

- 3.2.6 In order to support the Healthy Streets Approach, development proposals should take account of the existing and planned **connectivity of a site via public transport and active modes** to town centres, social infrastructure and other services and places of employment. Opportunities to improve these connections to support higher density development should be identified.

Policy D3 Optimising site capacity through the design-led approach

The design-led approach

- A All development must make the best use of land by following a design-led approach that optimises the capacity of sites, including site allocations. Optimising site capacity means ensuring that development is of the most appropriate form and land use for the site. The design-led approach requires consideration of design options to determine the most appropriate form of development that responds to a site's context and capacity for growth, and existing and planned supporting infrastructure capacity (as set out in [Policy D2 Infrastructure requirements for sustainable densities](#)), and that best delivers the requirements set out in Part D.
- B Higher density developments should generally be promoted in locations that are well connected to jobs, services, infrastructure and amenities by public transport, walking and cycling, in accordance with [Policy D2 Infrastructure requirements for sustainable densities](#). Where these locations have existing areas of high density buildings, expansion of the areas should be positively considered by Boroughs where appropriate. This could also include expanding Opportunity Area boundaries where appropriate.
- C In other areas, incremental densification should be actively encouraged by Boroughs to achieve a change in densities in the most appropriate way. This should be interpreted in the context of [Policy H2 Small sites](#).
- D Development proposals should:

Form and layout

- 1) enhance local context by delivering buildings and spaces that positively respond to local distinctiveness through their layout, orientation, scale, appearance and shape, with due regard to existing and emerging street hierarchy, building types, forms and proportions

- 2) encourage and facilitate active travel with convenient and inclusive pedestrian and cycling routes, crossing points, cycle parking, and legible entrances to buildings, that are aligned with peoples' movement patterns and desire lines in the area
- 3) be street-based with clearly defined public and private environments
- 4) facilitate efficient servicing and maintenance of buildings and the public realm, as well as deliveries, that minimise negative impacts on the environment, public realm and vulnerable road users

Experience

- 5) achieve safe, secure and inclusive environments
- 6) provide active frontages and positive reciprocal relationships between what happens inside the buildings and outside in the public realm to generate liveliness and interest
- 7) deliver appropriate outlook, privacy and amenity
- 8) provide conveniently located green and open spaces for social interaction, play, relaxation and physical activity
- 9) help prevent or mitigate the impacts of noise and poor air quality
- 10) achieve indoor and outdoor environments that are comfortable and inviting for people to use

Quality and character

- 11) respond to the existing character of a place by identifying the special and valued features and characteristics that are unique to the locality and respect, enhance and utilise the heritage assets and architectural features that contribute towards the local character
- 12) be of high quality, with architecture that pays attention to detail, and gives thorough consideration to the practicality of use, flexibility, safety and building lifespan through appropriate construction methods and the use of attractive, robust materials which weather and mature well
- 13) aim for high sustainability standards (with reference to the policies within London Plan Chapters 8 and 9) and take into account the principles of the circular economy

14) provide spaces and buildings that maximise opportunities for urban greening to create attractive resilient places that can also help the management of surface water.

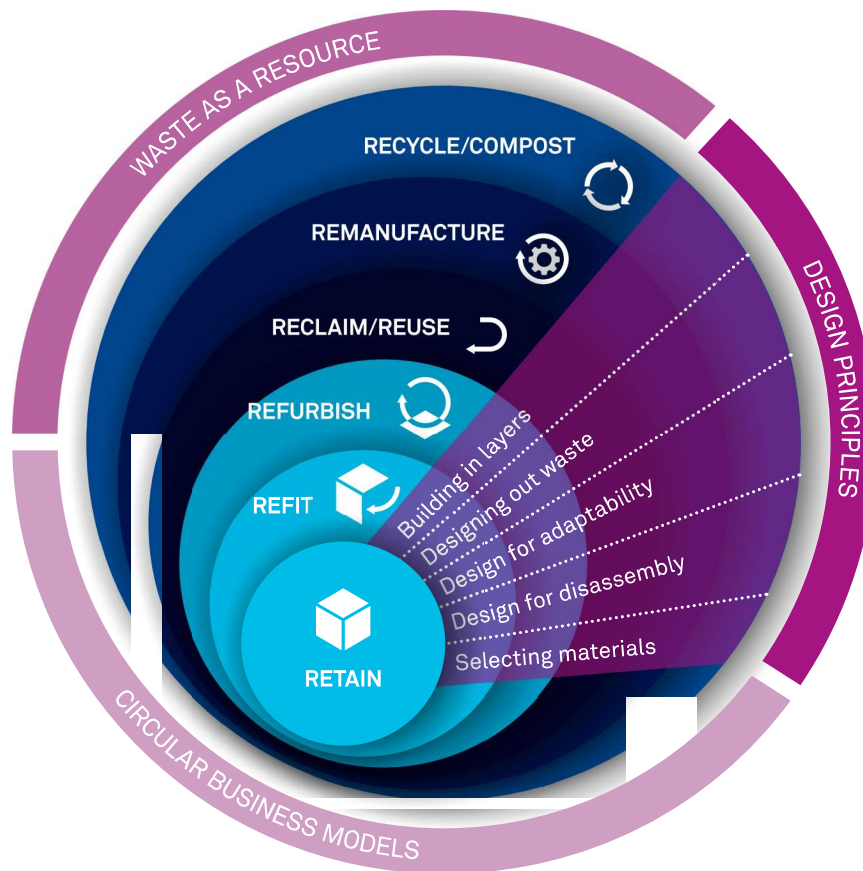
E Where development parameters for allocated sites have been set out in a Development Plan, development proposals that do not accord with the site capacity in a site allocation can be refused for this reason.

- 3.3.1 For London to accommodate the growth identified in this Plan in an inclusive and responsible way every new development needs to make the most efficient use of land by optimising site capacity. This means ensuring the development's form is the most appropriate for the site and land uses meet identified needs. The optimum capacity for a site does not mean the maximum capacity; it may be that a lower density development – such as gypsy and traveller pitches – is the optimum development for the site.
- 3.3.2 **A design-led approach** to optimising site capacity should be based on an evaluation of the site's attributes, its surrounding context and its capacity for growth to determine the appropriate form of development for that site.
- 3.3.3 The **area assessment** required by Part A of Policy D1 London's form, character and capacity for growth, coupled with an area's assessed capacity for growth as required by Part B of Policy D1 London's form, character and capacity for growth, will assist in understanding a site's context and determining what form of development is most appropriate for a site. Design options for the site should be assessed to ensure the proposed development best delivers the design outcomes in Part B of this policy.
- 3.3.4 Designating appropriate development capacities through site allocations enables boroughs to proactively optimise the capacity of strategic sites through a consultative design-led approach that allows for **meaningful engagement and collaboration** with local communities, organisations and businesses.
- 3.3.5 Developers should have regard to designated development capacities in allocated sites and ensure that the design-led approach to optimising capacity on unallocated sites is carefully applied when **formulating bids** for development sites. The sum paid for a development site is not a relevant consideration in determining acceptable densities and any overpayments cannot be recouped through compromised design or reduced planning obligations.
- 3.3.6 **Good design** and good planning are intrinsically linked. The form and character of London's buildings and spaces must be appropriate for their location, fit for purpose, respond to changing needs of Londoners, be inclusive, and make

the best use the city's finite supply of land. The efficient use of land requires optimisation of density. This means coordinating the layout of the development with the form and scale of the buildings and the location of the different land uses, and facilitating convenient pedestrian connectivity to activities and services.

- 3.3.7 Developments that show a clear understanding of, and relationship with, the distinctive features of a place are more likely to be successful. These features include buildings, structures, open spaces, public realm and the underlying landscape. Development should be designed to respond to the **special characteristics** of these features which can include: predominant architectural styles and/or building materials; architectural rhythm; distribution of building forms and heights; and heritage, architectural or cultural value. The Mayor will provide further guidance on assessing and optimising site capacity through a design-led approach.
- 3.3.8 Buildings should be of high quality and enhance, activate and appropriately frame the **public realm**. Their massing, scale and layout should help make public spaces coherent and should complement the existing streetscape and surrounding area. Particular attention should be paid to the design of the parts of a building or public realm that people most frequently see or interact with in terms of its legibility, use, detailing, materials and location of entrances. Creating a comfortable pedestrian environment with regard to levels of sunlight, shade, wind, and shelter from precipitation is important.
- 3.3. Measures to design out exposure to poor air quality and noise from both external and internal sources should be integral to development proposals and be considered early in the design process. Characteristics that increase pollutant or noise levels, such as poorly-located emission sources, street canyons and noise sources should also be designed out wherever possible. Optimising site layout and building design can also reduce the risk of overheating as well as minimising carbon emissions by reducing energy demand.
- 3.3.10 To minimise the use of new materials, the following **circular economy principles** (see also [Figure 3.2](#)) should be taken into account at the start of the design process and, for referable applications or where a lower local threshold has been established, be set out in a Circular Economy Statement (see [Policy SI 7 Reducing waste and supporting the circular economy](#)):
- building in layers – ensuring that different parts of the building are accessible and can be maintained and replaced where necessary

- designing out waste – ensuring that waste reduction is planned in from project inception to completion, including consideration of standardised components, modular build and re-use of secondary products and materials
 - designing for longevity
 - designing for adaptability or flexibility
 - designing for disassembly
 - using systems, elements or materials that can be re-used and recycled.
- 3.3.1 Large-scale developments in particular present opportunities for innovative building design that avoids waste, supports high recycling rates and helps London transition to a circular economy, where materials, products and assets are kept at their highest value for as long as possible. Further guidance on the application of these principles through Circular Economy Statements will be provided.
- 3.3.12 Figure 3.2 shows a **hierarchy for building approaches** which maximises use of existing materials. Diminishing returns are gained by moving through the hierarchy outwards, working through refurbishment and re-use through to the least preferable option of recycling materials produced by the building or demolition process. The best use of the land needs to be taken into consideration when deciding whether to retain existing buildings in a development.
- 3.3.1 **Maximising urban greening** and creating green open spaces provides attractive places for Londoners to relax and play, and helps make the city more resilient to the effects of climate change. Landscaping and urban greening should be designed to ecologically enhance and, where possible, physically connect, existing parks and open spaces.
- 3.3.1 Measures to **design out crime** should be integral to development proposals and be considered early in the design process. Development should reduce opportunities for anti-social behaviour, criminal activities, and terrorism, and contribute to a sense of safety without being overbearing or intimidating. Developments should ensure good natural surveillance, clear sight lines, appropriate lighting, logical and well-used routes and a lack of potential hiding places.
- 3.3.15 Development should create **inclusive places** that meet the needs of all potential users.
- 3.3.1 The design and layout of development should reduce the dominance of cars and provide permeability to **support active travel** (public transport, walking and cycling), community interaction and economic vitality.

Figure 3.2 - Circular economy hierarchy for building approaches

Source: Building Revolutions (2016), David Cheshire, RIBA Publishing ©

- 3.3.1 New developments should be designed and managed so that **deliveries** can be received outside of peak hours and if necessary in the evening or night-time without causing unacceptable nuisance to residents. Appropriate facilities will be required to minimise additional freight trips arising from missed deliveries.
- 3.3.18 Shared and easily accessible **storage space** supporting 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, odour and vehicle movements, and improve street scene and community safety.
- 3.3.19 Buildings and spaces should be designed so that they can **adapt to changing uses** and demands now and in the future. Their lifespan and potential uses or requirements should be carefully considered, creating buildings and spaces

that are easy to maintain, and constructed of materials that are safe, robust and remain attractive over time.

- 3.3.20 **Masterplans and strategic frameworks** should be used when planning large-scale development to create welcoming and inclusive neighbourhoods, promote active travel, enable the successful integration of the built form within its surrounding area, and deliver wider benefits to residents, such as access to shared amenity space and high-quality public realm.

Monitoring density and site capacity

- 3.3.21 **Comparing density** between schemes using a single measure can be misleading as it is heavily dependent on the area included in the planning application site boundary as well as the size of residential units. Planning application boundaries are determined by the applicant. These boundaries may be drawn very close to the proposed buildings, missing out adjacent areas of open space, which results in a density which belies the real character of a scheme. Alternatively, the application boundary may include a large site area so that a tall building appears to be a relatively low-density scheme while its physical form is more akin to schemes with a much higher density.
- 3.3.2 To help assess, monitor and compare development proposals several measures of density are required to be provided by the applicant. Density measures related to the residential population will be relevant for infrastructure provision, while measures of density related to the built form and massing will inform its integration with the surrounding context. The following **measurements of density** should be provided for all planning applications that include new residential units:
1. number of units per hectare
 2. number of habitable rooms per hectare
 3. number of bedrooms per hectare
 4. number of bedspaces per hectare.
- 3.3.23 Measures relating to height and scale should be the maximum height of each building or major component in the development. Boroughs should report each of the required density measures provided by the applicant when they submit details of the development to the London Development Database. The following additional measurements should be provided for all major planning applications:
1. the Floor Area Ratio (total Gross External Area of all floors / site area)
 2. the Site Coverage Ratio (Gross External Area of ground floors /site area)
 3. the maximum height in metres above ground level of each building and at Above Ordinance Datum (above sea level).

Policy D4 Delivering good design

Design analysis and development certainty

- A Masterplans and design codes should be used to help bring forward development and ensure it delivers high quality design and place-making based on the requirements set out in Part B of [Policy D3 Optimising site capacity through the design-led approach](#).
- B Where appropriate, visual, environmental and movement modelling/assessments should be undertaken to analyse potential design options for an area, site or development proposal. These models, particularly 3D virtual reality and other interactive digital models, should, where possible, be used to inform plan-making and decision-taking, and to engage Londoners in the planning process.

Design scrutiny

- C Design and access statements submitted with development proposals should demonstrate that the proposal meets the design requirements of the London Plan.
- D The design of development proposals should be thoroughly scrutinised by borough planning, urban design, and conservation officers, utilising the analytical tools set out in Part B, local evidence, and expert advice where appropriate. In addition, boroughs and applicants should make use of the design review process to assess and inform design options early in the planning process. Development proposals referable to the Mayor must have undergone at least one design review early on in their preparation before a planning application is made, or demonstrate that they have undergone a local borough process of design scrutiny, based on the principles set out in Part E if they:
 - 1) include a residential component that exceeds 350 units per hectare; or
 - 2) propose a building defined as a tall building by the borough (see [Policy D9 Tall buildings](#)), or that is more than 30m in height where there is no local definition of a tall building.

- E The format of design reviews for any development should be agreed with the borough and comply with the Mayor's guidance on review principles, process and management, ensuring that:
- 1) design reviews are carried out transparently by independent experts in relevant disciplines
 - 2) design review comments are mindful of the wider policy context and focus on interpreting policy for the specific scheme
 - 3) where a scheme is reviewed more than once, subsequent design reviews reference and build on the recommendations of previous design reviews
 - 4) design review recommendations are appropriately recorded and communicated to officers and decision makers
 - 5) schemes show how they have considered and addressed the design review recommendations
 - 6) planning decisions demonstrate how design review has been addressed.

Maintaining design quality

- F The design quality of development should be retained through to completion by:
- 1) ensuring maximum detail appropriate for the design stage is provided to avoid the need for later design amendments and to ensure scheme quality is not adversely affected by later decisions on construction, materials, landscaping details or minor alterations to layout or form of the development
 - 2) ensuring the wording of the planning permission, and associated conditions and legal agreement, provide clarity regarding the quality of design
 - 3) avoiding deferring the assessment of the design quality of large elements of a development to the consideration of a planning condition or referred matter
 - 4) local planning authorities considering conditioning the ongoing involvement of the original design team to monitor the design quality of a development through to completion.

- 3.4.1 The processes and actions set out in the policy will help ensure development delivers good design. The responsibility for undertaking a particular process or action will depend on the nature of the development or plan; however, the outcome of this process must ensure the most efficient use of land is made so that the development on all sites is optimised.
- 3.4.2 Applicants will primarily be responsible for undertaking design analysis through the use of various **digital modelling techniques** as part of a wide range of design and presentation techniques. These techniques can also be used as part of the plan-making process to assess growth options and forms of development, as described in Part B of Policy D1 London's form, character and capacity for growth.
- 3.4.3 To enable the design of a proposed development to be fully assessed, applicants must provide the necessary **technical information** in an agreed format. The detail and nature of this should be commensurate with the scale of the development. All outline applications referred to the Mayor should be accompanied by thorough design codes, ensuring exemplary design standards are carried through the planning process to completion.
- 3.4.4 The **Mayor's Design Advocates (MDAs)** will play a key role in helping to deliver good design. They will help champion design across the GLA Group and beyond, through research, design review, capacity building, commissioning and advocacy. MDAs are also members of the London Review Panel, which the Mayor has set up to provide design scrutiny. This review panel is primarily focused on the review of Mayoral investments, but can provide design review sessions for development proposals referred to the Mayor where they have not previously been subject to review, or for schemes of particular significance.
- 3.4.5 All development proposals should be subject to a level of scrutiny appropriate to the scale and/or impact of the project. This **design scrutiny** should include work by planning case officers and ongoing and informal review by qualified urban design officers and conservation officers. Development proposals required to undergo design review as set out under Part D will form a small portion of overall planning applications in London. The Mayor may require that other referable developments undergo design review. Boroughs are encouraged to use design review to support their scrutiny of development proposals.
- 3.4.6 The Mayor has published a **London Quality Review Charter**, with accompanying guidance. The Charter promotes a consistent approach across London's design review sector and promotes transparency of process. The Charter builds on

the established 2013 guidance²⁷ which calls for reviews to be independent, expert, multidisciplinary, accountable, transparent, proportionate, timely, advisory, objective and available. The Charter includes guidance on how panels and processes should be managed and records kept. It also clarifies that the purpose of the design review process is not to dictate the design of a scheme or contradict planning policy, but to guide better design outcomes. More widely, the Mayor's Good Growth by Design Programme, is developing a support offer to London's boroughs and London's review sector, for example, offering advice to boroughs wishing to put in place a design review function.

- 3.4.7 The **scrutiny** of a proposed development's design should cover its layout, scale, height, density, land uses, materials, architectural treatment, detailing and landscaping. The design and access statement should explain the approach taken to these design issues (see also requirements of Policy D5 Inclusive design).
- 3.4 For **residential development** it is particularly important to scrutinise the qualitative aspects of the development design described in Policy D6 Housing quality and standards. The higher the density of a development the greater this scrutiny should be of the proposed built form, massing, site layout, external spaces, internal design and ongoing management. This is important because these elements of the development come under more pressure as the density increases. The housing minimum space standards set out in Policy D6 Housing quality and standards help ensure that as densities increase, quality of internal residential units is maintained.
- 3.4. **Higher density residential developments**²⁸ should demonstrate their on-going sustainability in terms of servicing, maintenance and management. Specifically, details should be provided of day-to-day servicing and deliveries, longer-term maintenance implications and the long-term affordability of running costs and service charges (by different types of occupiers).
- 3.4.10 It is important that **design quality is maintained throughout the development process** from the granting of planning permission to completion of a development. What happens to a design after planning consent can be instrumental to the success of a project and subsequent quality of a place. Changes to designs after the initial planning permission has been granted are

²⁷ Design Review Principles and Practice, The Design Council, et al, 2013, available at: https://www.designcouncil.org.uk/sites/default/files/asset/document/DC%20Cabe%20Design%20Review%2013_W_0.pdf

²⁸ Higher density residential developments are those with a density of at least 350 units per hectare

often allowable as minor amendments, or in the case of outline applications in the form of additional necessary detail. However, even minor changes can have a substantial effect on design quality, environmental quality and visual impact. The cumulative effect of amendments can often be significant and should be reviewed holistically. Sufficient design detail needs to be provided in approved drawings and other visual material, as well as in the wording of planning permissions to ensure clarity over what design has been approved, and to avoid future amendments and value engineering resulting in changes that would be detrimental to the design quality.

- 3.4.1 **Design codes** submitted with outline planning applications for large developments can be one such way to ensure that design quality is upheld throughout the planning process. Their main purpose is to describe the key design principles of a development proposal in a simple, concise and mainly graphical format, and they should draw on the proposal's layout, massing and heights to define the principal features that make up the overall design integrity of the scheme. Assessment of the design of large elements of a development, such as landscaping or building façades, should be undertaken as part of assessing the whole development and not deferred for consideration after planning permission has been granted.
- 3.4.12 Having a sufficient level of design information, including key construction details provided as part of the application, can help to ensure that the quality of design will be maintained if the permitted scheme is subject to subsequent minor amendments. However, it is also generally beneficial to the design quality of a completed development if the **architectural design team is involved in the development from start to finish**²⁹. Securing the design team's ongoing involvement can be achieved in a number of ways, such as through a condition of planning permission, as a design reviewer, or through an architect retention clause in a legal agreement.

²⁹

Shaping London: How can London deliver good growth?, Mayor's Design Advisory Group, 2016

