storey.

2.5 Engaging local communities

2.5.1 Boroughs and neighbourhood planning groups should engage with local communities and interested parties at key milestones throughout the plan-making process when undertaking a character assessment. This should include engagement during the collation of character elements, and when checking and refining the findings of a draft character assessment. This collaboration offers the opportunity to learn from local knowledge and gather evidence about what people value within an area. It may identify aspects of urban character and identity that might otherwise have been missed. Workshops, surveys and digital tools and apps can be used to capture and map the opinions and contributions of local communities on the character, identity and lived experience of an area. This may include, for instance, visual preference surveys for understanding preferences in street scenes, architecture and character at different times of day and night. This process can help identify the boundaries to different character areas (see paragraph 2.3.4); aspects such as locally valued heritage, cultural and community assets; and less tangible characteristics, such as light and soundscapes, which may be unique and valued within an area by different community groups. Following the analysis of information collated, further engagement with local communities will allow an opportunity to verify the findings with those who live and work within the area.

2.5.2 Practitioners should consult and engage with a diverse range of participants from local communities, including businesses, landowners, interested parties and groups that are usually under-represented. Using a range of techniques, and scheduling activity at different times of day and night, and in different locations, to reduce barriers to participate and target under-represented groups can assist in gathering feedback from, and therefore planning for, the whole community.

2.5.3 Where statutory neighbourhood planning groups exist, boroughs must work with them and should have a clear, co-designed and managed process to arrive at a shared characterisation and growth strategy. This process, and the role different participants can play, will depend on the stage of neighbourhood planning that has been reached.

3 Stage two: Character evaluation

3.1 Sensitivity assessment and mapping

3.1.1 This stage involves carrying out a local character appraisal on the different character areas to assess their qualities and sensitivities to change.

3.1.2 This assessment should be carried out on each character area identified during stage one rather than the character types. This should inform, and be followed by, an assessment to understand each area's sensitivity to change. This will help define the extent to which different areas of the borough or neighbourhood have a capacity to change.

Step one: Local character appraisal

3.1.3 Step one involves the appraisal of evidence and information collated at stage one to determine the current quality of place of different areas. Boroughs are encouraged to assess the heritage, environmental, social and economic value of each character area. These values are detailed below:

i) **Heritage value:** This relates to the coherence and extent of the historic environment, and can be split into evidential, historical, aesthetic and communal value.

ii) **Social value:** This relates to the tangible and less tangible cultural and social characteristics and landscape that contribute to a sense of place.

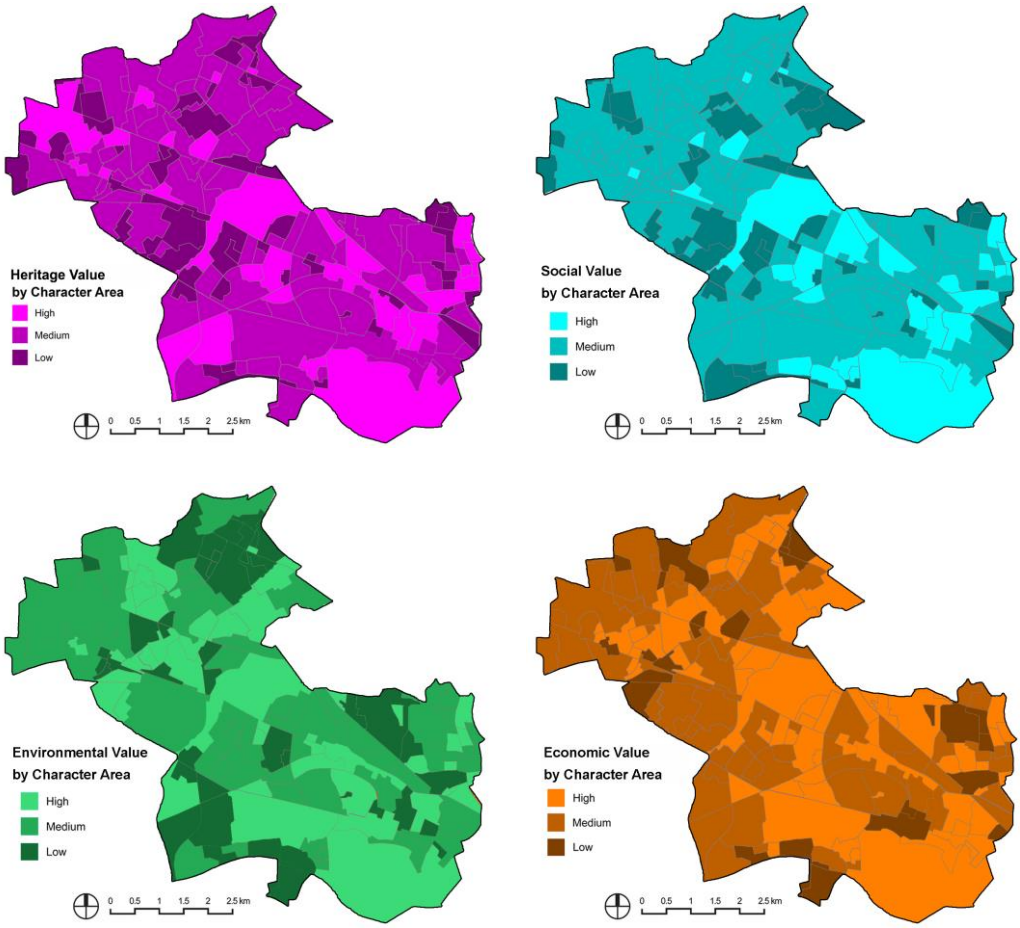
iii) **Environmental value:** This relates to the coherence, quality and extent of the local environment, people's sensory experience of a place, and its natural assets.

iv) **Economic value:** This relates to the scale and diversity of economic activity and businesses in an area.

3.1.4 Using the criteria in Appendix 3, each area can be rated low, medium or high for each element of value. This should take into account the coherence and extent of the criteria listed; and help give an overall picture of the heritage, social, environmental and economic value of a place. This process should draw out the valued features and assist in understanding the liveability, sense of place and community, urban environmental quality, urban design and sustainability of different places to determine their qualities. Assessments of these elements of value can be mapped as shown in Figure 3.1. When undertaking this appraisal, practitioners should consider the interrelationship between these different elements of value, as the presence of certain characteristics may be valued differently, from multiple perspectives and/or may be mutually supportive/valued. For instance, heritage assets may have not only a heritage value, but social, environmental and economic value too.

Figure 3.1 Local character appraisal

This appraisal involves evaluating the heritage, social, environmental and economic value of different character areas



Step two: Sensitivity to change assessment

3.1.5 Step two involves a sensitivity assessment for each area using the criteria from step one. This assessment weighs the different criteria, and the value they bring to an area, to understand the type/s of change that each area may be sensitive to. Different areas will be sensitive to different types of change, and these should be determined and clarified at this stage. For instance, in an area of high heritage value, its built form and physical appearance will be particularly sensitive to change. In an area of high social value, its community infrastructure, assets and social cohesion and fabric of the area will be sensitive to change. Areas evaluated as 'high value' for each of the four elements will be the most sensitive to change, while those areas that have been evaluated as 'low value' for each element may be less sensitive to change. For areas evaluated to have a combination of high and low-value criteria (such as high heritage value and low economic value), they may be more sensitive to change in respect of certain types of change but less to others. This assessment should directly inform the identification of areas suitable for different levels of change (see section 4.2).

4 Stage three: Growth strategy

4.1 Consulting the local community

4.1.1 Following completion of a borough or neighbourhood-wide character assessment, local communities and businesses should be engaged and collaborated with on a series of design visioning, placemaking exercises to identify the following for each character area:

i) areas suitable for different levels and scales of change

ii) each area's capacity for growth

iii) if and where tall buildings may be an appropriate form of development.

iv) area-wide vision and policies for these different areas.

4.1.2 This process of community engagement and consultation is separate from the engagement on character and identity in stage one. At this stage, boroughs and any neighbourhood planning groups should work with communities and local businesses on how to accommodate change and growth in different areas. This collaboration should seek to ensure that any changes to the physical environment achieve an overall positive contribution. An area's growth strategy should help deliver strong and inclusive communities, and provide access to good-quality community spaces, services, amenities and infrastructure. This can be assisted through the use of data-led tools to understand the community's opinions on an area's local amenities and preferences in street scenes, architecture and character. Boroughs and neighbourhood planning groups should also ensure that all parts of a community are engaged with and their views taken account of.

Neighbourhood planning

4.1.3 Where an area has a neighbourhood planning group, development of the growth strategy must be a co-designed process informing both local and neighbourhood development plan documents (DPDs). Where a neighbourhood plan has been made for an area it takes precedence over non-strategic local plan policies where they are in conflict, unless they have been superseded by strategic or non-strategic policies that are adopted subsequently. The agreed growth strategy should also inform the housing requirement for designated neighbourhood areas.

4.2 Identifying areas suitable for different levels of change

4.2.1 Findings from the character assessment and evaluation should be used to identify a strategy for change in which the suitable level of change for each character area is defined. Areas can be categorised into one of the three scales of change: *conserve*, *enhance* or *transform*. This process should be based on the evaluation of character and results from the sensitivity assessment. A central component of a growth strategy will be to plan how an area's strengths will be further enhanced, and weaknesses mitigated or addressed. This categorisation of areas of change should be mapped to show the spatial distribution of these categories, so it is clear which category a particular location falls under (see Figure 4.7).

4.2.2 These categories are intended to be a useful indicator of the potential for an area to support different degrees of change; they are not intended to be a policy designation. This exercise should be used to support and inform in the setting of design visions, policies and parameters for different areas within the borough or neighbourhood, and should focus on placemaking as the long-term outcome. It should also inform the design-led approach to potential site allocations (see the Optimising Site Capacity: A Design-led Approach LPG). In particular, this exercise can help inform the form and massing of site allocations, and help indicate the scale of development that should come forward on windfall sites in these areas

Conserve areas

4.2.4 These are areas of consistently high quality and coherent character such as conservation areas and designated green spaces (such as MOL and greenbelt). These will include areas that are deemed to be of highly positive character. In *conserve* areas, change must be undertaken particularly sensitively to enhance the valued qualities and character of the area.

4.2.5 Development coming forward in *conserve* areas should draw on the predominant typology and architecture in the area and reflect this in its proposal. Materiality and detailing should reflect the local vernacular while development heights should closely resemble the prevailing height. For areas with a particularly rich diversity of architectural styles, Conservation Area Appraisals and Management Plans will also be useful.

Figure 4.1 Example of a conserve area

Figure 4.2 New development in a conserve area (before and after)

Enhance areas

4.2.6 These are areas of mixed design quality in which moderate change should seek to enhance the overall character of the area. The attributes that contribute to the positive character within these areas should be identified and articulated in an area-wide vision. This should inform development coming forward in these areas to ensure that these attributes are reflected in proposals. It may also be appropriate to identify existing aspects that negatively impact the character and, therefore, what new development should not reflect or repeat. While there is an opportunity for new forms of design and architecture in these areas, any proposal should respect and draw on the special and valued features of the existing area. The height of a new development should be sensitive to the prevailing heights in the area, although there may be opportunities for a transition in height on appropriate sites; and there is the opportunity for, for example, the materials and detailing to reflect the local vernacular. References should be drawn genuinely from the local context, where these positively contribute to the area.

Figure 4.3 Example of an enhance area

Figure 4.4 New development in an enhance area (before and after)

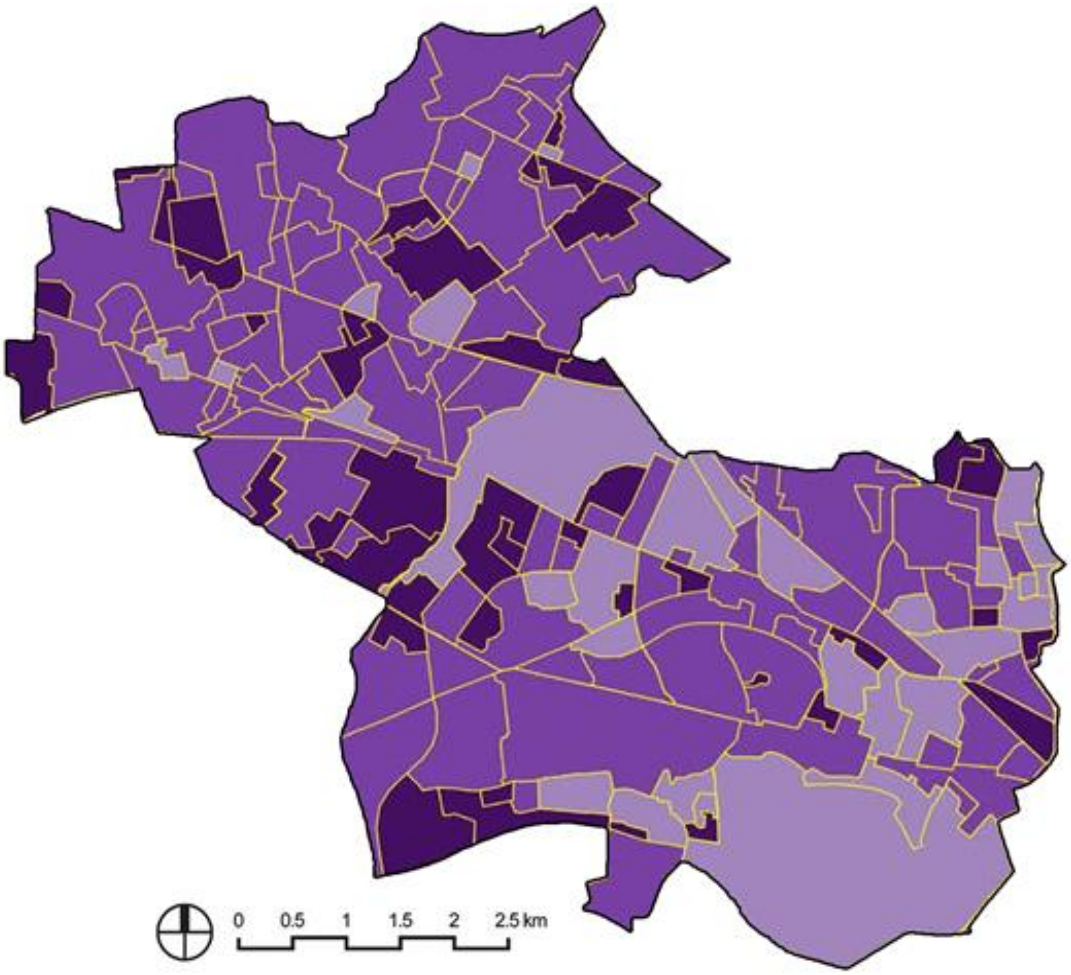
Transform areas

4.2.7 These are areas that have low-quality development of ill-defined character, and where an opportunity exists to establish a newly coherent character. New development should both enhance positive elements, where they exist, and improve the physical character through placemaking to create attractive new places. The new character should reflect the area-wide vision, which may be significantly different from the existing character. It should not result in car-dependent, sprawl-type development – indeed, there are important opportunities to change such developments that currently exist. *Transform* areas should intensify land use when accommodating change – and it is vital that the approach to higher-density development reflects good urban design principles. *Transform* areas will not necessarily be locations where tall buildings may be appropriate. Where an area includes heritage assets, or is within the setting of heritage assets, this does not exclude it as a *transform* area. Similarly, areas that have pockets of intact, high-quality urban fabric should not be excluded, but clear guidance should be given as to how the transformation of the area will retain and enhance these valued features.

Figure 4.5 Example of a transform area

Figure 4.6 New development in a transform area (before and after)

Figure 4.7 Example of an areas-of-change map



Conserve: areas that have a high-quality, well-established and coherent character that is sensitive to change

Enhance: areas that have a medium-quality, mixed character that would benefit from sensitive improvement through intervention

Transform: areas that have a low-quality, poorly defined character and/or where an opportunity exists to establish a new coherent character by enhancing positive elements

4.3 Capacity for growth

4.3.1 Following the identification of areas suitable for different levels of change, practitioners should determine each area's capacity for growth. An area's capacity for growth is different to the level of change envisioned, as it considers an area's capacity for greater or lesser levels of intensification. For instance, in certain areas where there is an opportunity to transform the character, there may be an extensive capacity for growth while in others there may be a more limited capacity. Similarly, there may be significant scope for growth in enhance areas, particularly where good transport connections exist. This will be dependent on the information determined during the character assessment (stage one) such as the scale and height of existing buildings and its transport connectivity (see Figure 4.8). This process will ensure that an area will optimise the benefits of good existing public transport or planned investment. The potential scale of growth should be assessed on a scale from limited to extensive growth using the criteria in Table A4.1 (in Appendix 4). This should overlay an area's level-of-change category to assist in determining the appropriate scale and form of development for an area. Areas with a higher capacity for growth will not necessarily mean tall buildings are appropriate – this will depend on the degree of change envisioned for an area (see section 4.2), and on whether it is subsequently identified as an area where tall buildings may be appropriate (see section 4.4). In the majority of areas with an extensive growth capacity, dense forms of mid-rise typologies are likely to be more appropriate.

Figure 4.8 Different capacities for growth

Development sites near these two conserve areas have significantly different growth capacity due to their existing urban form and accessibility to public transport

4.4 Determining if and where tall buildings may be appropriate

4.4.1 Policy D9 (Tall buildings) in the London Plan requires boroughs to identify locations where tall buildings may be an appropriate form of development in principle and their appropriate heights, subject to meeting the other requirements of the Plan. Having developed a tall building definition (see section 2.4) and identified potential areas of change, boroughs should conduct a tall buildings evidence base and a 'sieving' exercise to determine if and where buildings above this height may be appropriate. For boroughs that apply a relatively low definition of tall buildings, there are likely to be more locations where tall buildings may be an appropriate form of development, including in particular areas with good public transport accessibility (in accordance with Policy D3 B). Therefore, this stage in the process is likely to be a more extensive exercise than in areas that have a higher tall building height threshold definition.

4.4.2 This 'sieving' exercise should draw on the evidence provided by the character assessment and evaluation. Mapping where sensitivities lie will establish areas that need to be discounted from the outset, alongside areas with fewer sensitivities. The 'less' sensitive areas should then be 'sieved' to discount those areas where tall buildings are not envisioned. Where tall buildings are not appropriate due to sensitivities, or are not envisioned, the reasons and evidence for this should be recorded in a publicly available document. For the remaining areas, a suitability scoping exercise should be carried out to identify a finalised set of locations with associated appropriate heights, which could be expressed as maximums, in accordance with paragraph 3.9.2 of the London Plan. This suitability scoping stage should also include consideration of the likely effect of tall buildings upon the significance of relevant heritage assets and protected views (including extended background setting areas). These steps are set out below.

Step one: Sensitivity screening assessment

4.4.3 A sensitivity screening assessment should be carried out to identify locations where tall buildings would be inappropriate, and which therefore do not warrant further consideration. This should be carried out, with specialist input,[5] by ruling out locations where the existence of various planning constraints would mean that they are highly vulnerable and sensitive to tall buildings. This step is a high-level assessment of sensitivity to tall buildings and evidence gathering exercise and does not require a significance-based assessment of heritage harm. Boroughs should use the list of criteria in Table 4.1 together with any other criteria that is of local importance, to map the areas that each criteria cover and combine them into a single map. By visually illustrating these on a map, these criteria help to identify where tall

[5] This input may come from, for example, conservation or heritage officers.

buildings are likely to be inappropriate; and to indicate where tall buildings are not an appropriate form of development.

4.4.4 Generally, in areas where sensitivities to tall buildings have been identified through this 'sieving' exercise, they should be regarded as inappropriate and should be discounted. Boroughs should document the reasons and evidence why tall buildings are inappropriate in these areas, as this will be useful for determining any planning application for a tall building outside designated tall building areas. The locations shown to have limited sensitivity can then be carried forward to the next step in the assessment process.

Table 4.1 Sensitivity to tall building development criteria[6]

Sensitivity to tall building development criteria	
1) Areas that do not have any buildings that exceed the area's tall building definition[7] 2) Within or near Areas of Special Local Character 3) Within a Conservation Area or likely to affect the setting of a Conservation Area 4) Affecting a protected viewing corridor or its Wider Setting Consultation Area and the extended background 5) Within Green Belt or MOL	6) Within green open spaces and nature reserves 7) Physically affecting or within the setting of any designated heritage assets; this may apply to some non-designated assets too 8) Poor levels of public transport accessibility (for example, PTAL score 0-3) 9) Within the Thames Policy Area 10) Within the setting of a World Heritage Site 11) Within a Civil Aviation Authority Public Safety Zone

Step two: Alignment with area-wide aspirations

4.4.5 Next, boroughs should align remaining areas of their borough with the aspirations of each character area. These aspirations should be informed by the evaluation of character (stage two), level of change, capacity for growth and local community feedback for each area. In areas where tall buildings are not envisioned, either due to sensitivities or a consensus through the plan-making process, the reasons and evidence for this should be documented, and alternative typologies should be planned for. This documentation will be useful evidence in circumstances in which a tall building is proposed within an area where it is not envisioned.

4.4.6 Mid-rise developments can often offer an optimum design solution for delivering higher-density development in both areas where tall buildings are and are not appropriate. Mid-rise developments may also provide better opportunities for different households – for example, children and young

[6] Where necessary, boroughs may wish to add additional criteria.

[7] In circumstances where a large area is low-rise, and of poor urban character and form (such as some industrial/distribution sites or big box retail parks), there may be fewer sensitivities. In these cases, boroughs may wish to carry these areas forward to step two.

people's access to suitable play and amenity space. An example of where a mid-rise design solution has better optimised a site is shown in Figure 4.9.

Figure 4.9 Site optimisation

Two planning applications for Hook Rise South, Tolworth, Royal Borough of Kingston upon Thames

18 storeys – 705 dwellings

Refused (2016)

10 storeys – 950 dwellings

Approved (2018)

4.4.7 In areas with existing tall buildings, an assessment should be made as to whether further tall buildings (including the redevelopment of existing tall buildings) may be appropriate. This should follow the same process as above using the aspirations for each character as a basis for this assessment. Where a tall building or buildings negatively impact the character of an area, this existing tall building/s should not be used as a justification for the area being appropriate for tall buildings. Where further tall buildings are not appropriate, the sensitivity of any further tall buildings in these areas should be clearly set out when documenting the reasons for excluding them (see 4.4.4 above). These are likely to be isolated point blocks, such as the example shown in Figure 4.10.

Figure 4.10 Existing tall building/s

In this location, the mid-rise built form is a positive characteristic, and the existing tall building is an outlier. As a result, this existing tall building is not a justification for further tall buildings in the area.

4.4.8 If an existing tall building is considered acceptable in principle to be redeveloped, it should be identified in the development plan and maximum acceptable height for the site should be specified.[8]

4.4.9 For locations that have been identified as potentially suitable for tall buildings in their area-wide vision and policies, and that are not in areas sensitive to tall buildings (under step one and two), these areas should be taken forward to the suitability scoping exercise step below (step three).

Step three: Suitability scoping exercise

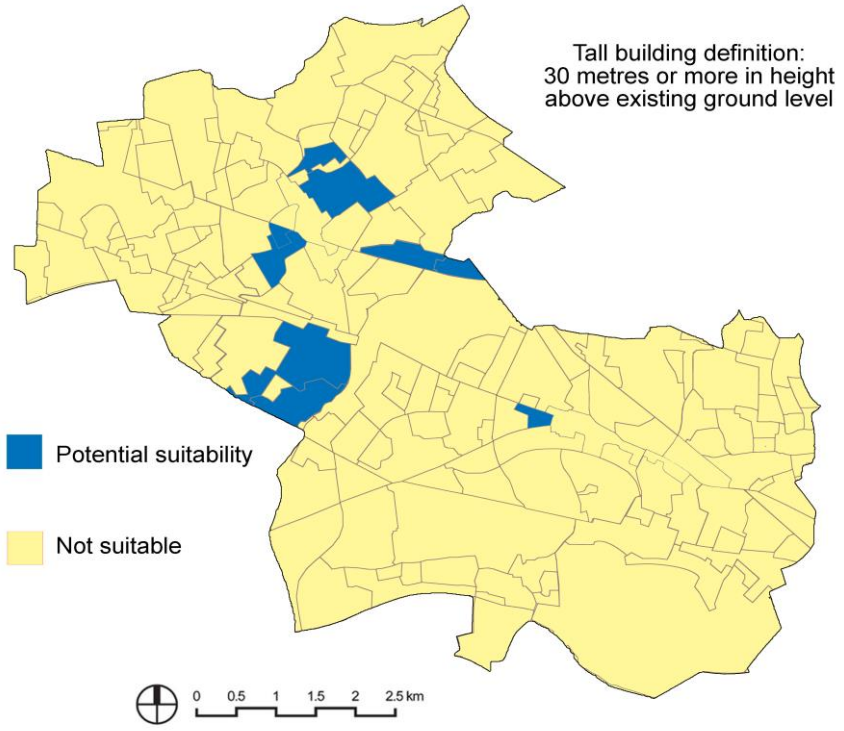
4.4.10 Having discounted areas of the borough where tall buildings are inappropriate for development, boroughs should assess the remaining areas (see top map in Figure 4.11) to identify where tall buildings would be detrimental; and, where relevant, to undertake an area-specific, heritage-led assessment of significance. Boroughs should determine the harm of tall buildings within these areas; and only identify areas where tall buildings could contribute positively to the character of an area. Where harm is identified, it should be documented as part of the borough's evidence base and included, or linked to, in the local plan. Information on harm will be important for development management decision-making if tall buildings are proposed in these areas.

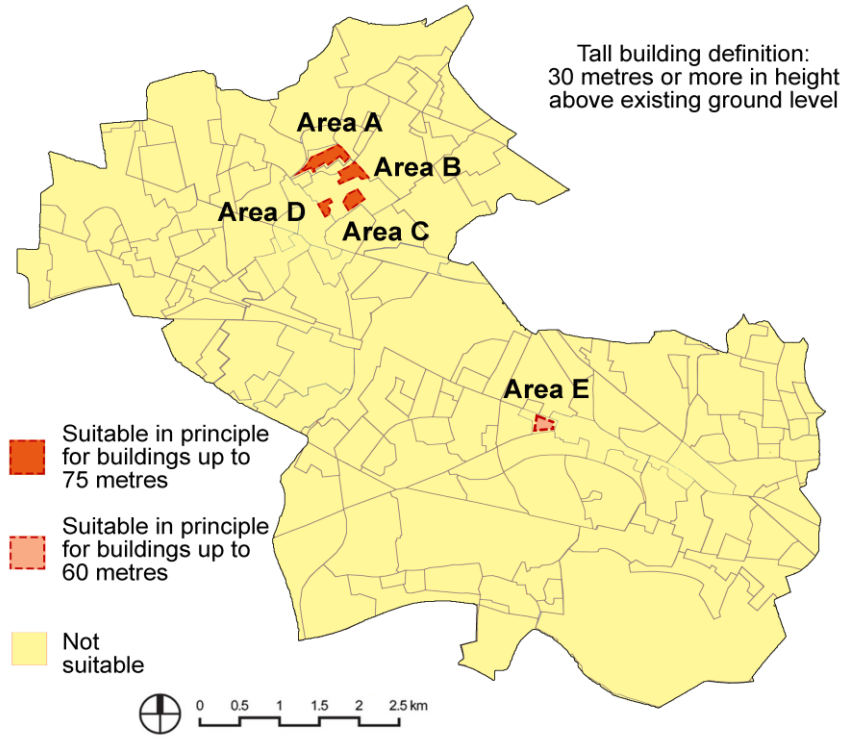
4.4.11 Carrying out visual impact assessments, through the use of 3D modelling software, is encouraged when identifying any potential impact or harm. This should include an analysis of sensitive long-range, medium-range and immediate views. Boroughs should pay close attention to an area's location in respect to conservation areas, strategic views and London's World Heritage Sites. This includes a consideration of any impacts to the backdrop of any strategic views. The greater the height of a tall building, the wider the area in which the building will be visible; and, therefore, the wider the area that will need to be taken into consideration.

[8] Redevelopment of a tall building will need to be carefully considered, weighing up the benefits of demolition, with circular economy principles in mind.

Figure 4.11 Tall building 'sieving' exercise

This exercise should identify locations inappropriate for tall buildings; and result in the identification of locations that may be appropriate for tall buildings (to be taken forward to step four)





Step four: Define locations and heights

4.4.12 Once locations where tall buildings may be appropriate have been identified, the appropriate heights for these locations, likely to be expressed as maximums, should be determined and identified on the Policies Map and within a DPD. These heights should preferably be expressed as both height above ground level and AOD to provide clarity for local communities, as well as accuracy for designers. Locations and heights should be defined as precisely as possible within DPDs, preferably on digital online maps, to provide as much clarity as possible for the decision-makers, the local community, landowners and applicants. Where there are different tall building definitions for different parts of a borough, these should also be shown on the Policies Map. In some cases, it may be appropriate to identify broad locations (see Figure 4.12) while in others, a more detailed approach may be necessary (see Figure 4.13). When undertaking this, practitioners should consider whether a cluster of tall buildings is envisioned; and if so, how height parameters should be set in order to preserve or create harmony within the skyline of the tall buildings cluster. Where limited evidence on an absolute maximum building height has been gathered, boroughs may choose to define an ‘appropriate’ rather than maximum building height. However, setting maximum heights is considered preferable, as this will provide greater clarity at the planning application stage. In addition, heights can also be stated as a range instead of a single maximum height. In all cases it should be clear in plans that these heights are not minimums to be exceeded.

Figure 4.12 Detailed height parameters for 'Site A' showing where tall buildings may be appropriate

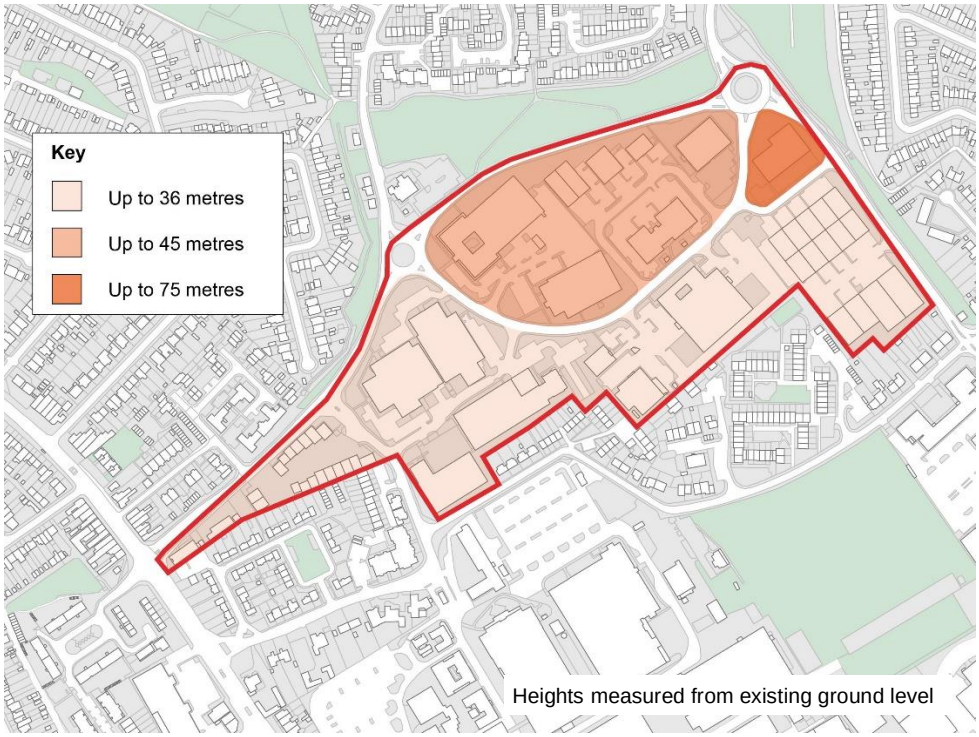
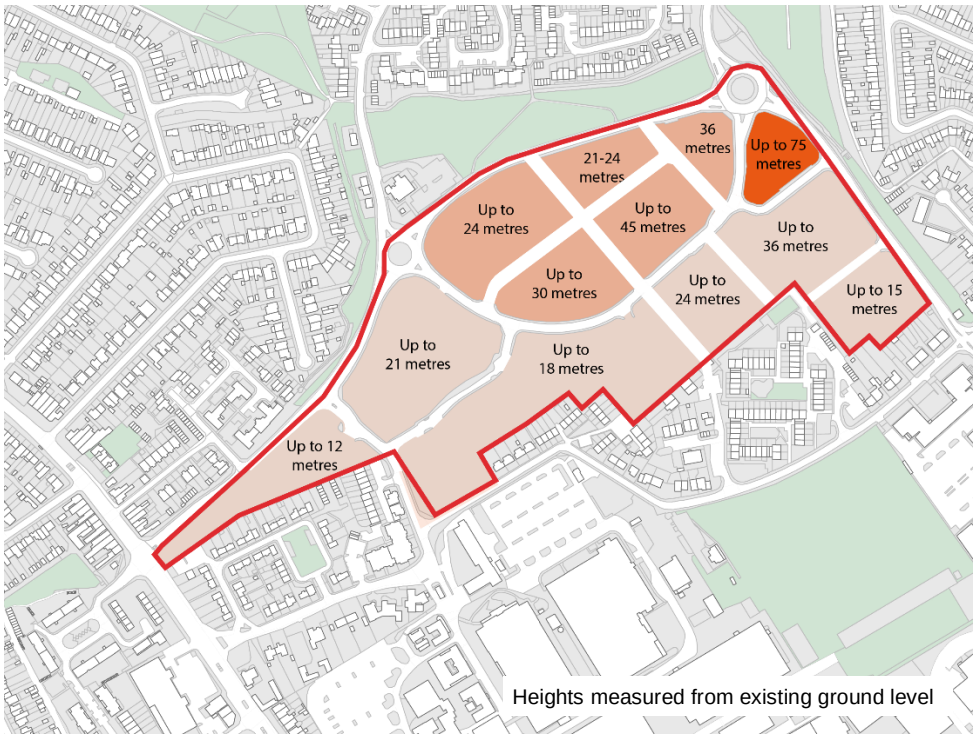


Figure 4.13 Boroughs are recommended to provide further detail on block locations and heights where necessary



4.5 Area-wide vision and policies

4.5.1 The last stage in a borough's growth strategy is the determination and clarification of an area-wide design vision and set of policies for each character area. This may include a set of design codes or parameters for an area. These should reflect an area's assessment and evaluation of character (stages one and two) and strategy for growth (stage three). Once determined, they should be contained within a Development Plan or a neighbourhood plan, and should set out the specific aspirations for future development – as well as setting parameters for the scale of development and change that is planned for. Accommodating the borough's growth requirements, including its overall housing target, needs to be considered in this process. These parameters, or in some case design codes, should be used to provide clarity and certainty about what is considered acceptable and/or desirable, in principle, in different areas within the borough or neighbourhood. They may include limitations on building heights, typologies and land uses; and the identification of retrofitting or refurbishment of notable landmarks, as well as changes to the transport infrastructure. Locations where tall buildings are, and are not, appropriate should also be reflected in the vision, policies and parameters for an area. This process must take account of the design-led approach in Policy D3, with higher-density development promoted in locations that are well connected to jobs, services, infrastructure and amenities by sustainable transport modes. This should be accompanied by embedding a Healthy Streets approach, such as the reallocation or repurposing of public realm to pedestrian-focused purposes.[9] While area-wide visions, policies and design codes or guides are encouraged for all areas, this will be particularly significant for areas where substantial change is envisioned.

4.5.2 Area-wide visions should be informed by an understanding of the demographic make-up and socio-economic data identified during the character assessment. Visions should take into account the different needs of specific groups within the community and the potential future population, with a particular focus on creating neighbourhoods that are inclusive and accessible (as required by Policy D5 of the London Plan) and, as a minimum, informed by equality impact assessments, as required under the Public Sector Equality Duty. They should also be informed by the community engagement and consultation that has taken place.

4.5.3 Using the information and evidence gathered throughout the characterisation and growth strategy process, boroughs and neighbourhood planning groups should ensure that new development respects, enhances and utilises these assets of character that contribute towards the local identity. Being a *transform* area is not the same as being an area identified as a location where tall buildings may be appropriate. Greater capacity and contribution

[9] See London Plan Policy T3 and the Sustainable Transport, Walking and Cycling LPG

towards the local character may be achievable through mid-rise development rather than tall buildings (see Figure 4.9 for an example). In areas undergoing significant change, or where there are multiple development sites, a coordinated approach or masterplan should be considered to optimise individual site development and opportunities to improve the wider area.

Boundary conditions

4.5.4 The potential for expanding existing areas of higher density in locations that are well connected to jobs, services, infrastructure and amenities by public and active transport modes should be explored before boundaries are finalised (Policy D3 part B). Once boundaries are decided, the treatment and management of boundary conditions between different levels of change should be carefully considered. This is to ensure that the character and setting of areas sensitive to change are not harmed; and that there is a transition between different character areas. In particular, the edges where *transform* and *conserve* areas meet should be carefully planned to ensure there is appropriate transition between the two areas. This also includes the boundary edges between boroughs, and therefore there is a need for close collaboration with neighbouring boroughs.

5 Stage four: Application of a character assessment and growth strategy

5.1.1 A character assessment and growth strategy should inform the spatial strategy within a local, or an area strategy such as an Opportunity Area Planning Framework. As such, it will be consulted on as part of the relevant statutory consultations.[10] Where it has been jointly developed with a neighbourhood planning group, it should also inform any neighbourhood plan.

5.1.2 The character assessment and growth strategy should also inform the following:

- town centre strategies
- heritage strategies and conservation area appraisals
- housing and economic land availability assessments
- the housing requirements for designated neighbourhood areas
- any design codes, including small site residential development (sites up to 0.25 hectares) design codes. For further information on this process, please see the Small Site Design Codes LPG.
- identifying a borough or neighbourhood's site allocations. As part of this process, a call for sites may also be useful to understand the availability and suitability of land. The capacity testing and future redevelopment of these sites should follow the design-led approach to determine the extent of development that can be accommodated sustainably. For further information on this process, please see the Optimising Site Capacity: A Design-led Approach LPG.

[10] For a local development plan document, this is Regulation 18 of The Town and Country Planning (Local Planning) (England) Regulations 2012. For Supplementary Planning Documents, this is Regulation 13 of The Town and Country Planning (Local Planning) (England) Regulations 2012. For Neighbourhood Plans, this is Regulation 14 of The Neighbourhood Planning (General) Regulations 2012.

Appendix 1 London Historic Character Thesaurus

A1.1 Scale and resolution of data collection

A1.1.1 Boroughs and neighbourhood planning groups should follow the approach set out in the LHCT user guide to collect and record the character types within their boundaries. Historic characterisation has several key principles underpinning the way in which it approaches understanding and mapping the landscape. These are outlined in Appendix 2.

A1.1.2 A list is contained within the LHCT of all the character type terms that have been developed for Greater London, along with scope notes that explain what each term covers (Appendix B of the document). These are broken down into three levels (e.g. broad, intermediate and narrow) in which the narrow level should be predominantly used when collecting and recording the character types. It may not be necessary or possible to identify the character type of every single building; however, boroughs and neighbourhood planning groups should aim to identify areas where there is a predominant character type. The intention is that this analysis should be carried out at scales below that of neighbourhood, i.e. several urban blocks. Defining the character type/s of finer grain areas such as town centres and the Central Activities Zone may take more time than in areas of recurring urban form (such as outer London suburbs, for instance). For these areas, previously commissioned character studies or appraisals may be useful when identifying the character types.

A1.2 Common character types

A1.2.1 To assist in defining the character types within an area, some of the most common character types have been included below in Figure A1.1. Images of these types have been included for ease of use and identification. Buildings that are the same character type, but differ in height, should be differentiated from each other. For example, the ‘basic terrace’ character type may include terraces of two or three storeys, etc, and a differentiation should be made between them. It is also encouraged, where possible, to differentiate between large areas where the built form of the same character type differs in architectural detailing or form. For instance, the images below show two two-storey terraces that differ in architectural form and roofline. This differentiation will assist in the development of area-wide design codes (see Small Site Design Codes LPG).

Figure A1.1 Examples of common character types

Examples of *Metroland Estate* character type:

Examples of *Basic Terrace* character type:

Examples of *Mid-Rise Block* character type:

Examples of *Block Dwellings* character type:

Examples of *Shopping Street* character type:

Appendix 2 Historic characterisation – key principles

A2.1.1 Key principles of historic character[11] are as follows:

i) That all of the landscape is historic, i.e. influenced by the direct and indirect actions of people. This includes apparently natural areas, such as woods, rivers and marshes, since these are always influenced in some way by human action.

ii) Historic characterisation is a 'complete coverage' approach; the whole of the area under consideration (not simply the obviously noteworthy components) is to be characterised.

iii) The character of an area, known as its 'current character', is recorded by analysing it and breaking it down into smaller areas that share a coherent developmental history.

iv) Previous character is recorded where it either influences current character (e.g. a recent housing development is the shape it is as it occupies the site of a former factory) or is important to understand the evolution of an area (e.g. a former dockland where docks have been infilled and can no longer be appreciated on the ground, but has still conditioned the overall development of the surrounding area, including factors such as the layout and shape of streets).

v) There is no inherent 'value' ascribed in the terms used for characterisation. Understanding of the value of areas or character types comes from analysing them and understanding their evolution, context and survival.

vi) Character type terms do not normally embed information on date in the term name. Many types are not explicitly tied to a specific period (e.g. terraced housing, wharves); greater flexibility in analysis can be achieved by recording date of origin as a separate attribute.

[11] As outlined in the London Historic Character Thesaurus (2021). These key principles have also been outlined by other studies and authors including: Clark, J., Darlington, J., and Fairclough, G., "Pathways to Europe's Landscape: European pathways to the cultural landscape 2000-2003", 2003; published by EPCL.

Appendix 3 Sensitivity assessment criteria

A3.1.1 Boroughs and neighbourhood planning groups should use the following criteria to assess the heritage, social, environmental and economic value of each character area identified.

Table A3.1 Assessment criteria

Heritage value	Economic value
• Near or within a concentration of heritage assets including listed buildings, local heritage assets, buildings at risk or recently lost buildings of merit; or otherwise likely to affect the settings of such assets. • Likely to affect a protected viewing corridor. This includes both strategic and local views, as well as the extended background of strategic views. • Near or within an area of archaeological value or historic importance; the setting of a World Heritage Site or conservation area; or the setting of high-quality and significant townscape features. • The quality, extent and variety of architectural periods evident and consistency of style. High-quality materials, detailing and surface treatment. • Evidence of a historic urban grain and street pattern still intact. • The range, quality, age and use of materials, detailing and surface treatment evident.	• Presence of businesses and economic activity including those that provide a diverse range of jobs. i.e., specific manufacturer, employer or centre that is responsible for a substantial proportion of local economic activity. • Diverse range of businesses and economic activity. This should include activity that takes place at night as well as during the day. • Clusters of a specific sector or interrelated businesses – for example, art galleries and antiques, performing arts or media clusters. • Businesses that are valued by a particular community – such as an ethnic or religious community or, for example, the LGBTQ+ community. • Presence of independent businesses or a 'localised economy' including local community shops and local markets. • Presence of Strategic Industrial Land. • Presence of a night-time economy.
High value	**High value**
Moderate value	**Moderate value**
Low value	**Low value**

Social value	Environmental value
• Intangible assets – presence of positive intangible characteristics that make a place unique or distinctive, and that foster a sense of belonging and identity. • Cultural assets – presence and significance of attributes, spaces and activities that celebrate a place's artistic, historic, cultural and creative character. • Community assets – presence and significance of highly valued community uses, spaces, services or infrastructure that meet the needs of the local community (such as pubs, community centres and public spaces). • Local features – presence and significance of physical features that are unique and that have local significance and meaning (e.g. public art, murals etc) to the local community. • Health and wellbeing – a place that encourages active travel and has overall positive benefits for the mental and physical health and wellbeing of Londoners. • Need and deficiency – a place with a wide range of economic opportunities, where the benefits of economic success are shared equitably. • Demography and density – sustainable densities supported by sufficient levels of infrastructure and access to amenities. • Employment – a place with a strong and diverse range of employment opportunities. A place with variously sized business units and affordable workspaces. • Town centres and high streets – presence of a vibrant town centre or high street that provides varied economic, civic and cultural offers throughout the day and night. • Presence of a protected Gypsy and Traveller site. • A soundscape that impacts positively on people's enjoyment of an area. • Education – presence and significance of high-quality and renowned educational and training facilities. • Housing types and tenure – a place with a variety of housing suitable to the needs of diverse communities, including affordable housing. • Best use of land – presence of successful places that make the best use of well-connected land. Low presence of unsuccessful, underutilised and poorly managed land. • Safety – a place that feels safe, secure and inclusive.	• Within Green Belt, MOL or green open space. • Concentration of high-quality green spaces, parks, gardens, mature street trees and other rich and varied biodiversity. This may include the presence of registered parks and gardens. • A place that enhances and celebrates its natural features, has a pleasant microclimate and is rich in biodiversity. • Efficient and resilient buildings and places. • A place with a strong sense of stewardship, which is made to last and can easily adapt future needs and lifestyle demands.
High value	**High value**
Moderate value	**Moderate value**
Low value	**Low value**

Appendix 4 Capacity for growth criteria

A4.1.1 Boroughs and neighbourhood planning groups should use the following criteria to assess an areas capacity for growth.

Table A4.1 Capacity for growth criteria

Capacity for growth
• Existing urban form such as density, height and urban grain • Existing high PTAL and connectivity • Planned or current infrastructure improvements, including improvements to PTAL and connectivity • Amount and extent of development sites/ areas (either in pipeline, planned or prospective) • Regeneration projects and initiatives in place or planned • Identified as an Opportunity Area, growth area or regeneration area • Recent development pattern and past levels of growth (likelihood this will continue) • Planning policy constraints limiting capacity for growth e.g. MOL or London Heathrow Airport Public Safety Zone
Limited capacity for growth
Moderate capacity for growth
Extensive capacity for growth

MAYOR OF LONDON

London Plan Guidance

Small Site Design Codes

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London Plan Policy	Policy H2 Small sites – Parts (B2 – 4)
Plan making	Where appropriate, planning authorities and neighbourhood planning groups should prepare area-wide housing design codes for a range of 'character types'. This can include identifying and mapping appropriate small sites for residential development, including site allocations; and listing small sites on brownfield registers. This could be brought forward through a Supplementary Planning Document (SPD).
Planning Application type and how the London Plan Guidance will be applied	This guidance only relates to design codes for residential use on small sites which are defined as sites of 0.25 hectares or less. These could be major or minor applications, depending on the number of dwellings as well as householder applications.
Who is this guidance for?	Planning authorities and neighbourhood planning groups should follow the process set out in this document at the plan-making stage when developing design codes for small sites. Once a design code is adopted for a specific area, boroughs and other decision-makers are expected to use these as a basis for their decision-making. Developers of small sites and their design teams should also refer to this guidance. Specialists in urban design, including heritage and conservation officers, should be involved in the process set out in this document and as such should to refer to this guidance.

1 About this document

1.1 What are small site design codes?

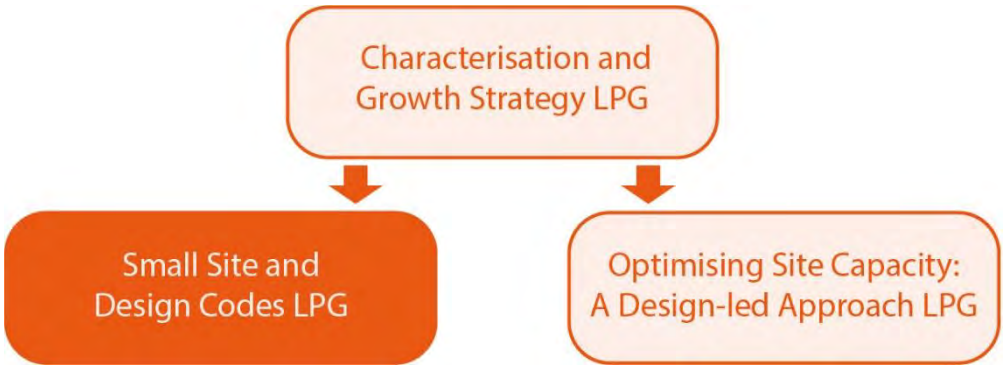
1.1.1 London Plan Policy H2 requires boroughs to prepare design codes for small sites where appropriate. These small site design codes are a particular type of design code that can be applied to a 'character type' within a given area. These design codes should proactively support well-designed new homes on small sites by providing clarity and certainty over the design and quality of small site residential development. They are a key mechanism to delivering a borough's small sites housing target, and an increase in housing through incremental development.

1.1.2 **Small sites:** residential developments on sites up to 0.25 hectares. Development on these sites may include new build; infill development on vacant or underutilised sites; upward extensions of existing buildings (including non-residential developments); residential conversions, and redevelopment of existing sites.

1.1.3 **Design codes:** a set of simple, concise, illustrated design requirements that are, wherever possible, visual and numerical to provide specific, detailed parameters for the physical development of a site or area.

1.1.4 This guidance only covers area-wide design codes for incremental intensification of small sites. These are most useful for site contexts where design features or design approaches are replicable – such as *conserve* and *enhance* areas, as set out in the Characterisation and Growth Strategy LPG. Design coding for larger sites, such as site allocations, is detailed in the Optimising Site Capacity: A Design-led Approach LPG. Boroughs or neighbourhood planning groups may also choose to develop site-specific briefs or design codes for small sites where necessary, but should refer to the guidance above when undertaking this. The Mayor provides support and advice for small developers, housing associations, and communities about developing small sites. Further information can be found here: https://www.london.gov.uk/small-sites.

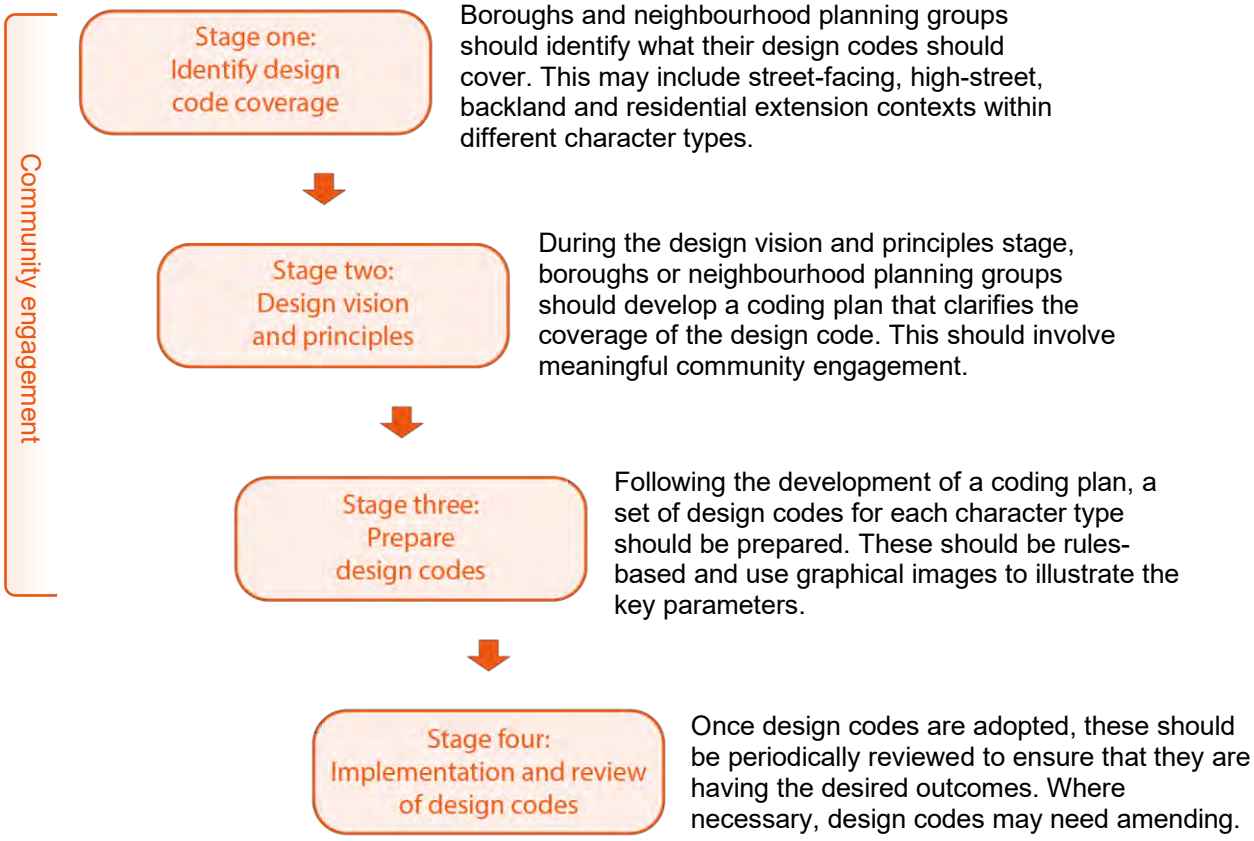
Figure 1.1 Relationship between the design LPGs



1.2 Stages in developing area-wide design codes

1.2.1 The development of area-wide design codes should be carried out using the four stages listed below, in Figure 1.2. These stages aim to ensure that area-wide design codes reflect the character and identity of the area and potential for change, as well as the views of all parts of the community. This document also provides four example design codes, shown in Appendix 2, that illustrate how this guidance can be used.

Figure 1.2 Four stages to developing area-wide design codes



Neighbourhood planning

1.2.2 Neighbourhood planning groups are encouraged to develop area-wide design codes within their designated neighbourhood area. Where applicable, this will include the identification of specific small sites; development of a coding plan and design codes; and the periodic review of these codes. Alternatively, neighbourhood planning groups may wish to collaborate on a borough's area-wide design codes and boroughs are required to collaborate effectively with any statutory neighbourhood planning bodies.

2 Stage one: Identify design code coverage

2.1 Identification of character types

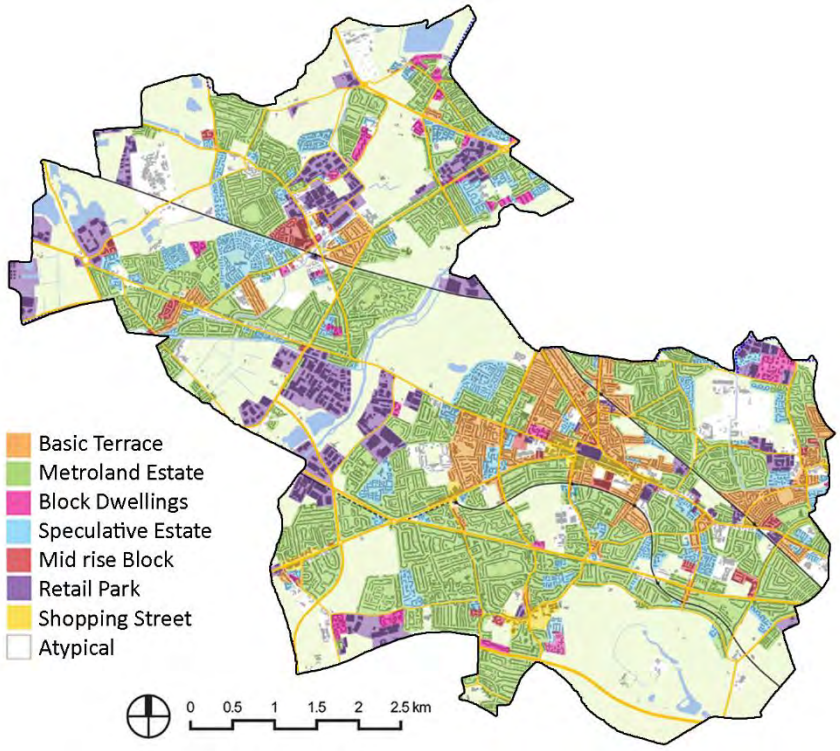
2.1.1 Small site area-wide design codes should use identified 'character types' as a basis for the application of the design codes. The process of determining these character types should be carried out during a borough's characterisation assessment; and is detailed in the Characterisation and Growth Strategy LPG.

Excerpt from Characterisation and Growth Strategy LPG (section 2.2)

Character types: the basic unit of historic characterisation and the building types or typologies within an area. Types are generic, not geographically specific, and can occur in more than one location in the borough or neighbourhood. These types should be identified through use of the London Historic Character Thesaurus (LHCT). Examples include the *Metroland Estate* and *Basic Terrace* types.

Each character type shares common features and characteristics such as their historical origins; block pattern/urban grain; and architectural styles and details. Where appropriate, these types will also form the basis of a coding plan for a borough or neighbourhood-wide small site design code. Each of the identified character types should be analysed to identify its strengths, weaknesses, opportunities and threats.

Figure 2.1 Example map of character types



2.2 Forms of incremental housing development

2.2.1 Boroughs and neighbourhood planning groups should choose to prioritise coding in areas for which the development of small sites is most likely to come forward. Incremental intensification of existing residential areas that are well connected – due to proximity to public and active travel infrastructure or town centres – is expected to play an important role in the delivery of small site development. As such, boroughs and neighbourhood planning groups are advised to prioritise design coding for character types located in or near town centres, particularly areas with Public Transport Access Levels 3-6.

2.2.2 Figure 2.3 and Figure 2.4 show some common opportunities for incremental housing development within the context of terrace, linear block and semi-detached housing. Where appropriate, it is recommended that certain small site contexts are coded for, for each character type selected. Each context will create different requirements for design codes which are discussed in the following sections. These contexts are:

- **street-facing context:** site with direct access to the street
- **high street context:** site situated on or near a shopping street
- **backland context:** site behind development, commonly vacant rear land
- **residential extensions:** extension of an existing development or dwelling to provide additional residential accommodation. This may be in the form of an upward, side or back extension.

Figure 2.2 Backland development

Reference: Goldney Mews, City of Westminster

Figure 2.3 Opportunities for incremental housing development within terraced and linear block context

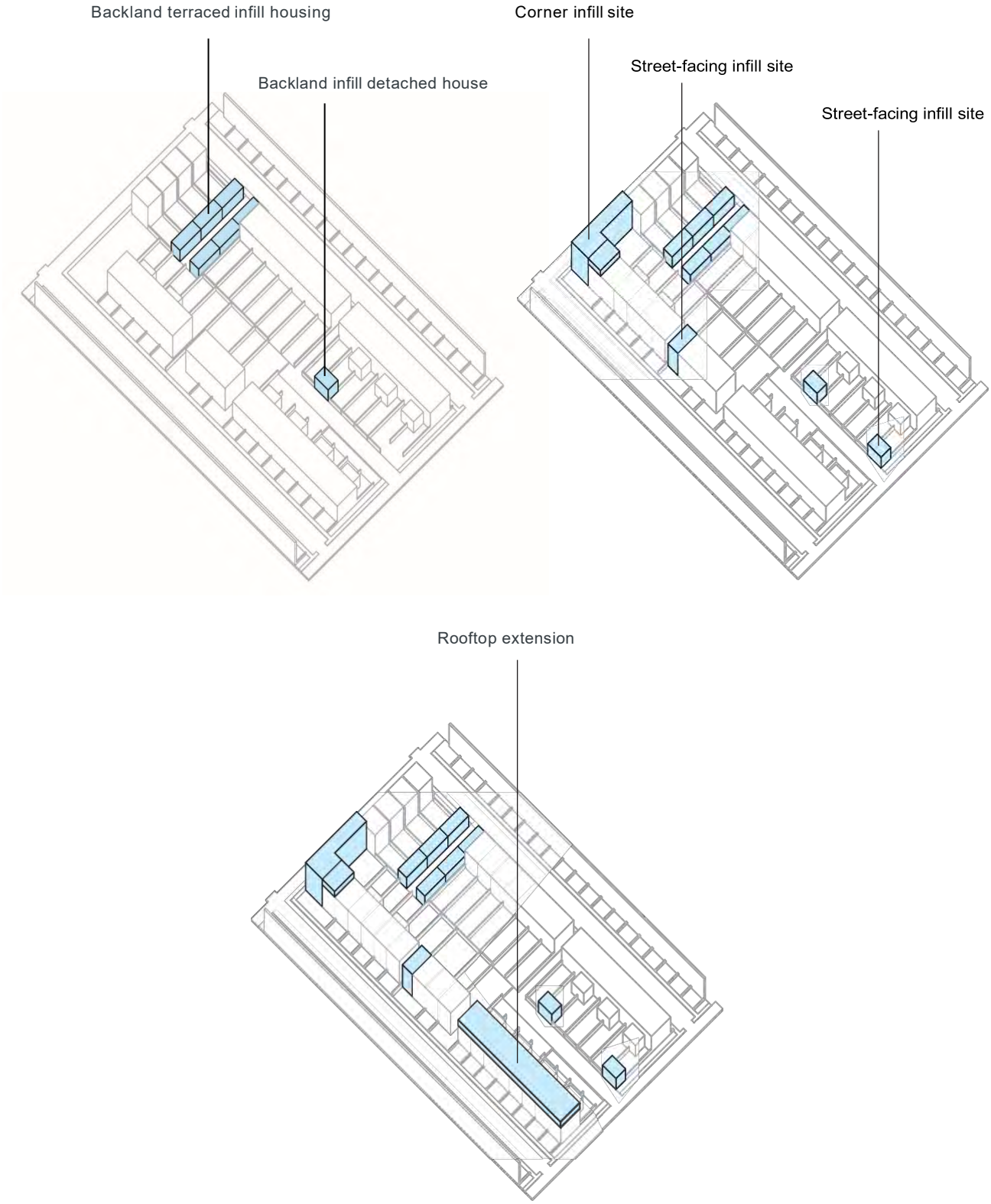
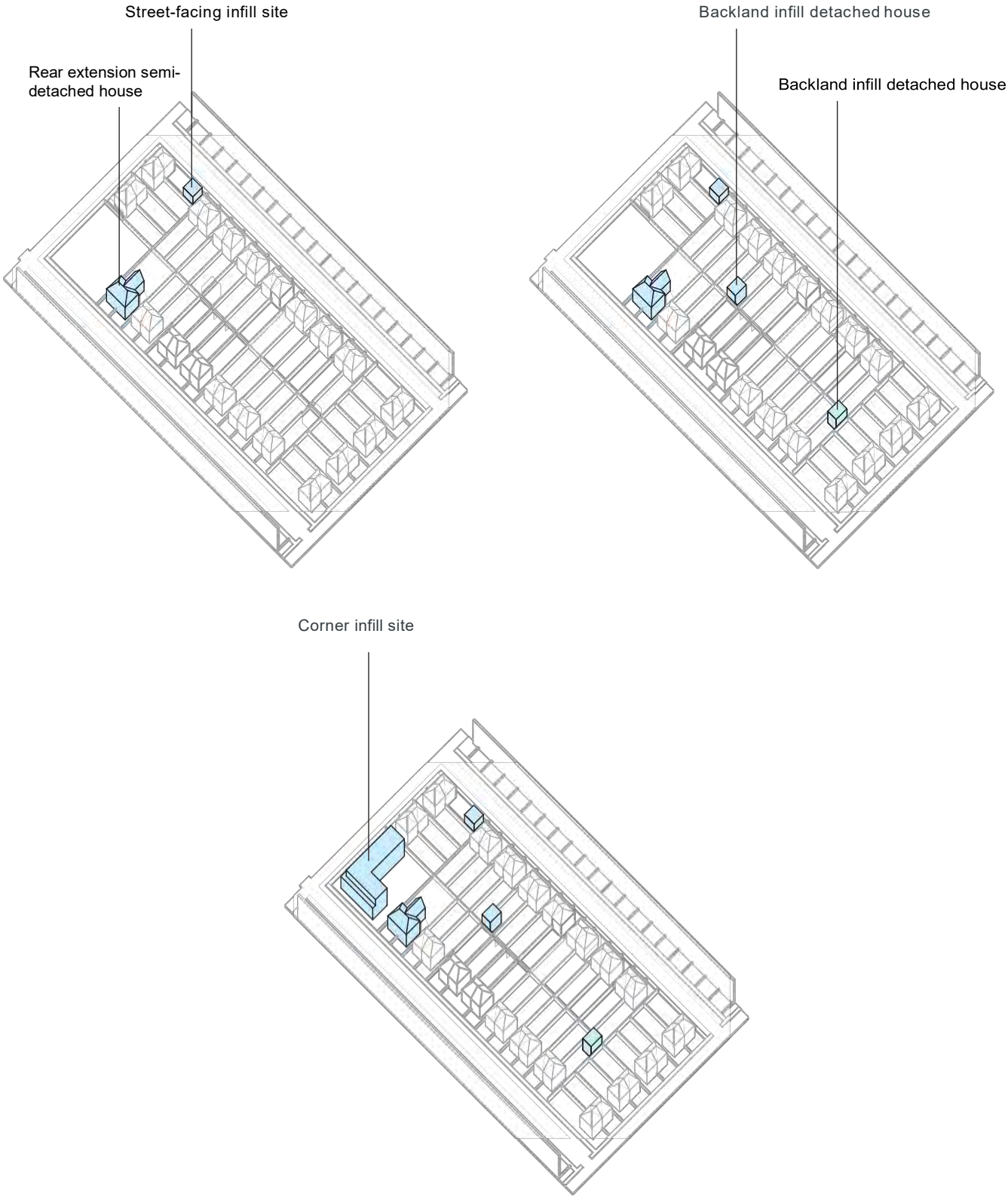


Figure 2.4 Opportunities for incremental housing development within semi-detached contexts



2.3 Street-facing context

Residential street infill

2.3.1 Residential street infill sites are plots situated on residential streets that have a street-facing aspect. These include infill sites in the middle or end of a residential street; and can include car parking spaces and gaps in the streetscape. On a street-facing plot, the character of the existing street scene will closely inform the relationship between the proposed development and the existing surrounding buildings. This character will inform the design codes on the frontage line, front-to-front distances, building heights, rear projections and roof forms.

Figure 2.5 Street-facing infill

These sites have direct access to the street and are often framed by two adjacent buildings. However, they may also be located at the end of a street, as shown in the image to the left.

Figure 2.6 Corner infill

Corner infill sites have direct access to the street and are most likely at road junctions. These corner sites often offer an opportunity to increase the height of development in relation to its surroundings, and act as marker buildings.

2.4 High street context

High street infill sites

2.4.1 High street infill sites are plots situated on or near high streets throughout London that do not currently optimise their site capacity or contribute positively to the streetscape. Appropriate design codes for these sites may permit upward extension or demolition and rebuild depending on the built quality of the site. Important design code parameters for this type of site include building height, frontage line, roof form, materiality, entrance arrangements and ground-floor use class, among others.

Figure 2.7 High street infill

This London high street, with a break in its three-storey frontage, offers the opportunity for redevelopment. Infill of such sites should continue to provide an active mixed-use ground floor, where possible, and reinforce the high street's strong frontage line with dwellings on the upper floors.

Figure 2.8 Surface carparks

Coupled with improved active travel measures, town centres and high streets should look to optimise surface carparks. These sites offer scope to redevelop as residential developments providing additional housing.

2.5 Backland context

Sites that do not have a street frontage

2.5.1 Backland sites are those without a street frontage, or where direct access to the street is limited. They include, among other things, residential garages that are located behind development and estate infill in areas that are not street-facing. These sites offer the opportunity for additional housing and improved public realm. While developments in street-facing contexts are generally governed by a clearer set of rules established by the urban order of an existing streetscape, backland sites require more innovation and reinterpretation to enable development. Consideration of access and servicing, and the inter-relationship between overlooking, privacy and daylight/sunlight, is paramount to the success and acceptability of new development in backland locations.

Figure 2.9 Residential garages

Residential garages should be prioritised for residential redevelopment. Development of these sites can reinstate the streetscape, reduce flood risk and encourage active travel.

Figure 2.10 Estate infill

Estate infill sites can offer the opportunity to reinstate street frontages by providing a frontage line in locations where this has been lost. Much of this space is often where direct access to the street is limited. Redevelopment of such sites is expected to include wider improvements to the estate, such as communal areas, open spaces and access and should not lead to a loss in green space.

2.6 Residential extensions

Upward, side and rear extensions

2.6.1 Sites suitable for upward, side and rear extensions include residential dwellings and housing blocks. A design code for this type of small site may be appropriate for a street or number of streets so to ensure consistency within an area. While a modest uplift on its own, the contribution of upward, side and rear extensions can be significant if done across a neighbourhood. A design code that is applicable to a number of streets is intended to contribute positively to the streetscape by encouraging an element of symmetry and pattern. It can also prevent situations where upward or side extensions are designed differently through the same street, which can negatively impact the streetscape. Applying a design code to a row of dwellings can also encourage a higher take-up of the design code.

Figure 2.11 Dwelling upward extension

A common example of an upward extension is a roof extension. Design codes for these must consider the implications if take-up is low and its impact on the streetscape. Permission to extend also provides the opportunity to attach planning conditions to refurbish the façade and the reinstatement of original architectural features that may have been lost since first built.

Figure 2.12 Linear and villa block extension

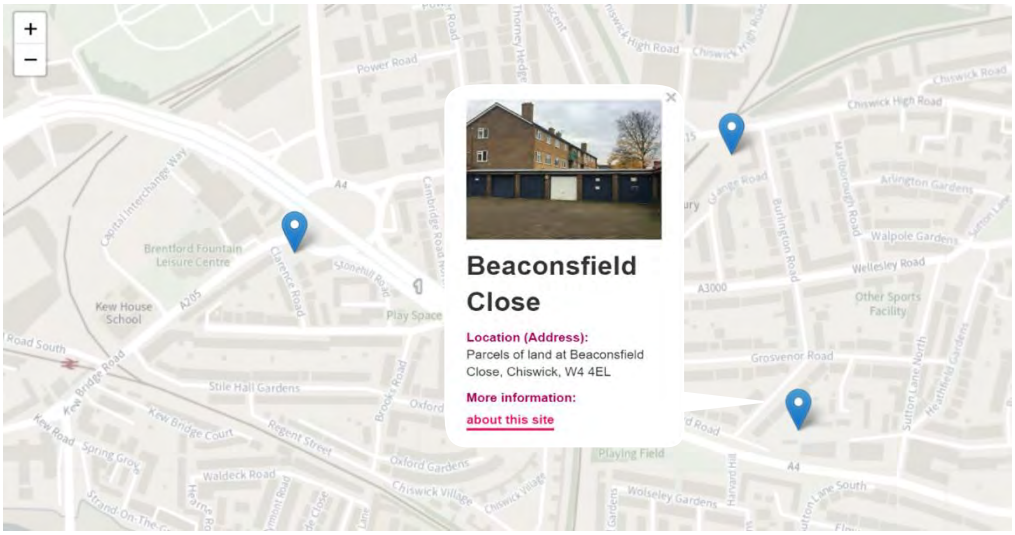
Often under one ownership, upward extensions of linear and villa blocks can avoid some of the complications that terraced or semi-detached dwelling extensions may experience. Permission to extend provides the opportunity to attach conditions to improve the existing façade and amenity space (see Figure A2.35). Regardless of permitted development rights, boroughs are encouraged to set out design best practice.

2.7 Identify and map specific small sites for development

2.7.1 It may be appropriate and advantageous to identify and map certain small sites for development. This is likely to be particularly appropriate for larger sites (those closer to 0.25 hectares in size) but it may also be relevant for a wider range of small sites, given the nature of the built-up area in London. Identification should be carried out in consultation with communities and landowners. Appropriate small sites may also be those that would have a significant positive impact on the character of the area if they were to be redeveloped. Examples could include vacant land, residential garages or carparks/surface parking.[1]

2.7.2 An area-wide design code will apply to these identified sites to encourage future development of these sites. Identified small sites should be listed and publicly accessible via a borough's online Brownfield Land register. A Brownfield Land register can help speed up the delivery of new homes by assisting developers to identify suitable housing sites quickly and easily. Boroughs and neighbourhood planning groups are encouraged to include these on online maps, as this will allow for information on each site to be kept 'live' and updated when sites are developed out. The GLA's Small Site Small Builders map is a good example of this type of tool. For some small sites, it may be advantageous to a develop a site-specific design code. Boroughs and neighbourhood planning groups should refer to the Optimising Site Capacity: A Design-led Approach LPG for details on this process. In a limited number of circumstances, they may also wish to allocate some of these sites.

Figure 2.13 Screenshot of the GLA's Small Site Small Builders programme portal showing identified small sites in west London



[1] For further information on identifying specific small sites, see the GLA's Small Site Small Builders programme for examples of existing small sites that have been identified through this programme.

2.7.3 The process of identifying small sites for residential development should also consider the wider needs within the plan area. As a result, other housing needs – such as supported and specialised accommodation, specialist older persons' housing, and Gypsy and Traveller accommodation – should be considered as part of the process to determine whether a site is more suitable for these uses. Boroughs can allocate sites to meet identified local need for other types of housing in development plan documents. This can provide greater certainty for developers and encourage the provision of sites in locations most suitable for these types of housing.

Call for sites

Boroughs and neighbourhood planning group are encouraged to carry out a community-led 'call for sites' that can be used to identify new locations for small site development.[2] This can support any local community-led housing or community land trust initiatives. This process can be done in tandem with seeking the community's preferences on the type and style of new development. When carried out, engagement should be representative of the local community and include those from hard-to-reach groups.

2.8 Coding coverage

2.8.1 At the end of this stage, practitioners should have identified and determined the coverage of their design codes. This should include the 'character types' where the area-wide design codes will apply, and any specifically identified small sites that are appropriate for development. At this stage, practitioners should also consider whether it may be advantageous for the same character type to have varying design responses. For instance, it may be necessary for character types that have a large variation in location, connectivity and architectural detailing (such as a different roof line or number of storeys) to have different design responses. When considering coding coverage, practitioners should take account of conservation areas and the settings of heritage assets. Existing conservation area management plans and appraisals will be particularly helpful in this regard.[3] While these areas should not be automatically excluded from the design-coding process, a more sensitive approach will be necessary and their inclusion within the design-coding process should be carefully considered. This may result in the setting of a more locally specific design code that responds to the unique and special character of that area. There is also an opportunity to provide clear information for retrofitting to improve energy performance, such as window replacement or the use of solar panels in a conservation area.

[2] See Camden's 'New Homes for Small Sites' programme for an example of this process.

[3] See Tower Hamlets' 'Driffield Road Conservation Area: Character Appraisal and Management Guidelines' for an example of guidelines on extending upwards.

3 Stage two: Design vision and principles

3.1 Character and context

3.1.1 Area-wide design codes should be grounded in a vision and set of design principles for each character type and small site context that is being coded. This should clearly articulate the type of small site development that is likely to be appropriate. The design vision should also reflect, and link back to, the findings of a borough's characterisation work that identified the sensitivity to change of different areas (see Characterisation and Growth Strategy LPG). This may include, for instance, if a character type is particularly sensitive to change; and/or is identified as having heritage value or a heritage asset. This vision should aim to build on the opportunities, strengths and weaknesses of each character type, which in turn will inform the design aspirations and visions, and how best to contribute to the positive aspects of local character. The design vision should also account for the fact that the same design code may be applied to character types in areas of differing levels of connectivity.

3.2 Public engagement and consultation

3.2.1 Fundamental to the process of developing effective and well-designed codes is the involvement of a range of stakeholders from the outset. This includes residents, community groups and local businesses, as well as development professionals. Boroughs and neighbourhood planning groups should undertake meaningful community engagement to determine the potential coverage of a design code, to ensure that the codes reflect the views and aspirations of communities living in or using the neighbourhoods, and who are most affected by and could benefit from change. Targeted consultation with members of the public most directly affected by the code for a particular area is encouraged. This engagement should be inclusive and reflect the range of views across the community in accordance with Good Growth Objective 1 of the London Plan. Engaging the public at this early stage aims to bring forward discussions about the future vision before planning applications under any new codes are submitted. To assist in this process, a range of in-person and digital engagement tools can be used. See the National Model Design Code (NMDC) for more information on public engagement when preparing design codes.

What public consultation and engagement should cover:

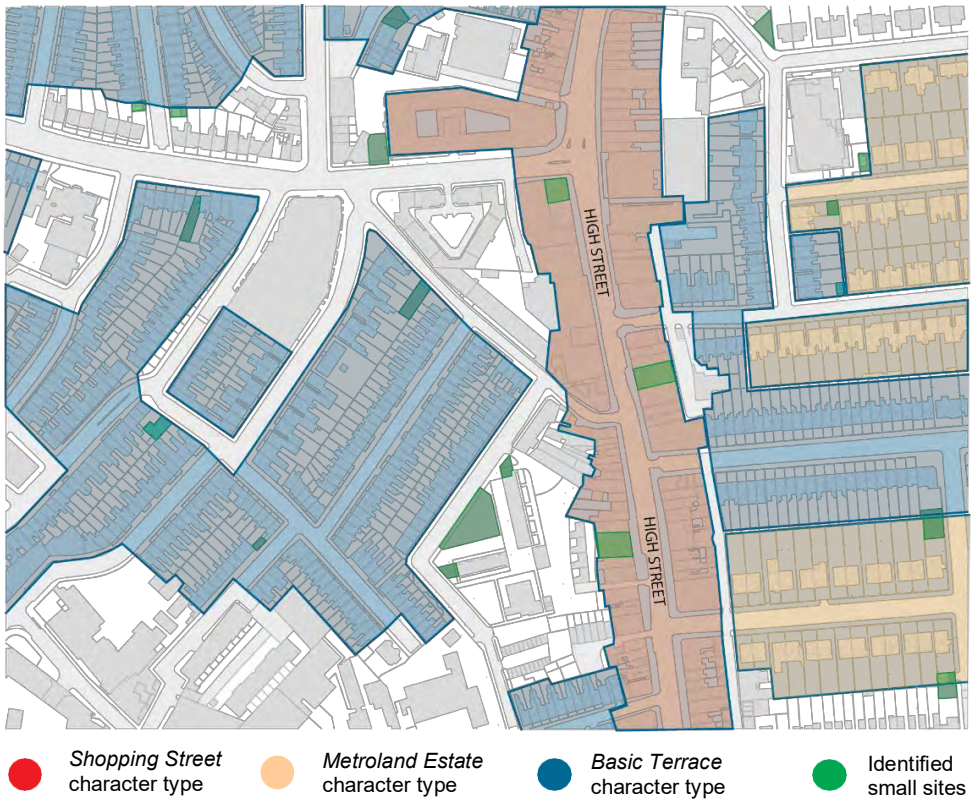
- application of design code and how it influences individual schemes
- identification of the areas where the code will apply
- content of the design code.

3.3 Small sites coding plan

3.3.1 Boroughs and neighbourhood planning groups should develop a coding plan that identifies the different character types to be coded and where any design codes will apply. Each character type should have a different design code that responds to the unique characteristics of each type. For instance, a design code (such as a set of illustrations and rules) for a *Basic Terrace* character type will be different from that of a *Metroland Estate*.

3.3.2 **Coding plan:** the map of the local authority or neighbourhood area that identifies where design codes will apply. This map is likely to be very similar to a character types map. However, it may exclude areas of very mixed character and those near the boundary with other character types where coding would be difficult to achieve. A coding plan should be in the format of a digital map so that it can be updated periodically and accessible to the public. It should also show any identified small sites.

Figure 3.1 Example coding plan for a part of a borough



3.3.3 Figure 3.1 shows part of a coding plan (shown in blue, red and yellow) and identified small sites (shown in green). A design code should then be devised for each character type identified within the coding plan. This code will then guide what is acceptable within that area. This format allows for easy identification for the different character types and the subsequent design codes that are applicable.

4 Stage three: Prepare design codes

4.1 Design code content

4.1.1 Design codes should be rules-based and use graphical images to illustrate the key design parameters. This may include examples of best practice, as well as what is not acceptable in design terms. It is encouraged to use the terms ‘must’, ‘should’ and ‘could’ to clarify the level of compliance needed to conform with a design code. This approach aims to define the elements that are non-negotiable while leaving flexibility in other elements.

4.1.2 Where compliance is mandatory, the word ‘must’ should be used. Where compliance is expected, the word ‘should’ should be used. For codes that are listed as ‘should’, applicants can deviate if they can justify a positive reason for doing so and demonstrate high-quality design will still be delivered. Practitioners may also want to use the term ‘could’ when compliance is optional and up to the discretion of the applicant. When preparing a design code, judgement should be used about the level of prescription contained within codes to ensure design principles lead to a context-based response, without limiting the innovation necessary to successfully realise good design and optimise the capacity of sites. The coverage of design codes will vary across character types and the type of small site context that is being coded.

4.1.3 For extensions to existing buildings, design codes can be utilised to provide guidance, and set requirements or conditions to retrofit or refurbish aspects of other parts of the original building, that would not otherwise have been upgraded or reinstated. These could include upgrades to cavity wall insulation; double or triple glazing; loft insulation; and the refurbishment or reinstatement of original features and detailing (see Appendix A2.5).

4.1.4 As per sections 66 and 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990, special attention should be given to design codes within conservation areas, or within the setting of heritage assets, to ensure that they conserve and enhance the character and appearance of an area. Within these areas, design codes may need to provide further detailed and specific parameters. Whilst not exhaustive, a comprehensive list is included within the NMDC and shown in Appendix 1. This list can be used when deciding what elements should be included in a design code. The following section will outline several of the most common elements.

Code testing

4.1.5 The testing of design codes is an important step in the preparation of design codes. Workshops should be held with a range of stakeholders to trial the design codes being prepared. This provides an opportunity to test a code and consider any unintended consequences that could arise, including a failure to optimise the capacity of sites. This exercise should identify aspects of a code where amendments are necessary. Coding should also take into consideration permitted development rights as a fall-back option and should endorse high-quality design solutions that can be used to discourage poorer design solutions that do not require planning permission.

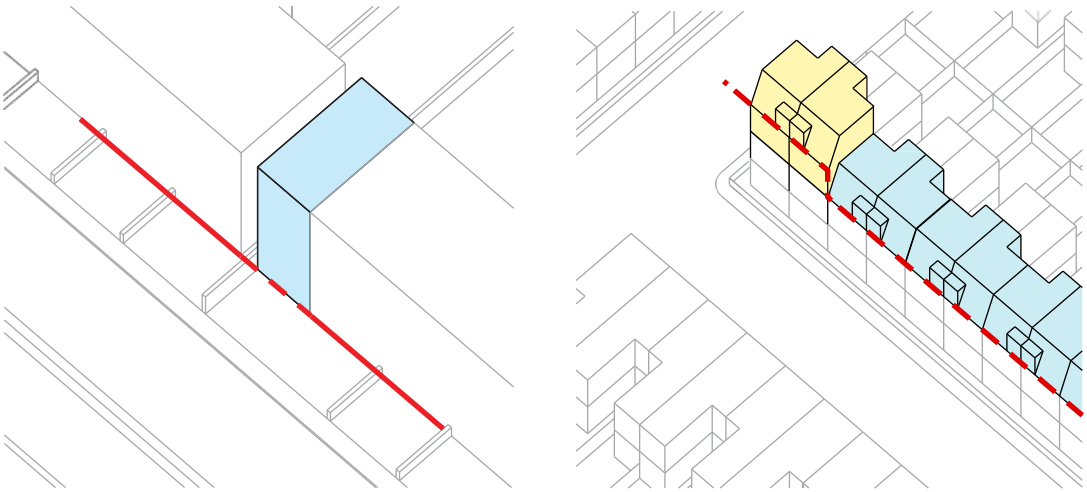
4.1.6 At the boundary of two different character types, it is important to consider the implication of an area's design code on its neighbouring area. As a result, it may be necessary to exclude some boundaries from a coding plan.

4.2 Front building line

4.2.1 Most design codes are likely to code for the front building lines (frontage) of any new development that faces the street. Most commonly, these codes are likely to advocate consistency with the existing building line of the street within which it is located. Typically, terraced housing has a regular, unbroken building line and it is likely that most design codes for these character types will require development to align with the existing building line, so as to not negatively impact the character of the street.

4.2.2 Character types of semi-detached and detached houses may have more variation in their building line, allowing flexibility in the positioning of new development in relation to the street. However, any design codes for these areas should ensure that the building line of new development should not negatively impact the street scene or harm either the privacy or the daylight and sunlight enjoyed by occupiers of existing nearby dwellings. Nor should it create or exacerbate street canyons in areas of existing poor air quality. The code should identify whether incremental development that bookend a street, or are located on a corner site, may have the opportunity to accommodate additional depth due to their prominent position and potential for multiple aspects. In these locations, a building line that steps out in relation to adjacent buildings could be considered appropriate, but care should be taken not to interfere with circulation and the public realm. In town centre and high street contexts with mixed-use ground floors, building frontage lines often have a direct relationship with the pavement and do not include space directly in front of the property that is owned and maintained by an identifiable household. In these circumstances and character types, consideration should be given to upper-level balconies; and the highway authority will need to be involved if balconies that overhang (oversail) the footway are being considered.

Figure 4.1 Building line



4.3 Front-to-front and back-to-back distances

4.3.1 When developing design codes for new streets and backland development, design coding the front-to-front and back-to-back distances can be useful to provide clarity for new development. Enclosure ratios/building height-to street-width ratios can also be used where new streets are envisioned. It may also be advantageous to identify street typologies when setting design codes, as these can provide clarity on the height and width of buildings and streets respectively.

Figure 4.2 Frontage distances and building setback

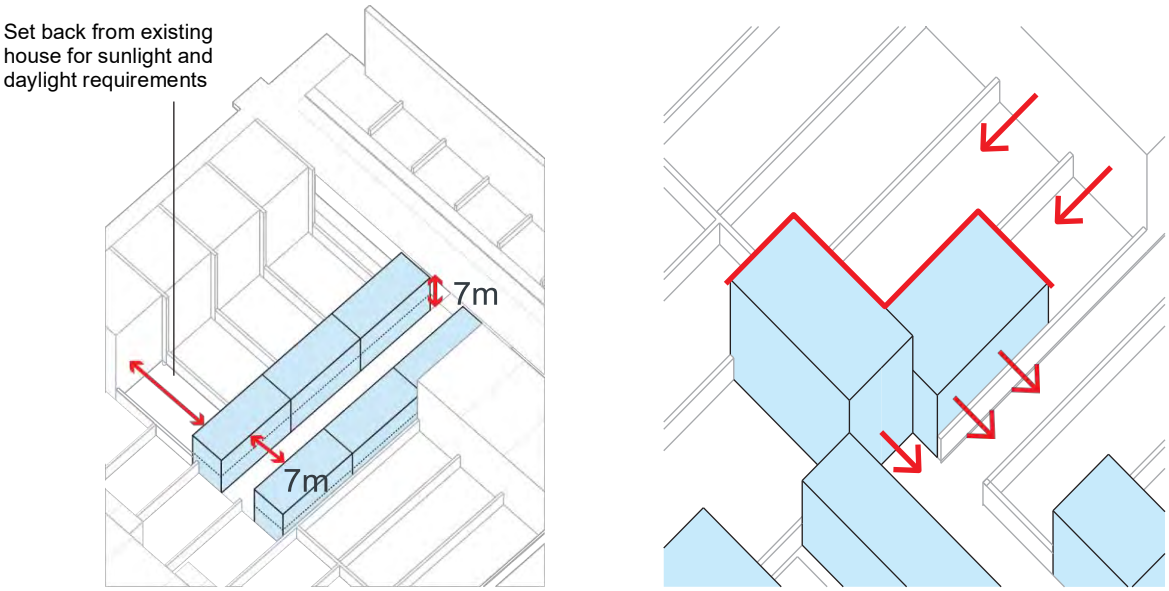


Figure 4.3 Building height-to-street width ratio

This illustrates a building height-to-street width ratio of 1:1, which creates an appropriate level of enclosure for this location. Reference: Chobham Manor, LB Newham.

4.4 Building height

4.4.1 Building height is one of the key design coding elements. It can influence the character of a place, its identity, and the environment for occupiers and users. Design codes may also be used to encourage increases in height particularly where this would optimise sites with good accessibility. For instance, new development may seek to accommodate one or more additional storeys. To ensure that the character and scale of the buildings along a street is maintained, design codes can include requirements to set back the top floor or advocate that upward extensions be partially contained within the roof space. In all circumstances, it is critical to ensure that existing and surrounding properties continue to receive good levels of daylight and sunlight and that the streetscape is positively enhanced.

Figure 4.4 Example illustration of the building heights in a semi-detached character type (such as *Metroland Estate*)

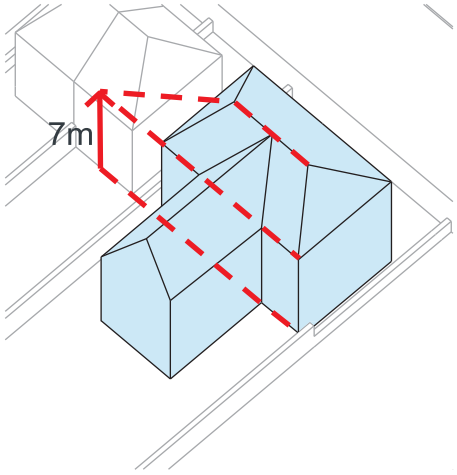


Figure 4.5 Backland development

This is a good example that avoids an unreasonable impact on the daylight and sunlight enjoyed by existing homes. Reference: Otts Yard, LB Islington.

4.5 Rear building line projection

4.5.1 When setting design codes for buildings or extensions that extend beyond a rear building line, parameters should be set to ensure that there is no unreasonable impact on the amenity of neighbouring homes in relation to daylight, sunlight and privacy.

4.5.2 A good rule of thumb is to follow the 45-degree rule illustrated below. This rule specifies that the height and depth of a new development or extension should not breach a 45-degree line drawn from the centre of the window of the lowest, and closest, habitable room on the neighbouring property.

4.5.3 Design codes can also use rear projection lines to set parameters on the height of new developments or extensions. These can ensure that new development is not overly dominant; and access to daylight and sunlight of the habitable rooms of neighbouring homes is maintained.

Figure 4.6 Example code for rear building line projection of dwellings in a semi-detached character type (such as *Metroland Estate*)

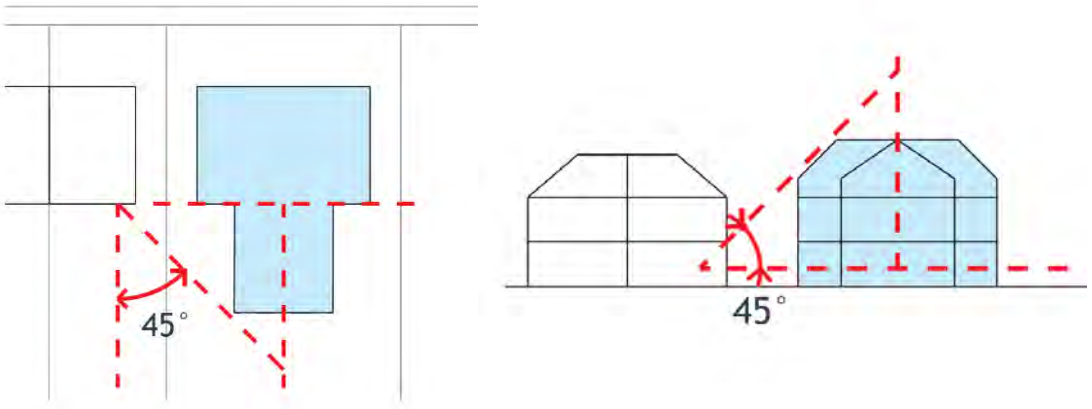
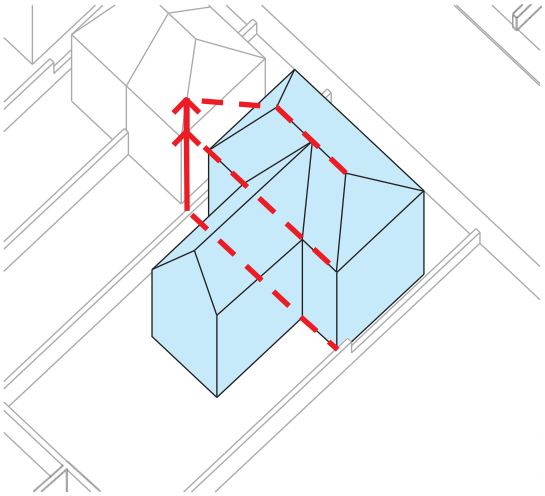


Figure 4.7 Rear building line projection in a semi-detached character type (such as *Metroland Estate*)



4.6 Green cover and landscaping

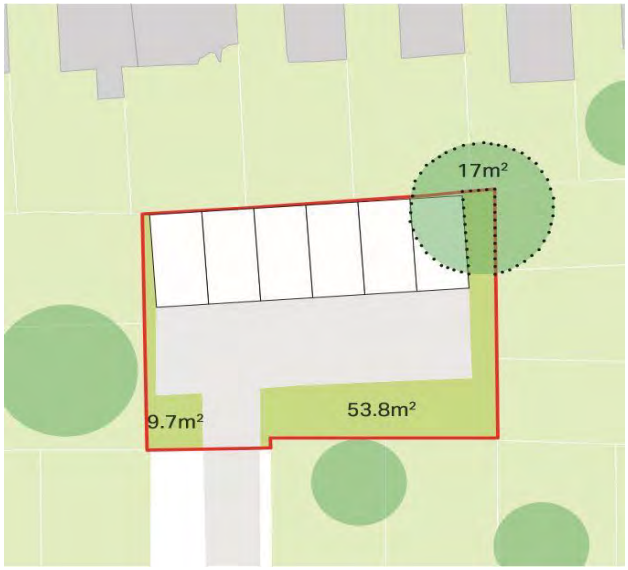
4.6.1 There are multiple ways that design codes can code for green cover and landscaping. This can be done, for instance, through requiring street trees, green roofs and other natural landscaping measures, such as sustainable drainage systems. Design codes should aim to prioritise the retention and provision of green features that have the most benefits. These should be used to secure net biodiversity gain and no net loss of green cover on minor development. In addition, the Urban Greening Factor (see Policy G5 Urban Greening) will apply to all major developments (10 units and above). As a result, boroughs and neighbourhood planning groups are encouraged to include this requirement as part of their design codes. Below is an example showing how a site can work out the re-provision of green cover so that no net loss of green space is secured.

Figure 4.8 Example of providing green cover and landscaping

Existing site

The existing site is a backland site with residential garages. It is accessible via a side road and has two areas of green coverage that will need to be re-provided.

The site also includes the full canopy of a tree. This will also need to be replaced.



Green coverage of the site

Green area to replace:

Tree		17m²
Area 1	+	53.8m²
Area 2	+	9.7m²
		80.5m²

Proposal A

The tree is retained and green coverage is replaced in the form of two green roofs and a garden.

Green area to replace

Green roof 1	23.5m^2
Green roof 2	33.2m^2
Garden	42.4m^2
	99.1m^2

Proposal B

The tree is retained and additional green coverage is added.

Green area to replace

Area	9.7m^2
Gardens	74.8m^2
	86.2m^2

Proposal C

The tree is removed and no additional green space is provided. More green cover should be provided (for instance, by adding green roofs).

Green area to replace

Garden	60.2m^2
	60.2m^2

4.7 Block types and building forms

4.7.1 When setting design codes for different character types, codes may set design parameters on the building type and typology of new development. This can help ensure that the block size of new development positively contributes towards the character of an area; and facilitate a transition to a higher density over time. This can be done through setting design codes on the type and typology of urban block, as well as the urban gain, plot ratio and floor area ratio.

Figure 4.9 Examples of different urban grain

Image source: NMDC

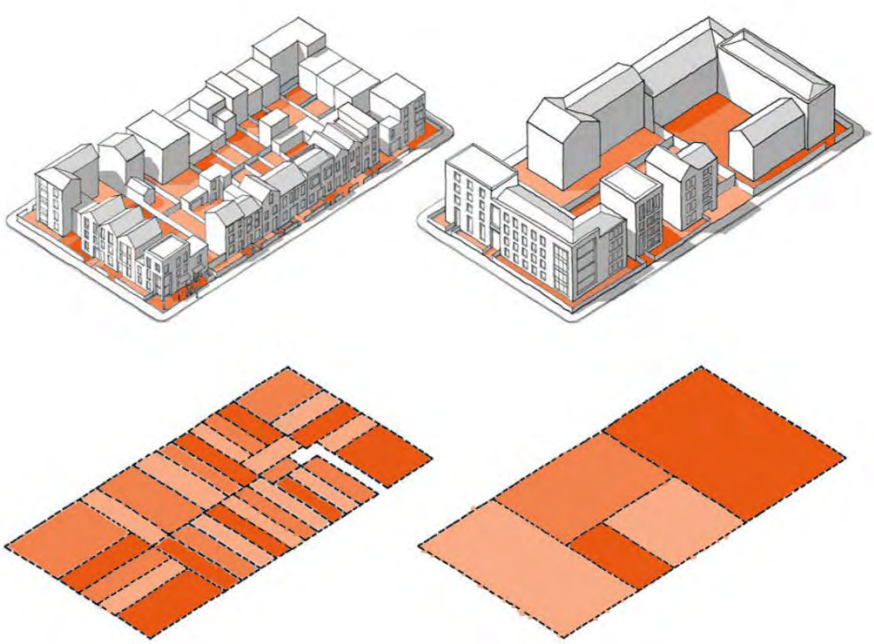
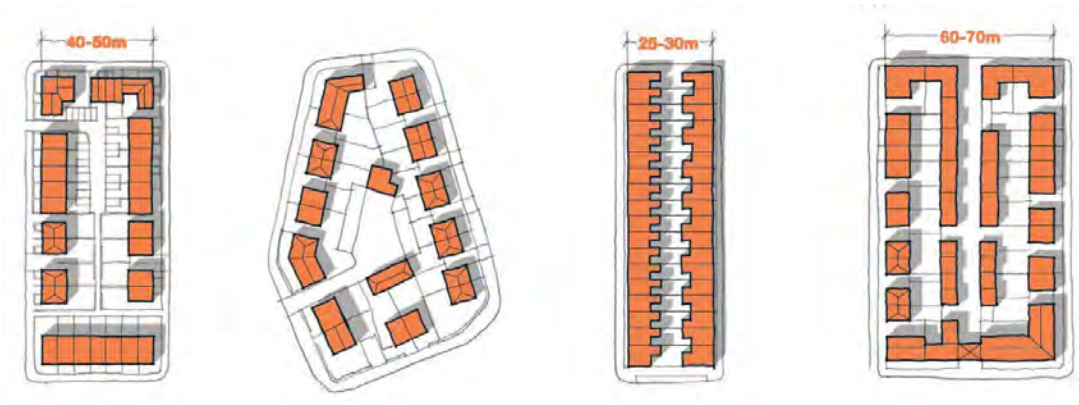


Figure 4.10 Examples of different block types

Image source: NMDC



Perimeter block | Informal block | Terrace | Mews block

4.8 Roof form and windows

4.8.1 The building roof form and window dimensions are important design coding elements for small site development. Clarifying the appropriate (and sometimes inappropriate) design of these elements through a design code can be a useful tool to improve design quality and the impact of new development on the local streetscape. This is particularly the case for infill development coming forward in character types that have a strong and consistent built form.

4.8.2 Innovative use of roof space and form will also be key to the success of small backland developments. Adopting a lower roof height and profile can help lessen the impact on neighbouring development by reducing overshadowing and maintaining privacy.

4.8.3 Design codes for upward extensions may require particular focus on the roof form and windows. This may include parameters on appropriate roof types such as gable, hipped and mansard. Design codes may also provide clarity on the required spacing of windows, which can be important in contributing to a consistent approach along a street. Codes can be used to encourage green and blue roofs and solar panel integration; and to clarify design parameters on private outside space, such as roof terraces, by illustrating appropriate and inappropriate examples/practice.

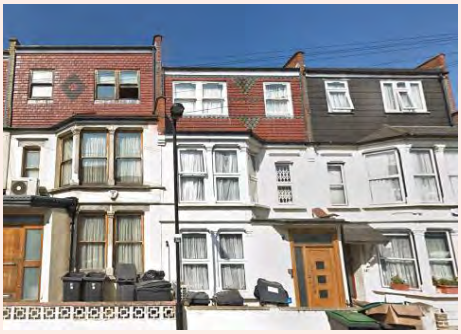
4.8.4 Boroughs and neighbourhood planning groups should consider the implications if take-up of a design code is low. In these situations of low take-up, a streetscape may be negatively impacted by noticeable gaps in the roofline. For this reason, a design code should be designed in a way to minimise the impact when and if the take-up is low.

Figure 4.11 Design precedents are a useful way to illustrate appropriate and inappropriate design or application of code

Appropriate roof extensions

Setting back the top floor can be a useful way to minimise the impact and appearance on the streetscape. Corner plots have the potential for an increase in height.

Inappropriate roof forms and windows



A common approach to window spacing and roof type is important to ensure consistency along a street. An inconsistent approach can contribute to an unbalanced sense of proportions and streetscape.

4.9 Materiality and detailing

4.9.1 When design coding for materials, it may be appropriate to provide a range of options that developments can choose from. This could be in the form a matrix that clarifies which materials are permitted or recommended (shown in Figure 4.12). Design codes can also be used to require matching material to an existing building. This is particularly relevant for extensions to buildings where the same material can be used to avoid the sight of obvious alterations. Where this is done, codes should also specify the need to avoid watermarks when transitioning from an old material to a new (matching) one. Upgrading cavity wall insulation can also be required as part of this.

Figure 4.12 Example building material matrix[4]

All buildings **must** be made from well-detailed robust materials that are durable, age well and are positively enhanced by weathering. New development **should** be clad in the following predominant materials using accent materials where appropriate. Additional and alternative materials **could** be appropriate and will be considered on their merits.

Predominant materials	 Brown clay facing brick	 Buff clay facing brick	 Red clay facing brick
	 Standing seam zinc roof tiles	 Reconstituted slate tile	 Concrete plain roof tile
Accent materials	 White clay facing brick	 Metal railings	 Perforated steel guarding
Examples of how to use materials	 Brick detailing adds texture and interest	 Full brick window reveals give a sense of depth	 Street metal accent used for cycle and bin storage

[4] This building material matrix has been inspired by the Wing Design Code.

5 Stage four: Implementation and review of design codes

5.1 Design code compliance

5.1.1 Once adopted, a borough or neighbourhood planning group's coding plan and design codes should be made publicly available. Boroughs and neighbourhood planning groups are encouraged to display these on interactive web-based maps that link the relevant design codes to each area of a coding plan. Four example design codes are shown in Appendix 2. Small site design codes set by a borough or neighbourhood planning group should be used in the determination of relevant planning applications. They are useful in clarifying design parameters to applicants and should act as an incentive to faster decision-making, due to increased certainty about what is acceptable on a site.

5.1.2 As part of this, planning authorities are encouraged to monitor the effectiveness and use of their design codes (including those prepared by a neighbourhood planning group within the borough boundary). One way of doing this is by developing a compliance tracker or checklist for each of their design codes. This can include a simple approach for use when determining an application.

Figure 5.1 Introductory part of a design code compliance checklist

Image source: Arbury design code

Section 1: Introduction	**Are proposals compliant?**			
Compliance with the Code	**Yes**	**No**	**Non-compliance justified**	**N/A**
Does the proposal fully comply with the requirements of the Code?	☐	☐	☐	☐
Has the applicant provided a Design Code Compliance Checklist accompanying the application?	☐	☐	☐	☐
Has comprehensive contextual and site analysis been undertaken to inform the application to ensure it appropriately responds to the local area?	☐	☐	☐	☐

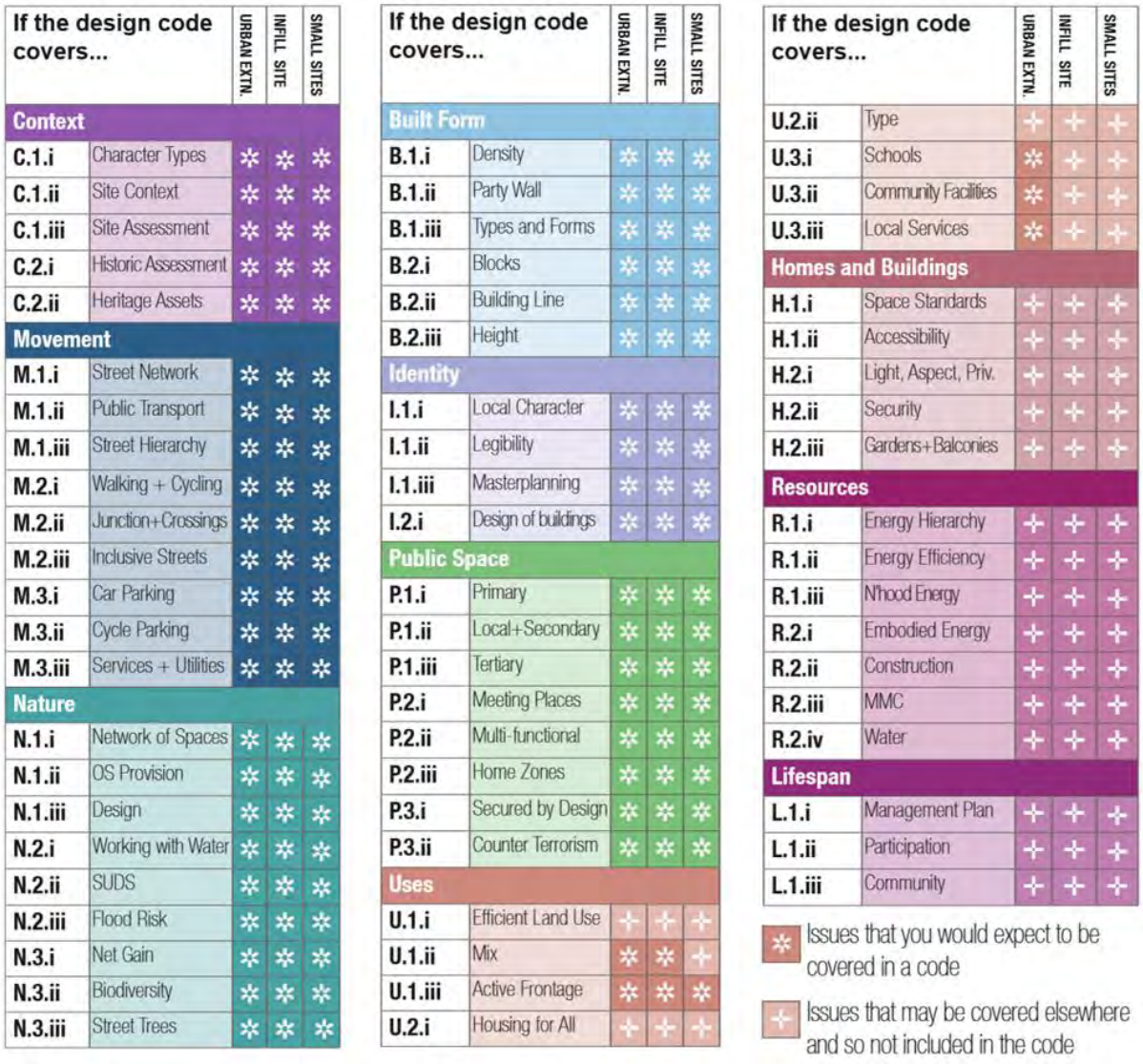
5.2 Periodic review of design codes

5.2.1 Design codes should be periodically reviewed, and their effectiveness assessed, as part of the development plan monitoring and evaluation process. It is likely that elements of a design code may have to be subsequently amended to reflect any issues or learning that have arisen since adoption.

Appendix 1 National Model Design Code elements

Figure A1.1 Design code coverage

Image source: NMDC



If the design code covers...		URBAN EXTN.	INFILL SITE	SMALL SITES
Context				
C.1.i	Character Types	✲	✲	✲
C.1.ii	Site Context	✲	✲	✲
C.1.iii	Site Assessment	✲	✲	✲
C.2.i	Historic Assessment	✲	✲	✲
C.2.ii	Heritage Assets	✲	✲	✲
Movement				
M.1.i	Street Network	✲	✲	✲
M.1.ii	Public Transport	✲	✲	✲
M.1.iii	Street Hierarchy	✲	✲	✲
M.2.i	Walking + Cycling	✲	✲	✲
M.2.ii	Junction+Crossings	✲	✲	✲
M.2.iii	Inclusive Streets	✲	✲	✲
M.3.i	Car Parking	✲	✲	✲
M.3.ii	Cycle Parking	✲	✲	✲
M.3.iii	Services + Utilities	✲	✲	✲
Nature				
N.1.i	Network of Spaces	✲	✲	✲
N.1.ii	OS Provision	✲	✲	✲
N.1.iii	Design	✲	✲	✲
N.2.i	Working with Water	✲	✲	✲
N.2.ii	SUDS	✲	✲	✲
N.2.iii	Flood Risk	✲	✲	✲
N.3.i	Net Gain	✲	✲	✲
N.3.ii	Biodiversity	✲	✲	✲
N.3.iii	Street Trees	✲	✲	✲

If the design code covers...		URBAN EXTN.	INFILL SITE	SMALL SITES
Built Form				
B.1.i	Density	✲	✲	✲
B.1.ii	Party Wall	✲	✲	✲
B.1.iii	Types and Forms	✲	✲	✲
B.2.i	Blocks	✲	✲	✲
B.2.ii	Building Line	✲	✲	✲
B.2.iii	Height	✲	✲	✲
Identity				
I.1.i	Local Character	✲	✲	✲
I.1.ii	Legibility	✲	✲	✲
I.1.iii	Masterplanning	✲	✲	✲
I.2.i	Design of buildings	✲	✲	✲
Public Space				
P.1.i	Primary	✲	✲	✲
P.1.ii	Local+Secondary	✲	✲	✲
P.1.iii	Tertiary	✲	✲	✲
P.2.i	Meeting Places	✲	✲	✲
P.2.ii	Multi-functional	✲	✲	✲
P.2.iii	Home Zones	✲	✲	✲
P.3.i	Secured by Design	✲	✲	✲
P.3.ii	Counter Terrorism	✲	✲	✲
Uses				
U.1.i	Efficient Land Use	+	+	+
U.1.ii	Mix	✲	✲	+
U.1.iii	Active Frontage	✲	✲	✲
U.2.i	Housing for All	+	+	+

If the design code covers...		URBAN EXTN.	INFILL SITE	SMALL SITES
U.2.ii	Type	+	+	+
U.3.i	Schools	✲	+	+
U.3.ii	Community Facilities	✲	+	+
U.3.iii	Local Services	✲	+	+
Homes and Buildings				
H.1.i	Space Standards	+	+	+
H.1.ii	Accessibility	+	+	+
H.2.i	Light, Aspect, Priv.	+	+	+
H.2.ii	Security	+	+	+
H.2.iii	Gardens+Balconies	+	+	+
Resources				
R.1.i	Energy Hierarchy	+	+	+
R.1.ii	Energy Efficiency	+	+	+
R.1.iii	N'hood Energy	+	+	+
R.2.i	Embodied Energy	+	+	+
R.2.ii	Construction	+	+	+
R.2.iii	MMC	+	+	+
R.2.iv	Water	+	+	+
Lifespan				
L.1.i	Management Plan	+	+	+
L.1.ii	Participation	+	+	+
L.1.iii	Community	+	+	+

✲ Issues that you would expect to be covered in a code

\+ Issues that may be covered elsewhere and so not included in the code

Appendix 2 Example design codes

A2.1.1 This section presents four example design codes for street-facing, high-street, backland and residential extension contexts. Each design code is preceded by an example analysis describing the characteristics of a selected character type; and an illustrated demonstration of how key design principles within the scenario may be applied.

A2.1.2 These example design codes are solely illustrative and have been included to highlight a number of design coding tools and language that can be used. These codes do not include all design-coding elements that may be necessary. As a result, boroughs and neighbourhood planning groups should develop their own small sites design codes for the relevant character types and site contexts identified. Three exemplar case studies to each small site context have also been provided, which illustrate a potential design solution.

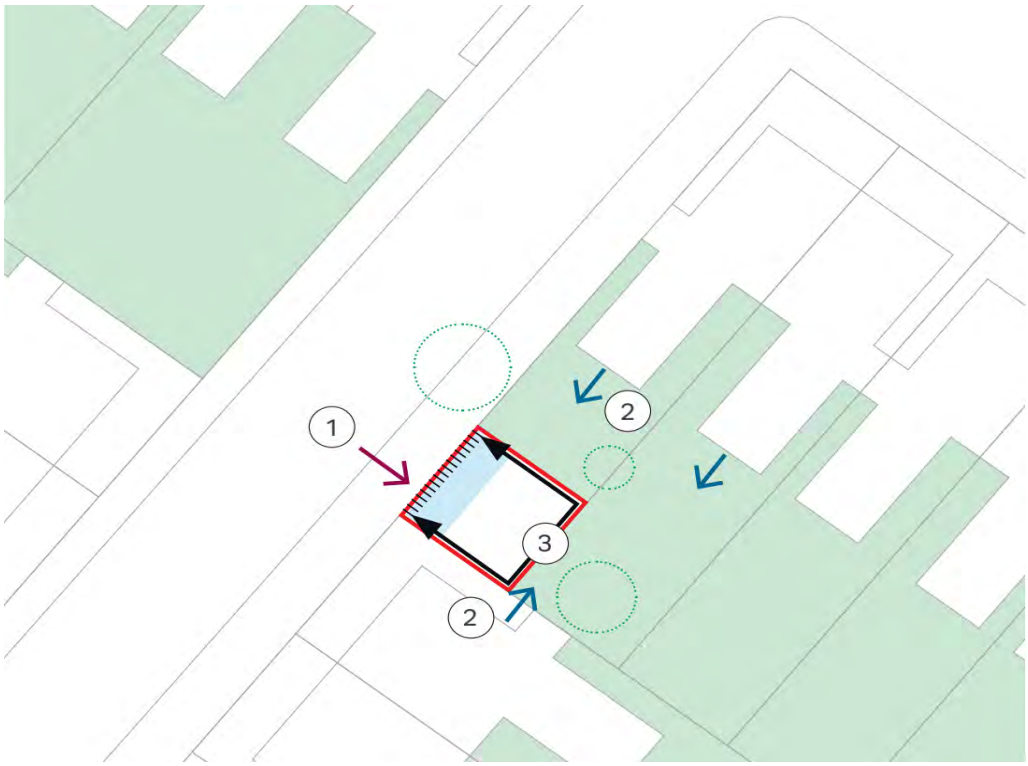
A2.1 Street-facing example design code

Character type description and analysis

Character type: *Basic Terrace*

Typical site context: This code applies to street-facing plots such as garage plots or other end of terrace sites.

Figure A2.1 Typical street-facing context to which this code applies



Key

1 Streets for refuse collection, emergency access and residential access

2 Windows in neighbouring properties overlook site

3 Potential overlooking issue on three sides towards neighbouring properties or private gardens - mitigation required

Neighbouring trees could provide privacy screening and aspect

Street frontage

Site boundary

Figure A2.2 Aerial of example street-facing site

Figure A2.3 Potential street-facing sites to which this code could apply

A2.1.2 The following page shows an illustration of what an example design code for this small site context could cover.

Figure A2.4 Frontage line

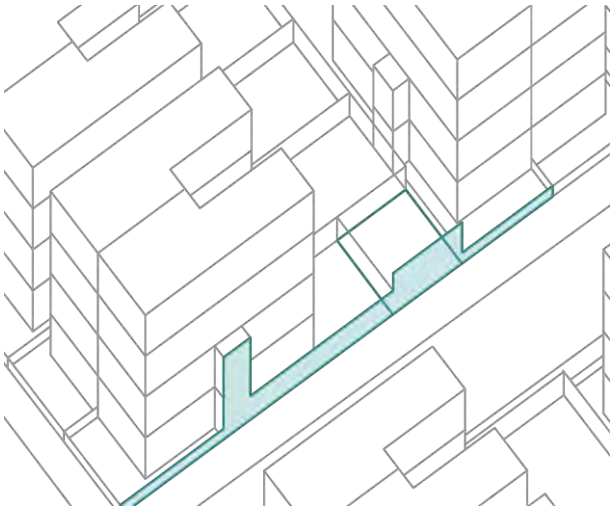


Figure A2.5 Built massing and height

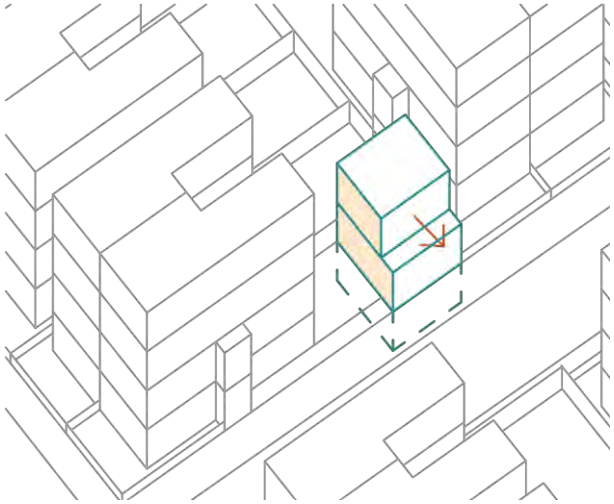
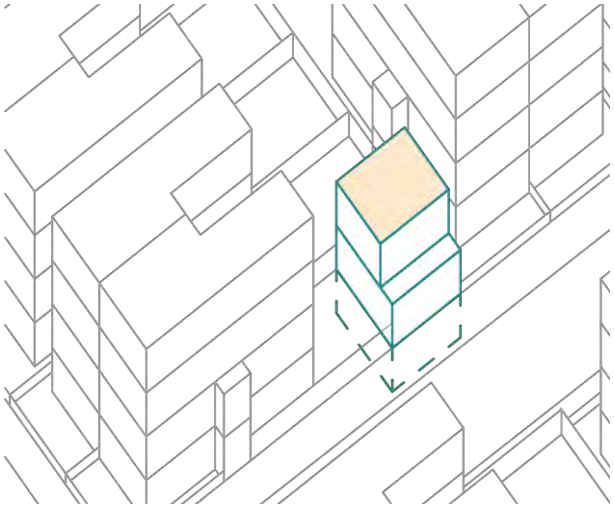


Figure A2.6 Green coverage



Frontage line

New development **must** be in line with the frontage building line of neighbouring properties.

Street-facing frontages **must** avoid large areas of blank facades.

New development **must** retain sufficient private amenity for residents of the host building.

Height, massing and orientation

New development **should** be no taller than its surroundings in height. New development **could** contain a one-storey basement if there is no risk of flooding.

The first floor **should** be set back from street frontage.

The primary aspect and windows **must** face towards the street.

Materiality

New development **should** be clad in a specified material contained within the material matrix (see Figure 4.12)

Green coverage and landscaping

New development **must** ensure no net loss of green cover. This **could** be in the form of a green roof.

Figure A2.7 Adolphus Road, LB Hackney

Wittering House is an end-of-terrace development that provides a new two-bedroom home in a well-connected location. Its two-storey height, and set-back first floor, aim to ensure loss of daylight to surrounding properties is minimised.

Figure A2.8 Sheendale, LB Richmond upon Thames

Sheendale Studios is a cluster of six studio houses built on the site of an old factory in south-west London. The design offers an interpretation of the adjacent architecture; and represents one potential approach for how to architecturally address small site development in a sensitive neighbourhood or conservation area.

Figure A2.9 Barretts Grove, LB Hackney

Barretts Grove provides seven new homes and uses the depth of the zone between the street and the façade of building to provide generous balconies. This is done whilst creating a clear connection between the neighbouring frontages and its own strong building line.

A2.2 High street example design code

Character type description and analysis

Character type: *Shopping street*

Typical site context: This code applies to single-storey retail unit with neighbouring buildings of three or more storeys. Such sites provide an opportunity for redevelopment with commercial use on the ground floor and residential use on the upper floors.

Figure A2.10 Typical high street context to which this code applies

Figure A2.11 Aerial of example high street site

Figure A2.12 Potential high street site to which that this code could apply

A2.2.2 The following page shows an illustration of what an example design code for this small site context could cover.

Figure A2.13 Frontage and building line

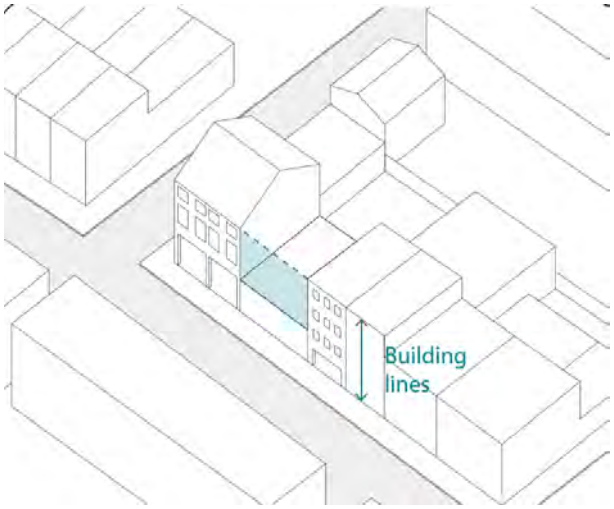


Figure A2.14 Street proportion

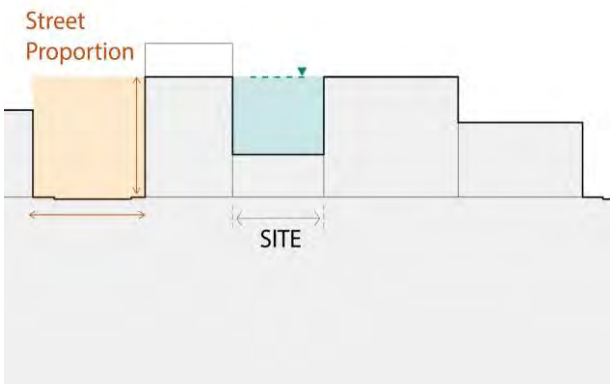
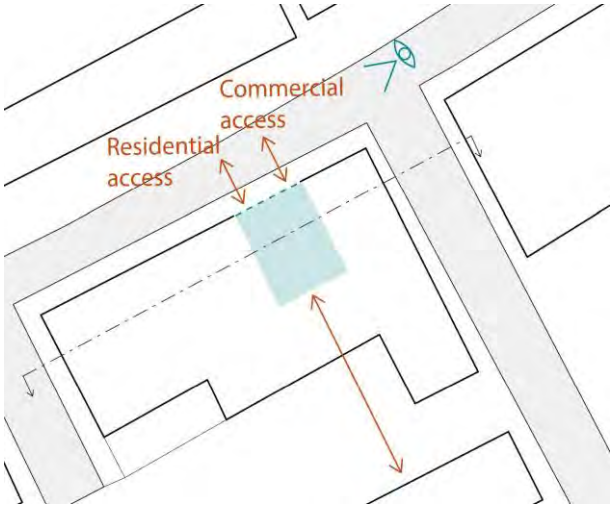


Figure A2.15 Access and movement



Built form and height

New development **should** have a consistent building frontage with the existing building line of the street within which it is located.

Building height **should** follow the predominant roofline; and **could** provide an additional one or two storeys above, providing it is stepped back.

Land use

New development **should** provide an active frontage and mix of uses on the ground floor, with residential use on the upper floors.

Access to residential dwellings on the upper floor should be located via a street-facing door.

Design and appearance

Where there is a variety of building types, the new development **should** follow the design and proportions of the predominant building style to avoid creating a fragmented streetscape.

The building materiality **should** be consistent with the specified materials contained with the material matrix (see Figure 4.12).

If street-facing balconies are proposed, they **must not** project over the pavement. Balconies **should** instead be located on the rear elevation or be inset balconies on the front elevation.

Access and servicing

New development **must** provide well-defined separate entrances to commercial and residential spaces.

(Image source: Tower Hamlets – Central Area Good Growth SPD)

Figure A2.16 Marley House, LB Hammersmith and Fulham

This development in Hammersmith replaces a single-storey extension to a public house. The development provides seven new homes, while re-providing the Class A4 use (drinking establishment) at the ground and lower-ground floors.

Figure A2.17 482 – 486 Roman Road, LB Tower Hamlets

This development replaced two one-storey retail units that front Roman Road. The new development now provides four two-bedroom apartments; and two commercial units on the ground floor.

Figure A2.18 190 & 190A Rye Lane, LB Southwark

This mixed-use high street infill provides 22 residential units on the upper floors, and in a former salvage yard to the rear of the high street. As well as providing a new frontage to the street, the development also retains and refurbishes an existing neighbouring building which is in the conservation area.

A2.3 Backland example design code

Character type description and analysis

Character type: *Basic Terrace*

Typical site context: Site where direct access to the street is limited. These sites are often located behind residential streets and may include residential garages or vacant backlands.

Figure A2.19 Typical backland context to which this code applies

Key

1. Streets for refuse collection, emergency access and residential access
2. Windows in neighbouring properties overlook site
3. Potential overlooking issue on three sides towards neighbouring properties or private gardens - mitigation required

Neighbouring trees could provide privacy screening and aspect

Street frontage

Site boundary

Figure A2.20 Aerial of example backland site

Figure A2.21 Potential backland sites to which this code could apply

A2.3.2 The following page shows an illustration of what an example design code for this small site context could cover.

Figure A2.22 Frontage line

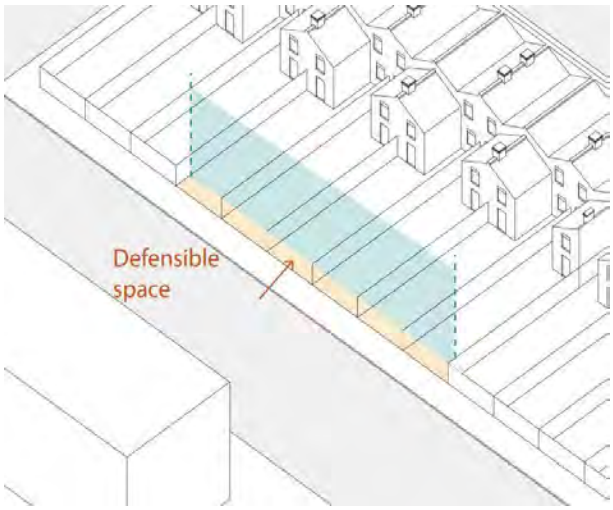


Figure A2.23 Built massing and roof line

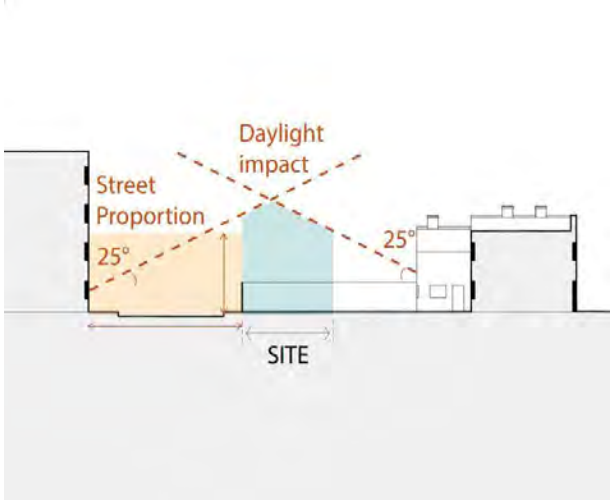


Figure A2.24 Access and outlook

Frontage line

New development **must** create a pedestrian-friendly street frontage.

The primary frontage **should** be street-facing to provide access and passive surveillance to the street.

Height, massing and orientation

New development **should** be no taller than its surroundings in height.

The built form **should not** intrude past the 25-degree angles shown in Figure A2.23.

Amenity space

Amenity space, internal layouts and landscaping **must** be carefully designed to provide adequate privacy in relation to surrounding buildings and back gardens.

Green coverage

There **should not** be a net loss of green cover. Where the development of a site causes the loss of green cover, this **should** be re-provided. This **could** be in the form of green amenity space, planting trees, incorporating green roofs and including other greening measures such as sustainable drainage systems.

(Image source: Tower Hamlets – Central Area Good Growth SPD)

Figure A2.25 Foundry Mews, LB Richmond Upon Thames

This intensification of a backland, light industrial site demonstrates that small developments can both retain employment use and deliver much-needed housing. The scheme comprises residential accommodation above workspace. All homes have external amenity space at first-floor level, in the form of enclosed patio terraces.

Figure A2.26 Strange House, LB Lewisham

This new home is located in an old pub yard, largely concealed from the street by an existing brick perimeter wall. The project carefully uses materials and existing site context to create a new home.

Figure A2.27 Hidden House, LB Islington

This house is located in a conservation area next to a Grade II listed former Victorian school on a site previously occupied by a caretaker's shed. The design carefully carves a space for the new residential dwelling on a site defined by the proximity of a tall perimeter brick wall.

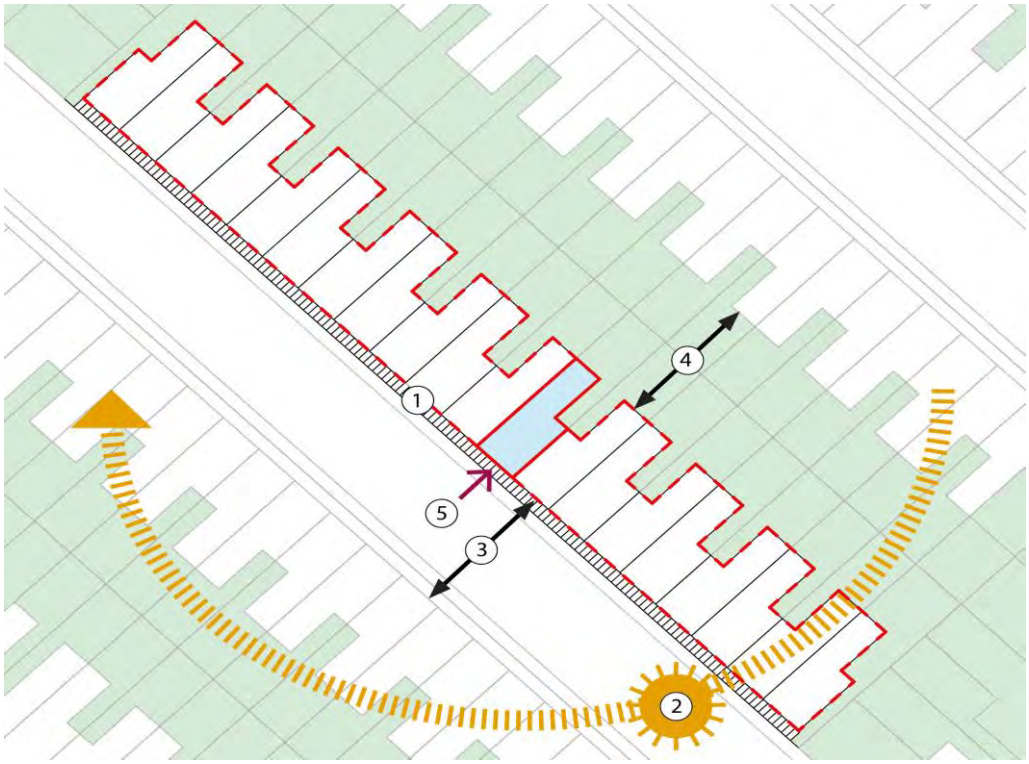
A2.4 Residential extension example design code

Character type description and analysis

Character type: *Basic Terrace*

Typical site context: Upward extension of existing two-storey terraced housing to create new homes or bedspaces.

Figure A2.28 Typical upward extension context to which this code applies



Key

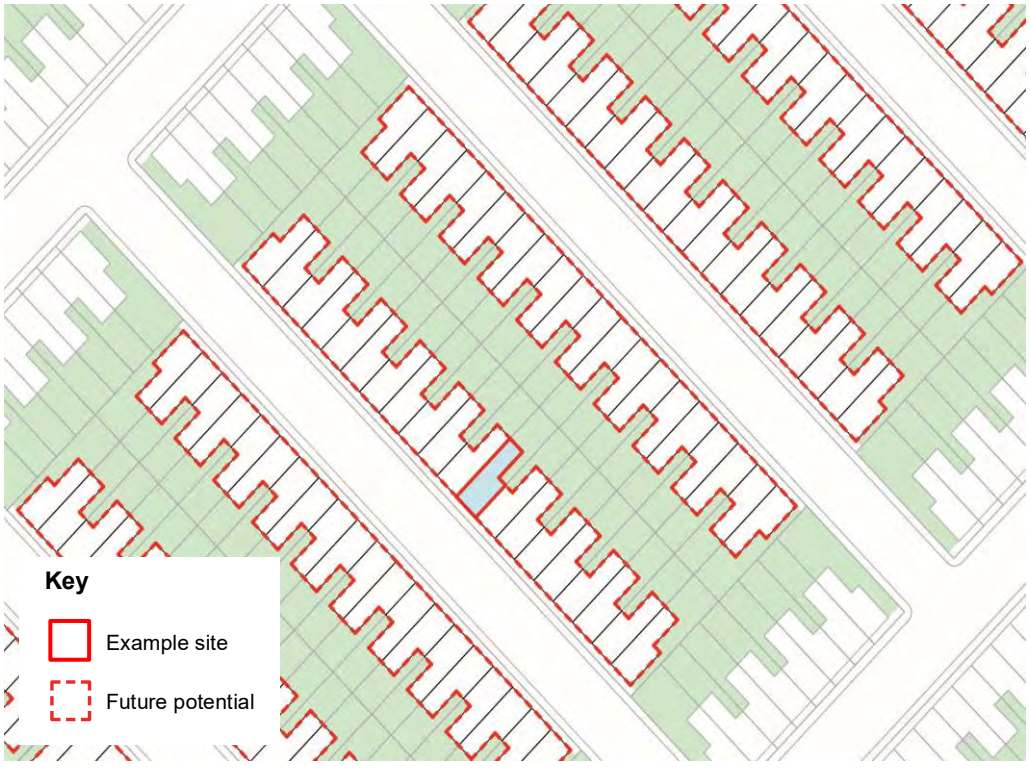
1. Streets characterised by consistent frontage
2. Orientation of streets may affect approach to upper level to ensure development does not unacceptably overshadow rear gardens and streets.
3. Street widths may vary and so parameters for upward extension should ensure enough daylight and sunlight reaches existing homes.
4. Back to back distances may vary and so parameters for upward extension should ensure good levels of daylight, sunlight and privacy for neighbouring homes.
5. Street access for refuse collection, emergency access and residential access

Site boundary for single house

Site boundary for whole terrace

Figure A2.29 Aerial of example street suitable for upward extension

Figure A2.30 Potential sites to which this code could apply



A2.4.2 The following page shows an illustration of what an example design code for this small site context could cover.

Figure A2.31 Existing street

Figure A2.32 Inappropriate extension

Figure A2.33 Appropriate extension

Development **should** be brought forward on a minimum of two terraces next to each other to avoid a sawtooth effect of the street.

Roof and chimney stacks

The extended roof **must** replicate the angle and pitch of the existing roof (and of the existing roofs on the street). The roof **should** be slated in a similar material (by look and appearance) to the existing roofs.

Roof eaves **must** replicate the existing eaves. The distance from the head of the new second-floor windows to the new eaves **must** be the same as the distance from the head of the existing first-floor windows to the old eaves.

Chimney stacks **should** be extended to match original. Traditional clay pots **should** be reused where possible or renewed to match original.

Windows

Windows **must** exactly match the floor below. This includes windows of exactly the same dimensions and finish as those on the floor below.

The size and pattern of windows **should** be reproduced from the floor below. The line of the windowsills and heads will set the line of fenestration, which **must** be maintained.

Bay window **must** be extended to the additional floor, with the bay window roof replicated at the new level.

Height

The height of the extension **should** be no greater than the height of the floor below. This **should** include matching the same distance from the windowsill to the head of the window below, as found in the existing house.

New and modified pitched roofs **should** follow the original roof in materials and detailing.

Material and detailing

All materials **must** match the original house.

Extensions **should** seek the retention and reinstatement of all original, decorative brick and stone details to elevations of extended houses; and such details **should** be replicated where appropriate in extensions.

(Image source: Haringey – House Extensions in South Tottenham SPD)

Figure A2.34 Estcourt Road, LB Hammersmith and Fulham

This row of two-storey terraces has been extended upwards, using mansard roofs, to add additional living space while creating an attractive streetscape. High take-up of upward extensions, and the consistent design of windows and roof line, have also led to an improved streetscape.

Figure A2.35 Abbey Road, LB Camden

Using modular construction, this one-storey rooftop extension provides a new two-bedroom home. As part of extension, the existing façade and communal areas were refurbished to improve the housing block for existing residents (see Figure 2.12 for an image of the block before redevelopment).

Figure A2.36 Lealand Road, LB Haringey

The upward extension on these two terraced properties has been allowed through the adoption of a strict design code in Haringey. The design code applies to a number of streets in which uptake has been high. For more information, see Haringey's House Extensions in South Tottenham SPD.

A2.5 Planning conditions

A2.5.1 It is encouraged to draw up a list of planning conditions for each design code. These planning conditions could include the refurbishing of façades and the reinstatement of original architectural features that may have been lost since first built. Providing a list of planning conditions can encourage improvements to the overall streetscape; and improve energy efficiency and performance of buildings. Encouraging joint planning permissions can also ensure extensions are part of wider programme of street-wide upward extensions.

Figure A2.37 Architectural detailing that could form part of the planning conditions for an upward extension

Image source: Tower Hamlets – Driffield Road conservation area character appraisal and management guidelines

Figure A2.38 Joint planning permission and construction

This project has ensured a consistent streetscape. Reference: Fitzroy Road, LB Camden

MAYOR OF LONDON

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Optimising site capacity: A design-led approach

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London Plan Policy	Policy D1 London's form, character and capacity for growth – Part (B3) Policy D3 Optimising site capacity through the design-led approach Policy D4 Delivering good design
Plan making	Planning authorities and neighbourhood planning groups should use this guidance during the local and neighbourhood plan-making process, when setting design parameters and establishing an indicative site capacity for site allocations and masterplans. This includes any existing site allocations that are being brought forward into new or revised Development Plans, as well as those that have been assessed as part of Strategic Housing Land Availability Assessments (SHLAAs) and have been found to be suitable and available. Where a site is brought forward through an appropriate Development Plan Document (DPD), it should be accompanied by a set of design parameters. These should take account of any relevant site-specific work that has been already undertaken, such as an area masterplan or characterisation assessment.
Planning Application type and how the London Plan Guidance will be applied	All development must make the best use of land by following a design-led approach that optimises the capacity of sites. This must be evident in the design and access statements submitted at the planning application stage. While this guidance applies to all land uses, it is mainly directed at residential or residential mixed-use sites.
Who is this guidance for?	Anyone involved in the planning, design, construction, delivery and operation of new major development including local borough planners, planning applicants, energy consultants, designers, developers, contractors, building owners, network operators and facilities managers. Specialists in urban design, including heritage and conservation officers, should be involved in the process set out in this document and as such should refer to this guidance.

1 About this document

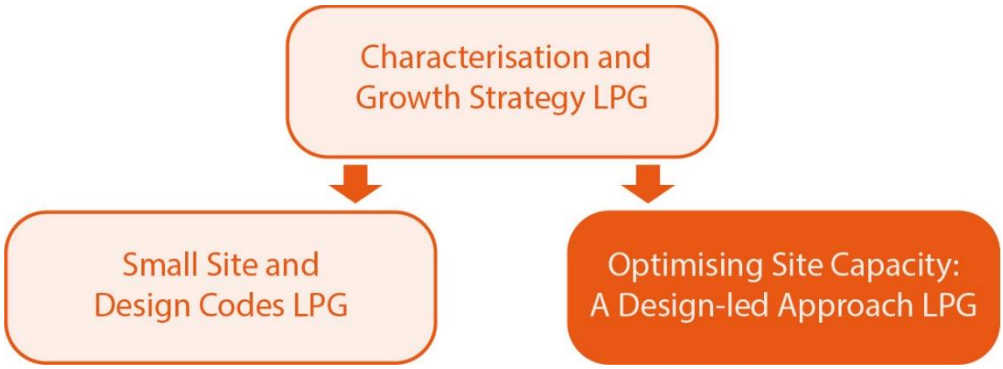
1.1 What is the design-led approach?

1.1.1 Good growth across London requires development to optimise site capacity, rather than maximising density. This means responding to the existing character and distinctiveness of the surrounding context and balancing the capacity for growth, need for increased housing supply, and key factors such as access by walking, cycling and public transport, alongside an improved quality of life for Londoners. Capacity-testing should be the product of the design-led approach, and not the driver.

1.1.2 This document sets out how the design-led approach, set out in Policy D3 of the London Plan, should be used to determine the most appropriate form of development on a site. The design-led approach is the process of setting site-specific design parameters and codes for development sites to provide clarity over the future design. These comprise a set of high-level strategic parameters addressing the form, massing and layout of a future development. They should be informed by a site-specific design vision that prioritises placemaking. They should be formulated at the local and neighbourhood plan-making stage to establish the design aspirations; and, for residential applications, to determine the indicative site capacity. Where design parameters have been set by the local planning authority or neighbourhood planning group, applicants should demonstrate that they have met these while following the process, set out in the document, to determine a more detailed design.

1.1.3 On sites where design parameters have not been set by the local planning authority or neighbourhood planning group, applicants should carry out this process during the preliminary design stages to determine a site's optimum design response and to clarify their design intentions. The design review process should be used to assess and inform design options early in the planning process (see Policy D4, Part D). This process should be carried out at the pre-application stage, with documents submitted as part of the design and access statement within a planning application.

Figure 1.1 Relationship between the design LPGs



1.1.4 This document is mainly directed at residential or residential mixed-use sites, but the process can be used for non-residential sites as well. It should be used in conjunction with the National Model Design Code (NMDC). This guidance builds directly upon the guidance in the Characterisation and Growth Strategy LPG, and differs from the area-wide design codes set out in the Small Site Design Codes LPG. The high-level design parameters set out in this guidance are site-specific, whereas the design codes in the Small Site Design Codes LPG are based on character types and cover an area – not just a single site.

1.1.5 The design-led approach prioritises placemaking, which should capitalise on the insight and knowledge of local communities. This should involve meaningful upfront engagement and collaboration with local communities, organisations and businesses, to ensure they have a greater say on the type of development in their local area at the plan-making stage.

Indicative Site Capacity Toolkit

1.1.6 An Indicative Site Capacity Toolkit has been developed as part of this guidance to assist in determining the indicative site capacity of residential sites. This digital toolkit includes a set of 3D residential building types[1] in SketchUp; and an Excel-based indicative site capacity calculator which can be used when calculating a site's indicative capacity. Boroughs, applicants and neighbourhood planning groups may choose to use other digital design tools if preferred.

1.2 Neighbourhood planning

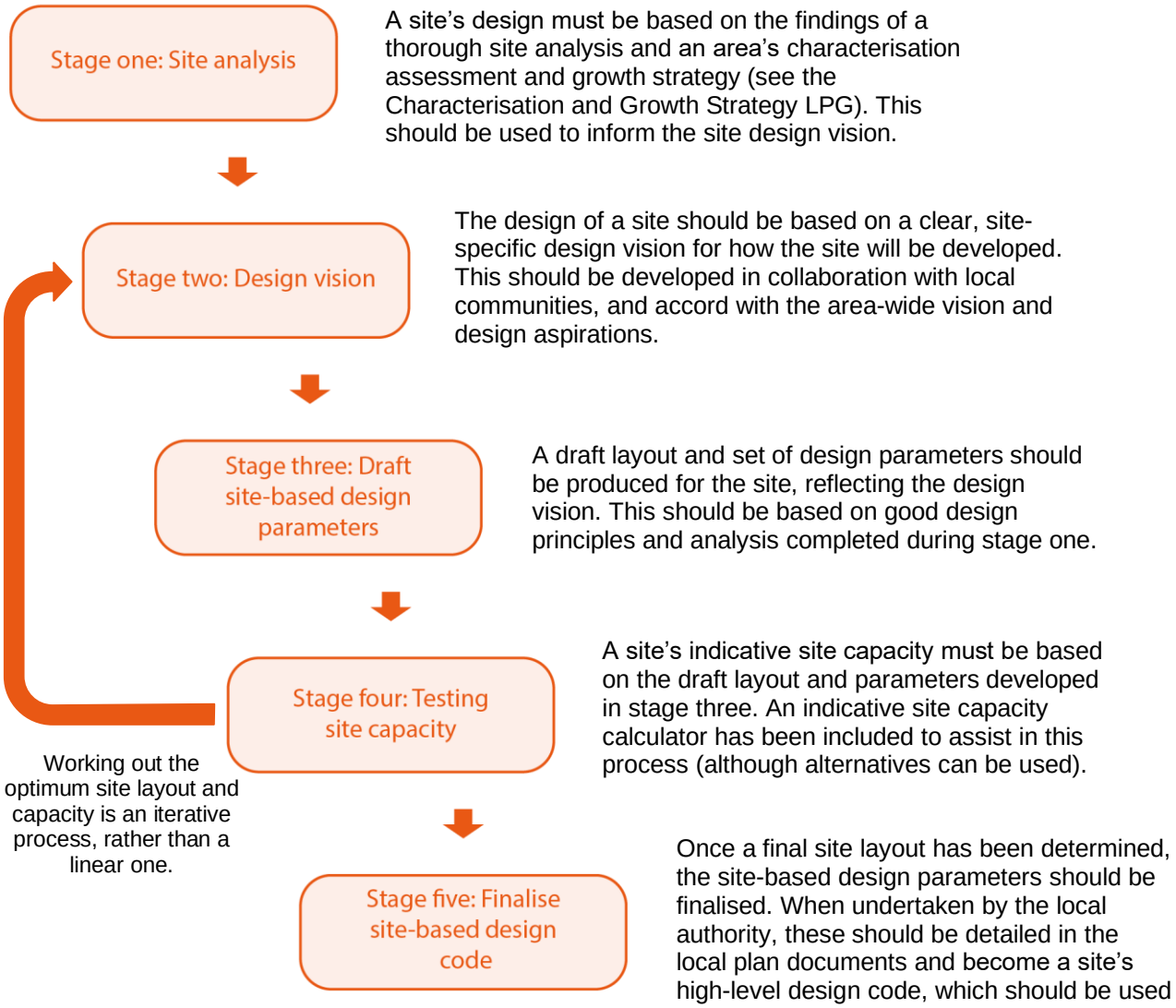
1.2.1 Neighbourhood planning groups are encouraged to develop design parameters for sites within their designated neighbourhood area. For residential or residential mixed-use sites, this should include determining the indicative site capacities.

[1] The 3D residential types are based on common block types in London that comply with the Housing Design Standards LPG. As a result, this toolkit includes a selective, and not exhaustive, list of residential types.

1.3 Stages of the design-led approach

1.3.1 Optimum site capacity is defined as development with the most appropriate form for its site, following an evaluation of the site's attributes, its surrounding context and its capacity for growth (London Plan Policies D1, D2 and D3). There are five stages to the design-led approach, detailed in Figure 1.2, below. When undertaken by a borough or neighbourhood planning group, this process should be carried out during the plan-making stage, when setting design parameters and working out indicative site capacities for sites.

Figure 1.2 Five stages to the design-led approach



2 Stage one: Site analysis

2.1 Site context

2.1.1 Stage one is an analysis of the site and its surrounding context. This stage should reflect findings from the borough-wide characterisation assessment as well as a more detailed analysis of a site's opportunities and constraints. This analysis should form the basis of any future redevelopment of a site, informing the appropriate scale and character. It should also take account of how a place changes around the clock and across the week.

2.2 Planning policy, guidance and history

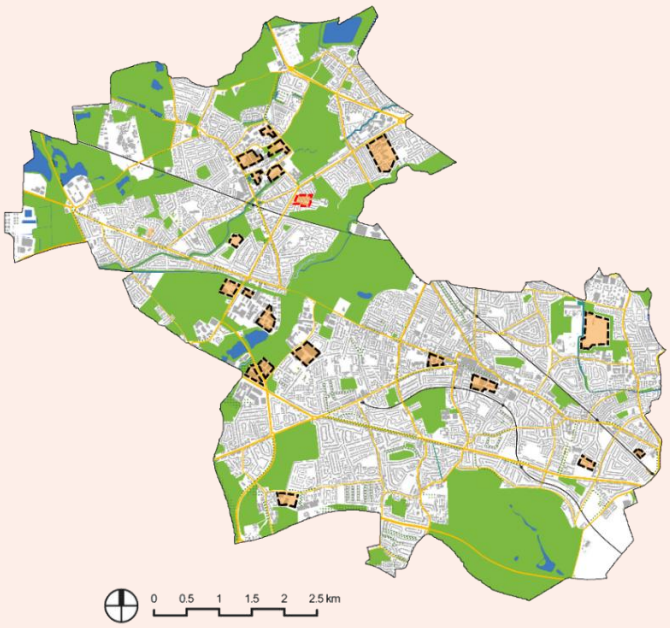
2.2.1 Boroughs, neighbourhood planning groups and applicants should first consider the existing and emerging development plan designations, including any relevant current allocations, planning designations for the site or adjoining sites, and local plan requirements. Relevant site-specific planning guidance documents or strategies – as well as any prior pre-application discussions or engagement with landowners and developers, existing planning applications, and planning approvals – may also provide useful insights during the site analysis.

Example site

An example site, outlined in red below, is used within this guidance to illustrate the key aspects and stages to the design-led approach.

Figure 2.1 Area map showing development sites

Sites brought forward through a DPD should be located on digital coding plan



2.3 Environmental and infrastructure opportunities and constraints

2.3.1 Boroughs, neighbourhood planning groups and applicants should first consider the environmental and infrastructure factors when analysing a site's potential for redevelopment. This should include factors such as flood risk; air quality; soundscape; land contamination; below-and-above-ground utilities; and site ownership. An analysis of the topography of a site should also be conducted as this will assist in defining the layout, orientation, building height, drainage and accessibility of a site. Considering these factors will help influence the design of a site and may highlight any potential constraints or opportunities early in the design process.

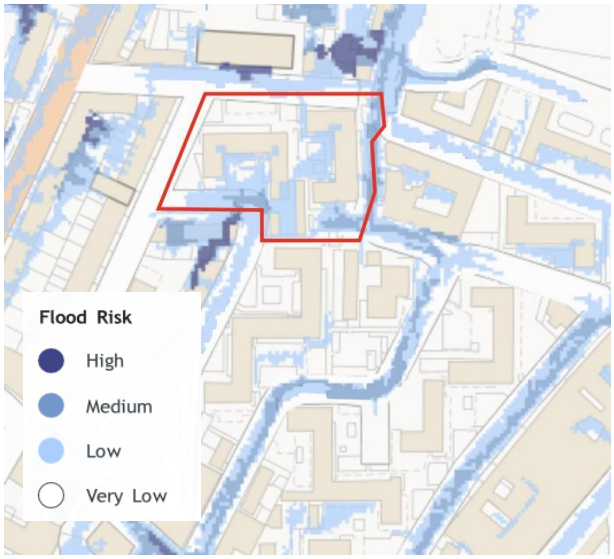


Figure 2.2 Assess flood risk

Development sites should be designed to adapt to the risks of climate change. As a result, a site's risk to flooding should be assessed and planned for. This could mean avoiding building on low-lying land and instead using it for sustainable urban drainage systems (SuDS). Options may also include ruling out basement accommodation and locating vulnerable uses on upper floors.

Figure 2.3 Assess below and above-ground utilities

A site appraisal of the below-and-above-ground assets and ground conditions should be carried out. This could include the presence of major utilities, overground pylons, sewers, London underground tunnels and site contamination. The Mayor's Infrastructure Coordination Service and Infrastructure Mapping Application (IMA) can support in this analysis.

2.4 Connectivity, permeability and access to local services

2.4.1 Connecting places with sustainable infrastructure and improving local and wider connections are key to successful places. Walking, cycling and public transport provision, accessible night and day, are crucial to creating healthy, inclusive and attractive places. An optimum capacity and density will be one where development takes full advantage of a site's current and future planned connectivity by public transport, walking and cycling to enhance access to services. When planning for connected, well-designed places, it is important to look beyond the boundaries of the site for opportunities to integrate with and enhance the surrounding streets, buildings and networks and to improve permeability and key connections. The hierarchy of streets can influence local movement and the opportunities for walking and cycling. The access to employment, local services and social infrastructure, such as education or health provision (including at night), should also be identified. This will help to determine if any new services or social infrastructure are required.

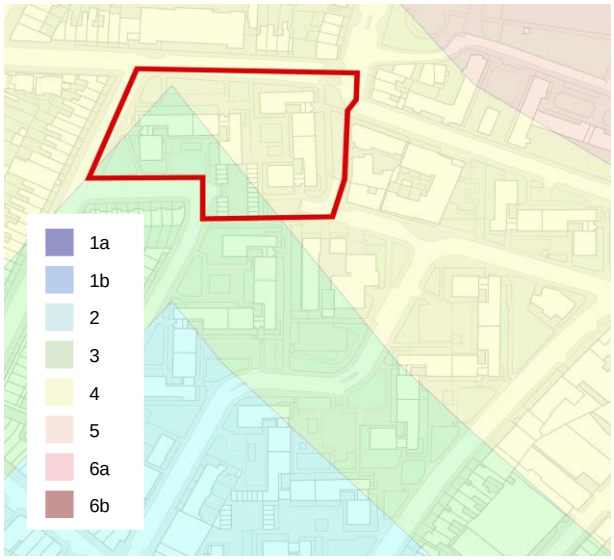


Figure 2.4 Connectivity measures

Connectivity measures such as Public Transport Access Level (PTAL), walking and cycling routes, and Time Mapping should be used to identify opportunities or potential barriers to site optimisation. In general, the better the connectivity, the greater the density and the lower the levels of car parking. How this may impact the design of the site and layout should be considered.

Figure 2.5 Hierarchy of streets

Existing street patterns and public rights of way should be analysed in terms of their function, hierarchy and strategic connections. Streets and public spaces within a development will be better used if they link well to those outside of the site – this will help encourage active travel, support new businesses and improve the sense of security on residential streets (see TfL's Healthy Street toolkit).

2.5 Built form and open spaces

2.5.1 Existing urban typologies near the site, which make a positive contribution to the character of the area, should influence the design vision for the site. This exercise may also involve assessing aspects of a site's surroundings that do not positively contribute to the character of an area (such as areas that are overly dark or secluded, or typologies that do not contribute positively to the area). The provision of public green space should be considered at this stage, with reference to the site analysis of topography, hydrology and the borough's wider green infrastructure network. Existing trees and ecology of value should be retained where possible due to the time needed to establish them. It is important to consider the proximity of (and ease of access to) green space to residential areas for recreation and relaxation, and to support biodiversity and reduce the urban heat island effect.

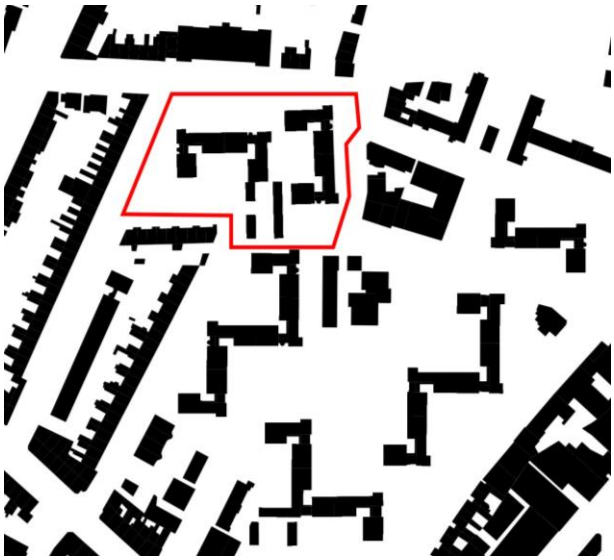


Figure 2.6 Urban typologies

Figure ground plans offer clues about the appropriate block size and urban typology that should be used. Larger urban blocks should be located next to wider streets. Smaller, fine-grain urban blocks should be separated by narrower streets. The orientation of buildings should be considered as this can affect a building's thermal performance, and quality and use of public open space (e.g. shadow, wind etc).

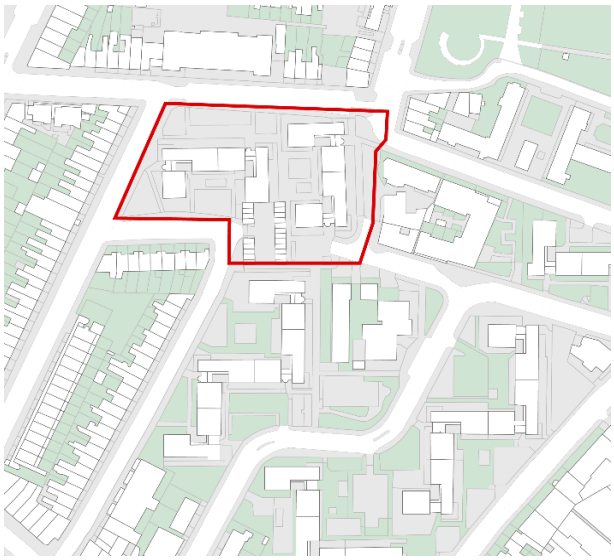


Figure 2.7 Green infrastructure

Site capacity can be optimised, safety-enhanced, and healthy lifestyles encouraged, where the benefits of green infrastructure are integrated into site design. Well-designed green infrastructure can make an important contribution to addressing flood risk; placemaking; mental and physical well-being; urban heat; and exposure to poor air quality for people more vulnerable to exposure, such as children and young people.

2.6 Heritage and placemaking

2.6.1 A site's history and heritage should heavily inform the design parameters and wider placemaking of a site. This should include the identification of heritage assets of varying significance including conservation areas, listed buildings, protected views and the presence of archaeological assets. Character types and areas (see Characterisation and Growth Strategy LPG) may also be identified. This will assist in informing the urban typologies of any future development. Local building styles and materials should be analysed as this can help determine aspects of identity that should be replicated. As per London Plan Policy HC1, proposals affecting heritage assets, and their settings, should conserve their significance. For buildings identified as being At Risk, boroughs should set out strategies for their repair and re-use. Community assets should be identified, as these might play a key role in forming existing communities around them and creating a sense of place (see Cultural Infrastructure Map).

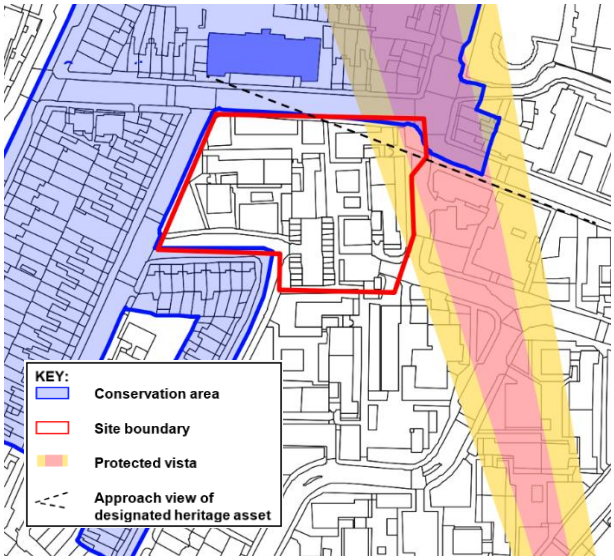


Figure 2.8 Identify heritage assets and protected views

Heritage assets are the remaining traces of the development history and contribute much to the legibility, continuity and identity of an area. They provide landmarks that aid navigation; and offer an opportunity to support culture, the circular economy and good placemaking. Sensitive interventions and adaptations to buildings help to preserve them for future generations.

Figure 2.9 Historic street map

Site parameters should be informed by an analysis of the historic and existing street patterns and urban grain. Historical street maps can give an insight into former street patterns that could be reinstated to reconnect to local streets. Appropriate urban block size can also help in good placemaking and improve permeability where this is poor. This process may also identify sensitive edges or boundary conditions that

2.7 Building height, layout and uses

2.7.1 Next, a site analysis of the building heights, layout and land uses should be carried out. As part of this, the impact of potential future building heights should be considered on heritage assets, protected views, and the daylight and sunlight of neighbouring properties. This includes the impact of overshadowing on existing properties, open green space and the internal spaces within the site itself. An analysis of nearby land uses should also be used to inform the mix and location of uses for any future development. In analysing the layout, it may be useful to establish 'desire lines' across the site, and visually compare the size of the urban blocks within the site against those surrounding it. If the urban blocks on the existing site are particularly large, it may be beneficial to subdivide these. This should be closely informed by the characterisation assessment and historic street layout.

Figure 2.11 Building heights

Local building heights should be assessed to determine the appropriate height of new development. Heights of new development should relate to the width and hierarchy of surrounding streets and public spaces. Particular consideration should be given at a site's edges where it meets existing townscape. Overly abrupt changes in height should be avoided unless justified from a townscape perspective.

Figure 2.10 Land uses

Future development should contribute to creating diverse mixed-use places. The location of future land uses will be influenced by surrounding and nearby land uses. Often, non-residential uses – such as restaurants, cafés, and retail frontages – should be located on busier streets, while the quietest streets are likely to be purely residential. Existing formal and informal community spaces should also be identified.

2.8 Infrastructure capacity analysis

2.8.1 Practitioners should proactively plan for estimated population growth and change as this will have implications for what infrastructure should be provided on a site and thus influence the overall site capacity. This will involve an iterative process of identifying existing infrastructure provision, and any deficiencies; and then re-evaluating it once an indicative site capacity is determined, and thus likely population has been established. It should include an assessment of social infrastructure, such as local health and education services; and consider in particular the needs of children, young people and the elderly living within new housing developments. A key consideration here is planning for the needs of existing and new residents, taking account of protected characteristics. This includes ensuring that any new and existing service/s is accessible to those walking, cycling or using public transport (see Sustainable Transport, Walking and Cycling LPG).

2.8.2 Population and child yield vary across type of home and housing tenure. The GLA Population Yield Calculator should be used, which gives an indication of the possible number and age of children that could be expected to live in a new housing development. The expected population yield can assist in determining the potential need for play space and social infrastructure generated by a new development, to inform the infrastructure-planning process when calculating the indicative site capacity (step 7 in section 5.1). This may include infrastructure such as schools and childcare facilities, as well as health and social care facilities.

2.8.3 Boroughs, neighbourhood planning groups and applicants should consider the viability and deliverability of sites when following the design-led approach. Sites should be designed to provide the relevant threshold level of affordable housing wherever possible, and the infrastructure needed to support delivery. Evaluating borough Infrastructure Delivery Plans (IDPs) provide a good starting point for assessing the adequacy of infrastructure capacity. Similarly, annual Infrastructure Funding Statements (IFS) may provide further detail to IDPs by detailing the projects where funds received through developer contributions and the Community Infrastructure Levy will be spent. Where infrastructure capacity is deemed inadequate, the borough should seek to ensure that sufficient capacity will exist at the appropriate time. Planning Obligations Supplementary Planning Documents and IFSs will help clarify priorities and locations for infrastructure-capacity improvements, and how funding may be secured. If the infrastructure necessary to support the development cannot be delivered, the scale of development being considered for the site should be reduced to reflect the level of infrastructure that will be available; and/or it may be necessary to phase development tied to infrastructure delivery (see Policy D2 Infrastructure requirements, for sustainable densities).

3 Stage two: Design vision

3.1 Placemaking

3.1.1 Using the information gathered during the site-analysis stage, a clear design vision should be formulated for what the site will become in the future. The foundation of this design vision should be a placemaking exercise that is focused on the design principles and physical attributes of a future development and how these should relate to the surrounding area. This is likely to include the scale and massing of the built form; routes through the sites; location of open spaces and other key green infrastructure features; and land uses. For boroughs and neighbourhood planning groups, this process should avoid duplicating policy aspirations that can be found elsewhere in the local or neighbourhood plan, and instead aim to clarify the site-specific design intentions and high-level parameters for a site. In areas undergoing significant change, approaching the design of multiple nearby sites together, rather than as individual sites, is encouraged. This will secure a more coherent approach to placemaking, thinking beyond 'the red line boundary', and improve an area's future legibility. New development must also support and promote the creation of an inclusive London where residents and visitors can access and benefit from places and spaces that offer safety, dignity and acknowledge diversity and difference in our city, during both the day and the night.

3.2 Public engagement and consultation

3.2.1 Communities, organisations and businesses should be meaningfully engaged with when developing the design vision for a site. As part of this, practitioners should present the evidence and findings of their site analysis to the local community and other stakeholders. This provides an opportunity for the local community to comment on or clarify the findings of the site analysis, and for any amendments or additions to be made.

3.2.2 Engagement should be inclusive, with the participation of all parts of a community and their views taken account of. Providing engagement online and in person, as well as offering different times of day for engagement, is also encouraged. This should involve the gathering of local insight and knowledge, as well as the communities' preferences on design, massing and land use. The community's perception of safety can also be gathered at this stage, as this will be an important consideration in the design of streets and the new development. Engaging the public at this stage brings forward discussions about the scale and form of development to the plan-making stage (or early design stages for applicants), where there is greater opportunity to shape future development in an area. Where relevant, feedback gained should then be used to shape the design of the development site. Examples of consultative community engagement could

include interactive Q&A sessions, setting up a community review group, and carrying out co-design meetings and workshops.

3.3 Borough-wide growth strategy and location of tall buildings

3.3.1 A site's design vision should clearly articulate what constitutes acceptable design quality for a site; and should be informed by the local area's spatial strategy. This may be in the form of a local masterplan; an Area Action Plan; a Neighbourhood Plan; or an area-specific Supplementary Planning Document (SPD).

3.3.2 The site's location within one of the three 'areas of change' (*conserve*, *enhance* and *transform*), and any area-wide visions, policies and parameters, should assist in informing the design vision for a site and the subsequent design parameters and codes. As a guide, the form and scale of development in each of the three areas of change should be similar to that detailed in section 4.2 of the Characterisation and Growth Strategy LPG. This process should take into account an area's capacity for growth. As a result, the form and scale of development in areas with a lower or higher capacity for growth will vary.

Locations where tall buildings may be appropriate

3.3.3 The London Plan requires boroughs to identify locations that may be appropriate for tall buildings and set their appropriate heights. Where relevant, these locations and heights should inform the design vision of a site, and any subsequent design parameters. In locations where tall buildings are not appropriate, the height parameters for a site should not exceed those set out in the borough's tall building definition.

3.3.4 Even in areas where tall buildings may be appropriate, boroughs and applicants should test alternative building typologies and building configurations, such as mansion blocks and mid-rise typologies, to determine whether they are a more suitable design solution for the site than tall buildings; and can achieve a similar number of homes.

3.3.5 As stated in the Characterisation and Growth Strategy LPG, the categorisation of a site within a *transform* area does not necessarily mean that a tall building is appropriate. Tall buildings should only be envisioned in areas that have been identified as part of a borough's development plan in accordance with Policy D9 Tall buildings. It is anticipated that many areas identified as *transform* areas will not necessarily envision building tall, but will rather focus on increasing density in the most appropriate way. Some of London's most densely populated neighbourhoods are areas that have no tall buildings, using mansion blocks and other mid-rise typologies. Often these typologies provide the optimum density, providing much needed housing using a street-based approach to intensification. Mid-rise typologies may also be more suitable for families with young children.

Figure 3.1 A dense, street-based mid-rise townscape

This area has been transformed, creating a dense, street-based mid-rise townscape in which a new positive character has been created. Example reference: Wyke Road (before and after), Hackney Wick, LB Tower Hamlets.

4 Stage three: Draft site-based design parameters

4.1 Site-based design parameters

4.1.1 Following the formulation of a site's design vision, a set of draft design parameters reflecting this vision should be drafted. These parameters should set out the layout and design aspirations for the site and will form the basis of the design codes and parameter finalised in stage five.

4.1.2 **Site-based design parameters:** concise, graphical or numerical, simple-to-understand parameters that relate specifically to a development site. These high-level design parameters should include limits on acceptable building heights, scale, massing, indicative layouts and, where appropriate, the amount of floorspace that should be provided for different land uses. These will form the basis of design parameters and codes that are formalised during stage five.

4.1.3 The level of detail provided in the design parameters for each site will vary depending on its size, location and characteristics. For sites not carried forward as allocated sites, such as SHLAA sites, the design parameters will deal simply with the strategic issues of layout, height and massing. However, for others that are strategic in scale, are at planning applications stage and/or are allocated sites, a more detailed set of design parameters/codes may be necessary. Nevertheless, it is important that the design parameters leave sufficient flexibility to avoid stifling innovation or the viability of a site.

Example strategic site

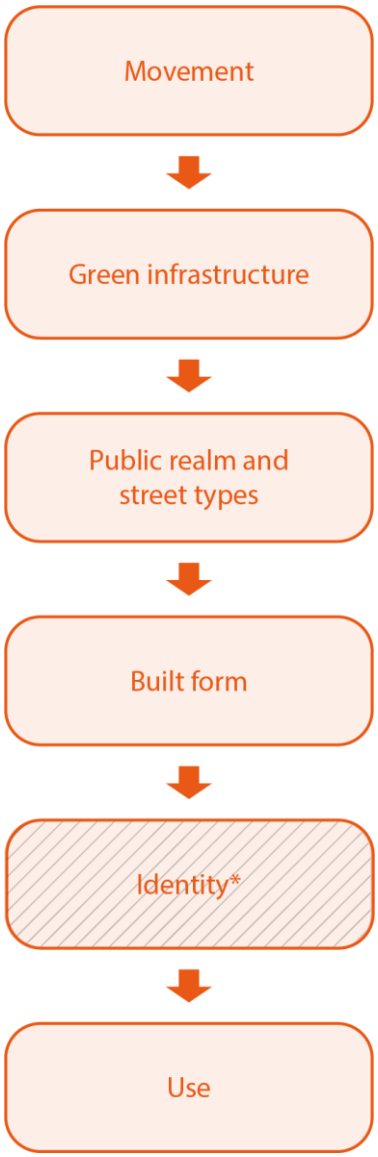
This example site will be used to illustrate the design coding process. The site does not fall within an area appropriate for tall buildings.*

Figure 4.1 3D map of the example site

*A tall building in this location has been defined as a building over 30m in height from the base to the top of the building.

4.1.4 As a minimum, boroughs, neighbourhood planning groups and applicants should clarify the following design parameters. These are set out in the NMDC, and covered in the next section under the following headings: Movement; Green Infrastructure (referred to as Nature in the NMDC); Public Realm and Street Types (referred to as Public Space in the NMDC); Built Form; Identity; and Use. In addition to these, a more exhaustive list of design coding parameters that boroughs can use is contained in the NMDC.

Figure 4.2 List and sequence of parameters that should be defined for a site



Define the movement routes and hierarchy in and around the site. While this may include vehicular movement for large sites, it should fundamentally prioritise walking and cycling.

Define and locate the green infrastructure on site. This may include formal green spaces such as parks; SuDS; street trees; and opportunities for food growing.

Define and locate the street types on site. This will include any new streets and public squares being envisioned for a large, site as well for any boundaries or edges of the site that connect with existing streets.

Define the block type, building line and height of buildings on the site. Boroughs may also wish to set parameters on the plot ratio and plot coverage of a site.

Define parameters on the materiality, window sizes, detailing, roofscape and how the building meets the ground (such as entrances, etc).

Finalise the mix and location of uses on site.

* This element is not fundamental to defining the indicative site capacity of a site and is therefore optional. Nevertheless, boroughs and neighbourhood planning groups are encouraged to set parameters for this element for any site that is likely to become an allocated site for development.

4.2 Movement

4.2.1 Designers should take a Healthy Streets Approach when designing a site. This should prioritise walking and cycling, as well as reinstating historic street patterns where possible. Often, clues in the surrounding streets will assist and offer the potential to easily connect beyond the red line of the site. Historic maps sourced during the site analysis may also help to identify old movement corridors that could be reconnected. This could include considering where some transport modes might be restricted to support active travel or public transport options, for example using barriers/cameras to restrict use as a through route for vehicles. For sites that create new streets, the experience and convenience of pedestrians and cyclists need to take priority over other users which consider 'place' as well as 'movement'. Designers should identify the hierarchy of streets and access for emergency/utility vehicles via an Air Quality Positive approach. Knowledge of the infrastructure capacity, and an understanding of local land uses, can also highlight nearby uses that would benefit from improved connections.

Figure 4.3 Street hierarchy

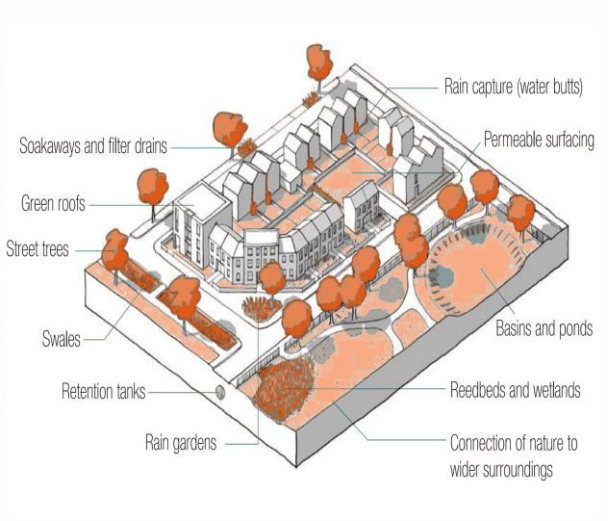
For large sites, a network of routes should be formulated that consider the location and hierarchy of streets. This should address issues of permeability through the site, connection to the existing street layout, desire lines and any key junctions and servicing requirements (see Active Travel Zone assessment). For smaller sites, it may not be necessary to provide guidance on this design coding element.

Figure 4.4 Worked example

A new walking and cycling route through the site has been introduced that connects two roads at either side of the site. This helps connectivity in the area and provides a frontage to position buildings. It is proposed to help link a network of green spaces, which was identified in the area during the design vision stage. A maximum parking provision of 0.25 car parking spaces per dwelling has been planned for.

4.3 Green infrastructure

4.3.1 In the context of the climate and ecological emergencies, it is vital for urban designers to consider aspects related to nature and green infrastructure early in the design process. A site's green infrastructure should be defined and positioned to optimise the benefits provided by existing and new greening. This should be informed by the borough's green infrastructure strategy, and can be broken down into a hierarchy of green spaces such as parks and green spaces; communal spaces; and private gardens. It can also include allotments or other food-growing places; play space; and urban greening features such as street trees, reflecting any site requirements or opportunities. Identifying opportunities for green infrastructure to deliver wider objectives such as sustainable drainage, net biodiversity gains and linking or integrating into existing key assets is also necessary at this stage. The design of green infrastructure should complement, and be in addition to, taking a Heathy Streets Approach to movement in and around the site.



Source: NMDC

Figure 4.3 Location of green infrastructure

Boroughs, neighbourhood planning groups and applicants should define the location and type of green infrastructure that will be provided on site. This may include requirements for rain gardens, street trees, green roofs, green open space and the retention of existing trees. It should also consider the sites connection to any wider green networks or infrastructure.

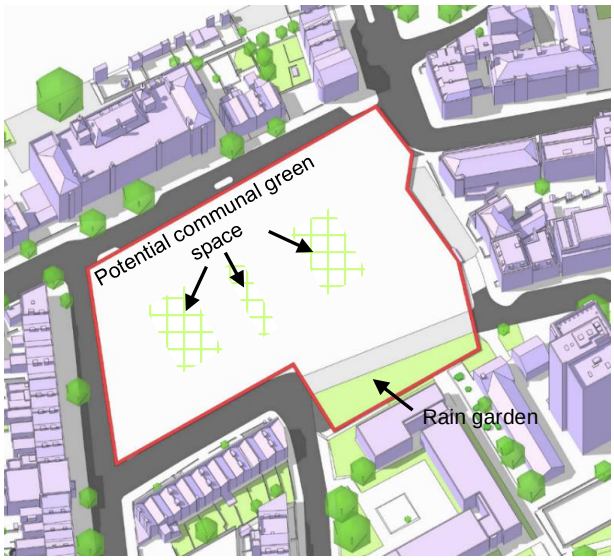
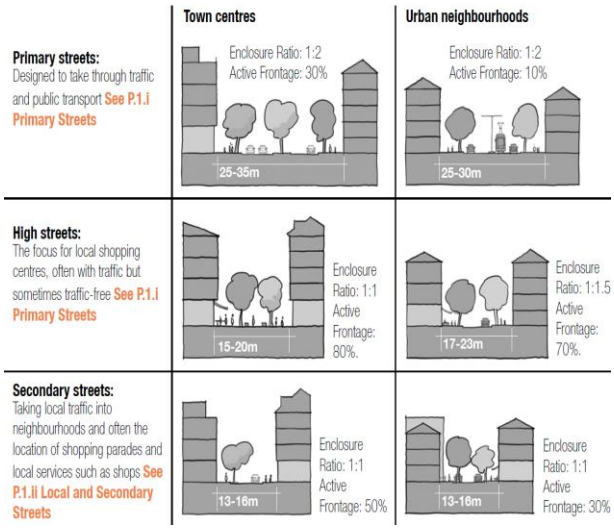


Figure 4.2 Worked example

Local analysis has indicated a low risk of flooding to the south of the site. Therefore, a rain garden has been located to the south of the site to capture and store rainwater in the event of a heavy downpour. This rain garden aims to reduce the risk of flooding while serving as green space for residents and locals. It is distinct from the semi-private green spaces that sit within the courtyards.

4.4 Public realm and street types

4.4.1 The character, quality and potential usage of public space is influenced significantly by the way it is enclosed by buildings. Appropriate building height-to-street width ratios can encourage vitality while allowing good levels of daylight and sunlight to be reached in public realm, and to dwellings along the street. It can also impact on how safe users feel while being in the space, particularly during the evening or at night. As a result, boroughs, neighbourhood planning groups and applicants should define the street types that are appropriate for the site using the street types in the NMDC. Where a site borders an existing street, the aim should be to provide a strong street frontage, and clear fronts and backs. Using these street types and the subsequent enclosure ratios will also help reinstate existing streets that have become less desirable. In addition, these types can help inform the appropriate heights of buildings by defining the street height-to-street width ratio. For further guidance, please refer to Manual for Streets.



Source: NMDC

Figure 4.4 Street types

The street types included in the NMDC should be used when defining a site's design parameters. These have dimensions and enclosure ratios that can be commonly found in London. These should be used to create a network of public spaces that are of good quality and well proportioned.

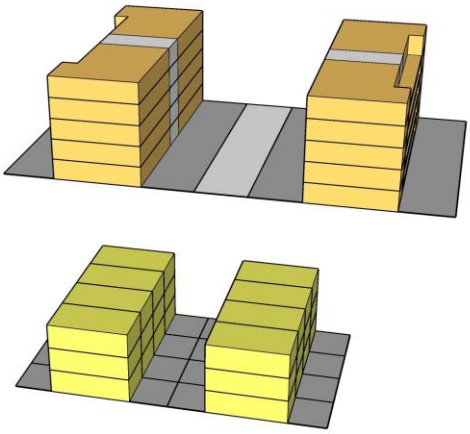


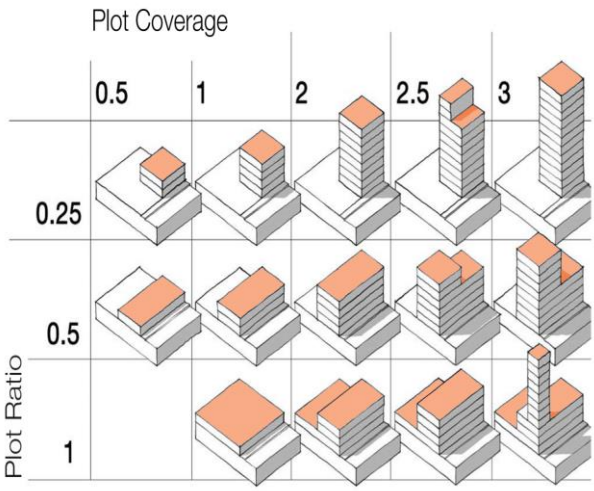
Figure 4.5 Street typologies models in SketchUp

To assist in the layout of sites, the residential building types, included in the Indicative Site Capacity Toolkit (see Appendix 1-Appendix 3), can be used to create different street typologies. Examples shown include an urban neighbourhood street with an enclosure ratio of 1:1.5, and a mews street with an enclosure ratio of 1:1 (see NMDC).

4.5 Built form

Block type, plot ratio and plot coverage

4.5.1 Having set out the design parameters for the site's movement, network of green/open spaces and public realm, the built form should be considered next. This should include defining the block type or types on the site. In many areas, the rhythm and variety of smaller or larger buildings may be intrinsic to the character of an area. Defining the plot ratio and plot coverage, instead of residential density, can be a more useful and context-appropriate way, as they take account of the form and massing. In doing so, these measures can provide ways to optimise a site's capacity while ensuring the design positively contributes to the character of an area. For larger sites, it may also be appropriate to define different character areas that have a combination of different block types and urban grain.



Source: NMDC

Figure 4.6 Plot ratio and plot coverage

It is encouraged to set parameters on the plot ratio and plot coverage of a site. Plot ratio is the ratio between site area and the total building floor area while plot coverage is the proportion of the site area occupied by buildings.

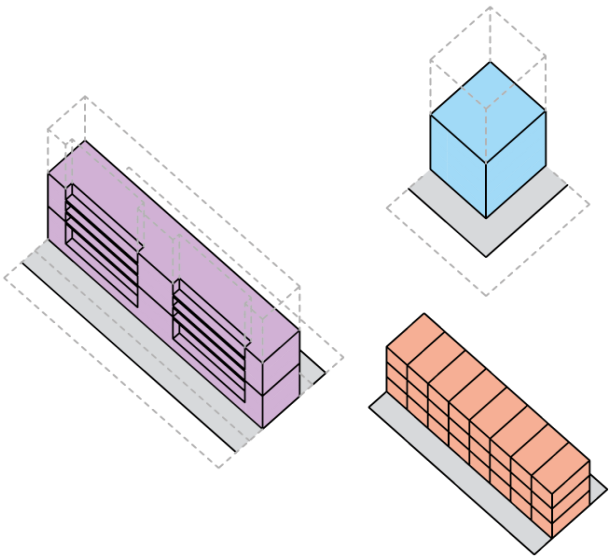
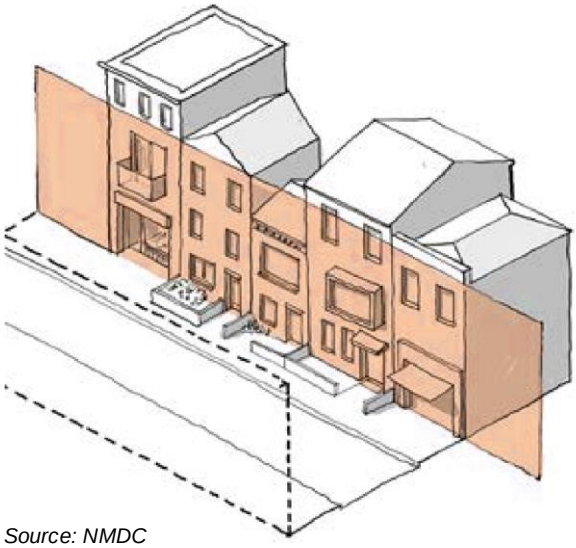


Figure 4.7 Residential/block type models in SketchUp

Boroughs, neighbourhood planning groups and applicants should define the block type that is appropriate for the site. If using the Indicative Site Capacity Toolkit, detailed within this guidance, boroughs are encouraged to use the pre-set residential types in the digital toolkit library, which can be used to model different street types and courtyard blocks.

Building line and height

4.5.2 Next, a site's height and building line parameters should be determined. These should specify the maximum heights for different locations within the site. This should be based on a site's design vision (see stage two) and influenced by the street types, hierarchy and any planning constraints such as protected views or nearby heritage assets. Height is particularly significant for sites that are in close proximity to different areas of character and identity. It is important to avoid a 'cliff edge' in height or massing where one boundary meets another, as illustrated in Figure 4.11, below. Consideration should be given to these boundary conditions with the aim of creating coherent conditions at a boundary. Tall buildings should only be located in areas that have been identified as appropriate. Guidance should also be provided at this stage on the future use or restoration of existing buildings on site that are of historic interest or townscape merit.



Source: NMDC

Figure 4.8 Building line

The building line is created by the primary front face of buildings along a street. Building line and set-back parameters should take into account the street type, building type and height of the anticipated massing on site. The size of a set-back will vary with the nature and context of the street, and may also consider any positioning of any defensible space.

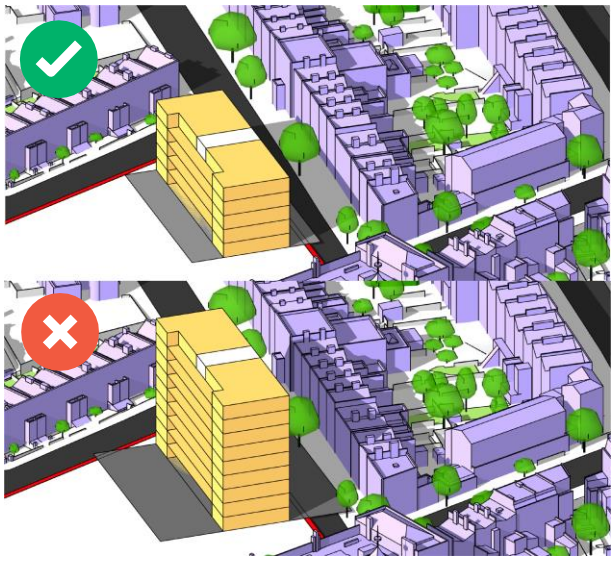


Figure 4.9 Appropriate boundary conditions

Practitioners should consider the boundary conditions of a site. Boundary treatment should provide a clear distinction between public and private space; and give a sense of security, enclosure and ownership of an area, whilst integrating with existing form and character.

Perimeter blocks

4.5.3 Having defined a site's layout, street type and building type, boroughs, neighbourhood planning groups and applicants are encouraged to consider the use of perimeter blocks where appropriate. Perimeter blocks characterise much of historic London, forming strong street frontages and clear backs. This is because it allows a continuation of the grain of London's streets, legibility and safety through active frontages and overlooking, and the ability to provide high-quality amenity space for residents away from vehicles. Figure 4.10 to Figure 4.14 also illustrate the potential of combining block types to optimise a site's capacity.

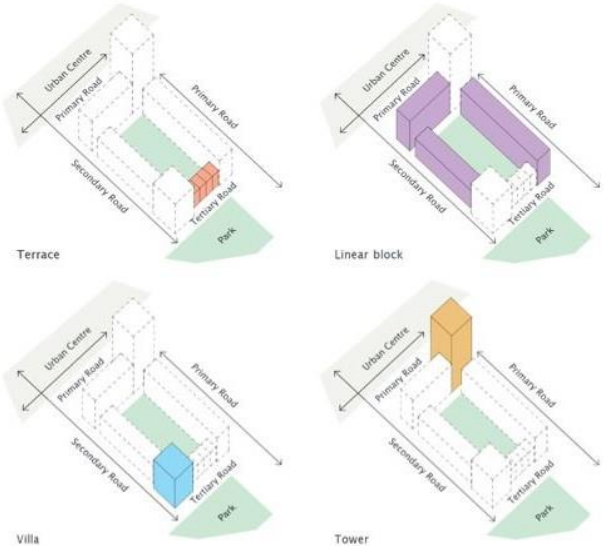


Figure 4.10 Combinations of different types within a perimeter block

The character and surrounding area should inform the use of different building types and heights within a parameter block. Where appropriate, the use of different combinations of types on the same site can help in optimising the site's capacity and enhancing spatial diversity.

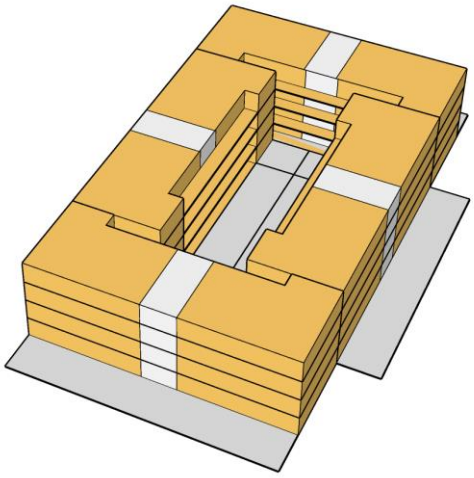


Figure 4.11 SketchUp model showing a perimeter block using four linear blocks

The SketchUp residential building types within the Indicative Site Capacity Toolkit can be combined to create different layouts including courtyard-forming or perimeter blocks. Care should be taken when using tall, enclosed courtyard blocks as this may limit the daylight and sunlight within the courtyard.

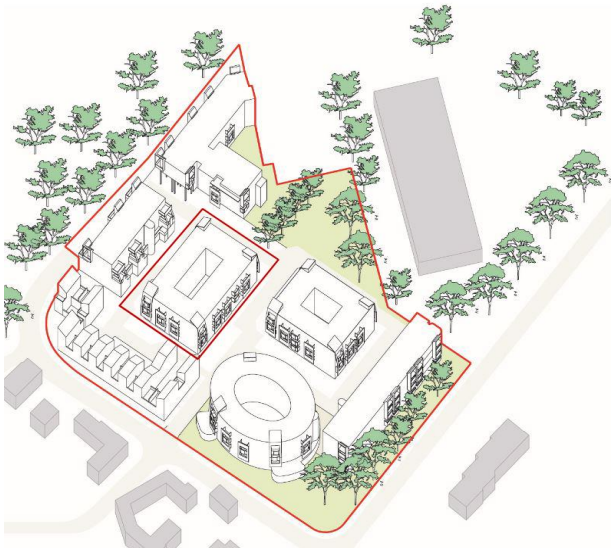
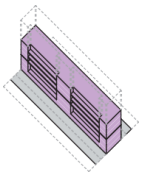


Figure 4.13 Redwood Park, Southwark

Four Linear blocks

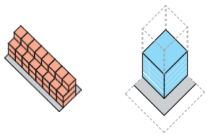


This is made up of four interlinked gallery access linear blocks. The four blocks form a perimeter block with a communal courtyard in the centre.

Figure 4.12 Brentford Lock West Phase Two, Hounslow

Six villa blocks

Ten terraces

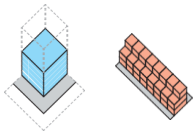


This development comprises six villa blocks which are connected by ten townhouses. The block encloses a courtyard garden that sits above an underground car park. Distinct sawtooth roofs make reference to the neighbouring wharf architecture.

Figure 4.14 Caudale, Camden

One villa block

Three terraces



This is made up of a villa block, which gives height and marks the street corner, and a connected terrace of three houses. The latter helps form an active urban edge to the street.

4.6 Identity

Sense of place and local character

4.6.1 Boroughs, neighbourhood planning groups and applicants may wish to produce design codes and guides on a site's detailing, materiality and local identity. These codes are unlikely to impact on a site's indicative site capacity and therefore for boroughs, may not be necessary for all sites. However, where suitable, guidance on these aspects can provide clarity on the aspirations of a final design and provide greater certainty.

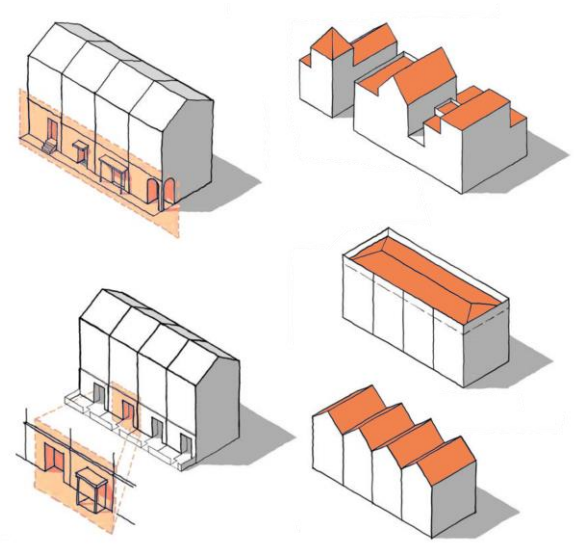


Figure 4.15 Building base and roofscape

Guidance on how the building meets the ground, and how it meets the sky, can assist in ensuring that a new development is in keeping with the local character of an area. This can include clarity over the design of a building's entrances and roofline.

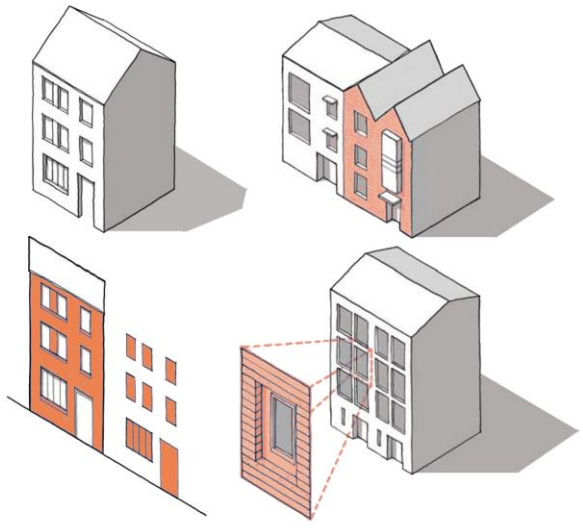


Figure 4.16 Windows, materiality and detailing

The size and positioning of windows, as well as the materiality and detailing, can significantly influence the appearance and identity of the final design. When setting guidance on these aspects, boroughs may wish to provide a set of visual precedents or examples that illustrate 'what not to do'.

Source: NMDC

4.7 Use

Active frontages and mixed-use developments

4.7.1 Lastly, the mix of uses for the site should be finalised following their consideration throughout the design process. This may include, for instance, a requirement for a mix of uses on the ground floor or basement. Social infrastructure and public services – such as nurseries, libraries, community centres, cultural venues and police stations – are often best placed in prominent and central locations that can emphasise their civic status. It is also important to consider the placement of separate entrances in mixed-use developments, and the level of activity at different times of the day and night, in order to enhance a sense of security. For example: retail, community and leisure uses will all require street frontages, whereas offices and industrial uses may not. As a result, it may be useful to consider how the development proposal will look/feel/work in the dark.

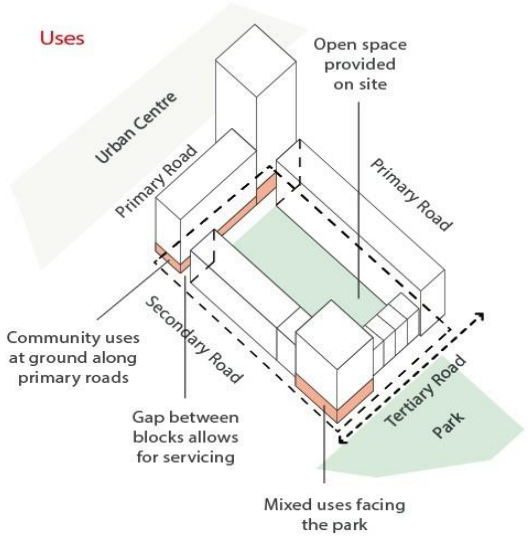


Figure 4.17 Integrating residential above commercial uses

The placement of commercial uses on the ground floor can promote vitality and a sense of community. Where appropriate, these should be placed in locations that promote social interaction and engage with the surroundings such as a local park or urban centre.

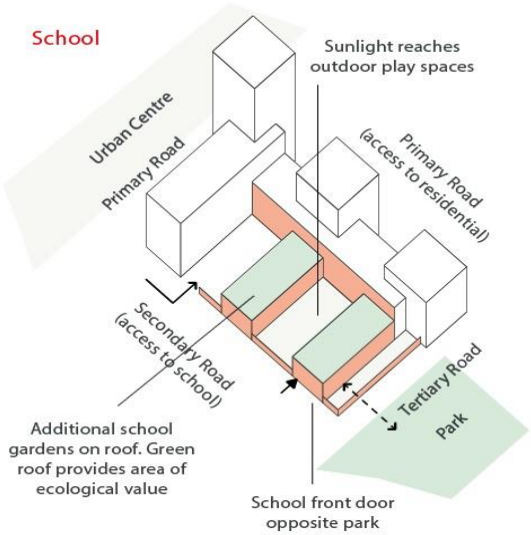


Figure 4.18 Integrating a school as part of a residential block

When integrating community uses into a residential block, the placement of entrances and play space should be carefully considered. In this example, the school entrances are located near a local park and the play space is located in the centre of the site.

5 Stage four: Testing site capacity

5.1 Modelling the site and determining the indicative site capacity

5.1.1 This section applies to sites that have residential dwellings (use class C3). For these sites, an indicative site capacity should be calculated using the draft design parameters set during stage three. The testing of a site's capacity is intended to be undertaken digitally using simple CAD software such as SketchUp or other 3D modelling software. Modelling the site allows boroughs, neighbourhood planning groups and applicants to test the appropriateness of several layouts; and combine different residential types, providing they are in accordance with the draft design parameters. In this way they can model the design parameters and select the option that best optimises capacity and responses to local context and character considered during the site-analysis stage.[2]

5.1.2 Boroughs, neighbourhood planning groups and applicants can use the Indicative Site Capacity Toolkit detailed in Appendix 1-Appendix 3. This tool can be used without significant training, and by neighbourhood planning groups as it is widely available. This section provides a step-by-step guide to using the Indicative Site Capacity Toolkit as an illustration of how to determine a site's residential capacity. This toolkit enables boroughs to identify the indicative site capacity and net number of additional new homes for a given site at plan-making stage. Alternatively, assessments can be made by drawing to scale the types on a site plan and adding up floor areas to arrive at the gross external area (GEA) to be entered on the calculator. Regardless of which tool a designer uses to assess a site's capacity, boroughs and applicants must base their modelling of a site's capacity on the draft design parameters set. As with any capacity-modelling exercise, site capacities should be treated as an approximation for development coming forward on site and not an absolute maximum or minimum.

5.1.3 Using the example site shown in Figure 4.1, a scenario is provided to illustrate the sort of design decisions that could be made. This scenario assumes that the site has been identified as being in an '*enhance*' area. The surrounding context has been assessed as having a mixed built quality with positive characteristics that should be enhanced. The worked example uses the residential types illustrated in Figure A1.2. The types are available through the GLA website as a downloadable digital resource.

[2] Building efficiencies, in terms of net to gross floorspace ratios, delivered by different built forms should also be considered at this stage as this will impact on deliverability.

3D modelling steps

Step 1. Having imported the site plan into 3D modelling software, the site movement infrastructure and street hierarchy should be placed onto the site. This will form the basis of the site layout and should be based on the site's design parameters.

Step 2. Next, the proposed green/open space, and aspects relating to green infrastructure, should be located on the site. These should consider the role of green infrastructure such as green space, SuDS, net biodiversity gain, and suitable locations for play.

Step 3. The public realm and street types will now inform the width of streets as well as the enclosure ratio that is desired. Where a site is bounded by an existing road, the proposed development should aim to create an appropriate street type and enclosure ratio that complements the existing character.

Step 4. The built form or building types should be selected, reflecting the site's parameters. If using the Indicative Site Capacity Toolkit, available as part of this guidance, the relevant residential types should be selected. Appropriate building heights should be modelled at this point which are based on the design parameters. The buildings should be arranged using the appropriate guidance on building lines and site arrangement.

Step 5. Where applicable, the non-residential uses on the site should be located. The approximate floor area should be defined.

Step 6. Once satisfied with the design option produced, the residential GEA (m^2) can be taken from the modelled scheme and used to identify indicative site capacity based on tenure and type mixes. If using the Indicative Site Capacity Toolkit contained within this guidance, the capacity calculator should be used. The GEA is based on the building capacities minus any loss due to the allocation of non-residential uses or parking.

Step 7. Lastly, using the indicative site capacity, an indicative scheme population using the Population Yield Calculator (see paragraph 2.8.2) should be produced to estimate the likely population and child yield to feed into the infrastructure-planning process.

This is an iterative process in which designers are encouraged to reflect on whether a site proposal provides sufficient social and physical infrastructure. The steps necessary to produce an indicative site capacity and indicative net number of additional new homes will be demonstrated in the following section using a worked example.

5.2 Scenario and worked example

This scenario assumes that the site is in an area of mixed quality and PTAL 3. It has been identified as having a moderate capacity for growth and should promote incremental change that seeks to enhance the overall character of the area. The area-wide vision for the area has identified the predominantly street-based, low-rise nature of the built environment as a positive characteristic. There is the opportunity for new forms of design and architecture providing it contributes to the street-based low-rise character. A listed building is located towards the north of the site and the analysis of the topography revealed that the site slopes down towards the southeast.

Worked example: This layout introduces a mix of four-storey terraces, five-storey linear blocks and a pedestrian-focused mews street in the middle of the site; together, these elements aim to respect the street-based, low-rise character of the neighbourhood. The layout follows the historic street pattern which was revealed during the site analysis, and aims to reinstate the local streets and urban block size. Four-storey terraces face onto the school, while a mews street has been placed at the centre of the site. Two courtyard spaces provide open green spaces for residents which have play space. A rain garden is located to the south of the site, which responds to the topography of the site to capture and store rainwater in the event of a heavy downpour. In addition, the linear blocks have green roofs.

Figure 5.1 Indicative massing of the worked example

5.3 Worked example – indicative site capacity

5.3.1 The indicative site capacity for the worked example above has been determined using the Indicative Site Capacity Toolkit, available as part of this guidance.[3] Using the excel spreadsheet template, the number and types of residential blocks have been entered in along with the tenure split.

5.3.2 There is also an option to include the total GEA of non-residential uses as well as the proposed parking ratio. These will lead to a reduction in the indicative site capacity for the number of housing units due to the floor area that they take up.[4] As a result, the number of car parking spaces should be minimised as this space will reduce the number of homes that can be accommodated on site, and compromise the efficient use of the site for other purposes.

Figure 5.2 Indicative site capacity calculator

This screenshot shows the indicative site capacity for the worked example

Type (select from pulldown menu)	GEA per storey (m2)	Number of storeys	Total GEA per block (m2)	Quantity	Total GEA per type (m2)	Car parking circulation factor	Ground floor car parking factor
Linear Urban Block	453.7	5	2268.5	3	6805.5	1.50	0.87
Terrace	55.0	4	220	24	5280.0	1.00	1.00
Terrace	55.0	3	165	8	1320.0	1.00	1.00
-Select Type-	0.0	0	0	0	0.0		
-Select Type-	0.0	0	0	0	0.0		
-Select Type-	0.0	0	0	0	0.0		
-Select Type-	0.0	0	0	0	0.0		
-Select Type-	0.0	0	0	0	0.0		

Capacity Calculator

Residential GEA*	**13,406**	m2
Non-residential	900	m2
Residential GIA	11,255	m2
Residential NIA	7,878	m2

Proposed average parking ratio:	**0.25**
Proposed average circulation factor	1.254
Ground car floor parking factor	0.932

* If fields are added to Digital Toolkit Record above, ensure formula for Residential GEA is

Tenure	Tenure Mix	NIA (m2)	Type	Type Mix	NDSS Area (m2)		Unit area including parking		Indicative Unit Count
Private	**50%**	3,939	1 bed	**30%**	50	23.0	53.4	22.1	22
			2 bed	**40%**	70	22.0	73.4	21.5	21
			3 bed	**30%**	86	13.0	89.4	13.2	13
			4 bed	**0%**	108	0.0	111.4	0.0	0
				100%	Total				56
Affordable (Intermediate)	**20.0%**	1,576	1 bed	**30%**	50	9.0	53.4	8.9	8
			2 bed	**40%**	70	9.0	73.4	8.6	8
			3 bed	**30%**	86	5.0	89.4	5.3	5
			4 bed	**0%**	108	0.0	111.4	0.0	0
				100%	Total				21
Affordable (Rented)	**30.0%**	2,364	1 bed	**30%**	50	14.0	53.4	13.3	13
			2 bed	**40%**	70	13.0	73.4	12.9	12
			3 bed	**30%**	86	8.0	89.4	7.9	7
			4 bed	**0%**	108	0.0	111.4	0.0	0
	100%			100%	Total				32
					Indicative Site Capacity				**109**
					Indicative capacity impact of accomodate car parking				-7

Indicative site capacity with 900m^2 of non-residential floorspace and 0.25 parking ratio: 109 dwellings (the floorspace of the allocated car parking has led to a reduction in seven homes).[5]

[3] Boroughs may choose to use alternative methods if necessary.
[4] Car parking has been included to highlight the detrimental impact of parking spaces on the capacity.
[5] Please refer to Appendix 3 for further details on the worked example calculations.

6 Stage five: Finalise site-based design parameters and design codes

6.1 Formalising site design parameters

6.1.1 Once a set of design parameters and an indicative site capacity have been determined for a site, the design parameters should be formalised. These design parameters will become a high-level strategic design code for the site and used at either of the stages listed at paragraphs 6.2 and 6.3.

6.1.2 Figure 6.1 displays the layout, form and heights of the scenario in stage four. It identifies the movement routes through the site, as well as aspects relating to green infrastructure and heights of buildings.

Figure 6.1 Example design parameters for the worked example

6.2 Local and neighbourhood plan stage

6.2.1 For masterplans or sites brought forward through a local plan or neighbourhood plan, a final set of site-based design parameters should be determined and included in local/neighbourhood plan documents. These parameters should be definitive, allowing them to be used in the determination of future planning applications on the site. They should be clear about any harms that arise from alternatives. Information on harm will be important for development management decision-making if a proposal does not accord with the design parameters. As a minimum, these should set out the building heights; scale; massing; indicative layouts and capacity; and, where appropriate, the amount of floorspace that should also be provided for different land uses. It may also be appropriate for more detailed design codes to be developed for these sites and included in later SPDs, planning briefs, masterplans or Opportunity Area Planning Frameworks.

6.2.2 It is recommended that sites, and their subsequent design parameters, are accessible via a digital online map. These online maps can improve accessibility and provide an opportunity to link the site boundary with the design parameters that have been formulised during the design-led approach. As such, online digital maps can strengthen ongoing engagement and transparency during the plan-making processes. Where boroughs and neighbourhood planning groups have used 3D massing models, there is also the opportunity to display these.

6.3 Planning application stage

6.3.1 Applicants of sites should follow the design-led approach and process set out in the document during the preliminary design stages to determine a site's optimal capacity and to clarify their design intentions. This should be carried out at the pre-application stage; and evidenced and submitted as part of the design and access statement within a planning application.

Appendix 1 Indicative Site Capacity Toolkit – Residential types

A1.1.1 The Indicative Site Capacity Toolkit requires the selection of residential types (shown in Figure A1.2) based on the drafted site-based design parameters set during the draft design parameters stage (see 'Stage three: Draft site-based design parameters').

A1.1.2 Each of the four residential types has an indicative capacity that can be calculated using the indicative site capacity calculator.[6] This will enable a design-led approach when calculating an approximate capacity of sites, which is based on an understanding of the character and identity of the place. Each building type has been based on a policy-compliant typology, taking account of dwellings per core and the provision of dual-aspect homes. Each of the residential types is discussed below, accompanied by an outline of anticipated strengths and weaknesses/other considerations.

The residential types available in the Indicative Site Capacity Toolkit only illustrate the form and massing. As a result, the architectural style is intended to be neutral.

Figure A1.1 Bourne Estate – An example of a linear block residential type

[6] The Tower type has not been included as a SketchUp model in the indicative site capacity toolkit. This type will be included following revisions to fire regulations.

Figure A1.2 Residential building types

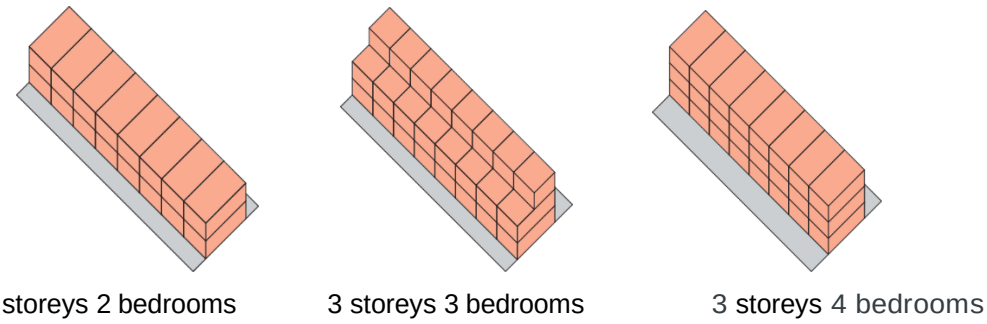
Terrace	
Linear block	
Villa block	
Tower	

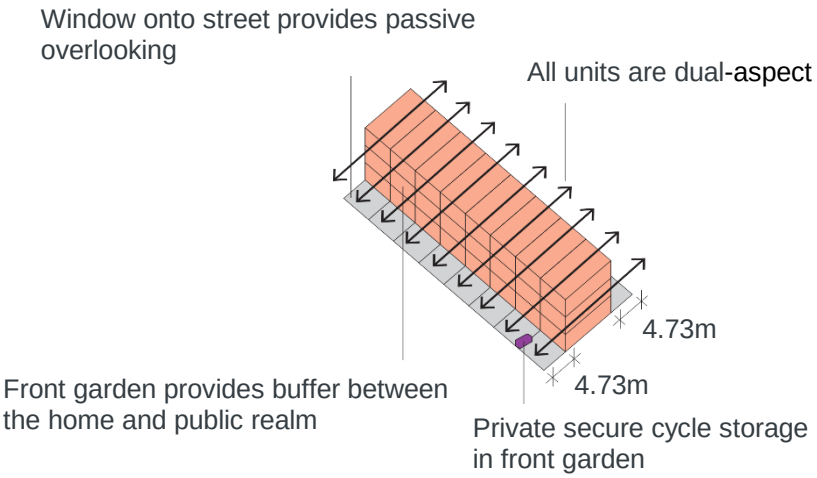
Terraces

Typical height range: 2 – 5 storeys

A1.1.3 Terraces enable the optimisation of site capacity where forms of development associated with moderate growth are contextually appropriate. They provide access to semi-public street frontages and private rear gardens, offering benefits for families with children. On larger sites, terraces may provide a useful intermediate scale that can connect existing streets to more intensive forms of development. On smaller or more irregular sites, they can be used as infill development. In terms of future-proofing, the repetitive character of terraces offers some opportunities to increase densities in response to planned enhancements to infrastructure, or where incremental growth is anticipated in the medium term.

Figure A1.3 Performance of terrace type against key Housing Design Standards[7]





[7] The SketchUp models have a grey base to represent an area (setback distance) that should not be built on. This base gets bigger as the building gets taller, and has been based on an offset distance to achieve a basic 45-degree visual sky component.

Performance against Housing Design Standards

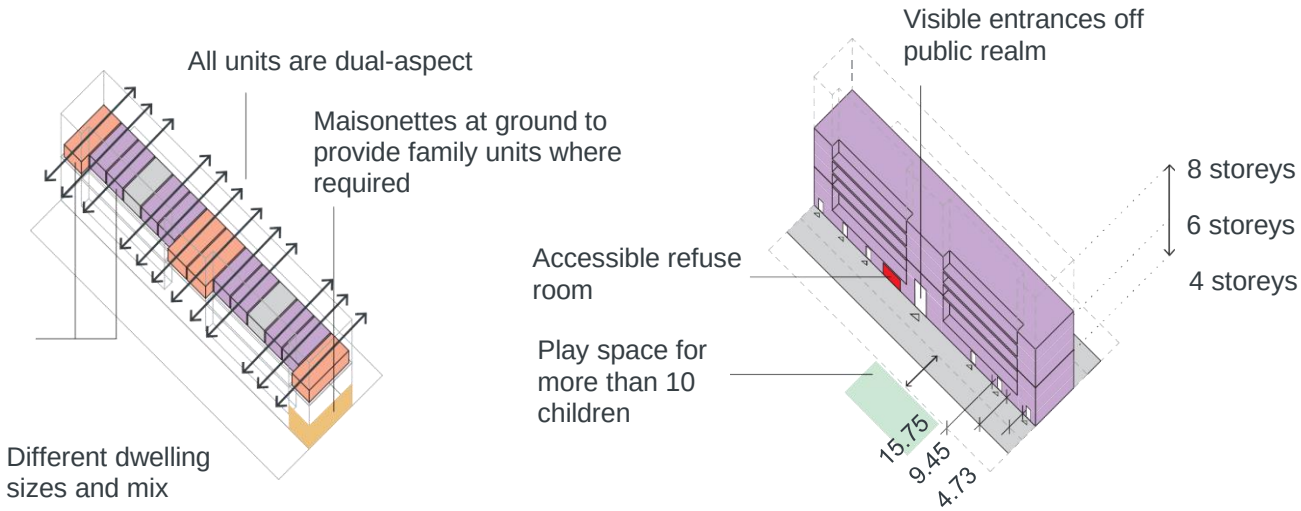
Strengths	• Relates well to the scale, massing and character of London's residential terraced streets. • Flexibility to deal with changes in topography. • Larger homes with gardens suitable for families. • Allows for phased construction, which can assist in project funding and viability. • Security of public realm through front doors and windows onto streets facilitating surveillance. • Ease of access and servicing due to direct relationship with street • Cycle parking can be within the domain of individual homes, so long as it is provided over and above the minimum space/ storage/circulation standards. • Dual-aspect is good for privacy, aspect, daylight, ventilation and passive cooling. • Opportunity for all dwellings to have private gardens. • Opportunity for interesting spatial relationships across multi-levels. • Potential to incorporate small scale live-work units. • Opportunity to increase biodiversity and green cover; and integrate SuDS into gardens and through green roofs. • Opportunity to incorporate rainwater-harvesting systems for outdoor water use, and SuDS within gardens to help reduce surface runoff. • Opportunity to incorporate property flood resilience measures. • Adaptability and flexibility due to singular ownership.
Weaknesses/ other considerations	• As accommodation is stacked over a number of storeys, it can be less suitable for many disabled and older people. • Less suited to integration with mixed uses. • More difficulty in meeting fabric energy-efficiency, but more opportunity for renewable energy.

Linear block

Typical height range: 3 – 8 storeys

A1.1.4 Linear blocks are a common type in urban arrangements, providing continuity of street frontage and flexibility in terms of height and dwelling mix. Four linear blocks can form a courtyard block of consistent scale, and provide an opportunity for private or semi-private amenity space. Linear blocks allow a similar relationship to the street as terraces, but offer higher densities by accommodating multiple dwellings in a vertical stack (Figure A1.4). Commonly, linear blocks comprise maisonettes at the ground and first floors, with additional maisonettes or lateral apartments at upper floors. This enables homes on lower floors to have individual entrances on the street, while homes on upper levels are reached by communal stairs and lifts. Upper-level homes may be paired around a lift or stair core; or accessed from a short corridor or external gallery. Mansion blocks are a common form of linear block in London, as is the creation of perimeter blocks through the use of four linear blocks together. Above eight storeys, achieving adequate daylight and sunlight into neighbouring homes, open spaces and streets can be problematic and should be avoided. At early capacity-testing, a useful principle is to assume that the shadow cast by buildings will be half that of the building height. Upper floors could be set back to reduce visual impact and improve daylight to the ground.

Figure A1.4 Performance of linear block against key Housing Design Standards[8]



[8] The SketchUp models have a grey base to represent an area (setback distance) that should not be built on. This base gets bigger as the building gets taller, and has been based on an offset distance to achieve a basic 45-degree visual sky component.

Performance against Housing Design Standards

Strengths	• Versatile and responsive to context. • Lower floors offer benefits for families with children and those with impaired mobility. • Linear blocks enable higher densities of varied dwelling mix and tenure. • Security of public realm through front doors and windows onto streets providing activity and surveillance. • Flats with kitchens fronting a gallery access can facilitate a good level of neighbourly interaction and passive surveillance. • Consideration needs to be given to the location of plant rooms, refuse and cycle stores. Car parking, if provided, must be designed to best support place-making and accessibility. • Dwellings at ground floor can have private gardens while balconies or terraces need to be integrated for upper levels. • Suited to incorporation of non-residential uses at ground floor. • Opportunity to increase biodiversity and green cover; and to integrate SuDS into gardens and through green roofs/facades. • Shallow block depths and structural systems allow dwellings to be easily adaptable.
Weaknesses/ other considerations	• If not designed well, long linear blocks can create deep, narrow dwellings that result in poor daylight levels due to internal spaces being some distance from windows. • Linear blocks have the potential to create double-loaded corridor arrangements that result in single-aspect dwellings. • Continuous tall linear buildings on narrow streets can concentrate air pollution. Consideration should be given to building location and orientation within the site.

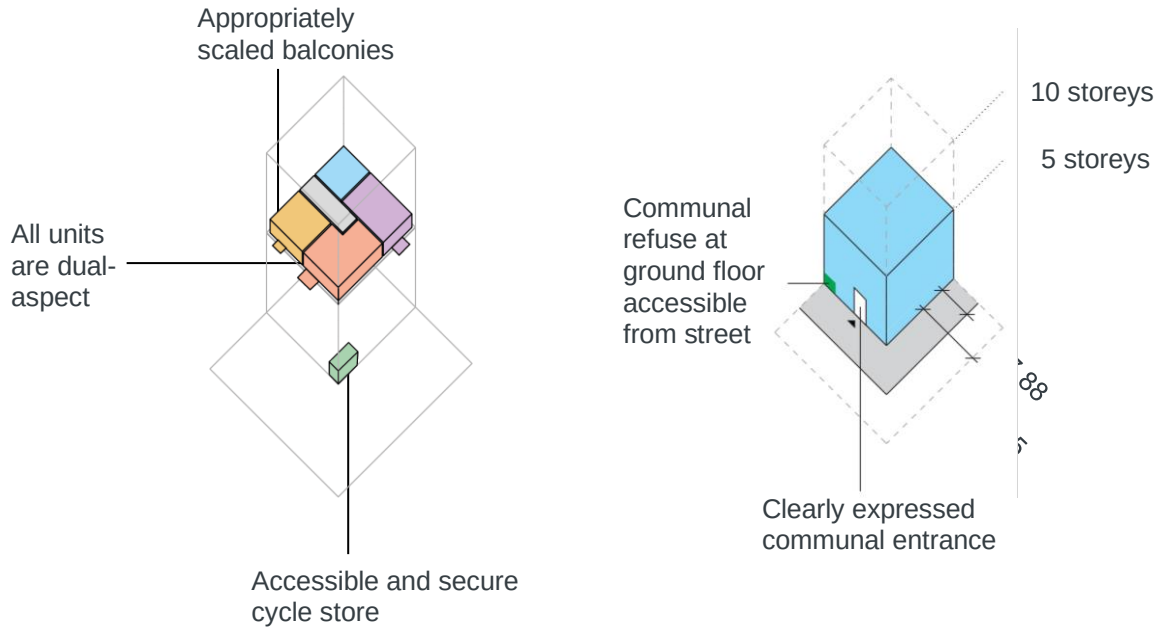
Villa block

Typical height range: 5 – 10 storeys

A1.1.5 The villa block is characterised by a central core and efficient circulation arrangement. This enables habitable rooms to be orientated towards the façade to provide frontage and aspect in all directions. Proportionally, the villa block is at least as tall as it is wide or deep, with a recommended height range between five and ten storeys.

A1.1.6 Within site arrangements, villa blocks can provide continuous frontage at corners, acting as landmarks in strategic locations such as crossroads, transport hubs and places of civic importance. They can also create gateways or edges between character areas. Four dwellings per floor provides good efficiency, while allowing all dwellings to be dual-aspect. The number of dwellings per floor will depend on dwelling type and size, but the central core allows for a variety of different flat types around it.

Figure A1.5 Performance of villa block against key Housing Design Standards[9]



[9] The SketchUp models have a grey base to represent an area (setback distance) that should not be built on. This base gets bigger as the building gets taller, and has been based on an offset distance to achieve a basic 45-degree visual sky component.

Performance against Housing Design Standards

Strengths	• Versatile in its use, either to define and densify corners/edges of urban arrangements, or when used independently. • Compact footprint can be useful when dealing with difficult topography. Flexible in its external appearance as it can be used to create distinction or blend in to surrounding context. • Multiple dwelling types can be accommodated within the same block, including wheelchair-accessible homes. • Can help deliver high levels of dual-aspect dwellings. • Multiple street frontages at ground level, which means that residential and mixed-use entrances can be easily separated. • Small building footprint allows for more space for green infrastructure and urban greening. • Efficient form and appropriate building fabric can enable energy-efficiency. Opportunity for communal heating and renewable energy, facilitated by efficient central core.
Weaknesses/ other considerations	• Ground floor needs careful planning to manage privacy and achieve active frontages. • Accessed by central cores, there is less potential to create a visual connection between front doors and play space at upper levels. This can be improved where stair cores have external windows that encourage passive surveillance of doorstep play. • When designed as a stand-alone building, careful planning is required to integrate refuse, plant or storage at ground level to avoid blank frontages. • Where flats per floor exceed four, single-aspect flats are inevitable. • North and south-facing single-aspect dwellings are likely to suffer from inadequate natural light and the potential for overheating respectively. • Active frontage limits scope to build in close proximity.

Tower[10]

A1.1.7 Towers are used in more limited circumstances than the other residential types. With increasing height, consideration should be given to the microclimate and potential for overshadowing of neighbouring homes, open spaces and streets, and the need to increase spaces between buildings to protect amenity and maintain adequate natural light. At early capacity-testing, a useful principle is to assume that half the building height will cast a shadow on the neighbouring ground. Consideration needs to be given to the space required at ground floor to access and service a high number of dwellings. As tower height and dwelling numbers increase, servicing the building becomes more complex and energy demand and Whole Life-Cycle Carbon emissions increase. Taller buildings do not always result in more affordable homes, as additional height can increase development costs. This can be more evident in lower-value locations. On such sites, alternative lower-rise build types may be more appropriate and may enable the delivery of development that is more sustainable.

[10] The Tower type has not been included as a SketchUp model in the indicative site capacity toolkit. This type will be included following revisions to fire regulations.

Performance against Housing Design Standards

Strengths	• Suitable for wheelchair-accessible houses with lift access. • Can work well in achieving mixed use when part of a larger site arrangement or designed with a podium. • Opportunity for communal heating and renewable energy.
Weaknesses/ other considerations	• Need considerable care to manage heritage and visual impact; and should be planned as part of a tall building strategy. • Higher construction costs, relative to other typologies, can impact on the deliverability of this type of development, particularly in low-value areas. • Impact of building orientation and the potential for single-aspect dwellings needs considering. Articulating the building and creating bays to allow windows to present perpendicular to the façade may limit the detrimental impact of single-aspect dwellings on residents. • Homes on floors high up in the building may be less suitable for family housing, particularly where they lack safe, convenient access to, and overlooking of, outside play and amenity spaces. • Design and layout should ensure the highest standard of fire safety. In particular, it needs to consider the likelihood of residents and visitors self-evacuating in the event of an emergency, as well as the ability of the fire service to service a fire. For instance, buildings over a certain height will need a second staircase.[11] Where a lift is provided, at least one evacuation lift per core is to be provided. This is in addition to a firefighters lift, where one is required. • When designed as a standalone building, careful planning is required to integrate refuse, plant or storage at ground level to avoid blank frontages. High operating and maintenance costs. • Needs consideration of the glazing proportions, ventilation and building structure on overheating risk, and the benefit of incorporating passive cooling measures. • Tall buildings can be less energy-efficient per square metre of floor area than linear or villa blocks; and have greater embodied carbon. • Can interact with air pollution in complex ways including the potential creation of accumulation of air pollution. • Offers limited scope for future conversion and have higher service and maintenance costs.

[11] For residential buildings over 18 metres applicants should engage the Building Safety Regulator and the London Fire Brigade (LFB) at pre-application stage. The Building Safety Regulator will be the Building Control body from 1 October 2023 and the LFB are a statutory consultee at this point.

Appendix 2 Indicative Site Capacity Toolkit instructions

A2.1.1 The Indicative Site Capacity Toolkit is provided as a downloadable digital resource from the GLA's website. SketchUp components are available for each of the types described in Appendix 1 (terrace, linear block, villa block) and can be selected by height.[12] Each component is tagged with its number of storeys and the GEA. The following instructions demonstrate the use of the Toolkit when importing the residential types into SketchUp.

[12] Residential building types may be updated from time to time to ensure that they reflect up-to-date building regulations and other requirements. If updated, any new or revised residential building types will be made available to download as a digital resource from the GLA's website and replace any superseded types.

Figure A2.1 Sketch Up menu

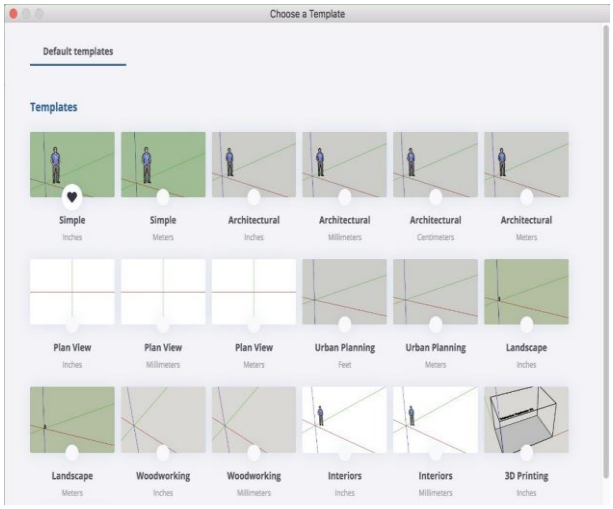


Figure A2.2 Importing a file

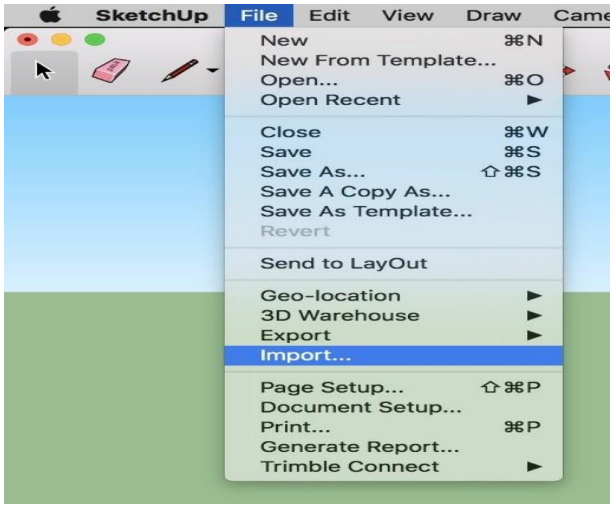
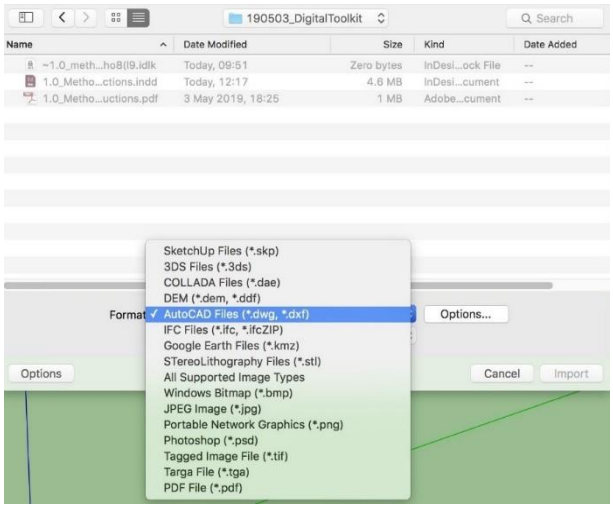


Figure A2.3 Format drop down menu



Digital Toolkit instructions

1) Download the component library of types from the GLA's website.

2) Open a new SketchUp file using a template set to measure in metres.

3) Import a 2D OS map or 3D site model to use as a base for testing proposals. External 2D or 3D files can be imported by selecting 'File' > 'Import' and then navigating to the source of the file, using the 'Format' drop-down list to select the file type. Ensure the base site information is imported at 1:1 scale and in metres.

Figure A2.4 Open component palette

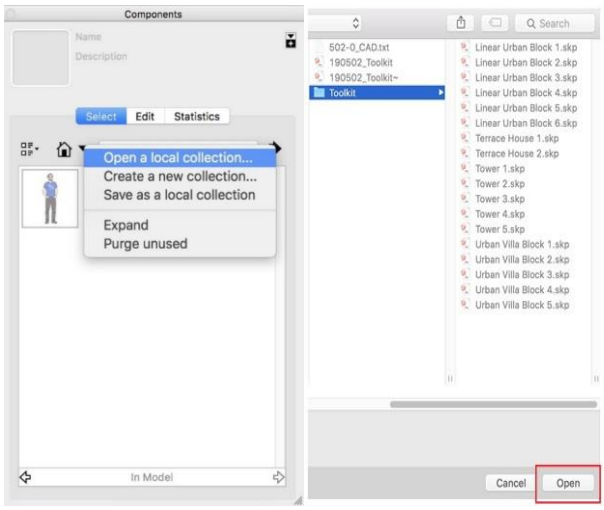


Figure A2.5 Component palette list

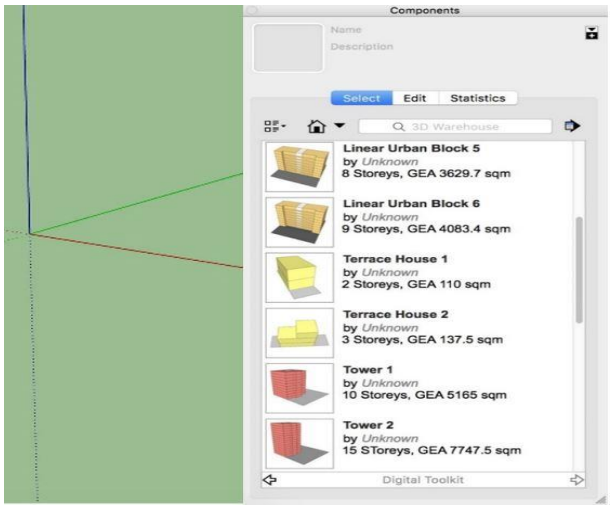
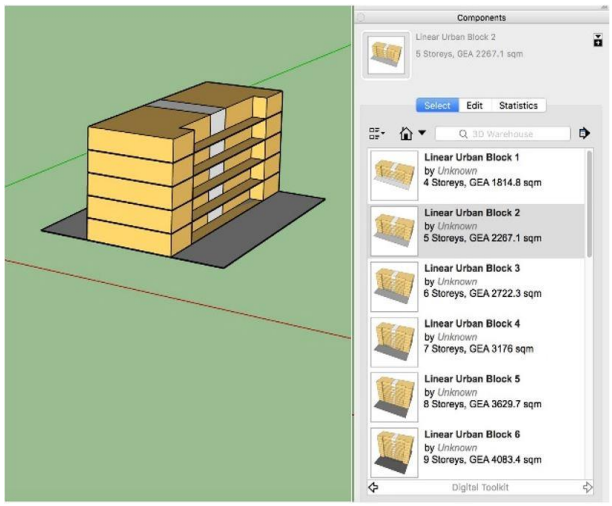


Figure A2.6 Select building type



Digital Toolkit instructions

4) In the component palette click on the 'details' arrow and select 'Open a local collection'.

5) Navigate to the downloaded toolkit of types and click 'Open'. Note: select the folder rather than individual SketchUp files to import the whole library of types.

6) The list of types will appear in the components palette within SketchUp. Each component is named by type, and has the number of storeys and total GEA of the block indicated.

7) Select types and place in the model space to test proposals.

8) Record the quantities of each type used in the GLA's indicative site capacity calculator. Record types with different storey numbers as separate lines in the record. Use the pulldown menu to select the type (a), fill in the number of storeys (b) and add the quantity used in the SketchUp model (c). The calculator will generate a total GEA per type (m^2) based on the inputted data (d).

9) The calculator will generate a residential GEA for the modelled scheme (e). Input tenure mix (f) and type mix for each tenure (g). The calculator will generate an indicative site capacity (h).

Appendix 3 Indicative Site Capacity Toolkit – Worked examples and site capacity calculator

A3.1.1 Once the layout of a proposal or site has been resolved, the indicative site capacity can be determined using the site capacity calculator. This is an excel spreadsheet that can be used without prior training.

A3.1.2 Boroughs should follow the steps below:

- Input the total number of residential blocks and types into the excel spreadsheet. Adjust for the number of storeys. This will automatically calculate the GEA (m^2) for each residential type.
- Enter in the non-residential floorspace that is allocated for the site.
- Input the proposed average parking ratio for the site. A higher ratio will lead to a lower number of dwellings overall, as some of the floorspace will be allocated to parking spaces.
- Input the policy compliant affordable (rented) dwelling mix and site appropriate mix assumptions for private and affordable (intermediate).
- Input the bedroom type mix.

A3.1.3 Output: The calculator will work out the indicative site capacity for the site. This is determined calculating the floorspace of the proposal, and subtracting the floorspace for parking and non-residential uses. Boroughs should also subtract any existing homes on the site/area to provide an indicative net number of additional new homes.

Worked example of the scenario used

GLA indicative site capacity calculator

Figure A3.1 Digital Toolkit Record – worked example of scenario

	GEA per storey (m^2)	Number of storeys	Total GEA per block (m^2)	Quantity	Total GEA per type (m^2)	Car parking circulation factor	Ground floor car parking factor
Linear Block	453.7	5	2268.5	3	6805.5	1.50	0.87
Terrace	55.0	4	220	24	5280.0	1.00	1.00
Terrace	55.0	3	165	8	1320.0	1.00	1.00
-Select Type-							
-Select Type-							
-Select Type-							

Figure A3.2 Capacity calculator – worked example of scenario

Residential GEA	13,406m^2
Non-residential	900 m^2
Residential GIA*	11,255 m^2
Residential NIA	7,878 m^2

Proposed average parking ratio	0.25
Proposed average circulation factor	1.254
Ground car floor parking factor	0.932

Car parking circulation factor: This is the circulation space required within a carpark. For the linear block and villa block residential building type, the circulation factor is set at 1.50 which equates to 50 per cent additional space allocated to circulation and manoeuvring of cars. This is a conservative estimate that assumes an optimal layout of parking is possible. For the terrace residential type, the circulation factor is set at 1.00 as it is assumed that any parking provided will be on-street.

Ground floor car parking factor: This accounts for parking on the ground floor that uses up space that may not be suitable for providing homes. The area available for parking under this factor depends on the (fixed) site area but decreases as a proportion of the total GEA as the density of a proposal increases. This means higher ratios of parking have an increasing impact on the number of homes at higher densities.

Non-residential uses: For the capacity-testing exercise, it is not necessary to determine whether non-residential use sits within its own building or across the residential buildings, for example across the ground floor. For capacity-testing, the floor area for non-residential uses can simply be deducted from the GEA once building blocks have been laid out to an acceptable height.

*If fields are added to the Digital Toolkit Record above, ensure the formula for residential GEA is extended to capture all types listed.

Figure A3.3 Tenure breakdown – worked example

Tenure	Tenure mix	NIA (m^2)	Type	Type mix	NDSS Area (m^2)		Indicative unit count
Market	50%	3,939	1 bed	30%	50	22.1	22
			2 bed	40%	70	21.5	21
			3 bed	30%	86	13.2	13
					Total		56
Affordable (Intermediate)	20%	1,576	1 bed	30%	50	8.9	8
			2 bed	40%	70	8.6	8
			3 bed	30%	86	5.3	5
					Total		21
Affordable (Rented)	30%	2,364	1 bed	30%	50	13.3	13
			2 bed	40%	70	12.9	12
			3 bed	30%	86	7.9	7
					Total		32
					Indicative site capacity		**109**
					Indicative capacity impact of accommodating car parking		-7

Notes:

- Editable fields for data input are denoted in white. Figures shown are illustrative.
- GIA calculated as 90 per cent of GEA.
- NIA calculated as 70 per cent of GIA (A reduced ratio has been used in conjunction with minimum space spaces to provide an indicative capacity. This reduced ratio aims to accommodate any additional site and scheme variables that may impact capacity).
- See Table 10.3 in the London Plan Policy for residential parking ratios.
- This example highlights the impact of residential car parking on the indicative site capacity. Even with a low parking ratio (0.25), the capacity is reduced by seven homes.
- Car parking calculations have been based on a 2.4m x 4.8m car parking space. If parking space standards are subsequently revised, these assumptions will have to be adjusted.

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London Plan Policy	Policy D6 Housing quality and standards Other relevant policies that are listed beside each standard
Plan making	N/A
Planning Application type and how the London Plan Guidance will be applied	This guidance provides a list of housing standards that are applicable to all self-contained residential applications (Use Class C3). This document focuses on housing across tenures, including Build to Rent and specialist older persons housing. However, it does not provide guidance on other specialist forms of housing such as shared living, temporary accommodation and student accommodation. The standards are broken down into those that are expected to be met, and those that are best practice and therefore strongly encouraged. The abbreviations in brackets after each standard indicate the type of development to which the standard applies. These are: • new-build: [NB] • changes of use: [CoU] • conversions: [C] • all of these types of housing development: [All]. The standards aim to ensure that development proposals create well-designed and sustainable places that are of high quality.
Who is this guidance for?	This guidance is aimed at developers and their design teams seeking planning permission, and borough development management officers. The guidance is categorised under three themes (or parts): placemaking and the public realm; shared and ancillary facilities; and homes and private outside space. These broadly follow the design process and aim to assist design teams in designing residential developments.

1 About this document

1.1 What are the 'housing design standards'?

1.1.1 This document brings together, and helps to interpret, the housing-related design guidance and policies set out in the London Plan 2021. It provides a set of standards that relate to housing design. It does not attempt to reproduce the content of the Plan, and compliance with this guidance should not be inferred to mean compliance with the policies. It applies to the creation of new housing that fall within Planning Use Class C3. This includes most forms of housing for older people (including extra care), but not shared living which is treated as *sui generis*.

1.1.2 This guidance responds to the impact of the COVID-19 pandemic, including the shift to increased homeworking. It also recognises the climate emergency, and the role that residential development has to play, and the contribution it has to make, in reaching net zero. These housing design standards will provide homes that: are safe, inclusive, comfortable, flexible, durable, well-built and well managed. They aim to achieve net zero-carbon homes that are designed to last at least 200 years; with eventual disassembly in mind. They encompass designing with residents' wellbeing in mind, and express what it means to optimise site capacity for a residential development, as opposed to simply maximising the development of a site.

1.1.3 The standards have been ordered to align with the design process, and the document signposts the relevant policies from the London Plan (see last column in the tables) and other guidance throughout. This aims to assist designers and borough officers when designing and assessing a development. The standards are split into those that are expected to be met for all relevant housing applications, and those that are strongly encouraged as they represent best practice. Meeting best-practice standards should not be a justification for not meeting affordable housing requirements in the London Plan. This document also highlights where standards are not directly applicable to specialist older persons housing.

2 Part A: Placemaking and the public realm

2.1.1 Good placemaking involves taking cues from the landscape and topography; the local climate; and the pattern of buildings, streets and open spaces. Design teams must consider the context and history of a place as well as any future plans, and look for opportunities beyond the immediate development boundary. Early engagement with a representative and diverse range of local people, which is proportionate to the scale of development, is also crucial. As good placemaking is synonymous with good environmental design, it is vital for development to retain and reuse as much as possible to minimise embodied carbon as well as operational carbon. This guidance encourages existing buildings and infrastructure to be retained or reused where possible, and any demolition to be robustly justified. Designers should also consider how London's climate will change in the future.

2.1.2 The layout of any development will be influenced by a wide range of factors. As a result, only a rigorous design process will identify the tensions and priorities and find the solution that, on balance, will produce the best all-round solution. Large developments should provide a wide range of dwelling types and tenures. There should be no perceptible qualitative difference between buildings designed for different tenures, and mixed tenure development is encouraged. London urgently needs more homes, but these need to be well designed, sustainable dwellings. As a result, the design-led approach advocated in the Plan requires developers to optimise, rather than maximise, development opportunities. The priorities may vary but they include optimising a building's orientation and form to maximise the quality of daylight and thermal efficiency, which is vitally important to tackling climate change and residential quality.

2.1.3 All parts of the public realm should feel safe and welcoming for everyone, both day and night, with a particular focus given to creating spaces that are safer for those groups that are more likely to have safety concerns in public spaces. It should be designed and built not just to last, but also to improve over time. This means using high-quality, durable materials and components that age well and require little maintenance. Simple, compact forms are effective in reducing carbon emissions, and the spaces between buildings are as important as the buildings themselves.

2.1.4 The accessibility of walking and cycling should take priority in the design of buildings, places and the surrounding area. Residential design must recognise the shift to at least 80 per cent of journeys by sustainable modes, and the mental and physical benefits of providing safe, attractive and convenient environments for pedestrians, cyclists and users of other micro-mobility options. This must be complemented by an inclusive approach such as the provision for people with a range of disabilities and who choose a range of transport modes; and careful consideration of lighting, servicing, deliveries and emergency access. The parking, and movement of private vehicles, where required, must not compromise this. Where new streets or

routes are created, or there are changes to existing streets, the allocation of highway space must be based on the Healthy Streets indicators. Thoughtful design can create space for informal, inclusive play and social interaction where gatherings and events can take place. It can also provide biodiversity gains and other ecological services through planting and incorporating Sustainable Urban Drainage Systems (SuDS). It is important that streets and all other parts of the public realm are overlooked and are well used. Active frontages and frequent entrances (shared and private) play an important role, and front gardens and boundaries require careful thought. New and, where possible, existing streets will be expected to include carefully selected trees and appropriate lighting.

2.1.5 Public green and blue spaces play a unique role because they belong to everyone, as highlighted further by the COVID-19 pandemic. They should: be multipurpose and biodiverse; be designed to respond to the scale and setting of the development; address deficiencies in local provision; and be inclusive and accessible to people of all ages and those living with a disability, both day and night. Play is a vital component, essential for healthy child development and allowing young people to explore ideas, learn social skills and make discoveries (see Public London Charter LPG).

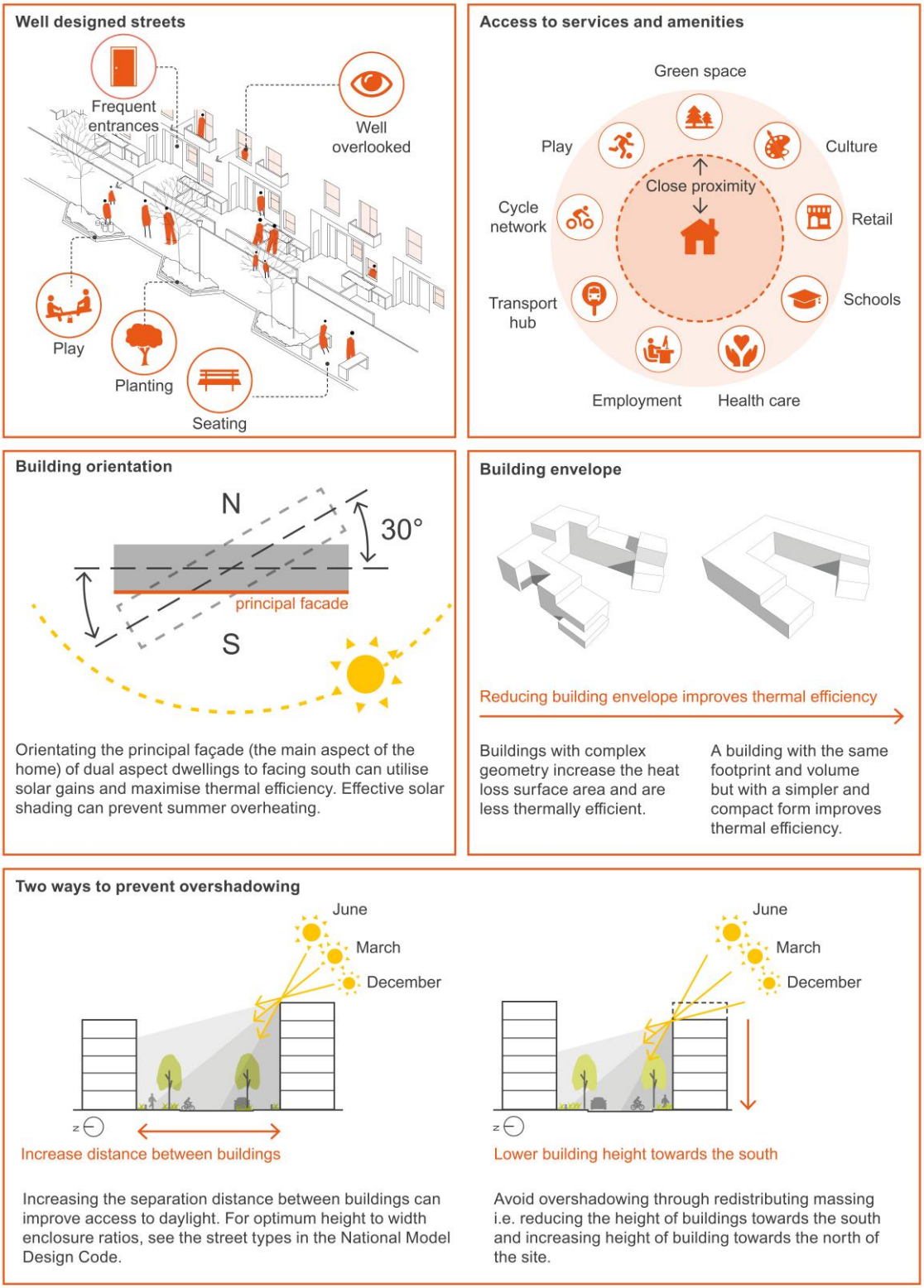
A	Placemaking and the public realm	Policy
A1	**Response to context**	
A1.1	Design proposals should respond positively to the unique characteristics of the site in its wider physical context by demonstrating how the scheme responds to the underlying topography and landscape; the character and legibility of the area; and local patterns of buildings, streets and materials, and how it aligns with an area's local vision and strategy. **[See Characterisation and Growth Strategies LPG]** **[NB]**	**D3**
A1.2	Make every attempt to retain and reuse existing built structures before considering substantial demolition. Where substantial demolition is proposed, applicants should demonstrate that the benefits of demolition would clearly outweigh the benefits of retaining the existing building or parts of the structure. **[See Whole Life-Cycle Carbon Assessment LPG and Circular Economy Statements LPG]** **[All]**	**SI2** **SI7**
A1.3	Heritage assets and their settings should be conserved, enhanced and integrated into the design of new development. They should contribute to the sense of place and make a specific contribution to placemaking and regeneration. **[NB]**	**HC1**
A1.4	The height and massing of new development should align with the design parameters and guidance for sites where this is set out in a local plan, design code, or other policy or guidance document. In areas that are not identified as those that may be appropriate for tall buildings, the height of new development should not exceed the relevant tall building definition. In areas that are within these designated areas, the height parameters should not be exceeded. **[See Optimising Site Capacity: A Design-led Approach LPG]** **[NB]**	**D1** **D3** **D9**
A1.5	New development should be street-based and connect with, and augment, the existing local network of public spaces, streets, paths and open spaces. Where appropriate, development should conserve or reinstate the historic street pattern. **[NB]**	**D3** **D6** **D8**
A1.6	Design proposals should consider the green infrastructure context beyond the site boundary, and refer to the borough's Green Infrastructure Strategy where available. Proposals should incorporate greening that is multifunctional, climate-resilient, and which optimises opportunities to enhance biodiversity. **[NB]** *Note: Where a local Green Infrastructure Strategy is not in place, refer to resources and data tools such as the GLA's Green Infrastructure Focus Map.*	**G1** **SI13**
A1.7	The most favourable orientation for each new building will be heavily influenced by the site-specific opportunities and constraints. Layouts should optimise the orientation of new buildings to maximise the quality of daylight and thermal comfort for residents, minimise overheating, and optimise thermal efficiency, by utilising and controlling solar gains. **[NB]**	**D6** **SI4**

A1.8	Particular consideration should be given to the impact of new development on the level of daylight and sunlight received by the existing residents in surrounding homes and on existing public green space. **[NB]**	**D6**
A1.9	The orientation and massing of buildings, and the separation distances between them, should ensure that the public realm is not unduly overshadowed to the detriment of health, wellbeing, biodiversity or amenity. Where demonstration is necessary and/or a building over 30 metres high is proposed, a micro-climate/wind/daylight and sunlight assessment should be submitted. **[NB]**	**D6** **D8**
A1.10	Avoid compromising the day-to-day functioning and long-term viability of adjacent non-residential uses, in accordance with the 'Agent of Change' principle. **[All]**	**D13**
A1.11	Masterplans and development briefs for large-scale developments subject to an Environmental Impact Assessment should be Air Quality Positive. All other development should be at least Air Quality Neutral. **[See Air Quality Positive LPG and Air Quality Neutral LPG] [NB]** *Note: See Air Quality Positive LPG for definition of 'large-scale development'.*	**SI1**
A1.12	Air Quality Assessments should be submitted with all major development proposals. **[All]**	**SI1**
A1.13	Major developments (both new-build and refurbishments) should be net zero-carbon by following the Energy Hierarchy. This means being lean, clean, green and seen. **[See Energy Assessment Guidance and 'Be Seen' Energy Monitoring LPG] [All]** *Note: See standard A1.14 for being lean; standards B7.1 to 7.2 for being clean; standard B8.1 for being green; and standard 10.2 for being seen.*	**SI2**
A1.14	All development should be lean and thermally efficient, resulting in at least a 10 per cent improvement over Building Regulations through energy-efficiency measures. Where possible, it should avoid complicated forms that increase the external surface area and therefore the heat loss of the building. **[See Energy Assessment Guidance] [All]**	**SI2**
A1.15	Development referable to the Mayor should calculate and minimise whole life-cycle carbon emissions (encompassing both operational and embodied carbon) and demonstrate actions taken to reduce life-cycle carbon emissions through submission of a Whole Life-Cycle Carbon (WLC) assessment. **[See Whole Life-Cycle Carbon Assessment LPG] [NB, CoU]** *Note 1: Refer to WLC principles in table 2.1 of Whole Life-Cycle Carbon Assessment LPG.* *Note 2: This standard is also strongly encouraged for all major development.*	**SI2** **SI7**
A1.16	Design for a long life by specifying high-quality, durable, low-maintenance materials that age well and require little maintenance. **[All]**	**D3**

A1.17	Design with flexibility and adaptability in mind by considering how new buildings could be adapted to accommodate new uses over time; and how eventual disassembly will facilitate the reuse of materials and components and minimise waste and pollution. Development referable to the Mayor should submit a Circular Economy statement. **[See Circular Economy Statement Guidance LPG]** **[NB]** *Note: This standard is also strongly encouraged for all major development.*	**D3** **SI7**
A1.18	Incorporate SuDS in line with the drainage hierarchy. Where development in areas at risk from flooding is permitted, ensure that the design and layout make space for water. Ensure that homes and infrastructure are set back from the banks of rivers and streams and incorporate flood resistance and resilience measures. **[NB, CoU]**	**SI12** **SI13**
A2	**Land-use mix**	
A2.1	The mix of uses should be in line with strategic and local targets and consider the need for non-residential uses (including shared workspaces) to reflect changing patterns of work. The land-use mix should take account of the need for local access to amenities both day and night, and facilitate convenient pedestrian connectivity to activities and services. **[NB, CoU]**	**D3** **T2**
A2.2	Ensure that the mix of dwelling types reflects strategic and local need and recognises the importance of mixed and inclusive communities. Large developments should aim to deliver a wide range of housing tenures and typologies and respond to specific local needs such as specialist housing for older people and multi-generational housing. **[All]**	**H10**
A3	**Streets and public realm**	
A3.1	Prioritise people walking and cycling while providing vehicular access for emergency and service vehicles, and meeting the access needs of disabled people. **[NB, CoU]**	**D5** **D8** **D12** **T2**
A3.2	Adopt a 'Healthy Streets' approach so that streets are designed as social spaces that invite footfall, and are safe, healthy, accessible, inviting, active and well lit. Ensure frequent entrances and active frontages with windows and balconies that overlook the street and public realm, encourage neighbourly engagement and increase passive surveillance. **[See Healthy Street Approach]** **[NB]**	**D3** **D8** **T2**
A3.3	Connect into, and improve and extend where beneficial, the existing network of foot and/or cycle paths. Where none exist, establish new routes, such as segregated cycle paths, that provide an alternative to heavily trafficked existing routes and connections to transport hubs/key destinations. **[NB]**	**D8** **T2** **T5**

A3.4	Ensure that front boundary treatments complement the style and materiality of the building (or buildings) and make a positive contribution to the streetscape. **[NB]**	**D3**
A3.5	Provide cycle parking (including for adapted cycles for disabled people); electric vehicle charging points if car parking is provided; and parking and charging points for micro-mobility for public use, where appropriate. **[All]**	**T5** **T6** **T6.1** **H13**
A3.6	Incorporate trees in new streets while ensuring that pavement widths can accommodate the trees without compromising pedestrian movement, or interfering with underground cables and services. Ensure tree species are suitable for the location and the type of development, and will remain appropriate and manageable when mature. **[NB]** *Note: Where possible, existing trees should be retained.*	**D5** **D8** **G1** **G7** **G8**
A3.7	Incorporate informal planting, seating, play and leisure opportunities; and provide shelter in new and, where feasible and appropriate, existing streets. **[See Making London Child-Friendly Guidance]** **[NB]**	**D5** **D8**
A4	**Public open space, biodiversity and urban greening**	
A4.1	Ensure that development proposals do not result in the loss of protected open space; and, where possible, create areas of publicly accessible open space, particularly in areas of deficiency. When creating areas of high-quality green open space, these should be at ground level, unless site constraints dictate otherwise. **[NB]**	**G4**
A4.2	Proposals should result in a net increase in biodiversity by conserving and extending existing habitats; and creating new ones to strengthen local ecological networks. **[See Urban Greening for Biodiversity Net Gain: A Design Guide]** **[All]** *Note: Opportunities include the provision of artificial nesting sites through the use of, for example, swift bricks.*	**G6**
A4.3	Minor developments should demonstrate no net loss of green cover. **[See Small Site Design Codes LPG]** **[All]**	**H2**
A4.4	Major developments should meet the local boroughs' Urban Greening Factor target scores or, where none exist, achieve a score of 0.4. **[See Urban Greening Factor LPG]** **[All]**	**G5**
A4.5	Where appropriate, make drinking water freely available in public spaces. **[All]**	**D8**

A5	Inclusion and accessibility	
A5.1	The public realm should be barrier free, usable by everyone and encourage social interaction. Consider seating, incidental play and places to hold social events during the day and, where appropriate, during the evening and at night. **[See Public London Charter LPG]** **[NB, CoU]**	**D5** **D8**
A5.2	At least 10 per cent of new dwellings should meet Building Regulation requirement M4(3) 'wheelchair user dwellings' in Approved Document M, Volume 1 (ADM); the remainder should be 'accessible and adaptable dwellings' (referred to as M4(2) or Category 2 in ADM). **[NB]** *Note: For further details refer to Part B: standard B1.4 and Part C: standards C1.1 to C1.3.*	**D7**
A5.3	Developments should be tenure blind. There should be no perceptible difference in the quality of the design or materials used when housing different tenures. 'Poor doors' and gated forms of development are unacceptable. **[All]**	**D6**
A5.4	Where non-residential amenities – such as gyms, pools, play space and shared workspaces – are provided, these should be accessible to all residents, and ideally to the wider community. **[All]**	**D6** **S5**
A5.5	Proposals should demonstrate that an inclusive design approach is taken, and that active travel routes are safe, accessible and convenient for all Londoners. This should include meeting the needs of different groups, including, but not limited to, those with protected characteristics under the Equality Act 2010. **[All]**	**D3** **D5** **D8** **T4**
A5.6	Provide details of the community engagement strategy. Explain how multiple types of engagement (such as face-to-face and online) have informed the design proposals from the early design stages, and been followed through in the design. **[NB, CoU]**	**D3** **D5**



1	2
3	4
5	

1. Connecting homes with streets, creating attractive, social spaces (A1.5, A3.2, A3.4, A3.6, A3.7, A5.1)
2. Access to services and amenities (A2.1)
3. Layouts should optimise orientation of new buildings to maximise the quality of daylight and thermal comfort (A1.7)
4. Simple and compact massing improves thermal efficiency (A1.14)
5. Optimal building heights and separation distances (A1.8, A1.9)

3 Part B: Shared and ancillary spaces

3.1.1 The majority of new homes delivered over the plan period will be flats, and it is therefore important that high-quality, shared indoor and outside spaces and ancillary facilities are provided. Careful design can ensure that the shared areas are a pleasant, inclusive and sociable extension to the home and help build supportive communities. Shared entrances should be safe, visible and identifiable from the public realm while offering shelter to users.

3.1.2 Providing private front doors to ground-floor dwellings has additional benefits: increasing activity in the street, reinforcing the residential nature of the building and reducing the number of households using the core. Two-storey family maisonettes often work well on the ground and first floors; they provide many of the attributes of a house, including a private garden, and are naturally suited to a double-height plinth where that is appropriate for the building. However, the structural and servicing implications of stacking different dwelling types must be given early consideration. The ground floor should also provide a mix of M4(2) and M4(3) homes.

3.1.3 The shared entrance lobby should look and feel inviting at all times of day; be designed to withstand heavy use; and serve as an inclusive and informal meeting space for residents. It is useful to have a clear route through to the shared outside space where one is provided. This may also allow bikes, mobility scooters and wheelchairs to be taken through the core to more secure stores. Generally regarded as a safer and more pleasant arrangement, it can also free up ground-floor space at the front of the building for more active uses. Arrangements for post and deliveries should also be subject to early consideration.

3.1.4 The layout, feel and length of the communal circulation arrangement have a significant impact on the quality of the journey that residents and their visitors experience when navigating the route from the communal entrance to the private front door. Developments should therefore avoid long narrow corridors. Covered outside decks are a healthier, safer and more convivial solution, and allow dwellings to be dual aspect. This has multiple benefits within the home and can also provide a second outside amenity space for residents. Bin stores and plant rooms are generally at ground level, but in larger developments it is worth exploring the potential for these elements to be accommodated in a lift-served basement. This can free up the ground floor for other more active uses, and provide secure private storage rooms for residents.

3.1.5 Fire safety requirements for a second staircase in taller buildings should be incorporated into the layout of the ground and upper floors and accounted for in the overall form of the building. Second staircases should be successfully integrated with the design of the building to ensure the development meets the housing design standards and the affordable housing requirements in the London Plan.

3.1.6 The design of shared, ground-floor outside spaces needs careful thought, particularly when surrounded by tall buildings. Lack of sunlight can be an issue; and while overlooking provides useful security, it can also feel intrusive to those seeking a calm retreat. Thoughtfully placed planting and landscape design can help to define zones; separate different functions; provide varying degrees of privacy; and celebrate seasonal change. Where possible, it is useful to provide a gate from the street to the outside amenity spaces to avoid mowers, for example, being taken through the cores.

3.1.7 Specialist advice should be sought when designing above-ground outside spaces, such as raised podia and roof gardens, as these present different opportunities and challenges. Drought-tolerant planting will reduce the amount of water needed, and grass should generally be avoided. Where these spaces are surrounded by private gardens and visible from surrounding flats, designers should consider the boundary treatment carefully and consider installing purpose-built garden pods or storage spaces. This avoids the need for residents to install individual garden sheds; and the consistency improves the outlook for those who use, and look down on, the courtyard. These spaces should also be designed to be inclusive, with level access, to be accessible to all.

3.1.8 Good design, particularly for larger developments, requires the design team to work with clients and building services engineers to gain an understanding of the building-management strategy. This will include how the various systems work and interact; the key components; the optimal location for plant and equipment; and the preferred distribution routes. It will also include identification of the parts of the systems that require frequent access for routine readings, checks, adjustments and general maintenance; and the implications of major renewal when that becomes necessary. Elements that need to be considered include lifts and common areas; plant rooms; window cleaning; photovoltaics and roofs generally; trees and planting (including watering, mulching and maintenance); play equipment; water-reuse systems; and shading devices. Designers should aim to make horizontal pipe runs as short as possible by optimising riser locations, and consider locating soil and vent pipes and heat interface units where they can be accessed from the communal deck or corridor to avoid disturbing residents. A window-cleaning strategy should also be agreed, and requirements for the cleaners' rooms and garden/equipment stores should be established.

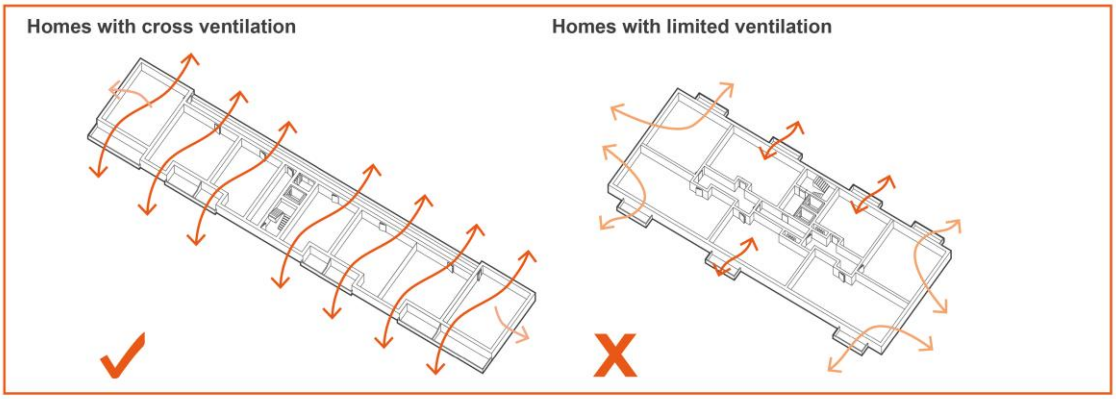
B	Shared and ancillary spaces	Policy
B1	**Approach routes and entrances**	
B1.1	Private and communal entrances should be visible and clearly identifiable from the public realm. **[NB, CoU]** *Note: Canopies or recesses can be used to make the main entrance more visible and provide shelter. This can aid those who are neurodiverse or partially sighted.*	D3 D6
B1.2	Ground-floor apartments and maisonettes should have 'own door' access from the street where possible. **[All]**	D3 D6
B1.3	Where a core provides access to one or more M4(3) dwellings, all parts of the internal and external circulation network should be designed to meet the approach requirements of M4(3) (as defined by Approved Document M, Volume 1*)* to ensure that all residents have equal access to all the shared parts of the building and any associated open space or facilities intended for their use. **[NB]**	D5 D6 D7
B1.4	The entrance lobby should be safe, welcoming, durable, well-lit and at least partially glazed; and, where appropriate, should include glazing manifestations. It should also include signage to aid wayfinding and any necessary instructional signage relating to fire safety. Where an access core serves four or more dwellings, an access control system with audio-visual verification in all dwellings should be linked to a main front door with electronic lock release. **[All]** *Note: Glazing manifestations are visible designs on glass to prevent people colliding with it.*	D3 D5 D6 D12
B1.5	Lifts and stairs should be within sight of the entrance area or clearly signposted. Floor and flat numbers should be clearly marked on each landing within the stairways of high-rise buildings; and be visible in both normal conditions, and poor-light or smoky conditions. The stairs should be prominent and attractive to encourage healthy lifestyle choices. **[NB, CoU]**	D5 D6 D12
B1.6	Establish whether a concierge is envisaged at the outset; but ensure that the building (or buildings) could function safely and effectively without one if the management regime were to change over time. **[NB, CoU]**	D3 D6
B1.7	Ensure that, and demonstrate how, post and deliveries can be safely received, stored and collected by, or delivered to, residents. **[All]** *Note: For Major development, this should be demonstrated with a management plan.*	D6
B1.8	**Best practice:** Where basements are provided, offer step-free private-storage facilities at basement level for residents to store bulky or occasionally used items, in addition to storage within the home. **[All]**	D6

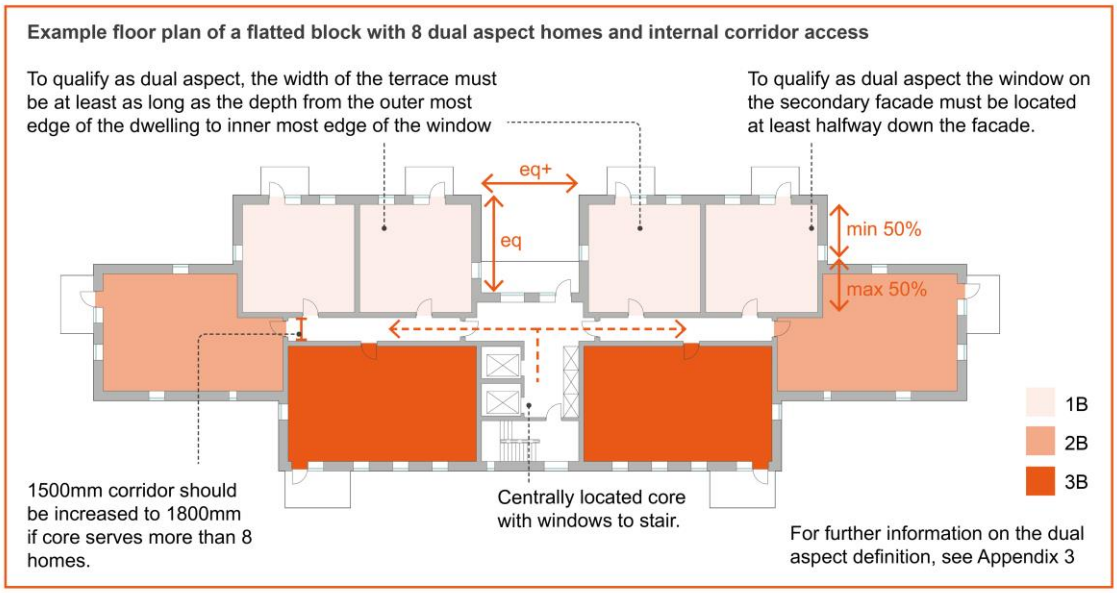
B2	**Internal circulation and dwellings per core**	
B2.1	Communal circulation spaces such as corridors should be at least 1500mm wide. Consider additional width within and adjacent to cores to allow wheelchair users to turn and/or pass each other more easily. **[NB, CoU]**	**D5** **D6**
B2.2	Internal corridors, particularly 'double-banked' corridors (those that serve flats on both sides), should be kept short and receive daylight and natural ventilation. (This standard is not directly applicable to specialist older persons housing.) **[NB, CoU]**	**D6**
B2.3	**Best practice:** Provide access galleries (or 'decks') that facilitate dual aspect homes as an alternative to internal corridors. **[NB]** *Note: Access galleries are unlikely to be appropriate in the upper floors of tall buildings.*	**D6**
B2.4	In lift-served buildings, at least one lift (more if indicated by a capacity assessment) should be a fire evacuation lift suitable for people who require level access to evacuate from the building. Protected lobbies in front of lift entrances need to be provided to ensure the safety of those that need to evacuate along with clear signage, lighting and pictograms of the evacuation route to the safe area/evacuation lift. **[All]** *Note: This requirement for evacuation lifts is in addition to any requirement to provide fire-fighters lifts under the building regulations.*	**D5** **D12**
B2.5	The number of homes accessed by a core should not exceed eight per floor. Deviation (by exception) from this standard will need to be justified and mitigated by increasing the corridor widths to 1800mm, locating homes on both sides of the core and introducing intermediate doors to create sub-clusters. (This standard is not directly applicable to specialist older persons housing.) **[NB, CoU]**	**D5** **D6**
B3	**Storage of bicycles, mobility scooters and wheelchairs**	
B3.1	Secure, step-free, long-stay cycle storage should be provided in accordance with the London Plan and the guidance set out in the London Cycling Design Standards. Storage should be in easily accessible locations and feel safe. Provision should be made for: • one space per studio or one-person, one-bedroom dwelling • 1.5 cycle spaces per two-person, one-bedroom dwelling • two cycle spaces for every dwelling with three or more bedspaces Two additional short-stay visitor spaces are required for developments with 5-40 dwellings, and thereafter one additional space per 40 dwellings. (This standard is not directly applicable to specialist older persons housing.) **[All]** *Note: See section C10.5 for cycle storage requirements in private gardens.*	**T5**

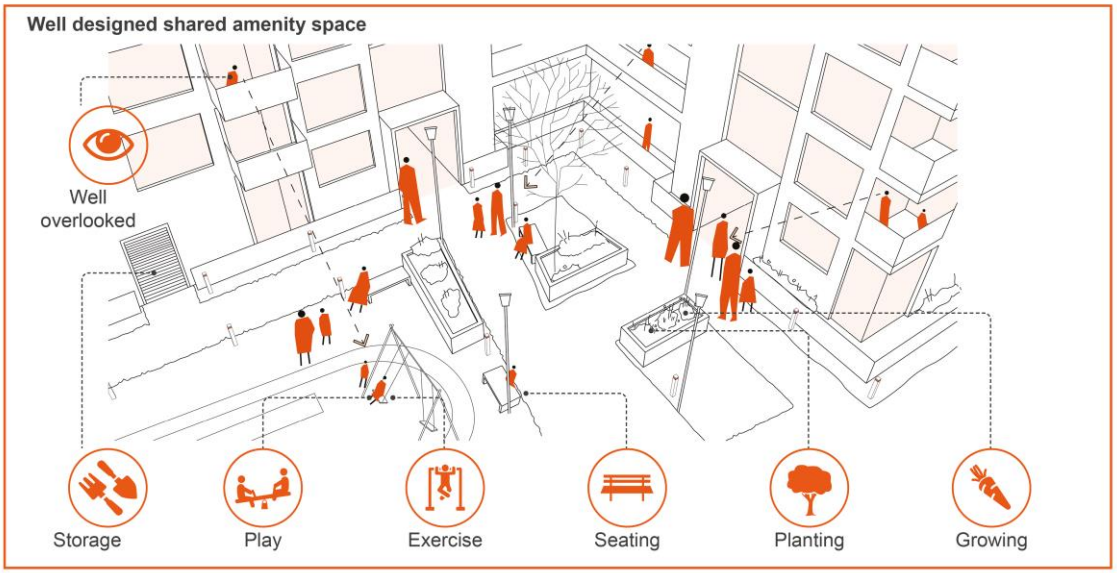
B3.2	All apartment buildings should provide secure and convenient storage and charging facilitates for micro-mobility devices, mobility scooters and wheelchairs. Fire protection between the storage and any escape route must be provided. Access to the storage from the core and/or the courtyard (where one exists) is preferable to access from the street. (A higher level of provision will be required in specialist older persons housing.) **[All]** *Note: This includes buildings that do not have any M4(3) homes to ensure that visiting wheelchair users are catered for.*	**D5** **D6**
B4	**Car parking**	
B4.1	Car parking is not permitted in the Central Activities Zone; Inner London Opportunity Areas; Metropolitan and Major Town Centres; locations with a PTAL of 5 or 6; or Inner London locations with a PTAL of 4. In other locations, proposals must not exceed the maximum residential parking standards set out in Table 10.3 of Policy T6.1 of the London Plan. **[All]** *Note: This standard does not apply to disabled persons parking spaces.*	**T6.1**
B4.2	Ensure that the location and organisation of resident car parking does not impede walking, cycling and public transport use; or negatively affect the use or appearance of the public realm and open spaces. **[All]**	**D3** **D6**
B5	**Access for emergency and service vehicles and fire safety**	
B5.1	Demonstrate how the design proposal achieves the highest standards of fire safety. Ensure that every apartment building has a safe and convenient means of escape, and an associated evacuation strategy for all building users. **[All]** *Note: Development will need to meet the latest fire safety requirements, including those for a second staircase.*	**D12**
B5.2	Provide a dedicated, unobstructed, suitably sized and located external space with a connection to a sufficient water supply from which a fire appliance can operate. **[All]**	**D12**
B6	**Dealing with waste and recycling**	
B6.1	Ensure that the proposed arrangements for dealing with waste and recycling conform to the local authorities' storage and collection strategies and requirements. Separate collection of dry recyclables, food waste and other waste should be considered in the early design stages to help improve recycling rates; reduce smell and vehicle movements; protect the street scene and community safety; and prioritise active frontages. **[All]**	**D3** **D6**
B6.2	Communal refuse and recycling facilities should be accessible to, and useable by, all residents including children and wheelchair users. They should be located on a hard level surface; be well lit and ventilated; and have a floor gulley to facilitate cleaning. **[All]**	**D3** **D6**

B6.3	When located within the footprint of a residential building, the waste and recycling room should be designed and positioned to minimise the impact of noise and smell on the occupants. **[All]** *Note: The distance between the entrance to a flat and the communal bin store should not exceed 30m as set out in Approved Document H.*	**D3** **D6**
B7	**Supplying energy efficiently (being clean)**	
B7.1	Use local energy resources (such as secondary heat and local heat networks), and supply energy efficiently and cleanly by connecting to district heating networks. **[All]**	**SI2** **SI3**
B7.2	Appraise and optimise network efficiency by minimising distribution heat losses, and by locating vertical risers within buildings in positions that reduce horizontal pipe runs to a practical minimum. **[NB, CoU]**	**SI2** **SI3**
B8	**On-site renewables (being green)**	
B8.1	Developments should be designed to maximise renewable energy by producing, storing and using it onsite through the use of, for example, photovoltaics and heat pumps. Keep parapets low, while maintaining safety for maintenance personnel; and where possible, locate plant and lift overruns to the north to minimise overshadowing. **[All]** *Note: South-facing and flat roofs are the most beneficial for solar photovoltaics.*	**SI2**
B9	**Shared outside amenity space**	
B9.1	Apartment buildings should generally offer at least one secure, communal outside green space, as a ground-level courtyard, a raised podium or a roof terrace. These spaces should be overlooked by residents; and be available and accessible to all occupants, including wheelchair users, regardless of tenure, and accessed via the cores. **[All]**	**D6**
B9.2	Communal outside spaces should be: multifunctional; designed for socialising, play, relaxation, exercise and, where appropriate, food growing. They should be green and biodiverse, and afford year-round visual interest when viewed from the surrounding dwellings. **[See Making London Child-Friendly Guidance]** **[NB, CoU]**	**S4** **G1** **G5** **G8**
B9.3	Ground and podium-level amenity spaces should include play spaces that are overlooked by nearby homes. Where a development is likely to accommodate 10 or more children/young people, provide at least 10m^2 of play space per child (accessible to all, regardless of tenure) that is appropriate for a range of different age groups**. [All]**	**S4**
B9.4	**Best practice:** Provide space and facilities for community gardening that include food-growing and composting. **[All]**	**G8**

B9.5	Maximise the quality and availability of daylight and sunlight in communal outside spaces, particularly in winter. It is particularly important that spaces designed for frequent use (including sitting and play spaces) receive direct sunlight through the day, particularly at times they are most likely to be used. **[NB, CoU]**	**D6**
B9.6	The design of raised podia (typically located over underground or undercroft parking) should reflect the limited light levels and soil depth typically associated with these spaces. Grass should be avoided in favour of drought-tolerant planting, and innovative approaches are encouraged. These include trees and climbing shrubs planted at ground level and allowed to grow through voids in the podium. **[NB]**	**G1** **G5**
B9.7	Proposals should consider lighting; sustainable watering solutions; tool storage; food growing and composting; and how future residents can be involved in the design and ongoing maintenance of shared outside spaces. **[All]**	**D3** **D6** **SI13**
B9.8	**Best practice:** Provide a separate, secure access route from the street to every outside space to avoid taking mowers and other large maintenance equipment through the building. **[NB, CoU]** *Note: Access routes should be wide enough to accommodate machinery that is likely to be used.*	**D3** **D6**
B10	**Management and maintenance**	
B10.1	Communal indoor and outside spaces should be designed to: minimise the amount of management and maintenance needed throughout the lifetime of the building; and facilitate safe access to the relevant parts of each management system. **[All]**	**D3** **D6**
B10.2	Major developments must submit energy performance data to the GLA's 'Be Seen' monitoring portal. **[See 'Be Seen' Energy Monitoring LPG]** **[All]**	**SI2**







1. Access galleries create dual aspect homes and encourage neighbourly interaction (B.2.3)
2. An example floorplan layout that provides a centrally located core with 100 per cent dual aspect homes (B2.1, B2.2, B2.5)
3. Well-designed communal outside areas for all residents to use throughout the year (B9.1, B9.2, B9.3, B9.4, B9.7, B9.8)

4 Part C: Homes and private outside space

4.1.1 All homes are required by the London Plan to meet the nationally described space standard (NDSS). However, this is an absolute minimum, not a target. This guidance encourages homes to exceed these standards by introducing a new best practice space standard to improve residential quality, and also to help accommodate the changes in working patterns experienced as a result of the COVID-19 pandemic which are likely, in part, to endure. Particular attention needs to be given to occupants using the kitchen, bathroom and appliances while other household members are working from home. This guidance also recommends more generous private space – again, in response to issues highlighted during the pandemic. Homes should generally have at least two habitable rooms, each with a window. Deep, narrow, single aspect studios will not provide a suitable quality of accommodation; homes are therefore expected to be dual aspect unless there are compelling reasons why that cannot be achieved. This has multiple benefits including ventilation; outlook; options in areas with poorer air quality or noise generators; and the possibility of a window to the kitchen and bathroom to allow better air movement, moisture and odour control. Optimising the layout of every home remains the initial goal, but avoiding loadbearing walls within dwellings will provide flexibility over time and allow layouts to be reconfigured with relative ease as lifestyles evolve. Designing a cellular layout as well as an open-plan option will secure adequate frontage and enough windows to allow successive generations of residents to make their own choices.

4.1.2 Visual privacy is more difficult to achieve in dense environments, particularly on lower floors. Off-setting or angling windows can mitigate problems; and fixed or movable screening devices can also be effective where they are an integral part of the overall design. It is also important to achieve high levels of soundproofing in party walls and windows, particularly where homes are located next to non-residential uses and communal spaces, such as entrances; lift and stair cores; bin and bike stores; and other sound-generating facilities. Consideration should be given to the internal layout of homes, including vertical stacking, to reduce noise impacts (for example, between living rooms and bedrooms). The standards in this section also aim to complement the consideration of daylight and sunlight impacts using the BRE guidance (Site layout planning for daylight and sunlight). This process involves a two-stage approach: firstly, by applying the BRE guidance; and secondly, by considering the location and wider context when assessing any impacts. With extreme weather events becoming increasingly common, design must balance daylight, passive solar gain and overheating considerations. Summer heat can be reduced through orientation, shading, fenestration, insulation, high-albedo materials, the provision of green infrastructure and other strategies. In areas with poorer air quality and/or high background noise levels, careful design will be needed to ensure passive ventilation is possible, in line with carbon reduction targets and the need to avoid additional waste heat and noise associated with mechanical ventilation.

C	Homes and private outside space	Policy
C1	**Inclusion and accessibility**	
C1.1	Development should meet the detailed requirements for the 90 per cent of dwellings that are required to meet M4(2) and the 10 per cent required to meet M4(3) set out in Approved Document M, Volume 1 (ADM). All require step-free access from the street (or parking/drop-off area) to the main private entrance. **[NB]** *Note 1: Accessible housing should be clearly identified in the planning application. M4(3) homes should be identified as either M4(3)(2)(a) 'wheelchair-adaptable' (and the default option), or (M4(3)(2)(b) 'wheelchair-accessible', as set out in ADM.* *Note 2: The principal bedroom should provide a clear access zone of at least 750 mm to both sides and foot of the bed (or a minimum of 1,000mm in M4(3) homes).* *Note 3: See Policy D7 for development where flexibility should be applied. Where this is the case, exceptions must be justified, and the affected dwellings described as M4(1).*	D7 H2
C1.2	**Best practice:** Dwellings that cannot provide step-free access from the street [described as M4(1)], should be designed to meet all other M4(2) requirements including step-free access to private outside space. **[All]**	D5 D6
C1.3	When an M4(3)(2)(a) wheelchair-adaptable home is proposed, drawings submitted at the planning application stage should clearly show how the layout can be adapted to meet the requirements for a wheelchair-accessible home in the future. **[All]**	D7
C1.4	When undertaking community engagement, identify any specific cultural requirements within the local community that need to be addressed in the design. **[NB, CoU]** *Note: This standard should be applied as part of standard A5.6. Examples include a preference for the kitchen to be separated from the living and dining spaces; and the need for larger kitchens to accommodate specific cooking and/or eating conventions.*	D5 D6
C1.5	**Best practice:** Family homes with three or more bedrooms should predominantly be located on the lower floors of buildings (and not above the fifth floor) so that they provide safe, convenient access to, and overlooking of, outside play and amenity spaces. **[NB, CoU]**	D6
C2	**Internal space standards**	
C2.1	All new dwellings must meet the minimum space standard in Policy D6 Part F(1-8) and Table 3.1 of the London Plan. **[All]** *Note 1: These space standards should be exceeded for M4(3) homes, which will need to be considerably larger to meet the minimum spatial requirements set out in Approved Document M, Volume 1.* *Note 2: This standard aligns with the NDSS, except for ceiling height, and is shown in Table A1.1 in Appendix 1 of this document.*	D6
C2.2	**Best practice:** New dwellings should meet the best practice space standard in Table A1.1 detailed in Appendix 1. **[All]**	D6

<table>
<tr><td>C2.3</td><td>A minimum ceiling height of 2.5m is required for at least 75 per cent of the gross internal area (GIA) of each dwelling to enhance the spatial quality; improve daylight penetration and ventilation; and assist with cooling. Any reduction (from 2.5m) in floor-to-ceiling heights should only be for essential equipment in the ceiling voids above kitchens and bathrooms. [NB, CoU]</td><td>D6</td></tr>
<tr><td>C2.4</td><td>Best practice: The floor-to-floor height of ground-floor dwellings should be at least 3.5m in order to promote flexibility and greater daylight; and allow for easier conversion to non-residential uses if required. [NB]</td><td>D6</td></tr>
<tr><td>C2.5</td><td>The following combined floor areas for living/kitchen/dining space should be met or exceeded: [NB, CoU]
<table>
<tr><th>Designed level of occupancy</th><th>Minimum combined floor area of living, dining and kitchen spaces</th></tr>
<tr><td>One person</td><td>21 sqm</td></tr>
<tr><td>One bed, two persons</td><td>23 sqm</td></tr>
<tr><td>One bed, three persons</td><td>25 sqm</td></tr>
<tr><td>Two bed, four persons</td><td>27 sqm</td></tr>
<tr><td>Three bed, five persons</td><td>29 sqm</td></tr>
<tr><td>Four bed, six persons</td><td>31 sqm</td></tr>
</table>
Note 1: In open-plan layouts, the floor area measured should be clearly identified. It should not include the space immediately inside the front door, or any circulation space needed to access other rooms.

Note 2: This applies to (M4(2) homes; M4(3) homes will typically exceeds these areas. See standard C2.12 and Approved Document M, Volume 1 for details.</td><td>D6</td></tr>
<tr><td>C2.6</td><td>The main sitting space in a home for up to two people should be at least 3m wide, and increased to 3.5m wide in homes with three or more bedspaces to achieve a functional layout. [All]</td><td>D6</td></tr>
<tr><td>C2.7</td><td>Best practice: Exceed the minimum built-in storage requirements by 0.5m^2 and increase the capacity of kitchen waste and recycling bins. [All]</td><td>D6</td></tr>
<tr><td>C2.8</td><td>Best practice: Provide at least two built-in storage cupboards in every home and at least one on every floor. Ensure that at least 50 per cent of the storage provided is located within circulation spaces. [All]</td><td>D6</td></tr>
<tr><td>C2.9</td><td>Best practice: Provide a WC on every floor that includes a bedroom. [All]</td><td>D3
D6</td></tr>
<tr><td>C2.10</td><td>Best practice: Provide an additional bathroom or shower room in homes for six or more people. [All]

Note: Approved Document M, Volume 1 has specific requirements for bath and shower provision in M4(3) homes.</td><td>D6</td></tr>
<tr><td>C2.11</td><td>Best practice: Provide a utility room in dwellings with two or more bedrooms. Where part of the utility room is contributing to the general storage requirement, the area claimed should be clearly identified. [All]</td><td>D3
D6</td></tr>
</table>

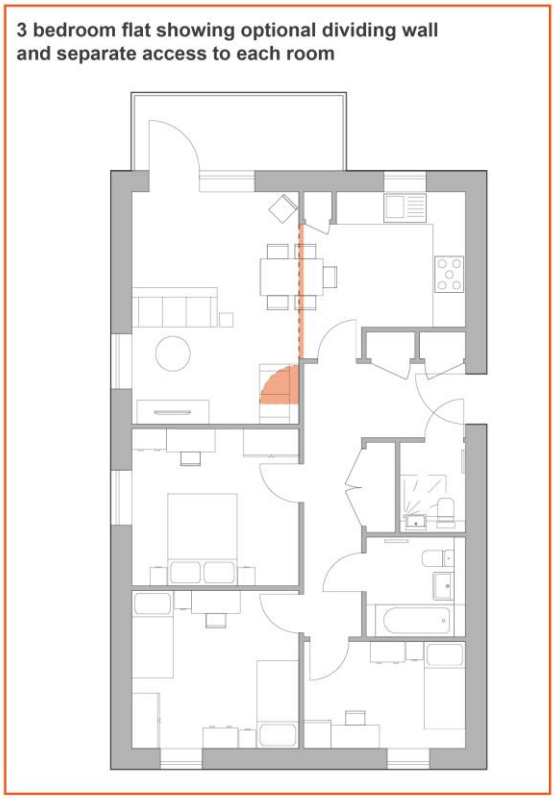
C2.12	Fully furnished internal floorplans should be submitted for every dwelling type proposed, at a scale of at least 1:100 to enable assessment of the layout and ensure it is functional and fit for purpose. **[All]** *Note 1: For convenience, the written and drawn furniture schedules that set out the required items for fully furnished floorplans are contained within Appendix 1 of this document. These are taken from Approved Document M, Volume 1 (ADM). Layouts that cannot comfortably accommodate all of the prescribed furniture for the dwelling type in question (including kitchen units and appliances) will not be considered acceptable.* *Note 2: The overall length of kitchen units should be measured at the mid-line of the worktop in accordance with the guidance for M4(3) homes set out in ADM. Where the washing machine is located out of the kitchen, the overall minimum worktop length may be reduced by 630mm. Note that kitchen requirements for M4(3) homes differ from those for M(4)2 – see ADM for details.* *Note 3: The internal layout drawings should include the overall GIA; the floor area; the width and depth of every habitable room; a north point; and the accessibility category of each dwelling. They should also demonstrate compliance with ADM.* *Note 4: Homes with five or more bedspaces and all dwellings with two or more storeys should provide at least two WCs. (Note: an additional 3m^2 is allowed for in the NDSS, for this purpose; and ADM requires a second WC in M4(3) homes with four or more bedspaces.)* *Note 5: Segregated bins for the short-term separation and storage of waste and recycling should be provided in kitchens or utility rooms as set out in the furniture schedule. The space used for this should not be counted towards the general storage requirement.*	**D6** **D7**
C3	**Choice and flexibility**	
C3.1	**Best practice:** Where open-plan living arrangements are proposed, ensure adequate separation between the kitchen and sitting space. In homes with three or more bedrooms, proposals should demonstrate how the space could be easily modified to provide two separate living spaces (preferably a living room and a kitchen/dining room), each with an openable window. A direct connection between the rooms is useful but not required. Conversely, where two spaces are provided from the start, it should be possible to remove the dividing wall without significant structural implications. **[All]** *Note: This approach is strongly encouraged in smaller homes.*	**D3** **D6**
C3.2	**Best practice:** Avoid load-bearing walls within the home to allow for future flexibility of the internal layout. Locate structural columns on external or party walls where possible. **[NB]**	**D3**
C3.3	**Best practice:** Avoid layouts in which the living space and other habitable rooms are only accessible via the kitchen. **[All]**	**D6**
C3.4	**Best practice:** Provide a dedicated study room in dwellings with three or more bedrooms. **[All]** *Note: To avoid being counted as a bedroom under the NDSS, the floor area should be less than 7.5m^2.*	**D3** **D6**

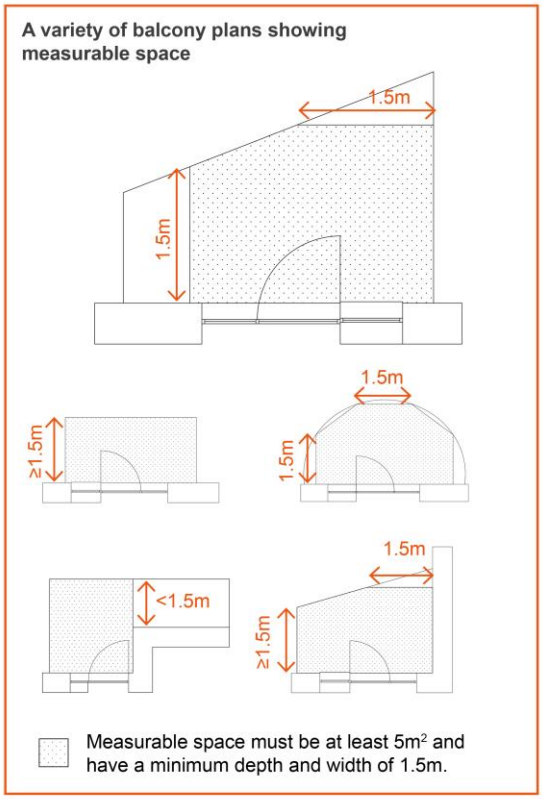
C4	**Aspect, orientation, daylight and sunlight**	
C4.1	New homes should be dual aspect unless exceptional circumstances make this impractical or undesirable; for example, when one side of the dwelling would be subjected to excessive noise or outside air pollution. Where single aspect dwellings are proposed, by exception, they should be restricted to homes with one or two bedspaces; should not face north; and must demonstrate that the units will: have adequate passive ventilation, daylight and privacy; and not overheat (particularly relevant for south or west-facing single aspect units). **[All]** *Note: See Appendix 3 for definition of dual aspect.*	**D3** **D6** **SI4**
C4.2	The location of the main living and eating spaces, and the main private outside space, should be optimised to make the most of the best views and the orientation. These spaces should receive direct sunlight (south-facing is preferable, provided that appropriate shading devices are incorporated) and enjoy reasonable privacy through the careful placement of windows, balcony design or other measures. **[NB]**	**D6**
C4.3	All homes should allow for direct sunlight in conjunction with solar shading. As a minimum, at least one habitable room should receive direct sunlight – preferably the living area and/or the kitchen and dining space. **[NB, CoU]**	**D6**
C4.4	Avoid placing bedrooms and bathrooms on street-facing facades at ground level or where they face onto a busy courtyard or podium. **[All]**	**D3** **D6**
C4.5	The primary window of a habitable room should not be located on an access deck. Where possible, avoid locating windows close to the internal corners of courtyards or L-shaped blocks. **[NB]**	**D3** **D6**
C4.6	Avoid large wide full-height windows to habitable rooms (particularly in bedrooms) where the risk of being overlooked and/or overheating is high. **[NB, CoU]**	**D6** **SI4**
C4.7	All habitable rooms (including a kitchen/dining room) should receive natural light and have at least one openable window that provides a view out when seated. **[All]**	**D6**
C4.8	**Best practice:** Bathrooms should receive natural light through openable window/s. **[All]**	**D6**
C5	**Air quality, external noise and soundproofing**	
C5.1	Where possible, locate habitable rooms away from busy roads, railways or existing buildings that generate excessive noise and/or poor air quality. **[All]** *Note 1: This applies to locations where there is a noisy or vibrant soundscape, particularly at night.*	**D14** **SI4**

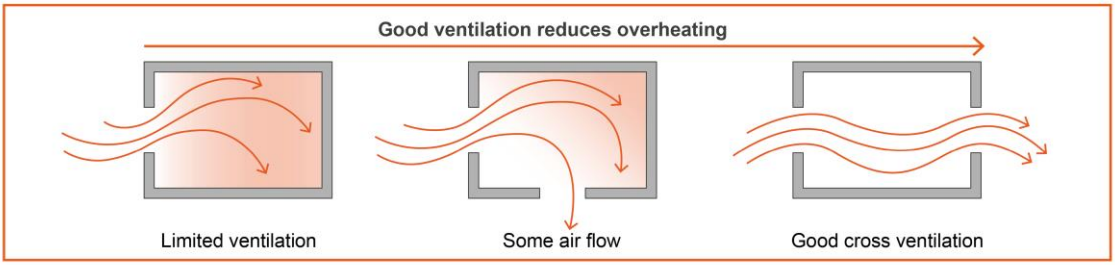
C5.2	Where necessary, adopt sound-attenuation measures to reduce the external noise experienced within the home to an acceptable level. **[All]**	**D14**
C5.2	**Best practice:** Avoid locating bedrooms and living rooms adjacent to corridors; lifts; stairs; bin and cycle stores; wheelchair and mobility scooter stores; plant rooms; and other noise-generating ancillary spaces. **[All]**	**D6** **D14**
C5.3	Provide high levels of soundproofing between rooms, as well as between dwellings, to provide privacy and allow different activities (including work and study) to take part simultaneously throughout the home. In particular, party walls should achieve internal airborne sound-insulation values that are at least 5dB above Approved Document E; and impact sound insulation values that are at least 5dB lower. **[All]**	**D6** **D14**
C5.4	Where equipment such as mechanical ventilation heating with heat recovery (MVHR) is installed, ensure the Acoustics Ventilation and Overheating: Residential Design Guide for internal noise levels is followed. Where possible, locate the MVHR in a circulation space, not a habitable room, and as close as possible to an external wall to minimise distribution losses – ideally within 2m. **[All]**	**D14** **SI4**
C6	**Thermal comfort**	
C6.1	Reduce the risk of overheating, through orientation; dwelling layout; the natural cross-ventilation afforded by dual-aspect; window design; and shading devices (preferably external to the facade). Major development should demonstrate this through an energy strategy in accordance with the cooling hierarchy. **[All]** *Note 1: Specialist older persons housing should be subject to a heatwave strategy. Including active cooling in one or more of the communal spaces can safeguard vulnerable residents during extreme hot weather events.* *Note 2: Solar-controlled glazing can be used to radiate and reflect away much of the sun's heat.*	**SI4** **D6**
C6.2	Daylight and overheating assessments should be analysed together to determine the optimal balance. South and west-facing facades are most at risk to overheating, and the use of shading should be used to prevent direct sunlight from entering the home during at-risk periods. **[All]**	**SI4** **D6**
C6.3	Maximise the benefit of passive ventilation by providing a variety of window opening options that allow controlled ventilation through smaller openings and purge ventilation through larger windows and/or doors. **[All]** *Note: Window grilles and secure openers can be utilised so windows can be safety left open. Types of ventilation that allow air in whilst reducing noise infiltration are encouraged.*	**SI4** **D6**
C7	**Water usage**	
C7.1	Water fittings and appliances should be designed to minimise consumption to no more than 105 litres per person, per day (plus up to five litres for external use). **[All]**	**SI5**

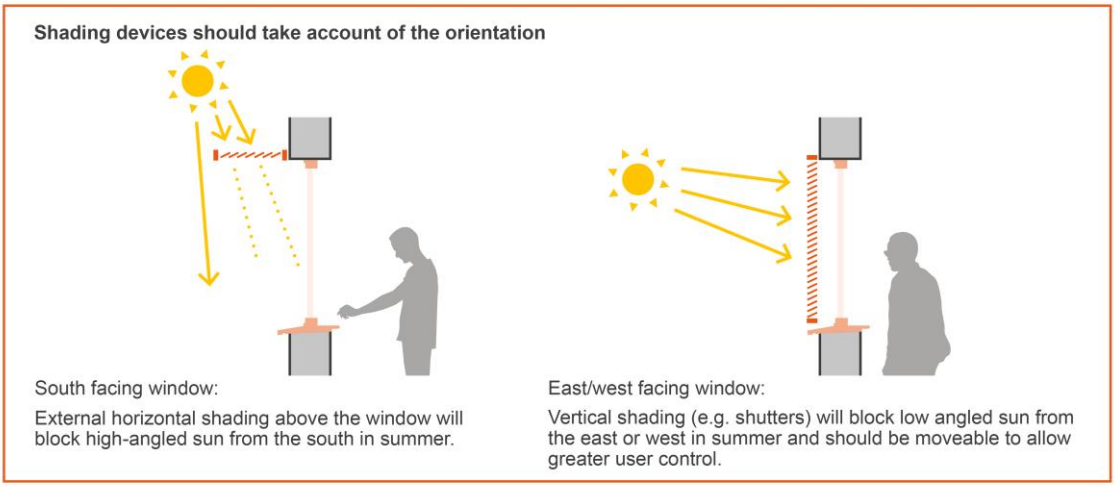
C8	**Digital connectivity**	
C8.1	Provide sufficient ducting space for full-fibre connectivity infrastructure to all end-users unless an affordable alternative 1GB/s-capable connection is available. **[All]**	**SI6**
C9	**Fire safety**	
C9.1	Seek advice from building control at the earliest opportunity and, where possible, also from the local fire service to ensure that the proposed location of the wheelchair and mobility scooter storage and charging space in every M4(3) home is acceptable. **[All]** *Note: The preferred location for wheelchair transfer/storage is close to the main entrance of the dwelling.*	**D12**
C9.2	**Best practice:** Install sprinklers in all homes that are entered at or above first floor level. **[All]**	**D12**
C10	**Private outside space**	
C10.1	Provide a minimum of one $5m^2$ of step-free private outside space for homes with one or two bedspaces, with a minimum depth and width of 1.5m. An extra $1m^2$ should be provided for every additional bedspace. **[All]** *Note 1: For functional and accessible reasons, the minimum area must be a polygon with at least four sides. Triangular and irregular-shaped balconies will need to be larger than the minimum area to achieve this requirement.* *Note 2: Where inset balconies are provided, the depth should be less than the external facing side to ensure the space is experienced as outside space and that adequate daylight and sunlight can reach the room behind.*	**D6**
C10.2	**Best practice:** Exceed the minimum area of private outside space and increase the minimum depth and width to at least 2.5m to extend its use generally, enable wheelchair users to manoeuvre and turn more easily, and increase opportunities for planting; growing food; storing light gardening equipment; and drying clothes. **[All]**	**D5** **D6**
C10.3	Balconies should be accessed via the main sitting area or kitchen/dining room unless the specific circumstances make this impractical. Consider the need for privacy and/or shade on balconies (ideally adjustable sliding screens or retractable awnings). **[All]**	**D6**
C10.4	Enclosing balconies as glazed, ventilated winter gardens is appropriate in some circumstances. These are where dwellings will be exposed to high levels of noise and/or strong wind, particularly at a high level. Winter gardens should be usable as outside space, thermally separated from the interior, and the floor should be 'drainable' to avoid standing water. Care should be taken to be avoid overheating. **[All]**	**D6**

C10.5	Homes with private rear gardens should accommodate bicycles, mobility scooters and bins, providing that the garden can be accessed directly from the street. Where this is not possible, secure, bespoke covered storage should be provided in front gardens; this should be designed and located to avoid obstructing ground-floor windows. **[All]**	**T5** **D6**
C10.6	**Best practice:** A future management plan should be put in place for proposed buildings. Ensure that windows can be cleaned from the inside unless they can be safely accessed from outside, or where cleaning is the responsibility of the management company. **[All]**	**D3** **D6**









1 2

3

4

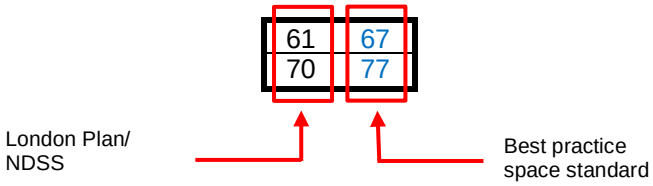
1. Three-bedroom apartment with options to separate or combine living areas (C2.2, C2.4, C3.1, C4.2)
2. Private outside space should be at least 1.5m deep and wide (C10.1, C10.3)
3. Natural ventilation approach to mitigate overheating (C4.1, C6.1)
4. Orientation of windows with shading devices (C6.1)

Appendix 1 Minimum and best practice space standards

A1.1.1 Table A1.1 shows both the minimum internal space standards, as set in Table 3.1 of the London Plan, and the best practice space standard, set out in standard C2.2. The best practice space standard provides additional space, over and above the minimum space standard, to ensure new homes are fit for purpose and of the highest residential quality. They specifically require more storage and better provision for home working.

Table A1.1 Minimum and best practice internal space standards for new dwellings^

Type of dwelling		Minimum gross internal floor areas (GIA)+ and storage (sqm)								Best practice extra space
Number of bedrooms	Number of bedspaces	1-storey dwellings		2-storey dwellings		3-storey dwellings		Built-in storage		
1b	1p	39/37	43/41*					1.0	1.5	+4
	2p	50	55	58	63			1.5	2.0	+5
2b	3p	61	67	70	76			2.0	2.5	+6
	4p	70	77	79	86					+7
3b	4p	74	84	84	94	90	100	2.5	3.0	+10
	5p	86	97	93	104	99	110			+11
	6p	95	107	102	114	108	120			+12
4b	5p	90	101	97	108	103	114	3.0	3.5	+11
	6p	99	111	106	118	112	124			+12
	7p	108	121	115	128	121	134			+13
	8p	117	131	124	138	130	144			+14
5b	6p	103	115	110	122	116	128	3.5	4.0	+12
	7p	112	125	119	132	125	138			+13
	8p	121	135	128	142	134	148			+14
6b	7p	116	129	123	136	129	142	4.0	4.5	+13
	8p	125	139	132	146	138	152			+14



Key

b: bedrooms

p: persons

^ New dwelling in this context includes new-build, conversions and change of use.

* Where a one-single-bedroom, one-person dwelling has a shower room instead of a bathroom, the floor area may be reduced from 39/43 sqm to 37/41 sqm, as shown.

+ The GIA of a dwelling is defined as the total floor space measured between the internal faces of perimeter walls that enclose a dwelling. This includes partitions, structural elements, cupboards, ducts, flights of stairs and voids above stairs. GIA should be measured and denoted in sqm.

Built-in storage areas are included within the overall GIA and include an allowance of 0.5 sqm for fixed services or equipment such as a hot water cylinder, boiler or heat exchanger.

GIAs for one-storey dwellings include enough space for one bathroom and one additional WC (or shower room) in dwellings with five or more bedspaces. GIAs for two and three-storey dwellings include enough space for one bathroom and one additional WC (or shower room). Additional sanitary facilities may be included without increasing the GIA, provided that all aspects of the space standard have been met.

How to qualify for the best practice space standard:

1. The overall internal floor area of the home must meet or exceed the best practice space standard shown in blue alongside the London Plan/NDSS figures in columns 3-5. The total minimum uplift for each typology is shown in the grey column.
2. The amount of built-in storage must be increased by at least 0.5m^2 as shown in blue in column 6.
3. All one-bedroom homes must have at least two habitable rooms, each with an openable window. Sliding doors or walls may be used to separate the bedroom from the main living space.
4. All habitable rooms should exceed the minimum floor area set out in London Plan Policy D6 part F1-7 (also shown in the technical requirements of the NDSS), and specifically demonstrate better provision for homeworking as set out below:
    - Every two-person, one-bedroom home should demonstrate space for at least two desks in the bedroom unless there is a dedicated study. Where possible, provide space for a desk in the sitting room too, in order to offer choice and improve privacy and/or concentration.
    - Every home with two or more bedrooms should demonstrate space for at least three desks and where possible, one desk per person.

In a well-designed layout, the best practice space standard will allow for additional benefit over and above those set out above. This may include space for a larger sitting room, dedicated study and/or utility room for instance. It is however, up to the discretion of the applicant or designer to plan how this additional space should be used. While it is recommended that the additional space contributes to one or more of the best practice standards (see best practice standards in part C), this is not a requirement.

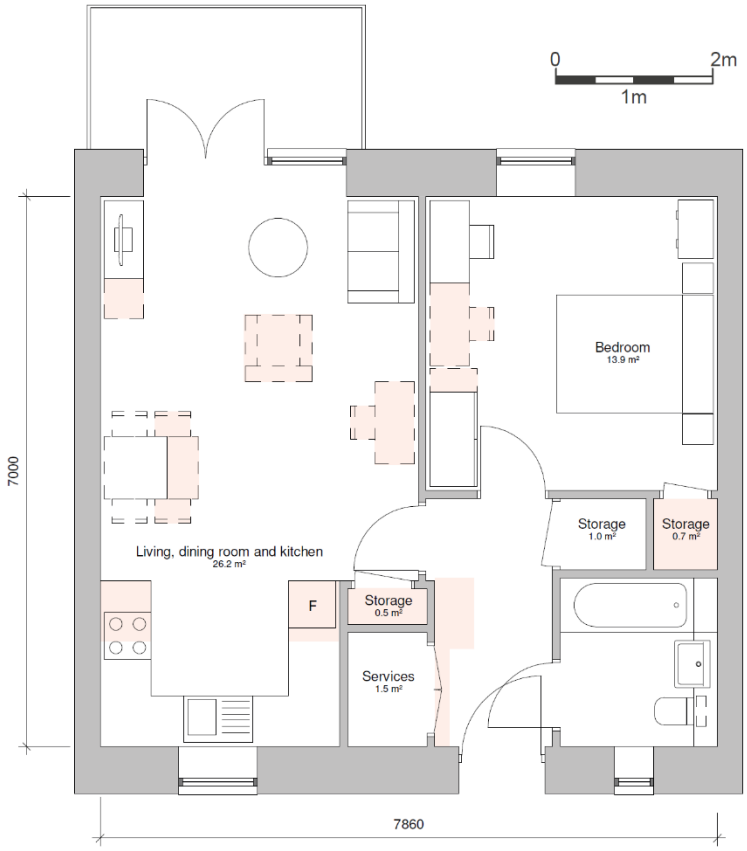
Note for M4(3) homes

As M4(3) homes need to be considerably larger than M4(2) homes, the NDSS is not an appropriate benchmark to take as the starting point for improvement. However, providing the relevant extra features listed above will allow these dwellings to claim compliance with the best practice space standard.

Best practice space standard - example layouts

A1.1.2 The layouts below illustrate how a one-, two- and three-bedroom flat can accommodate the additional space specified in the best practice space standard.[1] While it is up to the discretion of the applicant or designer to plan how this additional space should be used, it is recommended that the additional space contributes to one or more of the best practice standards in Part C of this document.

A1.1.3 Examples of flat plans that meet the best practice space standard and some of the other best practice standards



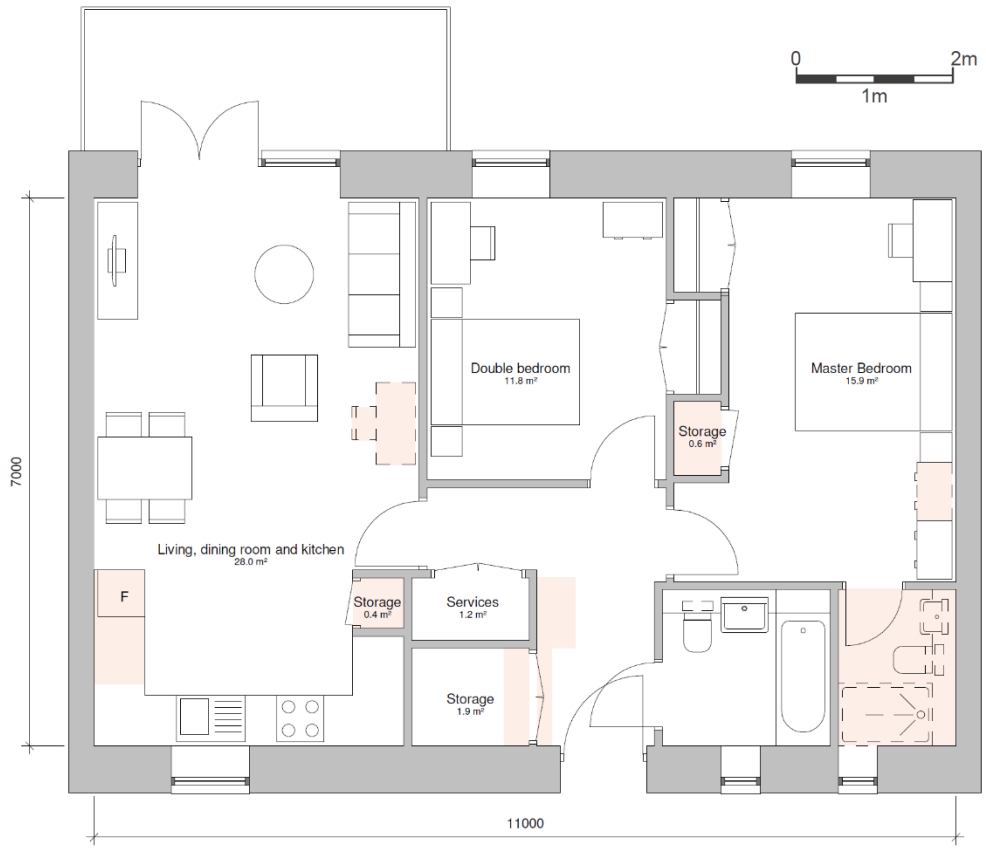
One-bedroom, two-person flat

Additional features facilitated by the best practice space standard:

- extra 1.2 m^2 storage (total 2.7 m^2)*
- generous entrance area
- services cupboard with option to include washing machine
- extra armchair and desk with larger storage unit
- larger dining table
- larger kitchen (more storage and recycling space)
- extra desk or storage in bedroom
- space for larger wardrobe

* allowance for 0.5 sqm within services cupboard as stated in NDSS

[1] These example layouts are based on a layout located on an access gallery or desk that provides cross-ventilation.



Two-bedroom, four-person flat

Additional features facilitated by the best practice space standard:

- extra storage 1.4m^2 storage (total 3.4m^2)*
- generous entrance area
- services cupboard with option to include washing machine
- larger kitchen (more storage and recycling space)
- extra storage in master bedroom
- ensuite with shower
- majority of storage accessed via circulation space

* allowance for 0.5 sqm within services cup'd as NDSS

Three-bedroom, five-person flat

Additional features facilitated by the best practice space standard:

- extra 1m^2 storage (total 3.5m^2)*
- generous entrance area
- services cupboard with option to include washing machine
- flexible living arrangement (open-plan or separate rooms)
- extra seating space in living room
- larger dining table
- larger kitchen (more storage and recycling space)
- space for larger wardrobe in all bedrooms
- dedicated study (or extra storage)
- ensuite with shower

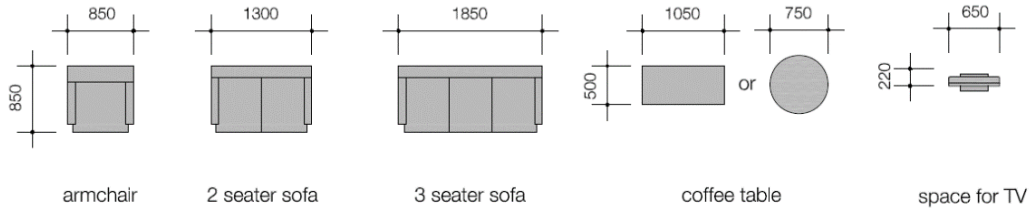
* allowance for 0.5 sqm within services cup'd as NDSS

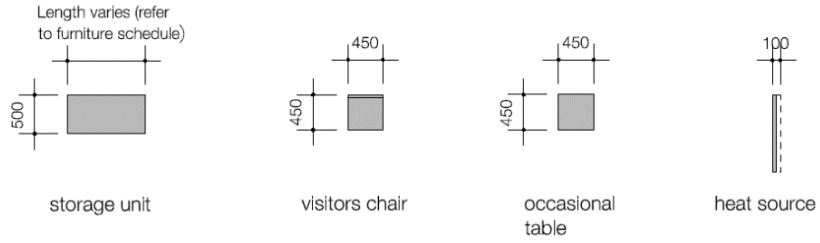
Appendix 2 Furniture schedule

A2.1.1 This drawn schedule should be read in conjunction with the minimum space standard (standard C2.1) and written schedule in Table A2.1. The relevant furniture for each M4(2) dwelling type should be shown on dwelling plans in accordance with standard C2.12. For M4(3) dwelling plans refer to Approved Document M, Volume 1. For dwellings that meet the best practice space standard (standard C2.2), the number of items provided should be beyond those specified in the written schedule.

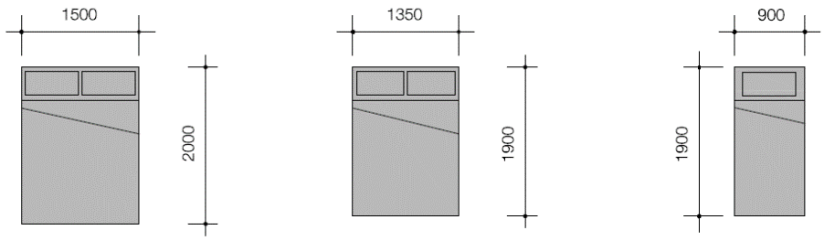
A2.1.2 Furniture schedule

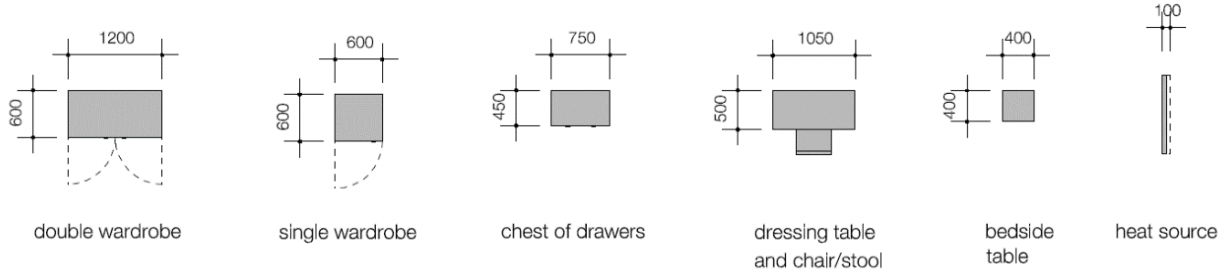
Living space furniture



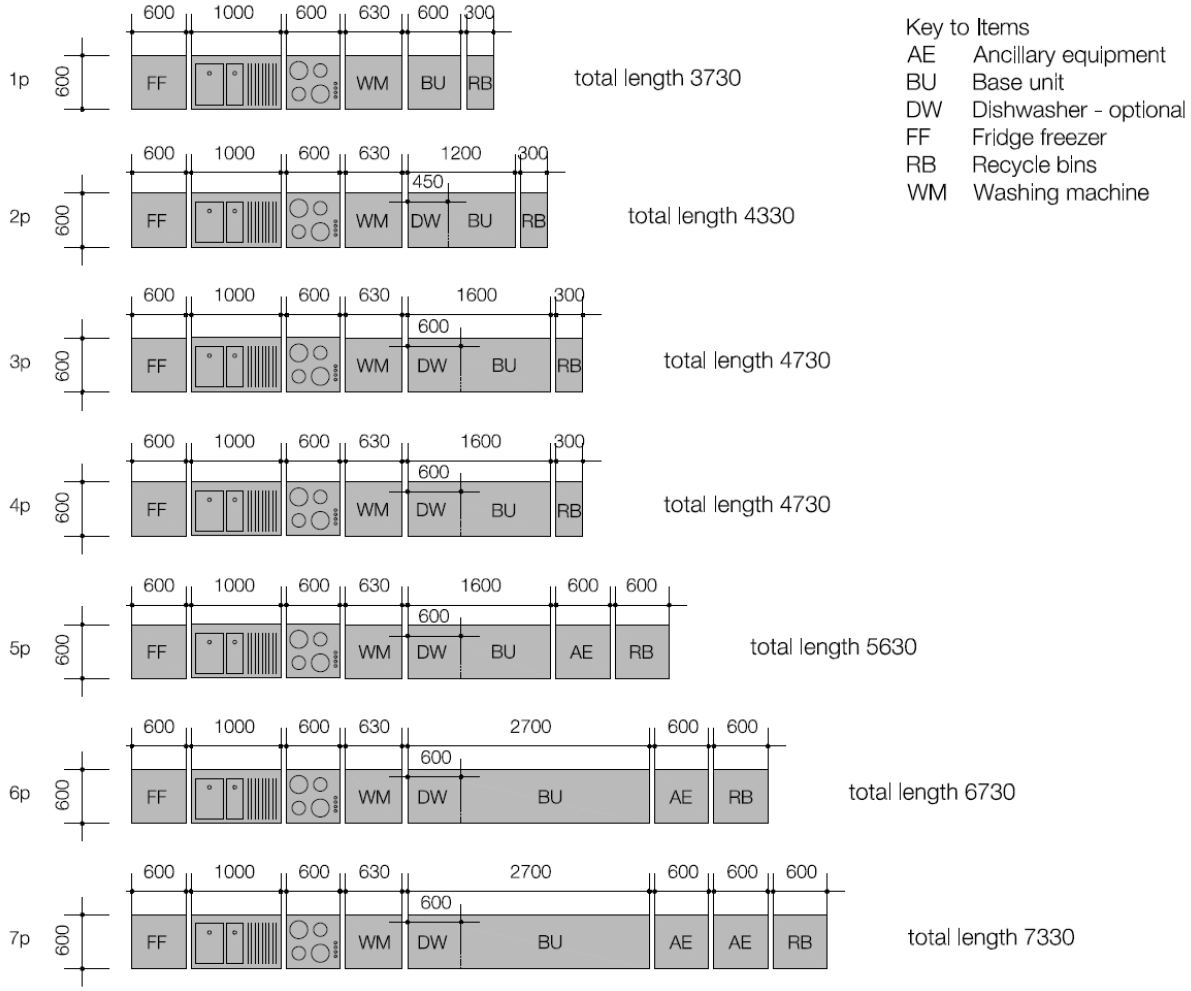


Bedroom space furniture





Kitchen furniture



Dining space furniture

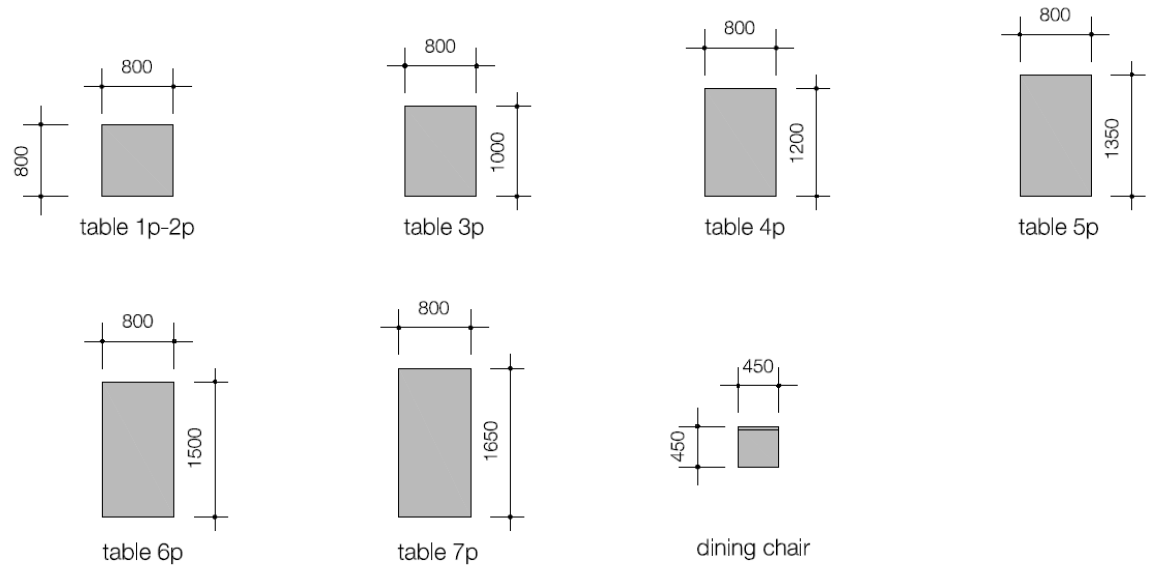


Table A2.1: Written schedule

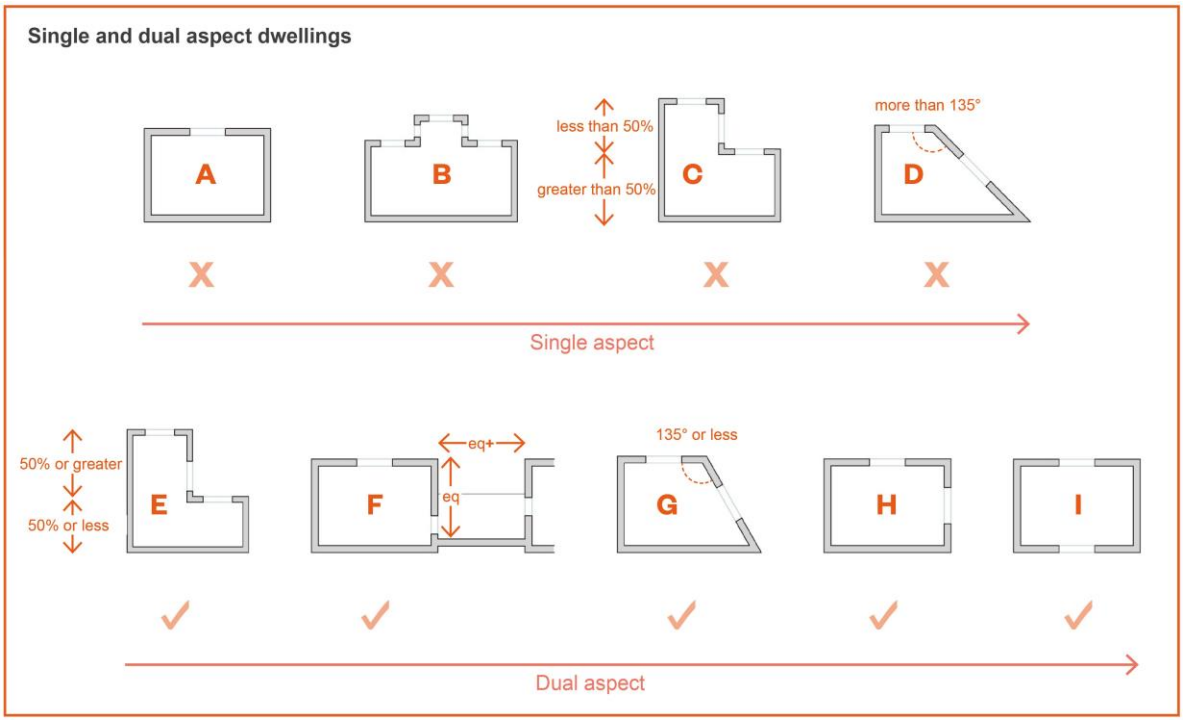
Type of space	Furniture required in each room	Furniture size (mm)	Number of items required (by bedspace)							
			1p	2p	3p	4p	5p	6p	7p	+
Living space	Armchair (or 'sofa seat' in addition to sofa where required below)	850 x 850	2	2	3	1	2	3	4	+
	Settee – two-seater (optional, as above)	850 x 1300	(item optional)							
	Settee – three-seater (optional, as above)	850 x 1850				1	1	1	1	1
	TV	220 x 650	1	1	1	1	1	1	1	1
	Coffee table	500 x 1050 (or 750 diameter)	1	1	1	1	1	1	1	1
	Occasional table	450 x 450					1	1	1	1
	Storage units	500 x length shown	1000	1000	1000	1500	2000	2000	2000	+
Dining space	Dining chair	450 x 450	2	2	3	4	5	6	7	+
	Dining table	800 x length shown	800	800	1000	1200	1350	1500	1650	+
Double bedroom	Double bed in principal bedroom	2000 x 1500		1	1	1	1	1	1	1
	Double bed in other double bedroom	1350 x 1900		1	1	1	1	1	1	1
	Bedside table	400 x 400		2	2	2	2	2	2	2
	Desk and chair	500 x 1050 (+ chair)		1	1	1	1	1	1	1
	Chest of drawers	450 x 750		1	1	1	1	1	1	1
	Double wardrobe	600 x 1200		1	1	1	1	1	1	1
Twin bedroom	Single bed	1900 x 900				2	2	2	2	2
	Bedside table	400 x 400				2	2	2	2	2
	Chest of drawers	450 x 750				1	1	1	1	1
	Desk and chair	500 x 1050 (+ chair)				1	1	1	1	1
	Double wardrobe	600 x 1200				1	1	1	1	1
Single bedroom	Single bed	1900 x 900	1		1	1	1	1	1	1
	Bedside table	400 x 400	1		1	1	1	1	1	1
	Chest of drawers	450 x 750	1		1	1	1	1	1	1
	Desk and chair	500 x 1050 (+ chair)	1		1	1	1	1	1	1
	Single wardrobe	600 x 600	1		1	1	1	1	1	1
Kitchen			length in mm							
	(1) Sink top with drainer	600 x 1000	1000	1000	1000	1000	1000	1000	1000	1000
	(2) Cooker (or oven + hob) space	600 x 600	600	600	600	600	600	600	600	600
	(3) Washing machine position/ worktop	600 x 630	630	630	630	630	630	630	630	630
	(4) Other base units	600 x length shown	600	1200	1600	1600	1600	2700	2700	+
	(4a) Dishwasher/worktop (included in 4)	600 x length chosen	(item optional)							
	(5) Ancillary equipment space	600 x length shown					600	600	1200	1200
	(6) Fridge/freezer space	600 x 600	600	600	600	600	600	600	600	600
	(7) Recycling bins space	600 x length shown	300	300	300	300	600	600	600	600
	(8) Total length of fitments (items 1 to 7)		3730	4330	4730	4730	5630	6730	7330	+
	(9) Wall cupboards	300 x maximum available length								
	Note: Items 3,5,7 may be in other rooms or spaces but should be close to the kitchen									
Bathroom	WC + cistern	500 x 700	1	1	1	1	1	1	1	1
	Bath	700 x 1700	1	1	1	1	1	1	1	1
	Hand wash basin	450 x 600	1	1	1	1	1	1	1	1
	Shower tray	750 x 750	(item optional)							
WC/ cloakroom	WC + cistern	500 x 700	(where required)							
	Hand rinse basin	250 x 350	(where required)							

Appendix 3 Dual aspect definition

A dual aspect dwelling is one with opening windows on two external walls, which may be on opposite sides of a dwelling (see illustration 'I' below) or on adjacent sides of a dwelling (F, H) where the external walls of a dwelling wrap around the corner of a building. One aspect may be towards an external access deck or courtyard (F), although the layout of the dwelling needs to be carefully considered in these cases to maintain privacy. The design of the dual aspect dwelling must enable passive/natural ventilation across the whole dwelling. The provision of bay windows, stepped frontage, shallow recesses, or projecting facades does not constitute dual aspect (B, C).

Dwellings that have opening windows on two adjacent sides can only be defined as dual aspect if the window opening/s are situated at least halfway down the depth of the dwelling (E, F, G, H). Where an aspect is facing a neighbouring wall, this aspect can only contribute towards being dual aspect if the separation distance between this aspect and a neighbouring wall is the same or greater than the distance from the outer corner of the wall to the inner most edge of the window (F). Where the two aspects of a dwelling are not at right angles, to contribute towards being dual aspect the internal angle between these aspects must not be greater than 135 degrees (D, G). This angle is the midpoint between 90 degrees (a dual aspect dwelling with right angled sides – see H) and 180 degrees (a single aspect dwelling – see A).

A3.1.1 Single and dual aspect dwellings[2]



[2] These illustrations represent entire dwellings (not an individual room) and the 'aspects' that contribute to a home being defined as single or dual aspect. Openings are located on the images to show the direction of an aspect, but not the exact number and location of windows in a dwelling.

GLA Planning

Design and Characterisation London Plan Guidance

Consultation summary report

May 2023

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Greater London Authority

May 2023

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1 Introduction

Between 11 February and 27 March 2022, the Greater London Authority (GLA) carried out a consultation on the Mayor's draft Design and Characterisation guidance. This guidance is made up of four London Plan Guidance (LPG) documents:

1) Characterisation and Growth Strategy LPG
2) Small Site Design Codes LPG
3) Optimising Site Capacity: A Design-led Approach LPG
4) Housing Design Standards LPG

These documents supersede the draft Good Quality Homes for All Londoners suite of documents, which were publicly consulted on between 13 October 2020 and 15 January 2021. This original suite of documents was broken down into four 'modules'; however, as a result of the first public consultation, the original draft Good Quality Homes for All Londoners documents were revised significantly and each 'module' was renamed as per the above list. In addition:

- significant changes were made to the content for each 'module', with 'module A' being split into two separate documents (documents 1 and 3, above)
- the structure and format of each LPG was amended to conform to the new LPG template and format
- 'module D', which had a list of case studies, was removed. A list of case studies will now form a different document/project that aims to showcase best practice exemplars.

Collectively, this new suite of documents (see 1 to 4, above) is now referred to as the Design and Characterisation LPGs, rather than the Good Quality Homes for All Londoners suite of documents.

This report provides a summary of the consultation responses received during the second public consultation (following the first, which was carried out on the superseded Good Quality Homes for All Londoners suite of documents). The full consultation summary report for this first consultation can be viewed here. This report identifies the key issues that were raised on the documents consulted upon, as well as any issues identified in both consultations, and has provided a GLA response to these issues. A specific question was asked in each survey (for each LPG) about whether there were any specific matters, raised in the first consultation, that had not been addressed in the second-consultation documents.

This summary includes responses received via the online survey and email, as well as during the virtual events. The Mayor would like to thank everyone who took part for engaging with the guidance. Appendix 1 includes a breakdown of all the engagement events that were held in both the first and second consultations.

2 Who took part?

Throughout the consultation period there were 394 attendees to virtual events[1] and 604 unique visitors to the consultation webpage, resulting in 2,253 page views of the consultation webpage. In total, 142 responses were received from 78 consultees during the consultation. Of the 142 responses, 59 were received through the Bang the Table surveys and 83 via email. This document provides a summary of all the responses received, including those received via the surveys and emails.

Information on those who took part in the consultation is taken from information submitted alongside consultation responses. There is limited data available about event attendees and those who responded via email. Therefore, the data on who took part represents only a sample of those engaged with, and may not reflect the true breadth of engagement. Survey respondents were asked whether they were responding as an individual; and, if not, what type of organisation they represented. The respondent types are broken down in the table below:

Respondent type	Number	Percentage
Individual	6	10%
Business	17	29%
Campaign group	1	2%
Community group	6	10%
Government body or agency	3	5%
Local authority outside London	0	0%
London borough	26	44%
Professional body	0	0%
Total	**59**	**100%**

2.1 Respondent demographics

Survey respondents were asked equality monitoring information to assess how representative respondents were compared to the demographics of Londoners. However, as the number of responses received on those questions was limited, the relevant analysis has not been included in this consultation summary report.

[1] See Appendix 1 for a summary of the engagement events.

3 Consultation feedback and GLA response

3.1 Summary of Characterisation and Growth Strategy LPG consultation responses

As part of the engagement on the draft guidance, respondents were asked to submit responses to specific questions. This section also includes responses through other engagement channels such as emailed responses.

Question 1: Did you (or your organisation) respond to the previous consultation on Good Quality Homes for All Londoners LPG (GQHFAL) which ran between 13 October 2020 and 15 January 2021?

Sixteen responses were received to this question through the online survey. Five respondents stated ‘yes’, while 11 responded ‘no’.

Response	Number	Percentage
Yes	5	28%
No	11	72%
Don’t know	0	0%
Total	**16**	

Question 2: Does this guidance address your previous response?

Twelve responses were received to this question through the online survey. One respondent stated ‘yes’, while five responded ‘no’ or ‘partly’.

Response	Number	Percentage
Yes	1	8%
No	3	25%
Don’t know	2	17%
Partly	2	17%
Other	4	33%
Total	**12**	

Question 3: If not, please advise which specific matters have not been addressed in this LPG?

Five responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- There should be more emphasis on the **social and economic** elements of character for an area, not just the built form.
- **Density** is largely absent from the assessment of site capacity.

GLA response

This guidance sets out a revised process for undertaking a character assessment and growth strategy. While there are aspects that differ from previous GLA characterisation guidance, the expectation of undertaking a character assessment, and the resources and skills required, has not changed. There is a greater emphasis on the **social and economic** elements of character for an area, not just the built form, throughout the document. This includes more clarity on the 'character areas' (see GLA response to Q7 for further information about this). **Density** is one of many elements that contribute to the character of an area. As a result, this is highlighted in figure 2.5 within the guidance.

Question 4: Do you have any comments about the information on page 4 and section 1 setting out how the guidance applies?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- **Broad support** for the information on page 4 and for the principles of a borough-wide characterisation and growth strategy.
- Would like clarification on the legal (hierarchical) application of the LPG documents in terms of planning policy. How does an LPG differ from **Supplementary Planning Guidance** (SPG)?
- Concern about a **digital** mapping approach in terms of implementing, monitoring, updating and funding it.
- The guidance should specify and recommend additional technical expertise/**specialists** on the process of characterisation, particular to heritage and the impact of tall buildings on the character of an area.
- '**Local Plan Making**' should be amended to state that 'Local and Neighbourhood Plan Making'.

GLA response

The GLA welcomes the **broad support** of the guidance. The role of LPGs is to provide further guidance to the policies in the London Plan. This term has replaced '**Supplementary Planning Guidance**', but the weight of the documents remains the same. This clarification is explained on the London.gov webpage under 'London Plan Guidance'. The role of **digital** planning is an important tool in the development of character assessments. Digital planning tools such as GIS and online engagement

tools allow for information to be presented and stored in an efficient way; and can also assist when reviewing this data. This guidance is aimed at local planning authorities (LPAs), and includes the involvement of **specialists** in urban characterisation and this has been made clearer in the LPG. Lastly, the '**Local Plan Making**' title has also been amended to 'Plan Making'.

Question 5: Do you have any comments about engaging communities and neighbourhood planning as set out in sections 2.1, 4.1 and 4.2?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Additional **community engagement** may be time and resource-intensive [this was also raised in the first consultation].
- It would be helpful if further guidance could be provided on how this engagement ties in with borough's **statutory obligations** for formal consultation.
- The recognition of the role of **neighbourhood** plans and their relationship with local plans is welcomed.
- Concern that **community engagement** will not be meaningful.
- Recommend that the guidance makes a clear distinction between engagement (of all forms) on the 'design' aspects of placemaking, and on the less tangible aspects of placemaking that are so important to people: protecting social heritage and social infrastructure (informal, not just formal); understanding local value and aspirations; acknowledging local needs and experience; improving integration and inclusion; and addressing inequality and the risk of displacement. This can be done through the use of '**active data**'.

GLA response

The involvement of local communities is a crucial part of plan making. As a result, the process set out in the Characterisation and Growth Strategy LPG is clear about the importance of local **community engagement**. The guidance has been amended to clarify the importance of the collection of the social and cultural characteristics of a place. In particular, the guidance now advocates that character assessments should include the collection and analysis of '**active data**' collected in collaboration with local communities. This aims to be more meaningful, and provides a greater opportunity to understand the local needs of an area. Further guidance has been provided on how the detailed community engagement ties in with a borough or **neighbourhood**'s **statutory obligations** for formal consultation.

Question 6: Do you have any comments about collecting the characterisation elements, the typological approach or character types, including use of the London Historic Character Thesaurus as set out in sections 2.2-2.4?

Thirteen responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The use of the **London Historic Character Thesaurus** (LHCT) is supported.
- The thesaurus is very detailed and may be difficult to use/classify **types**.
- Pleased that **heritage** has been identified as a core element of character.
- Welcome the reference to intangible elements of character.
- Concern that the guidance is too focused on the physical elements of character and not enough on the **social elements**.
- The guidance should be clearer about the difference between **character types** and areas.
- The reference to character types being the same as area types in the **National Model Design Code document** is not correct as area types are place-specific.
- Carrying out a **typological approach** in areas of diverse built form (such as town centres or the Central Activities Zone) will be complex and challenging.

GLA response

To assist practitioners in using the **LHCT**, appendix 1 of the guidance aims to clarify some of the most common '**character types**'. The GLA continues to support the identification of **heritage** assets as an important part of characterisation. The GLA is working with Historic England to investigate the possibility of mapping character **types** at a London-wide level, which could be used by boroughs. It was also evident from the consultation that there is considerable confusion between the '**character type**'. 'character areas' and 'area types' (referred to in the **National Model Design Code**). As a result, the structure of the guidance has been simplified to avoid confusion and the references to 'area types' has been removed. Advice on carrying out a **typological approach** in areas of diverse built form has been included in section A1.1 of the LPG; and aspects of **social elements** have been added.

Question 7: Do you have any comments about the character evaluation process including character areas, defining boundaries and/or quality and sensitivity assessment and mapping as set out in sections 3.1-3.4?

Thirteen responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Defining **character areas** could include analysing aspects of social and cultural character as well as the built form.
- Confusion about the interrelationship between **character types** and character areas.
- Confusion about the methodology and suggestion that Stage 2 is restructured to include differently termed **criteria** than the ones in the guidance.
- It would be useful to bring the criteria in **Appendix 3** into the main part of the document.
- Character area **boundaries** should not solely focus on built and mapped character, but also functional character, such as where people live, work and shop.
- Guidance should recognise that drawing **boundaries** is a subjective process.

GLA response

To address concerns raised, the section on '**character areas**' has been moved from section 2 to section 1. This has been done to simplify the process and highlight the differences between '**character types**' and '**character areas**'. The guidance has also strengthened its wording on the importance of social and cultural character. As part of this, the guidance has also been amended to advocate for the collection of 'active data' through engagement with local communities.

In Stage 2 of the guidance, the process has also been amended with different-termed **criteria** now used. This aims to ensure that the local authorities are able to evaluate character and the sensitivity of an area in the most useful and insightful way. A new illustration of '**character areas**' has also been added to the guidance to show the different areas and **boundaries**. **Appendix 3** has been kept as an appendix as this is considered to make the body of the document too large.

Question 8: Do you have any comments about defining tall buildings as set out in section 3.5?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- It would be useful to include a **diagram** of the minimum definition for a tall building.
- Concern about the resource implications of boroughs having to set out in supporting text the **harms** that tall buildings would cause outside these locations.
- Requesting that boroughs set their tall building heights substantially higher than their surroundings would not work in areas of **existing tall buildings**.

GLA response

An important element of Policy D9 (tall buildings) is the setting of a 'tall buildings' definition. The guidance does not advocate using a relative height as a definition; as such, the wording on this has been strengthened. A **diagram** was not deemed necessary for this section; however, the wording in parts of this section has been amended to clarify the process and minimum height definition allowed. Reference to as assessment of **harm** has also been clarified in the LPG. This includes clarifying that step 1 of the section 4.4 is a high-level assessment of sensitivity and does not require a significance-based assessment of heritage **harm**. This aims to 'screen out' inappropriate locations that do not warrant further consideration. Nevertheless, boroughs are still advised to document the reasons why tall buildings are inappropriate in these areas. The guidance has been amended to consider **existing tall buildings** areas when setting a tall building definition.

Question 9: Do you have any comments about identifying areas suitable for different levels of change and the capacity of an area for growth as set out in section 4.3, and the use of conserve, enhance or transform areas?

Twelve responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The approach is supported and well considered.
- It would be useful for the guidance to provide further detail on how boroughs should get from the **quality and sensitivity assessment** and mapping, to the areas of change.
- Suggestion that LPAs could use blurred **boundaries** between areas (shading) instead of fixed boundaries.
- Concern around carrying out the process when using the **capacity for growth** and change matrix (particularly for the extreme ends of the spectrum).

GLA response

In response to comments and concerns about the '**capacity for growth**' section, this section has been revised. The matrix illustration has been removed, and the text has been moved to a new section that separates out the process of identifying change and identifying an area's **capacity for growth**. Figure 4.8 has also been added to the document to clarify the concept that two conserve areas can have significantly different **capacity for growth**. This amendment to the guidance, along with others, is intended to provide greater clarity on how boroughs should get from the **quality and sensitivity assessment** and mapping, to the areas of change. The guidance uses clear **boundaries** to provide clarity over which level of change a particular site is in. The document has been amended to provide more guidance on defining the **boundaries** of the areas which are categorised into different levels of change.

Question 10: Do you have any comments about developing area-wide visions and policies as set out in section 4.4?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The approach is **broadly supported**.
- It is helpful that a coherent or comprehensive approach to **masterplanning** is encouraged in areas undergoing significant change or where there are multiple development sites.
- The guidance could provide more insight into what aspects could be included in a **vision** for an area.
- The term 'design vision' should be amended to 'design **aspirations**'.
- This **section should be moved** so that it follows the sensitivity assessment of tall buildings.

GLA response

The GLA welcomes the **broad support** for this section and approach to **masterplanning**. However, to make the process clearer, a number of amendments have been made. Most significantly, the **section has been moved** to fall after the 'locations where tall buildings may be appropriate'. This has been done to set out a

more coherent sequencing of the process where an area's sensitivity to tall buildings (and determining of appropriate locations) is determined before setting area-wide **visions** and policies. The guidance now references an area's **aspiration** as part of the scoping for tall buildings.

Question 11: Do you have any comments about defining locations where tall buildings may be appropriate as set out in section 4.5?

Fourteen responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Concern about further tall buildings in London, but would welcome **mid-rise**.
- Concern about the resource implications and practicalities of assessing the potential **harm** of tall buildings.
- Suggestion that the guidance specifically advocates for **specialist** input in developing and applying methodologies for assessing the sensitivity of areas to new tall buildings.
- Suggestion about splitting the **sensitivity assessment** into absolute constraints (e.g. CAA safeguarding, Green Belt) and constraints that need more analysis.
- Suggested amendments to **table 4.2** including the recommendation that a significance-based approach, rather than an arbitrary figure of 50m for sensitivity, would be better.
- There is a risk that heritage assets will not be given proportionate consideration in the plan-making stage, which will make them vulnerable later to insensitive development. This risk is particularly high in areas that have lots of **designated assets** (and thus are generally more sensitive) as they will take longer to carry out a sensitivity assessment.

GLA response

The location and height of tall buildings are central elements of Policy D9 of the London Plan. As such, this guidance sets out a four-step process to determining if and where tall buildings are appropriate. The guidance is now clearer that built environment **specialists**, such as heritage and conservation officers, should be involved in the process. It also highlights the opportunity to build at **mid-rise** rather than high-rise. To provide clearer guidance, the **sensitivity assessment** (at step one) has been amended to remove reference to a significance-based assessment of **harm**. This decision was made because it has been acknowledged that this would be too onerous for a local authority to undertake. Instead, step one focused on a high-level assessment of sensitivity, which will screen out areas that are inappropriate for tall buildings and thus avoid undertaking unnecessary detailed analysis of them. This aims to avoid a scenario where areas with lots of **designated assets** take longer to assess. Suggested amendments have also been incorporated into **table 4.2.**

Question 12: Do you have any comments about applying a characterisation and growth strategy as set out in section 4.6?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The approach is **broadly supported**.
- Recognition in paragraph 4.6.1 that a characterisation and growth strategy should **inform local plan or neighbourhood plan policies** is supported.

GLA response

The GLA welcomes the **broad support** for this section. To highlight its importance, the section has separated out from the previous section to become its own section (Stage 4 in the process). This continues to advocate that the process should **inform local plan or neighbourhood plan policies**.

Question 13: Do you have any comments about the three appendices?

Nine responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The advice on the **LHCT** offers succinct guidance and is easy to follow.
- **Figure A1.1** shows a mansion instead of a three-storey terrace.
- It would be useful to move **Appendix 3** into the body of the guidance.
- It would be useful to provide an explanation of the **similarities and differences** between how character is classified in different guidance documents.

GLA response

The GLA welcomes support for the inclusion of the **LHCT**. **Figure A.1.1** has been revised to show a three-storey terrace. As it would cause disruption to the flow of the guidance and make the body of the document too large, **Appendix 3** has not been moved into the body of the guidance. It should also not impact the implementation of the process. The addition of supplementary text on the **similarities and differences** between how character is classified in different guidance documents was considered. However, on balance, it was decided that this would not be added as it may confuse the reader.

Question 14: Is there anything else you want to tell us about the characterisation and growth strategy LPG?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Supportive that '**module A**' has been split into two documents.
- Supportive of the principles set out in the document.
- Concern that LPAs may not have enough **resources** and skills to undertake the process set out in the guidance.
- Guidance should be clear that **tall buildings** are not suitable in conserve areas.

GLA response

The GLA welcomes the broad support for this guidance and the splitting of '**module A**'. Nevertheless, it is acknowledged that this guidance contains a number of **resource**-intensive design processes. That withstanding, the process of frontloading the design work has many benefits, including more meaningful engagement with local communities at the beginning of the plan-making process and more clarity and certainty on development within London. Greater focus on the design and characterisation process at the local plan-making stage may also streamline the assessment of planning applications that are subsequently lodged. It should also be acknowledged that boroughs already undertake character assessments as part of their statutory responsibilities; therefore, the guidance in this LPG reflects many of the processes that are currently undertaken. The guidance does not explicitly state that **tall buildings** are not suitable in conserve areas, as there may be areas, particularly over time, for example that have **tall buildings** within them that become conserve areas.

Question 15: Do you have any additional comments about the Equalities Impact Assessment or how this guidance will impact on people with protected characteristics (age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex; sexual orientation)?

Nine responses were received to this question through the online survey, with eight confirming that they had no comment. One respondent stated that it should be easier to contact the Mayor and the planning team.

GLA response

The Mayor and GLA welcomes comments via londonplan@london.gov.uk.

3.2 Summary of Small Site Design Codes LPG consultation responses

As part of the engagement on the draft guidance, respondents were asked to submit responses to specific questions. This section also includes responses through other engagement channels.

Question 1: Did you (or your organisation) respond to the previous consultation on Good Quality Homes for All Londoners LPG (GQHFAL) which ran between 13 October 2020 and 15 January 2021?

Eleven responses were received to this question through the online survey. Four respondents stated 'yes' while seven responded 'no' or 'don't know'.

Response	Number	Percentage
Yes	4	36%
No	5	45%
Don't know	2	19%
Total	**11**	

Question 2: Does this guidance address your previous response?

Nine responses were received to this question through the online survey. Two respondents stated 'yes' while four responded 'no' or 'partly'.

Response	Number	Percentage
Yes	2	22%
No	2	22%
Don't know	3	34%
Partly	1	11%
Other	1	11%
Total	9	

Question 3: If not, please advise which specific matters have not been addressed in this LPG:

Five responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Concern that LPAs may not have enough **resources** and skills to undertake the process set out in the guidance [this was also raised in the first consultation].
- The guidance should be less **prescriptive.**

GLA response

It is acknowledged that the development of area-wide design codes is a **resource**-intensive exercise. However, it is considered that this upfront design work will provide a framework for a more streamlined assessment at the development management stage. As a result, once embedded, area-wide design codes are considered to be a useful tool to help bring forward, and assess, small sites. This work also ties into the National Model Design Code. which is advocated at a national level. The guidance provides a framework or process for local authorities to create area wide design codes. Many of the aspects detailed within are advisory. As a result, it is not considered that it is too **prescriptive**, but rather that it provides a broad process for local authorities to follow.

Question 4: Do you have any comments about the information on page 1 and section 1 setting out how the guidance applies?

Seven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Information is clear and concise.
- The focus of the document is solely on design and does not address the complexity of **land ownership, site assembly, viability,** and market demand for small sites.
- '**Local Plan making**' should be expanded to cover 'Local and neighbourhood plan making' as this document covers both types of plan.
- Whilst the guidance may capture more typical small site conditions, questions are raised about how **atypical** sites are to be assessed?
- The input of **specialists**, particularly those in heritage and conservation should be reiterated.

GLA response

The guidance on small site design codes is aimed at the redevelopment and delivery of sites with similar characteristics to each other throughout London. Examples include terrace infill and upward extension for instance. As a result, area-wide design codes should be applied to 'character types' and this guidance provides a process for LPAs to follow. While aspects of **land ownership, site assembly and viability** should be considered when developing an area-wide design code, this guidance is

focused on the design process for these common occurring sites. As a result, **atypical** sites are less likely to benefit from an area-wide design code. The guidance now advocates that **specialists**, such as heritage and conservation officers, should be involved in the process. Lastly, the '**Local Plan Making**' title has also been amended to 'Plan Making'.

Question 5: Do you have any comments about engaging communities and neighbourhood planning as set out in section 1.2.2 and 3.2?

Eight responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Questions raised as to whether the community should be **engaged** at Stages 1 and 3 as well.
- Requirement in **paragraph 1.2.2** for boroughs to collaborate effectively with any statutory neighbourhood planning bodies is strongly supported.
- The guidance would benefit from making clear that where **neighbourhood planning** groups have already prepared design codes that are in a neighbourhood plan, then LPAs, in preparing their local plans, should avoid preparing their own design codes for these areas unless there are clear and compelling reasons to do so.

GLA response

Involvement of local communities in the development of small sites is an important aspect. As a result, the guidance is clearer on when the local community should be **engaged** with; and this has been extended to Stages 1 and 3. Guidance on this process within **neighbourhood planning** has been included in **paragraph 1.2.2**.

Question 6: Do you have any comments about identifying design code coverage as set out in section 2.1 and the design vision and principles as set out in section 3.1 noting that these build on the guidance in the Characterisation and growth strategy LPG?

Eight responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Design code coverage section is clear and supported.
- Other small site **conditions** such as railway arches and canal/river locations could be identified.
- Specific text about heritage assets and **conservation areas** being a strength should be introduced in this document.
- The reference to **area types** should be removed.

GLA response

Due to confusion between the terms used in the National Model Design Code and this LPG, the term '**area type**' has been removed from the guidance. Originally, reference to this term was intended to help practitioners navigate the different terms,

however this term has now been removed as it has confused many readers. Guidance on how to develop design codes in **conservation areas** has now been added. While **conditions** such as river locations are not included, boroughs may wish to explore this.

Question 7: Do you have any comments about different site conditions set out in section 2.2.-2.6?

Eight responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Guidance shouldn't encourage development on **back gardens**.
- Welcome the focus on small site **conditions**.
- This **approach** would be particularly beneficial for SMEs.

GLA response

In response to comments, several terms have been removed or amended. This includes the term 'underutilised' and 'back garden' which have been removed. As a result, the LPG does not directly reference or advocate setting design codes for **back gardens**. The word '**conditions**' has also been changed to 'contexts'. The GLA welcomes the support for its **approach**.

Question 8: Do you have any comments about identifying and mapping small sites as set out in section 2.7 and scoping what areas the design code will cover as set out in section 2.8?

Seven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Potential to add additional guidance on the **call for sites process**, including how community-led housing fits into the process.
- Welcome the explicit mention that the same character type need not elicit a consistent design response.
- Other forms of housing, such as **Gypsy and Traveller accommodation**, should be considered before identifying a site for residential development.
- Concern about the impact of design codes on **conservation areas**.

GLA response

The **call-for-sites process** can be a helpful exercise to understand which sites may come forward for development in the near future. As a result, the guidance has been amended to highlight the **call-for-sites process** when identifying small sites in a local area. The document has also been revised to highlight the potential role of community-led housing in the redevelopment of small sites. The LPG now states that identifying small sites for residential development should also consider the wider needs within the plan area, such as **Gypsy and Traveller accommodation** and other specialist forms of housing. Additional guidance has also been added to the

coding coverage section to clarify how to approach small sites in sensitive areas such as those in **conservation areas**.

Question 9: Do you have any comments about preparing a coding plan as set out in section 3.3?

Seven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The **option to exclude areas** from the coding plan, where there is a mixed character that would be difficult to code for, is welcome.
- Areas of exceptionally **mixed typologies** or those on the boundaries of other building types should not be excluded from the design code, as these areas would benefit from the guidance.

GLA response

The GLA welcomes the broad support for this guidance and clarification of the **option to exclude areas**. The guidance does not exclude areas of **mixed typologies**, but states that these areas 'may be excluded where a design code is difficult to achieve'. This is because the 'character types' are identified at a 'several urban blocks' scale.

Question 10: Do you have any comments about Stage 3, preparing the design code as set out in section 4?

Nine responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Use of terms 'must', 'should' and 'could' to **clarify the level of compliance**, backed with specific examples, is useful.
- Guidance should make clear that where a site is in a **conservation area**, this will be a key consideration for the design code.
- Sustainable materials should be included/advocated for in the materials section. The image in the green coverage section should be amended so it does not support a **tree being removed**.
- **Swift bricks** should be advocated for.

GLA response

Support for the use of terms to **clarify the level of compliance** is welcome. Additional guidance has been added to the document on how to approach character types that are likely to be within **conservation areas**. While the use of **swift bricks** can be advantageous, as this document provides a process to develop area-wide design codes, it is not considered necessary or appropriate to specifically mention swift bricks. The example in the 'Green cover and landscaping' section has been amended so that it does not advocate for a **tree to be removed**.

Question 11: Do you have any comments about Stage 4, implementing and reviewing the design code as set out in section 5?

Seven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Support for the requirement to monitor design codes.
- The **Stage number** could be aligned to the document section number for easier reference.
- Concern a small site design code could be lengthy and not **concise**.
- LPAs should have a responsibility to monitor the **compliance** with any codes prepared by neighbourhood planning groups.

GLA response

Due to the structure of the LPGs, which is the same across all LPGs, it is not possible to align the **'stage' number** with the 'section' number. As a result, no change has been made. In section one of the LPG, a design code is defined as a 'set of simple, **concise**, illustrated design requirements that are visual and numerical wherever possible to provide specific, detailed parameters for the physical development of a site or area'. Section 5.2.1 of the LPG has been amended to clarify that LPAs are encouraged to monitor the **compliance** of their codes, including those set up a neighbourhood planning group.

Question 12: Do you have any comments about the appendices?

Six responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The inclusion of Appendix 2 is helpful.
- Concern that **inappropriate** upward extensions may negatively **impact** the streetscape and uniformity of terraced/semi-detached housing types.
- Extensions to buildings (especially upwards extensions) need to avoid **'watermarks'** when transitioning from an old to a new (matching) material.

GLA response

The case studies and images in the LPG have been carefully selected in order to show best practice. To avoid unintended/**inappropriate impacts** on the streetscape, the example upward extension design code has been amended to recommend that development should be brough forward on a minimum of two neighbouring terraces next to each other to avoid a saw-tooth effect of the street. Avoiding **watermarks** has also been mentioned.

Question 13: Is there anything else you want to tell us about the Small Site Design Codes LPG?

Seven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The document provides a helpful account of the features of development that a design code could take into consideration.
- Additional guidance should be provided as to how to plan for **unique** sites.
- **Figure 2.13** shows brownfield sites in Newham, which bear no relation to the types of sites covered by the guidance in section 3.3 (which is more about consistent/repeated sites).
- Use of the term 'location' rather than '**condition**' is preferred. Suggest that the terms 'street-facing locations', 'high street locations', and 'back land locations' should be used throughout the document instead.
- The guidance should include some more detailed contextual information on how small sites design codes will sit alongside **existing planning policies** and requirements – this could be included as a preamble paragraph to chapter 2.
- Concern over the level of upskilling, **resourcing** and increased capacity that will be required to identify and map appropriate small sites, carry out consultations and code testing, produce design code content and carry out monitoring tasks.
- **Targeted consultation** with members of the public most directly affected by the code for a particular area would be most beneficial, rather than borough-wide consultations. As such, we would suggest that sub-areas should be identified during the area characterisation studies that can be utilised to hold consultations at smaller scales.

GLA response

The guidance is clear that small site design codes can be useful in clarifying the design parameters for commonly found sites around London. However, for sites that are **unique**, a site-specific design code may be more appropriate. The images throughout the document have been reviewed and where necessary, these have been updated to ensure that they are of the highest quality and appropriate. This includes **Figure 2.13** which now references the GLA's Small Site Small Builders portal instead. It is acknowledged that the development of area-wide design codes is a **resource**-intensive exercise. However, it is considered that this upfront design work will provide a framework for a more streamlined assessment at the development management stage. As a result, once embedded, area-wide design codes are considered to be a useful tool to help bring forward, and assess, small sites. Further information on how small sites design codes sit alongside **existing planning policies** and requirements has been added and the term '**condition**' has been changed to 'context'. Additional text has also been added to the LPG to clarify that '**targeted consultation** with members of the public most directly affected by the code for a particular area is encouraged.'

Question 14: Do you have any additional comments about the Equalities Impact Assessment or how this guidance will impact on people with protected characteristics (age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex; sexual orientation)?

Six responses were received to this question through the online survey, which all reported having no additional comments.

3.3 Summary of Optimising Site Capacity: A Design-led Approach LPG consultation responses

As part of the engagement on the draft guidance, respondents were asked to submit responses to specific questions. This section also includes responses through other engagement channels.

Question 1: Did you (or your organisation) respond to the previous consultation on Good Quality Homes for All Londoners LPG (GQHFAL) which ran between 13 October 2020 and 15 January 2021?

Twelve responses were received to this question through the online survey. Four respondents stated 'yes' while eight responded 'no'.

Response	Number	Percentage
Yes	4	33%
No	8	67%
Don't know	0	0%
Total	**12**	

Question 2: Does this guidance address your previous response?

Ten responses were received to this question through the online survey. One respondent stated 'yes' while three responded 'no' or 'partly'.

Response	Number	Percentage
Yes	1	10%
No	2	20%
Don't know	3	30%
Partly	1	10%
Other	3	30%
Total	10	

Question 3: If not, please advise which specific matters have not been addressed in this LPG:

Four responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Concern that LPAs may not have enough **resources** and skills to undertake the process set out in the guidance.
- The document should make it clear that the process should be brought forward through an appropriate **Development Plan Document** (DPD).
- Additional residential building types would be useful and are still needed.
- Four dwellings per core in the **Tower** building type is an inefficient use of resources [this was also raised in the first consultation].

GLA response

The GLA acknowledges that carrying out this process will require **resources**. However, there is an expectation that setting parameters will support and streamline the assessment of applications at the planning applications stage. Wording in the document has been revised to make it clearer that this process should be brought forward through an appropriate **DPD**. Lastly, as the parameters are high-level and strategic, the residential building types (such as the '**Tower**') are simplified typologies that meet the Housing Design Standards. In particular, there is an expectation that all homes should be dual-aspect. For this reason, the **Tower** typology has been designed to accommodate 100 per cent dual-aspect, and has four dwellings per core. This is nevertheless a high-level assumption and typology should only be used to work out an indicative (or appropriate) capacity (see GLA response to Q9).

Question 4: Do you have any comments about the information on page 5 and section 1.1, 1.3, 6.2 and 6.3 setting out how the guidance applies?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Principles of plan-led approach supported.
- Support the replacement of the density matrix with a context-led approach.
- Welcome the requirement that planning applications should follow this process.
- The involvement of heritage **specialists** should be clarified.
- Document should make clear if other local plan documents (such as Design Supplementary Planning Documents) are subject to the same process and consultation?
- Concern about a **prescriptive** and/or rigid rules-based approach to development.

GLA response

Design parameters for specific sites are expected to be set out in DPDs through involvement with **specialists** in urban design, including heritage and conservation officers. The process set out in this LPG should be brought forward through an appropriate **DPD**. As a result, additional text has been added to this section to clarify these points. The guidance also reiterates that the design parameters should be a set of high-level strategic parameters that address the form, massing and layout of a future development. As a result, they should avoid being overly **prescriptive** while setting parameters on the strategic matters. This aims to provide clarity and certainty over future development and can assist in increasing trust in the planning system when referring to design aspects.

Question 5: Do you have any comments about engaging communities and neighbourhood planning as set out in section 1.2, 3.2 and 6.2?

Twelve responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Welcome the clarity on the expectation to consult the community.
- The LPG should include reference to engagement with **landowners and developers**.
- Concern that only parts of the community will be engaged with; and that the guidance should reiterate the importance of meaningful **community engagement** with hard-to-reach communities.
- Concern about a lack of **community engagement**.
- Concern about the **community engagement** frustrating the delivery of homes.
- Concern that community engagement may be time and **resource**-intensive.
- It would be useful to set out how **community engagement** and the consultation on the design-led site allocation approach coincides with the statutory consultation framework for local plans.

GLA response

To reflect the importance of **community engagement**, additional text has been added to the LPG. Engagement with **landowners and developers** is also now referenced. While engagement with communities may result in additional **resource** being directed towards this area, the GLA feels that this is an important part of the process in order to deliver well-designed places that serve new and existing residents alike.

Question 6: Do you have any comments about the site analysis as set out in section 2.1-2.8?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- The LPG is focused on residential design, and less so on other **land uses**.

- This section does not address the complexity of land ownership, site assembly, **viability**, market demand and supply cycles, and mixed-use development – these are all determinants to design.
- Specify that **above-ground utilities** should be considered as well as those below ground.
- Date that is noted in **section 2.8.3** (footnote) should be amended as it is incorrect.

GLA response

While the guidance is predominantly focused on the development of residential sites, the process should also be applied to other **land uses**. The guidance acknowledges the influence of **viability**, which has been mentioned in section 2.8 and Appendix 1. The wording in **paragraph 2.8.3** recognises the importance of viability and market demand. The importance of assessing **above-ground utilities** has been highlighted and footnote 2.8.3 has also been amended.

Question 7: Do you have any comments about Stage 2 which sets out the process for developing a design vision as set out in section 3.1-3.3, noting that this builds on the guidance in the Characterisation and growth strategy LPG?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Reference to mid-rise typologies achieving high densities with relevant precedence is welcomed.
- It would be useful to have a better understanding of how the design vision stage differs from the **design parameters** stage.
- Section should clarify that applicants of sites should use and present their **site-analysis** work done at Stage 1, during their public consultation. Guidance should clearly state that applicants are expected to amend or add additional information gathered during engagement so that it informs site vision.
- Guidance in **section 3.3** should further emphasise that site parameters should be derived from not only the borough-wide characterisation study and site level analysis but of the area-wide or neighbourhood parameters and policies.

GLA response

The design visioning stage is an important stage in the process that involves the consideration and reflection of the **site analysis**. As such, it was felt that it was necessary to have a separate stage which reiterates the ‘thinking’ or ‘visioning’ part of the process and how this is separate from defining and clarifying the **design parameters**. The guidance also states that practitioners should present the findings of their site analysis to the local community and other stakeholders. This aims to improve the quality of local engagement. The wording in **section 3.3** has also been revised to reflect the existing area-wide or neighbourhood parameters and policies.

Question 8: Do you have any comments about the Stage 3, drafting site-based design parameters, as set out in section 4.1-4.7?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Defining site-based design parameters is welcomed.
- The setting of some of the parameters is overly **prescriptive** and will stymie high-quality design.
- Welcomes clarification that the parameters should allow for a degree of **flexibility**.
- Concern that drafting the site-based design parameters is a **resource-**intensive process.
- Concern that LPAs do not have the **in-house skills** to carry out the process.
- The guidance could provide further detail on the draft site-based **design parameters.**

GLA response

The GLA acknowledges the importance of having a balance between **flexibility** and **prescription** within the design parameters, at the same time as providing enough clarity and certainty. As a result, the guidance sets out that the design parameters should be a set of high-level strategic parameters that address the form, massing and layout of a future development. The guidance acknowledges that the level of detail provided in the **design parameters** for each site will vary depending on its size, location and characteristics. Accordingly, the balance struck in the LPG is considered to be appropriate. While the GLA also acknowledges that this will require **resources**, there is an expectation that setting parameters will support and streamline the assessment of applications at the planning applications stage. The GLA acknowledges that some LPAs do not feel they have the **in-house skills**. However, this process provides an opportunity to develop and bolster these in-house skills (via routes such as Public Practice for instance), which will lead to improvements over time.

Question 9: Do you have any comments about Stage 4, testing the site capacity, as set out in section 5?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Welcome the statement about indicative capacities being **approximate**.
- Suggestion that the **capacity** should be given as a figure or a range.
- Document should specify what **weight should be afforded** to the indicative capacity calculations in the decision-making process or at appeal.
- Concern there is an absence of testing of this **methodology**.
- It may be difficult to use the residential building types on **irregular-shaped sites** [this was also raised in the first consultation].
- It would be useful to have other building typologies or **street types.**

GLA response

The capacity toolkit and its **methodology** have been robustly tested during the development of this guidance. The indicative site capacities set should not be interpreted as absolute maximums or minimums for the quantum of homes. The design parameters provide a design envelope which provides clarity and certainty in respect of the overall form of the development. However, the exact **capacity** will depend on the detailed design within the set parameters. As a result, additional text has been added to this section to make it clearer that indicative site capacities should be treated as an **approximation**, but this does not apply to the design parameters set. The **weight afforded** to a site's indicative capacity calculations will be dependent on whether it is set out in a DPD or not. The GLA acknowledges that the residential building types are more difficult to use on **irregular-shaped sites**. However, the benefits of using a simple to use design package, such as SketchUp, are considered to outweigh the drawbacks. The guidance is also clear that boroughs can use other tools if preferred. Additional **street types** have been added to the library of types.

Question 10: Do you have any comments about Stage 5 for finalising the design parameters and design codes as set out in section 6?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Explanation about the **parking factor and ratio** would be useful.
- Engagement with **landowners and developers** should be carried out during this process.
- Support for high-level, strategic parameters that are not overly detailed or prescriptive, as this will restrict creativity and innovation.
- Consistent use of same example site is helpful, in particular seeing how this translates to a design code/parameters diagram.

GLA response

The GLA welcomes the support of the example site and high-level strategic design parameters outlined in the guidance. Additional text has been added to clarify the **parking factor and ratio** within the capacity calculator. Engagement with **landowners and developers** is included within this guidance.

Question 11: Do you have any comments about the Appendices?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- **Towers** often have more than four units per core.
- There should be additional residential types that are applicable to **suburban** sites.

- More **typologies** would be useful. Suggestions include typologies for irregular sites, mansion block or double-loaded corridor blocks.
- The comment, “As accommodation is stacked over a number of storeys, it can be less suitable for many disabled and older people” should feature as a **weakness**, not a **strength**.
- Use of precedents is helpful.
- It is unclear how the toolkit accommodates for different building **typologies** beyond the assigned categories.

GLA response

The residential building types within the Indicative Site Capacity Toolkit aim to provide a selection of the most common housing **typologies** in London that can be modelled in SketchUp. This includes the terrace typology, which can be used in **suburban** areas. Nevertheless, these have been amended to provide the ability to create perimeter blocks and street types. Due to uncertainty about changes to building fire safety regulations, the SketchUp model of the **tower** typology has subsequently been removed from the guidance. Following further clarity on the fire safety regulations, this tower SketchUp model may be revised and included within the indicative site capacity toolkit. The **strengths and weaknesses** table has also been revised to better reflect the attributes of the different residential types.

Question 12: Is there anything else you want to tell us about the Optimising Site Capacity – A Design-led Approach LPG?

Nine responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Concern that **frontloading** the design work could impact the finances of planning departments.
- Public engagement and consultation would require considerable **resources** in order to reach a wide range of people within the borough.
- The use of SketchUp is limiting. The guidance should provide examples of alternative software (for example VuCity or other **brands**).
- It is not clear when the consultation should occur for this process and whether this should be part of **regulation 18**.
- Can it be made a requirement for planning applicants to include details of how they followed this approach as part of their **planning application** documents?

GLA response

The GLA acknowledges that **resources** will be needed for community engagement work and **frontloading** design considerations. However, this should already form part of a local authority duties and responsibilities. Pre-application meetings are a useful way to clarify many of the site-specific requirements and many of the non-strategic requirements. Community engagement on sites should occur before **regulation 18**, as this will allow sufficient time to encompass aspects learned and developed during the process. The use of specific **brands** or software has not been

included in the guidance as this may undermine other competitors and suppliers. Lastly, the guidance does include details on the **planning application** stage.

Question 13: Do you have any additional comments about the Equalities Impact Assessment or how this guidance will impact on people with protected characteristics (age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex; sexual orientation)?

Eight responses were received to this question through the online survey, which all reported having no additional comments.

3.4 Summary of Housing Design Standards LPG consultation responses

As part of the engagement on the draft guidance, respondents were asked to submit responses to specific questions. This section also includes responses through other engagement channels.

Question 1: Did you (or your organisation) respond to the previous consultation on Good Quality Homes for All Londoners LPG (GQHFAL) which ran between 13 October 2020 and 15 January 2021?

Fifteen responses were received to this question through the online survey. Four respondents stated ‘yes’ while eight responded ‘no’.

Response	Number	Percentage
Yes	7	47%
No	7	47%
Don’t know	1	6%
Total	**15**	

Question 2: Does this guidance address your previous response?

Fourteen responses were received to this question through the online survey. One respondent stated ‘yes’ while eight responded ‘no’ or ‘partly’.

Response	Number	Percentage
Yes	1	7%
No	3	21%
Don’t know	3	21%
Partly	5	37%
Other	2	14%
Total	14	

Question 3: If not, please advise which specific matters have not been addressed in this LPG:

Nine responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Current limit of **eight units per core** should be increased [this was also raised in the first consultation].
- Communal corridors wider than **1500 mm** may be impractical.
- Concern that the guidance does not address **daylight and sunlight** adequately.
- There are a **large number of standards.**
- The document does not include a direct reference to **swift bricks** or similar to reflect London Plan Policy G6.

GLA response

The number of homes per core is an important design aspect, which can influence the sense of community and neighbourliness within a development. As such, having a limit of **eight dwellings per core** is considered an important design standard. Nevertheless, this standard does allow for exceptions and provides a list of mitigation measures such as increasing the corridor widths to **1800mm**, locating homes on both sides of the core and introducing intermediate doors to create sub-clusters. For developments that have eight dwellings or fewer per core, the standards do not require communal corridors to be wider than **1500mm**. The guidance addresses daylight and sunlight in a large number of standards: A1.7, A1.8, B9.5, C2.4, C4.1, C4.3, C4.8, and it also highlights that the BRE guidance on **daylight and sunlight** should also be used to assess developments. The **large number of standards** reflects the requirements of the London Plan and the importance of good housing design. An additional note has been included about the potential for **swift bricks**.

Question 4: Do you have any comments about the information on page 5 and section 1 setting out how the guidance applies?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Explicit reference of the impact of the COVID-19 pandemic on housing standards is welcomed.
- LPG says it **applies** to ‘Change of Use’ but some of these would fall under the General Permitted Development Order. It is not clear if this guidance would apply in that scenario.
- The LPG should be clearer on how the standards are to be **implemented** by architects/developers, and assessed by planners.
- The LPG does not provide adequate guidance on how to treat an application that is unable to meet some or **all the standards** in this document.
- Concern that the guidance reproduces the content of the London Plan.

- There is a lack of guidance on **build-to-rent** development.
- The Housing Design Standards should be **applied flexibly**.

GLA response

The housing design standards LPG aims to be a 'one stop shop' for housing design matters. As a result, the LPG includes guidance on design aspects in a list format to assist the designer in **implementing** them. The standards are ordered to align with the design process which cover, and link back, to requirements in the London Plan. The expectation is for all development (taking account of the type of development like change of use, new build, conversions) to meet **all the standards**. The document also has a list of best practice standards; it has been made clearer that while it is not required, it is encouraged, that these are met. The LPG applies to planning applications; therefore, if a development does not require planning permission, then these standards will **not apply**. The guidance applies to **build-to-rent** development and standards should not **applied flexibly**.

Question 5: Do you have any comments on the Placemaking and the Public Realm guidance/text as set out in paragraph 2.1.1-2.1.8?

Nine responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Guidance could be more explicit about the importance of holistic character analysis (including heritage analysis) and response to **character and context**.
- This section should signpost the **GLA's public realm guidance**.
- The importance of **blue infrastructure**, and not just green infrastructure, should be highlighted.
- Suggestion that third sentence of **paragraph 2.1.7** is amended to read: "It is important that streets and public realm are overlooked and well-used."
- Suggestion that 2.1.8 adopts a social model approach and specifically mentions **inclusive** spaces.

GLA response

The guidance is clear that understanding the surrounding **context and character** is important to good design; this is reiterated, in particular, by the standards A1.1, A1.3, A1.4, A1.5 and A1.6. The guidance has been amended to reference the GLA's **Public London Charter**; and both **blue infrastructure** and inclusive design to good design are further reiterated. **Paragraph 2.1.7** has also been amended. Additional wording and guidance on **inclusive** design has been added into the guidance.

Question 6: Do you have any comments about the standards in Part A?

Thirteen responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Standard A5.4 (**accessibility of non-residential amenities**) may not be feasible in many circumstances due to requests by RP's relating to the service charge affordability challenges and estate management issues.
- **Standard A1.14** appears to conflict with the document's ambition for high-quality design of buildings.
- **Standard A1.14** – concern that it could lead to a reduction in the proportion of dual-aspect or enhanced single-aspect dwellings.
- Standards should be applied flexibly.
- **Standard A4.2** should advocate for artificial nest sites such as swift bricks.
- **Standards A4.2** and A4.3 should state whether it applies to all development or just some.

GLA response

A number of amendments have been made to the supporting text in part A and the standards. These include amendments to **Standard A1.14**, to ensure it does not contradict or conflict with other standards. A note has also been added to **Standard A4.2** to mention artificial nest sites such as swift bricks as an option. The **accessibility of non-residential amenities** to residents of all tenures is an important design consideration. As a result, the standard has not been removed.

Question 7: Do you have any comments on the Shared Spaces and Ancillary Spaces guidance/text as set out in paragraph 3.1.1-3.1.6?

Eight responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Greater emphasis should be placed on accessibility such as **step-free access**.
- Providing refuse in the **basement** is expensive and carries a higher service charge, as refuse removal has to be managed.
- **Garden sheds** or pods are not normally provided to, or permitted on, private terraces flanking shared podium amenity spaces.

GLA response

The standards and supporting text have been amended to highlight the importance of **step-free access**. Standard B1.9 has also been amended to clarify that the standard should apply 'where **basements** are provided'; and the wording around **garden sheds** and pods have been revised.

Question 8: Do you have any comments about the standards in Part B?

Twelve responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- **Standard B1.9** – it is very expensive to provide basements in London and this is unlikely to be a practical suggestion.

- **Standard B2.2** – prohibiting double-banked corridors will have a significant impact on housing numbers achievable.
- **Standard B2.3** – concern about covered outside decks, and questions around their effectiveness and desirability.
- **Standard B2.3** – access galleries/decks sometimes bring privacy challenges, both for adjoining and future occupiers. These can also cause cold-bridging problems and are harder to maintain (e.g. pigeons, etc).
- **Standard B2.5** – number of units per floor should be increased from eight.

GLA response

A number of amendments have been made to the supporting text in part B and the standards. These include amendments to **Standard B2.2**, which no longer prohibits internal corridors, as the GLA acknowledges that they can be used to good effect in some developments (particularly tall buildings) in London. **Standard B1.9** has been amended to clarify that the standard should apply 'where basements are provided'. **Standard B2.3** has also been amended to become a best practice; it is therefore no longer a mandatory standard. Nevertheless, deck access is still encouraged as it can provide social spaces for residents, as well as the ability to provide a greater proportion of dual-aspect homes. A new standard (Standard B10.2) has also been added to address the submission of energy performance data. The number of units per floor in **Standard B2.5** has not been revised, as this is considered optimal for facilitating interactions between neighbours.

Question 9: Do you have any comments on Homes and Private Space guidance/text as set out in paragraph 4.1.1 and 4.1.2?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Concern about **minimum space standards** frustrating the delivery of homes.
- Concern about the **5 per cent** extra space that is advocated for, as this will impact on development costs.
- Welcome the emphasis on climate mitigation and importance in design.

GLA response

The **minimum space standards** are a London Plan policy requirement, and are also set in the nationally described space standards. As a result, no amendment has been made. The additional space in Standard C2.1 is a best practice standard and therefore strongly encouraged, rather than being required. Nevertheless, to clarify the exact space that is needed in different dwelling sizes, the standard has been revised to include a set of best practice space standards. As a result, the **5 per cent** uplift has been removed.

Question 10: Do you have any comments about the standards in Part C?

Eleven responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Guidance should address topography is greater detail.
- **Standard C2.2** – evidence should be provided to demonstrate that larger dwellings provide a qualitative improvement to residential quality.
- **Standard C4.1** – the standard is more restrictive than the wording in the London Plan Policy D6.
- Standard C4.6 – this standard has the potential to limit daylight to units and may result in rooms failing the **BRE standards**.
- Number of **best practice** examples should be removed as they go further than the London Plan.
- Standard C2.6 – this standard goes beyond the **validation requirements** of most London boroughs.
- Standard C4.3 – it would be useful to have the **two-stage approach**, set out in paragraph 4.1.2, as a required standard.

GLA response

A number of amendments have been made to the supporting text in part C and the standards. These include amendments to some of the standards that address design considerations of accessibility issues. **Standard C2.2** has also been amended to remove the 5 per cent uplift on floor area and replace it with a revised space standards table in Appendix 1 of the document. The expectation to provide larger homes, in the form of a best practice space standard, is an important design consideration now that many more Londoners are working from home. This decision to amend the standard was made because the 5 per cent additional would have been difficult to calculate, and unclear when dealing with decimal floor areas (for instance, whether to round up or down). As a result, the GLA feels it is clearer to state the additional space in a table. These new space standards have been robustly tested to ensure that they are able to provide an uplift in residential quality and three example layouts have been included in the appendices of the document. The guidance is clear that **best practice** standards are strongly encouraged, rather than being mandatory. No changes have been made to the minimum space standards as these are contained within Policy D6 of the London Plan. **Standard C4.1** has also not been revised as it is not considered to be more restrictive than Policy D6. Overall, these standards link to policies in the London Plan and therefore do go beyond the **validation requirements**. The **two-stage approach** to assessing daylight and sunlight is included in the introductory text to Part C: Homes and private outside space. As there are no standards that explicitly mention the **BRE guidance**, it would be confusing and misleading to include the two-stage process as a standard.

Question 11: Do you have any comments about the appendices?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Welcome the inclusion of Appendix 2.
- Further explanation and illustration of **dual-aspect definition** would be useful.
- Dual-aspect definition should include reference to **enhanced single-aspect**.

- The level of detail specified in Appendix 1 Furniture Schedule could discourage creative layouts that cater to a variety of functions.
- The **kitchen layouts** are overly prescriptive.
- For kitchen furniture, there will be differing requirements for **M4(3) homes**. This includes space alongside tall appliances and cooking facilities.

GLA response

The **dual-aspect definition** has been amended and a set of illustrations has been inserted to clarify this definition pictorially. The term '**enhanced single-aspect**' has not been used, as it may encourage developments towards this. Appendix 1 is a useful tool for designers and has been kept in the document. This includes **kitchen layouts** as well as referencing the Approved Document M where guidance on **M4(3) homes** can be found.

Question 12: Is there anything else you want to tell us about the Housing Design Standards LPG?

Ten responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Broad support for the LPG and standards contained within it.
- Some **illustrations** would be useful in the document.
- The standards should be applied **flexibly** [this was also raised in the first consultation].
- The standards should be **strengthened**.
- Concern there is a lot of **repetition** of existing guidance.

GLA response

The GLA recognises the usefulness of **illustrations** and images in a housing design document. As a result, the LPG now contains a number of **illustrations** after each section of the document. These **illustrations** aim to link back to particular standard/s, providing additional clarity on them. Where possible, the LPG has tried to minimise duplication and **repetition** of guidance that can be found in the London Plan or in other guidance. However, there is a degree of duplication to some of the guidance and policies in the London Plan as to omit these aspects may lessen or undermine their importance and significance in housing design (for instance, removing standards may lead the reader to view those aspects as less important). The standards set out in the guidance have been worded carefully so there is a balance between flexibility and prescription. This is considered to be appropriate as further **flexibility** or **strengthening** of the standards may undermine them, and lead to them becoming unenforceable or impossible to achieve.

Question 13: Do you have any additional comments about the Equalities Impact Assessment or how this guidance will impact on people with protected characteristics (age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex; sexual orientation)?

Eight responses were received to this question through the online survey. A summary of all responses relating to this question is detailed below:

- Welcome the provision of a separate **study** area within the home, as this is particularly beneficial to demographics more likely to work at home. This includes women; under-21s and over-65s; and those with a disability.
- The inclusion of **inclusive and accessible** wording throughout the document, even if repetitive, is helpful.
- Whilst accessibility is mentioned, the LPGs could include greater clarity and guidance on issues of **inclusion and accessibility**.
- **Walking, cycling** and public transport must be prioritised over other vehicles to prevent exacerbating inequality.

GLA response

The GLA welcomes the broad support for the provision of additional home-working space within new homes. As a result, the Best Practice Space Standard in the Housing Design Standards LPG has been amended to require additional desk spaces within new homes. The guidance also advocates, via a best practice standard, that homes should have a dedicated **study**. Nevertheless, while this LPG aims to increase the size of new dwellings, it is ultimately up to the user in how they eventually use this space. For instance, some households may wish to use the additional space differently to suit their living requirements. To ensure that new homes are **inclusive and accessible**, the wording of several standards has been revised. This includes standards A3.2, B1.9, B9.1, C1.1, C10.1, and C10.5. Prioritising **walking, cycling** and public transport over other vehicle use is an important and reiterated element within these LPGs. In particular, the LPGs advocate for the Healthy Streets approach and the concept of the **15-minute city**.

4 Next steps and monitoring

Following the consultation and analysis of responses, the four documents in the Design and Characterisation suite have been updated to reflect the points raised as part of this process. Updated documents will then be approved by the Mayor. It is expected that the documents will be adopted in early 2023.

Following the adoption of the London Plan in 2021, a consultation was undertaken on a new framework for the Annual Monitoring Report (AMR). The consultation has concluded, and the new AMR framework has now been published. A new AMR covering 2021-22 is due to be published in March 2023. Monitoring of this guidance will fall under the monitoring of the London Plan policies D1, D3 and D6, under which these LPGs sit.

Appendix 1 Summary of engagement

Informal and/or early engagement (prior to first consultation)

Activity type	Participation	Representation
Workshop	Young Londoners working with the Stephen Lawrence Trust (Blueprint for All)	23 attendees
Workshop	London borough planners	45 attendees (approx.)

Formal engagement on Good Quality Homes for All Londoners (first consultation: 13 October 2020 – 15 January 2021)

Date	Activity type	Participation	Representation
13 October – 15 January 2021	Consultation survey and written responses	All	141 responses
5 November 2020	Webinar – guidance and focus on Module A	Borough planners	25 attendees
10 November 2020	Online meeting – overview of the guidance	Developers, registered providers, landowners, designers	9 attendees
12 November 2020	Urban Design London (UDL) webinar	Borough planners and councillors	133 attendees
20 November 2020	Webinar overview of the guidance	All	85 attendees
24 November 2020	Online meeting – focused on Module B – Small Sites and Design Codes	Borough planners	18 attendees
26 November 2020 and 1 December 2020	A SketchUp tool drop-in session was offered: individual bookable 15-minute sessions for borough planning officers with questions on how to use SketchUp	Borough planners	0 attendees
8 December 2020	Webinar – overview of guidance	All	42 attendees

Formal engagement on Design and Characterisation LPGs (second consultation: 11 February – 27 March 2022)

Date	Activity type	Participation	Representation
11 February – 27 March 2022	Consultation survey and written responses	All	142 responses
4 March 2022	Webinar – overview of suite of documents	General public	79 attendees
8 March 2022	UDL event reviewing the Design and Characterisation guidance	General public	104 booked, 68 attendees
8 March 2022	Association of London Borough Planning Officers (ALPBO) meeting – presentation covering suite of documents	London borough officers	20 attendees
11 March 2022	Webinar – overview of suite of documents	London borough officers	83 attendees
16 March 2022	UDL event reviewing Small Site Design Codes LPG	General public	162 booked, 85 attendees
16 March 2022	UDL event reviewing Optimising Site Capacity: A Design-led Approach LPG, and the use of SketchUp models.	General public	109 booked, 59 attendees

A1.1.1 The second consultation took place in 2022 towards the easing of COVID-19 pandemic restrictions. Nevertheless, due to the uncertainty over possible new restrictions being brought in at short notice, the consultation events were all held online, through virtual meetings and webinars. The ways of responding were also publicised through the GLA's online platforms.

A1.1.2 These events were hosted on Zoom as either meetings (participation via turning on video and unmuting, or using the chat function) or webinars (participation via the Q&A function), and included a presentation and a Q&A session. Zoom Webinar events were recorded and are available to watch on YouTube with captions (see Bang the Table consultation).

Equality Impact Assessment (EqIA) for London Plan Guidance

London Plan Guidance:	This EqIA covers four pieces of draft London Plan Guidance (LPG): • Characterisation and growth strategy LPG • Optimising site capacity – a design-led approach LPG • Small site design codes LPG • Housing design standards LPG.
Teams involved:	London Plan Team
Date:	14 October 2022

1. Please provide an outline of the guidance, who it is aimed at and any key issues to be aware of.

1. Characterisation and growth strategy LPG

This relates to the following policies in the London Plan and is used for plan-making:

- Policy D1: London's form, character and capacity for growth
- Policy D3: Optimising site capacity through the design-led approach
- Policy D9: Tall buildings
- Policy HC1: Heritage conservation and growth
- Policy SD9 (Part B): Town centres – Local partnerships and implementation.

It sets out a three-stage process to survey and analyse the characteristics of areas; and uses this to identify the characters of different areas and define tall buildings. This is then used to support growth strategies that take account of areas' capacity for change and for growth, including areas where tall buildings might be appropriate and the heights in these locations.

2. Optimising site capacity: a design-led approach LPG

This relates to the following policies in the London Plan and is used for plan-making and directly informing planning applications:

- Policy D1: London's form, character and capacity for growth
- Policy D3: Optimising site capacity through the design-led approach
- Policy D4: Delivering good design.

It sets out a five-stage process for implementing the design-led approach to plan-making and the site assessments that inform specific planning applications.

3. Small site and design codes LPG

This relates to London Plan Policy H2: Small sites, parts B2 to B4, setting out a process to analyse the opportunities for small site development; and to prepare and implement

design codes. It will be used for plan-making and directly informing planning applications. It covers relevant aspects of the National Model Design Code published in 2021 by national government.

4. Housing design standards LPG

This relates to London Plan Policy D6: Housing quality and standards, and provides a checklist of London Plan policy requirements for new-build, change of use and housing conversions in one place. It also has appropriate cross-references back to the relevant policy in the London Plan and guidance about the type of development to which different standards apply.

The new guidance will be of interest to architects, designers, planners, developers, boroughs, neighbourhood planning groups, community groups and others.

2. Which of the Public Sector Equality Duty aims are relevant to the guidance and the impacts identified?

The Public Sector Equality Duty (PSED) set out at Section 149 of the Equality Act 2010 requires the Council, when exercising its functions, to have 'due regard' to the need to:

1. *eliminate discrimination, harassment and victimisation and other conduct prohibited under the Act;*

2. *advance equality of opportunity between people who share a protected characteristic and those who do not, having due regard, in particular, to the need to:*
   a) *remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic;*
   b) *take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;*
   c) *encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low;*

3. *foster good relations between people who share a protected characteristic and those who do not, having due regard, in particular, to the need to:*
   a) *tackle prejudice, and*
   b) *promote understanding.*

Consider which aims are particularly relevant to the guidance.

The four LPGs will have broadly positive impacts for all protected characteristics, particularly in relation to aims 2a and 2b. In relation to public safety issues, the guidance may be able to have indirect positive impacts in relation to PSED aim 1.

Assessment

List aspects of the guidance that might affect particular groups

Guidance key aspects, chapter headings, theme, etc	Particular group that could be affected
Characterisation and growth strategy LPG	Positive: Children and young people; older people; disabled people (including those affected by chronic respiratory conditions); trans people; pregnant women, and women who have recently given birth; Black/African/Caribbean/Black British Londoners, and Londoners of mixed, multiple or other ethnicities; women; the LGBTQ+ community; people on low incomes.
Optimising site capacity – a design-led approach LPG	Positive: Older people, children and young people; disabled people; pregnant women; Black Londoners; women; people on low incomes.
Small site design codes LPG	Positive: Religious and ethnic groups who live in multi-generational households. Neutral: People on low incomes. Negative: Children.
Housing design standards LPG	Positive: Older people, children and young people; disabled people; trans people; Black/African/Caribbean/Black British Londoners, and Londoners of mixed, multiple or other ethnicities; women and girls; people on low incomes.

*It should be noted that the general policy requirement and principles are already required through the London Plan. This LPG is providing further detail on how the policies should be implemented, and therefore further amplifying the effects

Equality impacts, mitigating actions and justification (where applicable)

Characterisation and growth strategy LPG

Group	Potential impact description What positive and negative impacts have been identified (known and potential) for particular groups? Refer to evidence (including engagement). Check the objectives from the IIA and the EqIA guide questions and use these where relevant to structure your answers. Check the EqIA elements from the original IIA and any subsequent assessments.	Relevant PSED aim (1, 2a, b or c, and/or 3)	Actions identified and/or justification For negative impacts, set out mitigating actions to minimise or eliminate negative impacts and any action plan. If negative impacts cannot be mitigated, provide **objective justification**. For positive impacts, consider how these could be maximised.	Assessment of equality impacts Score each impact as either: +2 Strong positive +1 Positive 0 Neutral - 1 Negative - 2 Strong negative Mixed or uncertain
Age (consider particularly children, under-21s and over-65s)	Positive By setting out a clear and consistent process for how characterisation should be done, the LPG increases the likelihood that consideration of factors such as air quality, transport networks (particularly walking and cycling) and open space will inform how an area develops. Children and young people may benefit from improvements that would increase their levels of independent mobility (such as safer walking and cycling	2a, 2b	Section 4.5 of the LPG specifically states: *"Visions should take into account the different needs of specific groups within the community and the potential future population, with a particular focus on creating inclusive and accessible neighbourhoods (as required by Policy D5 of the London Plan) and informed by equality impact*	+1

	routes) and access to open spaces, which could help in tackling childhood obesity and support good mental and physical health. This aspect of the LPG may also benefit specific groups of children (those from a Black, Asian or minority ethnic background, and those on low incomes), where engagement with the natural environment tends to be lower.		*assessments, as required under the Public Sector Equality Duty."* Making this an explicit requirement of the visioning process aims to help to ensure that visions for growth areas result in places that are more inclusive for groups of people of specific ages, such as older Londoners, who tend to face more barriers in the public realm that can limit confidence and ability to access buildings, places and spaces. Nevertheless, further explicit mention could be made that this should be informed by community engagement. As a result, additional text has been added to clarify this.	
	The LPG requires the development of area visions, informed by data including demographic and socio-economic analysis.	2b		+1
	Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community may result in area visions that better reflect the needs of specific groups, including groups of people of specific ages.	2b	The revised LPG requires the identification of cultural, social and economic/commercial characteristics that are valued by the community. This aims to better reflect the needs of specific groups.	+1

Disability (consider different types of physical, learning or mental disabilities)	Positive By setting out a clear and consistent process for how characterisation should be done, the LPG increases the likelihood that consideration of factors such as air quality will inform how an area develops. Improving air quality is an important issue for disabled people affected by chronic respiratory conditions.	2a	Section 4.5 of the LPG specifically states: *"Visions should take into account the different needs of specific groups within the community and the potential future population, with a particular focus on creating inclusive and accessible neighbourhoods (as required by Policy D5 of the London Plan) and informed by equality impact assessments, as required under the Public Sector Equality Duty."*	+1
	The LPG requires the development of area visions, informed by data including demographic and socio-economic analysis.	2b	Making this an explicit requirement of the visioning process aims to help ensure that visions for growth areas result in places that are more inclusive for disabled people. Nevertheless, further explicit mention could be made of the fact that this should be informed by community engagement. As a result, additional text has been added to clarify this.	+1
	Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of specific groups, including disabled people.	2b	The revised LPG requires the identification of cultural, social and economic/commercial characteristics that are valued by the community. This aims to better reflect the needs of specific groups.	+1

Gender reassignment	Positive Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of specific groups, including trans Londoners.	2b		+1
Marriage and civil partnership	No impacts identified.	N/A		N/A
Pregnancy and maternity	Positive Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of pregnant women, and women who have recently given birth. This is especially important given the traditional dominance of male-oriented patterns and types of development in city planning.	2b		+1
Race or Ethnicity (consider refugees, asylum seekers,	Positive By setting out a clear and consistent process for how characterisation should be done, the LPG increases the likelihood that consideration of factors such as air quality will inform	2b		+1

migrants, Gypsies and Travellers)	how an area develops. This aspect of the LPG may benefit Black/African/ Caribbean/Black British Londoners, and Londoners of mixed, multiple or other ethnicities, who tend to be slightly more exposed to pollution than the rest of the population. Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of specific racial and ethnic groups.	2b		+1
Religion or belief	Positive Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of specific religious groups.	2b		+1
Sex	Positive Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of women, given the traditional dominance of male-oriented patterns	2b		+1

	and types of development in city planning.			
Sexual orientation	Positive Requiring the identification of cultural, social or economic/commercial characteristics that are valued by the community aims to result in area visions that better reflect the needs of specific groups including the LGBTQ+ community.	2b		+1
People on low incomes	Positive By setting out a clear and consistent process for how characterisation should be done, the LPG increases the likelihood that consideration of factors such as air quality will inform how an area develops. Areas of greater deprivation tend to see high levels of air pollution, so this aspect of the guidance may benefit people on low incomes.	2a		+1

Optimising site capacity – a design-led approach LPG

Group	Potential impact description What positive and negative impacts have been identified (known and potential) for particular groups? Refer to evidence (including engagement).	Relevant PSED aim (1, 2a, b or c, and/or 3)	Actions identified and/or justification For negative impacts, set out mitigating actions to minimise or eliminate negative impacts and any action plan. If negative	Assessment of equality impacts Score each impact as either:

	Check the objectives from the IIA and the EqIA guide questions and use these where relevant to structure your answers. Check the EqIA elements from the original IIA and any subsequent assessments.		impacts cannot be mitigated, provide **objective justification**. For positive impacts, consider how these could be maximised.	+2 Strong positive +1 Positive 0 Neutral - 1 Negative - 2 Strong negative Mixed or uncertain
Age (consider particularly children, under-21s and over-65s)	Positive The LPG requires site-capacity work to be informed by opportunities to enhance permeability and access to local services, employment and social infrastructure. This aims to provide better access for younger Londoners to education and employment opportunities; and better access for older Londoners to services such as shops, open spaces, public transport and community uses. Greater permeability, and attractive and safe routes, also positively benefits older people. The LPG requires site capacity to be informed by and reflect requirements for green infrastructure, including open space on site in appropriate instances; and connection to green infrastructure elsewhere. This aspect of the LPG may	2a 2a		+1 +1

	benefit specific groups of children (those from a Black, Asian or minority ethnic background, and those on low incomes), whose engagement with the natural environment tends to be lower. The requirement to consider noise as part of site-capacity work may benefit older Londoners affected by dementia, Alzheimer's and other related conditions. Considering public transport accessibility levels when establishing potential site capacity can benefit younger and older Londoners as they tend to use buses than other age groups. As a result, they are likely to benefit from greater public transport accessibility.	2a 2a		+1 +1
Disability (consider different types of physical, learning or mental disabilities)	Positive The LPG requires site-capacity work to be informed by opportunities to enhance permeability and access to local services, employment and social infrastructure. This is particularly important for disabled Londoners who face a range of barriers to walking (including physical barriers, pollution and noise) and barriers using streets and accessing public transport.	2a		+1

	The requirement to consider air quality as part of site-capacity work may benefit disabled Londoners who are affected by chronic respiratory conditions. The requirement to consider noise may benefit disabled Londoners who are neurodiverse. Considering public transport accessibility levels when establishing potential site capacity should reduce the likelihood of new development contributing to overcrowding on public transport, which is a significant barrier for disabled Londoners.	2a 2a		+1 +1
Gender reassignment	No impacts identified.	N/A		N/A
Marriage and civil partnership	No impacts identified.	N/A		N/A
Pregnancy and maternity	The LPG requires site-capacity work to be informed by opportunities to enhance permeability and access to local services, employment and social infrastructure. This is particularly important for those that are pregnant and have small children who face a range of barriers using streets and accessing public transport (specifically those that do not have step free access or access to toilets).	2a		+1

	In areas where bus travel is higher, this may benefit pregnant women and those with children as they are more likely to use buses than other groups.			
Race or Ethnicity (consider refugees, asylum seekers, migrants, Gypsies and Travellers)	Considering public transport accessibility levels when establishing potential site capacity should lead to a greater proportion of new homes being close to transport and other social infrastructure. This can improve access to local services and employment. In areas where bus travel is higher, this may benefit Black Londoners as they are more likely to use buses than other groups.	2b		+1
Religion or belief	No impacts identified.	N/A		N/A
Sex	Considering public transport accessibility levels when establishing potential site capacity can benefit women who live in areas where bus travel is higher, as women are more likely than men to use buses.	2b		+1
Sexual orientation	No impacts identified.	N/A		N/A
People on low incomes	The guidance recognises that taller buildings do not always result in more affordable homes, and can result in reduced affordable housing as a	2b		+1

	proportion of total delivery; and that on some sites alternative lower-rise build types may be more appropriate. Inclusion of this in the guidance may lead to site-capacity work by boroughs and neighbourhood planning groups that optimises affordable housing delivery, which would benefit people on low incomes in particular. Considering public transport accessibility levels can benefit Londoners on low incomes, as they are more likely to use buses than other income groups.	2b		+1

Small site design codes LPG

Group	Potential impact description What positive and negative impacts have been identified (known and potential) for particular groups? Refer to evidence (including engagement). Check the objectives from the IIA and the EqIA guide questions and use these where relevant to structure your answers. Check the EqIA elements from	Relevant PSED aim (1, 2a, b or c, and/or 3)	Actions identified and/or justification For negative impacts, set out mitigating actions to minimise or eliminate negative impacts and any action plan. If negative impacts cannot be mitigated, provide **objective justification**. For positive impacts, consider how these could be maximised.	Assessment of equality impacts Score each impact as either: +2 Strong positive +1 Positive 0 Neutral

	the original IIA and any subsequent assessments.			- 1 Negative - 2 Strong negative Mixed or uncertain
Age (consider particularly children, under-21s and over-65s)	Negative The LPG seeks to facilitate the development of small sites, which could in some instances include flatted development. These flatted homes are less likely to have access to private gardens, and may not result in new play spaces due to the small scale of development. This could have a negative impact on children if new homes do not have adequate access to green open space.	2b	Increase in housing provision is vital for addressing the housing crisis, which will be of particular importance to young people and children as they grow older and seek accommodation. Intensification of the built-up area through small sites will help to achieve this in a more sustainable way than other options (such as not meeting need, displacing need to outside London or building on the Green Belt). The guidance is clear that any such developments should not cause a net loss of green cover.	-1
Disability (consider different types of physical, learning or mental disabilities)	No impacts identified.	N/A		N/A

Gender reassignment	No impacts identified.	N/A		N/A
Marriage and civil partnership	No impacts identified.	N/A		N/A
Pregnancy and maternity	No impacts identified.	N/A		N/A
Race or Ethnicity (consider refugees, asylum seekers, migrants, Gypsies and Travellers)	Positive While the LPG is generally aimed at encouraging new dwellings, it could also be drawn on by boroughs to facilitate extensions to existing homes to provide for religious and ethnic groups who live in multi-generational households. When identifying small sites for redevelopment, the LPG highlights the opportunity to consider and identify other housing needs within an area, including Gypsies and Traveller accommodation.	2b		+1
Religion or belief	Positive While the LPG is generally aimed at encouraging new dwellings, it could also be drawn on by boroughs to facilitate extensions to existing homes to provide for religious and ethnic groups who live in multi-generational households.	2b		+1

Sex	No impacts identified.	N/A		N/A
Sexual orientation	No impacts identified.	N/A		N/A
People on low incomes	The LPG encourages boroughs to proactively support well-designed new homes on small sites by developing design codes for small sites. While some larger small sites would be required to provide affordable housing, many smaller sites would not meet the thresholds for requiring this. This could be seen as negatively impacting on people on low incomes, who are most in need of affordable housing. However, the guidance cannot be seen in isolation; and the London Plan encourages development of a broad range of sites for housing including larger sites. It is likely that encouraging small sites through design codes would increase the delivery of housing overall, which would help to tackle housing affordability as well as providing affordable housing on sites that meet the relevant thresholds.	2b		0

Housing design standards LPG

Group	Potential impact description What positive and negative impacts have been identified (known and potential) for particular groups? Refer to evidence (including engagement). Check the objectives from the IIA and the EqIA guide questions and use these where relevant to structure your answers. Check the EqIA elements from the original IIA and any subsequent assessments.	Relevant PSED aim (1, 2a, b or c, and/or 3)	Actions identified and/or justification For negative impacts, set out mitigating actions to minimise or eliminate negative impacts and any action plan. If negative impacts cannot be mitigated, provide **objective justification**. For positive impacts, consider how these could be maximised.	Assessment of equality impacts Score each impact as either: +2 Strong positive +1 Positive 0 Neutral - 1 Negative - 2 Strong negative Mixed or uncertain
Age (consider particularly children, under-21s and over-65s)	Positive The guidance requires wind assessments for buildings over 30 metres high. This may help to mitigate the impact of such buildings on the wind strengths at street level – something that may be beneficial for older Londoners and children, who are more likely to find that strong winds negatively affect their ability to get around. The LPG sets out various measures that seek to make new buildings more	2a	Additional wording stating that the design of shared spaces should be inclusive has been added to the introduction sections of Parts A and B.	+1

	thermally efficient, and minimise extremes of temperature. This could have a beneficial effect for older Londoners, who are more likely to be negatively affected by very hot and very cold temperatures. The guidance requires development to respond to specific local needs such as specialised housing for older people and multigenerational housing. The guidance promotes improvements to walking and cycling networks, the 'Healthy Streets' approach, cycle parking and other interventions that may help to increase levels of independent mobility for children and young people. Older people and younger children, in particular, are likely to benefit from the incorporation of seating and shelter in new streets; the creation of public realm that is barrier-free; and requirements for drop-off points with dropped kerbs as set out in the guidance. The guidance requires all apartment buildings to provide secure and convenient storage for mobility scooters and wheelchairs, which is likely to benefit older people.	2b 2b 2b 2b 2b		+1 +1 +1 +1 +1 +1

	Incorporating play opportunities, as required by the guidance, would be likely to benefit children and young people. The guidance reiterates the London Plan policy S4 requirement for an appropriate quantity of play space. The guidance also stipulates that family-sized homes should predominantly be on lower floors in order to provide good access to play and amenity spaces. This is likely to benefit children in particular.	2b		+1
Disability (consider different types of physical, learning or mental disabilities)	Positive The guidance encourages retention and reuse above demolition. This may help to improve air quality by reducing pollution from demolition and construction. The guidance reiterates the need for Air Quality Neutral and Air Quality Positive approaches and the submission of air quality assessments (as required in London Plan policy). The guidance also advises developments to locate habitable rooms away from sources of poor air quality. Improving air quality is an important issue for disabled people affected by chronic respiratory conditions. The guidance requires wind assessments for buildings over 30 metres high. This may help to mitigate	2a 2a		+1 +1

	the impact of such buildings on the wind strengths at street level, something that may be beneficial for disabled Londoners, who are more likely to find that strong winds negatively affect their ability to get around. The guidance requires provision of parking for adapted cycles and mobility scooters, which is likely to be beneficial to disabled Londoners in particular. Disabled people, in particular, are likely to benefit from the incorporation of seating and shelter in new streets; the creation of public realm that is barrier-free; and requirements for drop-off points with dropped kerbs, as set out in the guidance. The guidance reiterates the requirements of London Plan policy D7 for wheelchair user dwellings, and accessible and adaptable dwellings; and requires proposals to demonstrate that an inclusive design approach has been taken. The guidance requires internal circulation space to provide accessible routes and stipulates that corridors should be at least 1,500mm wide, with consideration for additional width adjacent to cores. The guidance reiterates the need (set out in policy D5) for a fire evacuation lift. These aspects	2b 2b 2b		+1 +1 +1

	of the guidance would be likely to benefit disabled people. The guidance requires all apartment buildings to provide secure and convenient storage for mobility scooters and wheelchairs, which is likely to benefit disabled people. The guidance requires communal refuse and recycling facilities to be accessible and usable by wheelchair users. The guidance recommends larger private outside space as best practice, in order to enable wheelchair users to manoeuvre more easily. The LPG sets out requirements for public realm, shared areas and active travel routes that are safe. This may benefit disabled people, who in recent years have experienced significant increases in levels of hate crime.	2b 2b 2b 2a		+1 +1 +1 +1
Gender reassignment	Positive The LPG sets out requirements for public realm, shared areas and active travel routes that are safe. This may benefit trans people, who experience high levels of harassment in the street and increasing levels of hate crime. A significant proportion of trans people	1, 2a		+1

	report avoiding certain streets because of a lack of feeling safe.			
Marriage and civil partnership	No impacts identified.	N/A		N/A
Pregnancy and maternity	No impacts identified.	N/A		N/A
Race or Ethnicity (consider refugees, asylum seekers, migrants, Gypsies and Travellers)	Positive The guidance encourages retention and reuse above demolition. This may help to improve air quality by reducing pollution from demolition and construction. The guidance reiterates the need for Air Quality Neutral and Air Quality Positive approaches, and the submission of air quality assessments (as required in London Plan policy). The guidance also advises developments to locate habitable rooms away from sources of poor air quality. This aspect of the LPG may benefit Black/African/ Caribbean/Black British Londoners, and Londoners of mixed, multiple or other ethnicities, who tend to be slightly more exposed to pollution than the rest of the population.	2a		+1
Religion or belief	No impacts identified.	N/A		N/A
Sex	Positive			

	The LPG sets out requirements for public realm, shared areas and active travel routes that are safe. This may benefit women and girls, given increasing concerns around the safety of women and girls.	1, 2a		+1
Sexual orientation	No impacts identified.	N/A		N/A
People on low incomes	Positive The guidance encourages retention and reuse above demolition. This may help to improve air quality by reducing pollution from demolition and construction. The guidance reiterates the need for Air Quality Neutral and Air Quality Positive approaches, and the submission of air quality assessments (as required in London Plan policy). The guidance also advises developments to locate habitable rooms away from sources of poor air quality. Areas of greater deprivation tend to see high levels of air pollution, so this aspect of the guidance may benefit people on low incomes.	2a		+1

Overview of equality impacts

Using your findings from the table above, summarise the impacts for each group in the table below using the scoring listed above.

	Age	Disability	Gender reassignment	Marriage and civil partnership	Pregnancy and maternity	Race	Religion and belief	Sex	Sexual Orientation	People on low incomes
Characterisation and growth strategies LPG	+1	+1	+1	N/A	+1	+1	+1	+1	+1	+1
Optimising site capacity – a design-led approach LPG	+1	+1	N/A	N/A	+1	+1	N/A	+1	N/A	+1
Small site design codes LPG	-1	N/A	N/A	N/A	N/A	+1	+1	N/A	N/A	+1
Housing design standards LPG	+1	+1	+1	N/A	N/A	+1	N/A	+1	N/A	+1

Amendments to the guidance

(only for review to the EqIA in the future)

Change	Reason for change
What changes have you made to the guidance as a result of this EqIA?	Why have these changes been made?
Characterisation and growth strategy LPG: Section 4.5 of the LPG states that the assessment of different needs of specific groups within the community should be informed by the community engagement and consultation that the local planning authority carries out.	Making it clear that a needs assessment should involve, and be informed by, community engagements aims to ensure that visions for different areas result in places that are more inclusive for disabled people and older people in particular, given the (often physical) barriers that these groups face, which prevent environments from being inclusive and accessible for them.
Small Site Design Codes LPG: Additional wording stating that when boroughs identify small sites for redevelopment, they should also consider other housing needs within an area, including Gypsies and Traveller accommodation.	This change has been made to encourage practitioners to consider the wider needs of an area when undertaking this process. This may include Gypsy and Traveller accommodation, or other specialist forms of housing/accommodation.
Housing design standards LPG: Additional wording stating that the design of shared spaces should be inclusive has been added to the introduction sections of Parts A and B.	These changes have been made to reiterate the importance of designing inclusive spaces. Clarifying this importance aims to make it clearer to the designer of residential applications, and ensure that new development is more inclusive.

Recommendation

Based your assessment, please indicate which course of action you are recommending to decision makers.

Outcome Number	Description	Mark with an X (more than one box can apply)
Outcome One	**No major change to the guidance is required.** This EqIA has not identified any potential for discrimination or negative impact, and all opportunities to advance equality have been taken.	X (all recommended changes have been made to the guidance)
Outcome Two	**Adjustments to the guidance are required** to remove barriers identified by the EqIA or better advance equality.	

Outcome Three	**Justify and continue with the guidance** despite having identified some potential for negative impacts or missed opportunities to advance equality.	
Outcome Four	**Stop, rethink or abandon** when the EqIA shows actual or potential unlawful discrimination.	

Monitoring

Monitoring will take place through the London Plan Annual Monitoring Report and wider monitoring of the Mayor's other strategies, as well as part of reviewing the London Plan.

Appendix A: Evidence Reference and Content

London Plan IIA (including EqIA) and Addendums

Evidence

Age

London boroughs have a relatively young population. The median age of Londoners is 35, compared to a national average of 40.

32 per cent of Londoners are under 25; and 11 per cent are 65 or over (ONS, 2011).

Older Londoners (aged 65 or over) are more likely to be women (London Travel Demand Survey, 2016-17).

In 2019, over a fifth of London's population were under 16 (1.9m). Over two-thirds, or 6.2m, were working age (between 16 and 64), and less than one in eight were 65 or over (1.1m). Despite being the smallest age group in London's population, the number of Londoners aged 65 or over is projected to increase by 86 per cent between 2019 and 2050, faster than younger age groups (GLA City Intelligence Unit, 2018).

Data at a national level reveals that some groups of children are less likely to engage with the natural environment. This includes children who are Black, Asian or Minority Ethnic (BAME), 56 per cent of whom make at least one visit a week to green space. This is compared children who are not from BAME backgrounds (74 per cent); and children whose parents are from a lower social class, with a gap in weekly visits of 12 percentage points between the highest social grade (77 per cent) and the lowest (65 per cent) (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

More than one in five reception children in London are overweight or obese, rising to more than a third of year 6 pupils: five percentage points greater than the national rate. Black and Asian children are more likely to be overweight or obese in London than White children. At year 5, children living in the most deprived areas are 14 percentage points more likely to be overweight or obese than children in the least deprived areas (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

There are several specific barriers that older Londoners face which can limit their confidence and ability to access buildings, places and spaces, contributing to feelings of social isolation. Issues such as speed of traffic, noise, and fear of crime or falling affect half of older people – especially people in sheltered accommodation or care homes, and people with physical or cognitive impairments. Older Londoners also face barriers accessing public transport in London, including overcrowding, antisocial behaviour and a lack of universal step-free access (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Use of London buses is higher among Black, younger and low-income Londoners, and women (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Disability

Between 2015 and 2017, 16 per cent of working-age Londoners (16 to 64) were disabled (ONS, 2017). This is slightly less than the national average for Great Britain of 20 per cent, reflecting London's younger population.

There are 1.3m disabled adults in London, defined according to the Equality Act 2010 as having a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on their ability to do normal daily activities (ONS, 2019).

14 per cent of Londoners consider themselves to have a disability that affects their day-to-day activities 'a lot' or 'a little' (ONS, 2011).

Disability is closely related to age: 13 per cent of the working-age population are disabled versus 28 per cent of people aged 65 or over (ONS, 2019).

56 per cent of disabled Londoners are women, compared with 50 per cent of non-disabled Londoners.

Disabled people are also more likely to be on a low income (61 per cent of disabled people are also on low income). 34 per cent per cent of disabled Londoners have a household income of less than £10,000 compared with 10 per cent of non-disabled Londoners (London Travel Demand Survey, 2016-17)

84 per cent of disabled Londoners report that their disability limits their ability to travel.

55 per cent of disabled Londoners state that their disability affects their mobility; 22 per cent have a serious long-term illness; and 10 per cent have a mental health condition.

Many disabled people experience multiple impairments.

According to GP records, approximately 2 per cent of London's population, or around 175,000 people, have a learning disability (Public Health England in GLA, 2019).

Equality and Human Rights Commission (EHRC) (2018), The housing experiences of disabled people in Britain

Key factors for successful independent living for disabled people include accessibility features such as adapted kitchens and bathrooms; a feeling of safety and security and being in a good location with access to shops, transport and public services.

There is a lack of availability of accessible housing across all tenures.

Living in unsuitable accommodation can cause deterioration in mental wellbeing.

Appropriate housing is often either unavailable or unaffordable.

Disabled people in the private and social rented sectors were more likely to have experienced poor housing than disabled homeowners. Although homeowners overall had more choice and control over their housing, many had experienced considerable difficulty purchasing accessible homes, particularly within an affordable price range.

LSE (2016), No Place Like an Accessible Home: Quality of life and opportunity for disabled people with accessible housing needs

At least 1.8m households (one in 12 of all households) in England have an identified need for accessible housing, of whom 580,000 (one-third) are working age.

0.7m households (around one in 30 of all households) have more significant needs corresponding roughly to Building Regs 2/3.

Real need is estimated to be higher, as the English Housing Survey does not include figures for disabled children.

DCLG (2016), English Housing Survey Adaptations and Accessibility Report, 2014-15

In England in 2014, there were around 814,000 households (4 per cent) with a wheelchair user. Around 521,000 (64 per cent) of these households included someone who only required a wheelchair outside the home; while 210,000 (26 per cent) of these households contained someone who used a wheelchair all the time. The remaining 84,000 households(10 per cent) had someone who just used their wheelchair when indoors. Among all households with a wheelchair user, 84 per cent (685,000) lived in a home that did not have full visitability – including the 19 per cent (158,000) who lived in a home that lacked any of the four following features: level access to the entrance; a flush threshold; sufficiently wide doorways and circulation space; and a toilet at entrance level. These households most commonly had only one visitability feature (32 per cent).

Terraced (41 per cent) and semi-detached (34 per cent) houses were far more likely to have none of the four accessibility features than detached houses (9 per cent) or flats (10 per cent).

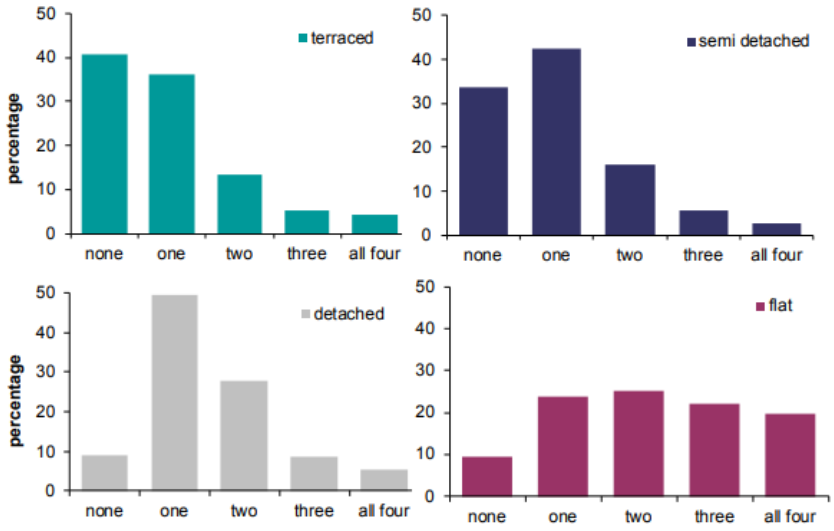
The majority of homes lacking full visitability could be adapted to provide all four features. It was more difficult for terraced houses and older properties to be made fully visitable. Terraced houses were the most likely dwelling type in which full visitability was unfeasible (50 per cent) compared with flats (27 per cent), and other houses (semi-detached, 15 per cent; and detached, 14 per cent).

In 2014-15, one in 10 households (10 per cent) that included a person with a long-term limiting disability requiring adaptations wanted to, or were trying to, move somewhere more suitable for their needs. Nearly half of the households (47 per cent) that wanted to move somewhere more suitable contained a person with a long-term disability aged under 55.

In 2014, almost two-thirds (64 per cent) of homes had a toilet at entrance level; but the presence of the other three visitable features were less common – especially level access, which was present in just 18 per cent of homes. Of the other accessibility features assessed by the English Housing Survey, the most common in 2014 were the absence of any trip steps (75 per cent); and the presence of a room at entrance level that could be converted into a bedroom (56 per cent). Less common were the presence of a bathroom at entrance level (39 per cent), and straight stairs (for the installation of a stair lift) with a sufficiently wide landing to allow wheelchair access (24 per cent). Just a fifth had a wheelchair-accessible toilet at entrance level (20 per cent).

Although a quarter of newer homes built since 1990 (24 per cent) could be made compliant with minor works only, a similar proportion (25 per cent) of these homes were not feasible for full visitability. This latter finding can be partly explained by the dwelling-type profile of newer homes – namely, the relatively high proportion of flats that have been built; where these are not fully visitable, it is often impractical to extend or redesign these homes.

Figure 2.4: Number of visitability features, by dwelling type, 2014



Base: all dwellings
Note: underlying data are presented in Annex Table 2.2
Source: English Housing Survey, dwelling sample

Improving the accessibility of terraced homes would be the most challenging project, with half (50 per cent) of these homes simply not feasible for full visitability in 2014. This is partly because smaller and mid-terraced homes do not easily allow for any moderate or major adaptations, such as the rearrangement of internal space or building extensions to take place. There are similar issues with extensions to upper floor or basement flats; and so 27 per cent of flats were not feasible for visitability. Over half of semi-detached (58 per cent) and detached homes (60 per cent) could be made fully visitable through a moderate level of work; but 15 per cent and 14 per cent respectively were not feasible for compliance with visitability.

Figure 2.5: Level of work required to create full visitability by dwelling type, 2014

Base: all dwellings
Note: underlying data are presented in Annex Table 2.3
Source: English Housing Survey, dwelling sample

Disabled Londoners face barriers to accessing public transport in London, including overcrowding, antisocial behaviour, and a lack of universal step-free access (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

There has been a major growth in the number of hate crime victims who are disabled, increasing five-fold between 2014-15 and 2016-17.

Gender reassignment

There are no current data sources on gender identity in London or the UK as a whole. Research carried out in 2012 on the acceptability of gender-identity questions in surveys provided an indicative estimate that 1 per cent of the UK population identify as trans (EHRC, 2012). The Government Equalities Office tentatively estimated that around 0.3-0.8 per cent of the UK population in 2018 were transgender (approximately 200,000 to 500,000 people).

Between 2014-15 and 2016-17 there was a threefold increase in the number of hate crime victims who were trans (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Stonewall (2018), LGBT in Britain – Trans report

Trans people experience high levels of discrimination and poor treatment because of their gender identity, and often change their behaviour because of these factors. Examples of this discrimination and poor treatment range from verbal abuse and intimidation in the street and other public spaces, such as toilets, to being discriminated against in shops, cafés, restaurants, bars and nightclubs. Trans people also face discrimination when using public services, and when looking for a house to rent or buy.

More than two in five trans people (44 per cent) avoid certain streets altogether because they don't feel safe there as an LGBT person.

Marriage or Civil Partnership

In 2015, 5 per cent of partnerships formed in London were same-sex marriages or civil partnerships.

In 2011, 39.8 per cent of adults in London aged 16 and over were married, and 0.4 per cent were in a same-sex civil partnership. The national respective figures were 46.6 per cent and 0.2 per cent.

Pregnancy and maternity

The total fertility rate (the number of children that a woman with average fertility would have) is 1.70 in London, compared to a national figure of 1.76 (ONS, 2017). In London the general fertility rate (births per 1,000 women aged 15-44) is 62.9 per cent, compared to 61 per cent for England and Wales. The crude birth rate (births per 1,000 population) is 14.3, compared to 11.6 for England and Wales.

58 per cent of live births are borne by mothers who were themselves born outside the UK, compared to a national average of 28 per cent (ONS, 2017).

Pregnant women, and people on maternity and paternity leave using buggies, are more likely to require level access to buildings. Housing types without level access, such as linear blocks that are four storeys or less and lack lift access, may be more difficult to access.

Pregnant women may also be negatively affected by overcrowding on public transport.

Race

BAME Londoners make up 40 per cent of London's population (ONS, 2011). BAME Londoners are more likely to be younger and on lower incomes. For instance, 44 per cent of people on low incomes in London are also BAME (London Travel Demand Survey, 2016-17). Cost of travel is more often mentioned as a barrier to public transport use by BAME Londoners (51 per cent). BAME Londoners are more likely to live in households with an average annual income below £20,000 (33 per cent BAME compared with 25 per cent White).

Most Londoners have English as their main language (78 per cent). However, 4 per cent do not speak English well (ONS, 2011).

Research by Sport England (2020) shows that people from Asian and Black backgrounds are far more likely to be physically inactive than those who are White. Research by the Institute of Fiscal Studies 2020 shows that Black people are more likely to be overweight than White people, while both Asian and Black populations have been found to have a higher risk of diabetes and heart disease.

Furthermore, just under a third of Bangladeshi households are classified as overcrowded, as are 15 per cent of Black African households, according to the English Housing Survey (2018). Only 2 per cent of White British households are classified as overcrowded.

18.9 per cent of Black households are made up of a single parent with dependent children, the highest percentage out of all ethnic groups for this type of household; the lowest percentage was found among Asian households, at 5.7 per cent (Census, 2011).

Black/African/Caribbean/Black British Londoners are slightly more likely to be exposed (15 per cent versus 13 per cent of the population). A similar result has been found for people of a mixed, multiple or other ethnicity, with only White and Asian/Asian British Londoners accounting for a smaller share of people exposed than their share of the population (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Use of London buses is higher among Black, younger and low-income Londoners, and women (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Religion or belief

The 2011 Census shows that the representation of religion and beliefs of Londoners has changed over the past 10 years. There has been a decline in the proportion of Londoners considering themselves to be Christian (from 58 per cent to 48 per cent). There has also been an increase in the proportion who do not identify with any religion (from 16 per cent to 21 per cent).

Religion varies considerably between ethnic groups. While 28 per cent of White Londoners, and 27 per cent of mixed ethnicity Londoners, report they have no religion, only 7 per cent of Black and 8 per cent of Asian Londoners report this.

More than half of Black Londoners (68 per cent) and White Londoners (57 per cent) report that they are Christian. Asian Londoners, and Londoners who have selected 'other' to describe their ethnic group, are most likely to be Muslims (36 per cent of Asian Londoners and 50 per cent of Londoners selecting 'other' ethnic group are Muslims).

Research by the EHRC highlights that, in England, there is a higher percentage of Christians recorded as being overweight or obese (66.6 per cent), compared with people that have no religion (55 per cent). The percentage of religious minorities recorded as overweight or obese was 56.4 per cent in 2012.

Sex

Half of Londoners are women (51 per cent) (ONS, 2011).

In 2018, the GLA projected that, in 2019, 4.55m Londoners would be female and 4.55m would be male (GLA Intelligence Unit 2018). Women face particular issues around gender-based violence and low pay. As the majority of lone parents (90 per cent) are women, recent reforms to welfare that have affected lone parents have had a disproportionate impact on women. 18.9 per cent of Black households, and 16.2 per cent of mixed ethnicity households, were made up of a single parent with dependent children, the highest percentages out of all ethnic groups for this type of household. The lowest percentage was found among Asian households, at 5.7 per cent, followed by White households, at 6.7 per cent (Census, 2011).

Women sharing other protected characteristics often face additional challenges, such as higher gender pay gaps among older and BAME women (All-Party Parliamentary Group on Sex Equality, 2018). Young women report issues around financial pressures and mental health issues (Young Women's Trust, 2017). Men face issues around lower educational attainment and are at higher risk of suicide (EHRC, 2018).

Londoners living in a lower-income household (less than £20,000 per year) are more likely to be women (London Travel Demand Survey, 2016-17).

Women in London are more likely to be older (ONS, 2011).

Men are more likely than women to be working full-time.

Women are more likely to be unemployed than men; and are more likely to work part-time.

Women are more likely than men to be travelling with buggies. This could mean that women are more likely to be affected by lack of level access and overcrowding.

Use of London buses is higher among Black, younger and low-income Londoners, and women (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Many cities have developed in ways that are biased toward the needs of men, including a focus on car-based transport rather than walking and public transport; lack of easy access to a variety of employment opportunities; a traditional commuting pattern that promotes long commutes into city centres; public spaces that are unsuitable for people with pushchairs and buggies; loss or lack of public toilets; and lack of safety considerations at night (Jenny Divine and Aude Bicquelet-Lock, for RTPI: Women and Planning (Part II) – Creating Gender-Sensitive Urban Environments Post-Covid-19: Challenges and Opportunities, 2021).

Sexual orientation

Statistics about the size of the LGB population vary considerably and there is no single widely accepted measure. The 2017 GP Patient Survey found that 5.4 per cent of Londoners identified as lesbian, gay, bisexual or 'other', compared to the national rate of 3.3 per cent. Figures from the 2017 Annual Population Survey provide lower estimates for London and England (3.2 per cent and 2.6 per cent respectively).

LGB Londoners are significantly more likely than heterosexual Londoners to have experienced incidents of unwanted sexual behaviour or hate crime.

LGBT young people are more likely to find themselves homeless than their non-LGBT peers, comprising up to 24 per cent of the youth homeless population.

Low incomes

Areas of greater deprivation tend to see high levels of air pollution (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Use of London buses is higher among Black, younger and low-income Londoners, and women (GLA: Equality, Diversity and Inclusion Evidence Base for London, 2018).

Gaps in Evidence

No gaps identified.

Appendix B: Engagement summary

Summary of protected groups engaged

Already engaged: The guidance has been developed by a broad network of built environment and planning professionals, including Mayor's Design Advocates. Young Londoners working with the Stephen Lawrence Trust have had their say on the role that housing has in shaping our neighbourhoods and boroughs. Urban Design London has provided a platform for borough officers to offer its expertise.

Engagement record

Engagement undertaken which is relevant to the EqIA for example with specific community groups, or protected characteristic groupings, or to fill identified evidence gaps.

Event details	Specific groups represented	Key findings
August 2018	Young people	GLA workshop facilitated by Mae Architects and the Stephen Lawrence Charitable Trust, engaging young Londoners on the key quality-of-life indicators and priorities from their perspective.