

MAYOR OF LONDON

London Plan Guidance

Industrial Land and Uses

Consultation Draft

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London Plan Policy

Policy E4 Land for industry, logistics and services to support London's economic function.

Policy E7 Industrial intensification, co-location and substitution.

Plan-making

This guidance informs the industrial evidence supporting plan-making. It provides clarity and consistency for assessing 'sufficient supply' of land and premises to meet industrial demand, which is required by Policy E4A.

This guidance also applies to plan-making by helping planning authorities to consider industrial intensification and co-location opportunities on designated industrial land 'in collaboration with the Mayor', as required in Policy E7B.

Planning application type and how the London Plan Guidance (LPG) will be applied

This guidance applies to:

- all industrial-use applications, to consider if the use could be optimised and/or intensified addressing Policy E7A, and applying suggested indicative building design advice
- applications for the co-location of industrial and non-industrial uses, as set out in Policy E7B
- non-industrial applications on designated industrial land, in the context of the need for a plan-led approach, which Policy E7B requires.

Who is this guidance for?

Planning authorities providing in terms of:

- plan-making:
 - clarity on industrial demand-and-supply evidence expectations to inform supply requirements
 - support for the consideration of industrial intensification and co-location opportunities across the whole borough area
 - advice for individual plan-led approaches to intensification and co-location
- planning applications:
 - support for the assessment and determination of industrial planning applications
 - setting out strategic expectations for the assessment and determination of industrial masterplans and schemes, and demonstrating opportunities for intensification and co-location. This is also for applicants, developers and consultants.

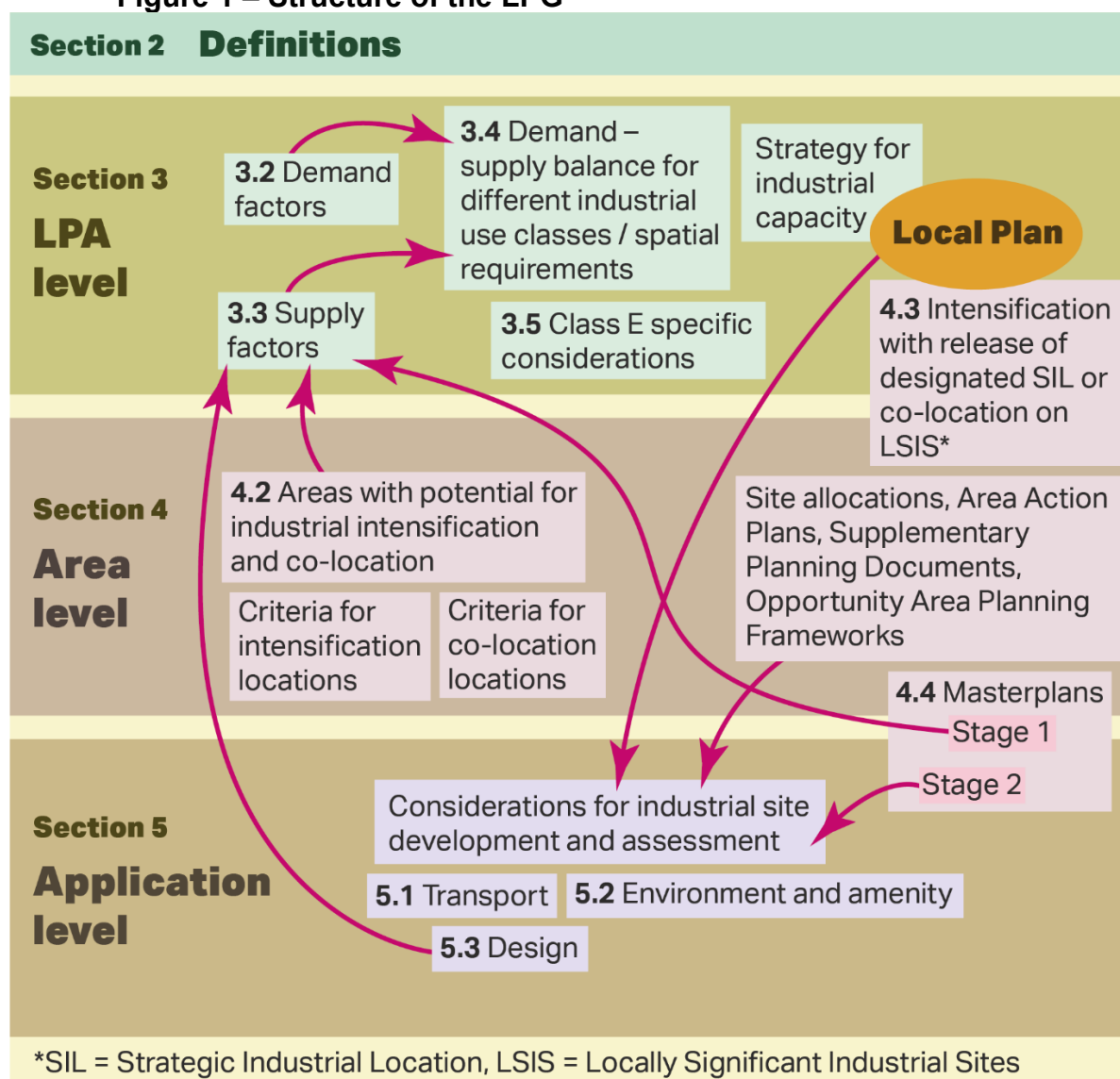
1 About this document

1.1 This draft LPG aims to support planning authorities and applicants by:

- providing clear definitions for terms relating to industrial development, enabling clarity and consistency
- providing clarity and consistency for assessing ‘sufficient supply’ to meet industrial demand, as required by London Plan Policy E4A (section 3)
- considering strategic industrial intensification and co-location opportunities on designated industrial land in collaboration with the Mayor as required in Policy E7B (section 4)
- setting out strategic guidelines for the development, assessment and determination of industrial schemes (section 5).

1.2 Figure 1, below, illustrates the structure of the LPG and how different sections interact.

Figure 1 – Structure of the LPG



2 Definitions

2.1 The following definitions, in alphabetical order, should be used when applying this guidance and the relevant London Plan policies:

- **Areas with potential for industrial intensification and co-location:**

Areas identified by the local planning authorities (LPAs) based on the criteria set out in section 4 of this LPG, as well as any local considerations. They will inform the industrial land supply (see section 3.3, below) and the local strategy for industrial capacity. LPAs should establish the potential capacity of these areas in more detail through a plan-led approach.

- **Industrial co-location:**

A development that integrates industrial uses with sensitive non-industrial uses (such as residential) within a single development area. Co-location can be side by side or stacked.

- **Industrial floorspace capacity:**

It is important to establish existing industrial floorspace capacity, as a starting point for calculating any uplift in industrial provision in an industrial development proposal. The following should be noted:

- Industrial floorspace capacity is commonly measured as gross internal area.¹ Mezzanine space is excluded, as its use depends on individual operator requirements.
- On a vacant industrial site, the most recent industrial use, prior to any demolition, should inform capacity calculations.
- On a site with little existing industrial floorspace, including on sites that have significant levels of open storage, the calculation of capacity is informed by the average plot ratio for a representative wider industrial area (such as the whole Strategic Industrial Location (SIL) or industrial area the site is located in); or wider geographies such as the borough or sub-region.² However, operational yard space requirements also need to be considered.
- When a building not in industrial use in a designated industrial area is brought back into industrial use, the gross internal area of the existing building should be used.

¹ The Royal Institute of Chartered Surveyors (RICS) defines this as the area of a building measured to the internal face of the perimeter walls at each floor level (Code of measuring practice, 6th edition, RICS, May 2015).

² [The LILS study](#) includes average plot coverage data for core industrial. Across London the average is 46 per cent. Up-to-date property and land statistics should also be considered.

Through development proposals, there may be potential to consider improvements in land-use efficiency, including: access routes; the use of operational yard space; or industrial intensification (see section 4.2, below).

- **Industrial intensification:**

This is development providing industrial floorspace that is greater than the existing industrial floorspace capacity.

- **Industrial land:**

This includes sites that are designated as industrial; non-designated but in industrial use; or vacant and last in industrial use. In London industrial land may be designated as either SIL or a Locally Significant Industrial Site (LSIS) (see London Plan Policies E5 and E6).

- **Industrial premises:**

These are units with industrial uses as defined above. They can be located within industrial or mixed-use developments.

- **Industrial uses:**

These are the uses listed in London Plan Policy E4A. However, due to the changes to the Use Class Order, industrial uses also include – alongside B2, B8, and specific Sui Generis uses - the following:

- research and development of products or processes from Class E(g)(ii)
- industrial process (which can be carried out in any residential area without causing detriment to the amenity of the area) from Class E(g)(iii).

A condition should be secured as part of such planning proposals, for this to count towards a LPA's long-term industrial capacity. Otherwise, existing Class E floorspace can be subject to loss to other non-industrial commercial uses (see in paragraph 3.3.2).

The [London Industrial Land Supply](#) (LILS) study differentiates between 'core' and 'wider' industrial uses.

- core uses include general and light industry, as well as warehousing and storage
- wider uses cover aggregates and waste management; other utilities; land for transport including depots, terminals and docks; wholesale markets; and hybrid industrial uses (see section 3.3 for details).

- **Operational yard space:**

This is external space³ for a range of industrial occupiers, for example in the logistics, aggregates and waste industries to enable their core business activities including storage and circulation space. Yard space is

³ Through careful design there can be scope to internalise yard space. Design would need to address potential impacts in terms of noise, dust and odour, as well as fire safety considerations.

separate from floorspace but forms part of the industrial capacity of a site. It is generally not shared between occupiers, although that depends on the frequency of its use.

- **Plot ratio:**

The ratio of the gross external area to the site area, with the site area expressed as one.⁴

- **Strategy for industrial capacity:**

This is a clear LPA-wide strategy for addressing and monitoring any forecasted supply gap for any type of local and strategic industrial demand, broken down by use class and building typologies. The strategy is reflected in the Local Plan policies and policy maps. It is not an additional stand-alone strategy.

3 Demand and supply

3.1 Introduction

3.1.1 As part of the evidence base to plan for business,⁵ LPAs should demonstrate through the Local Plan evidence how the needs for industrial land, industrial uses and premises will be met.

3.1.2 LPAs should demonstrate how the factors set out below have been addressed including by setting out the underlying local and strategic assumptions that informed the evidence and resulting local plan policies, designations and, where relevant, allocations. Given the wide range of different industrial sectors, LPAs should break down these factors by use class and, as much as possible, by individual uses. For example, data centres are generally accepted as Use Class B8, but have very different operational requirements and impacts to B8 logistics facilities.

3.1.3 The evidence required to support any co-location, substitution or net losses of designated industrial land or non-designated land in industrial use will be more detailed than the evidence required to retain existing industrial land and capacity.

3.2 Establishing industrial demand

3.2.1 Key sources of industrial demand that should be considered to inform plan-making include the following:

- **Local demand** from:

⁴ Definition by the Royal Institute of Chartered Surveyors with the Gross External Area defined as the area of a building measured externally at each floor level (Code of measuring practice, 6th edition, RICS, May 2015).

⁵ Planning Policy Guidance (PPG) on Plan Making, paragraph 41, reference ID: 61-041-20190315

- industrial uses that are growing such as distribution, open storage, self-storage, and dark kitchens/stores
- hybrid industrial growth sectors that often require industrial space for some of their activities such as film/TV production and life sciences
- potential industrial growth sectors such as green and clean tech including those related to the circular economy, as well as sustainable local manufacturing or production
- potential growth in local infrastructure facilities such as for waste processing, electricity distribution and other utilities
- any small and medium-sized enterprises that are particularly active/relevant/established locally; and culture and night-time uses that depend on industrial land.
- **A share of strategic demand** that serves a wider area for:
 - critical sub-regional infrastructure including large utility assets for aggregates, waste, energy, water management and data centres
 - services/production with a regional, national or international function, for example for activities that depend on specific locational agglomeration benefits of the capital, such as food processing and distribution, specialised life science labs, creative industries, wholesale markets, and essential services to support the function of the Central Activities Zone and Northern Isle of Dogs
 - freight and logistics hubs on strategic rail, water and road transport routes including associated infrastructure and amenities for workers.
- Any suppressed backlog demand that has not been met previously.

3.2.2 LPAs may find it helpful to complement this data and relevant published evidence⁶ with up-to-date intelligence from the real estate sector. This intelligence would cover property market trends, demand drivers and scenarios reflecting population and economic trends for various geographies and industrial occupiers. It would also note the use class and their specific space requirements. These could include:

- preferred locations
- operational yard space requirements
- size of units
- building design
- floor to ceiling heights
- loading and servicing requirements
- necessary ancillary uses such as office spaces.

⁶ This includes the GLA's 2017 [London Industrial Land Demand](#) study.

3.3 Identifying industrial supply

3.3.1 Key sources of industrial supply that should be considered to inform plan-making include:

- the potential to intensify (where appropriate – see section 4) and add industrial capacity on sites with old stock in need of modernisation and specifically, to meet the minimum Energy Performance Certificate rating of ‘B’ for all stock by 2030
- the potential to intensify (where appropriate – see section 4) and add industrial capacity to vacant and low-density land and premises
- redevelopment of surplus transport and utility sites for other industrial uses; in the case of transport, this is subject to the agreement of relevant authorities, and in accordance with London Plan Policy T3 and the [Sustainable Transport, Walking and Cycling](#) LPG
- in designated industrial areas, redevelopment or change of use from non-industrial to industrial
- redevelopment or retrofit of sites and areas in other employment uses, for example retail parks, secondary offices and other town centre uses, substituting non-industrial uses for industrial uses, where appropriate
- potential to accommodate light industrial demand or other appropriate industrial activities, such as maker spaces and micro-mobility hubs (focused on last-mile distribution in particular by cargo bikes or on foot), in designated town centres or as part of a town centre boundary review.

3.3.2 The following aspects should also be taken into account when identifying supply:

- The potential for further loss of supply, in the light of the historic trend of losses.⁷ Pipeline data based on individual planning applications and changes to designated industrial areas should also be taken into account, as well as identified and estimated losses through Permitted Development Rights or within Use Class E.
- Viability and deliverability constraints, considering evolving market conditions and emerging typologies such as industrial intensification, on new supply coming forward.
- Industrial developments should only count towards industrial floorspace capacity, if they broadly meet the indicative building design advice set out in section 5.3. This advice aims to ensure that the floorspace is fit for an industrial activity. However, only some representative industrial typologies are covered by the advice. There are other important industrial typologies that, for example require more operational yard space or only have few buildings.

⁷ As highlighted in the [LILS](#) study: 18 per cent between 2001 and 2020, and 3.5 per cent between 2015 and 2020.

3.3.3 Designated industrial areas are particularly important for the supply of industrial capacity due to their agglomeration benefits and the investment certainty they provide. Many have good access to the strategic road network, some to rail and/or waterways infrastructure. Appendix B of the [LILS](#) study assesses the character of all designated SIL areas in London. In addition, LPAs should consider assessing LSIS areas, including to identify those that have significant proportions of B8/B2 uses and are effectively operating as SIL.

3.3.4 Sources of information for industrial supply include:

- The [LILS](#) study, which serves as a useful starting point for the supply-side consideration. It also identifies past industrial land uses, a pipeline of potential gains and losses as well as data and analysis for designated industrial areas.
- The [Planning London Datahub](#), which enables updating the land-use data regularly/dynamically based on completions.
- Commercial real estate agents, which can provide up-to-date information on existing industrial employment and business sectors/operations, as well as industrial floorspace and property information and values.
- The GLA's [London Employment Sites Database 2021](#), which can also provide useful context.

3.3.5 LPAs can also use industrial land audits⁸ to improve the accuracy in understanding existing industrial employment and business profiles. They can help to provide detailed assessments of the existing conditions, assets, opportunities and constraints for specific industrial areas. They include a range of quantitative and qualitative information and associated mapping. The list below provides broad guidelines on what an industrial audit might include:⁹

- Wider context and connections:
 - links to strategic and local road networks
 - links to rail, waterways networks
 - links to public transport, cycling and walking routes, as well as Public Transport Access Levels (PTALs)
 - links to other SIL/LSIS, town centres, offices, retail parks, local services and social infrastructure.
- Land use:

⁸ Examples of good practice in industrial land auditing can be found at: GLA, [Industrial Audits](#)

⁹ This updates Chapter 5 of the [Practice Note – Industrial intensification and co-location through plan-led and masterplan approaches](#), November 2018

- existing total supply of industrial land and floorspace broken down by current designation (SIL, LSIS and non-designated), planning use class, and function or business sector
- existing operational space, including open storage
- occupancy of sites and premises and vacancy including cleared sites, land with derelict buildings, and land with vacant floorspace capable of being occupied, as well as reasons for long-term vacancy if present
- other private and public services – including, for example, utility and social infrastructure, creches, retail
- other non-ancillary uses, including residential and commercial.
- Employment:
 - employment capacity (actual on site or estimate based on employment densities)
 - employment profile (by economic sector).
- Existing site/building features:
 - building/site typologies (for example studio space, large industrial, bespoke industrial)
 - number of storeys, plot ratios and plot coverage, by site and by land use
 - age and condition of industrial floorspace
 - operational yard space
 - dedicated access/loading/parking/charging for HGVs/vans
 - dedicated access/parking/charging for staff/visitors for cyclists/cars as well as access for pedestrians
 - heritage assets
 - environmental impacts (for example visual, noise, odours, dust, frequency and nature of vehicle movements) and operational hours
 - viability data including existing rental values and yields
 - site ownership arrangements and boundaries.
- Qualitative assessment:
 - opportunities including potential for intensification/more efficient use of land and improvements to access etc.
 - site constraints including access, utilities, contamination, etc
 - road access limitations, congested roads
 - interviews with primary suppliers and customers.

3.4 Strategy for industrial capacity

- 3.4.1 LPAs should devise a positive strategy for industrial capacity reflected in the local policy approach and on policy maps, including demonstrating how any

supply shortfalls for any type of industrial land will be addressed and monitored. As part of the strategy, LPAs should do the following:

- Assess the demand and supply evidence, informed by the factors highlighted in sections 3.2 and 3.3.
- Plan how and where to meet separately identified disaggregated demand for different use classes, building typologies and operational requirements such as yard space. The policies map should clearly indicate: any SIL and LSIS areas proposed to be added, retained, released, substituted or intensified/co-located; and any site allocations including retail or town centre sites.
- Ensure that there is sufficient capacity for the identified industrial demand by use; and that appropriate protections are in place for their availability over the Local Plan period.
- Ensure that industrial sectors minimise their need for land and vehicle movements as much as possible; and that alternative sustainable approaches are considered and promoted.

3.4.2 Specifically in relation to designated industrial areas and site allocations, the strategy should do the following:

- Ensure that designated industrial land is suitable for the industrial operations that are set out in London Plan Policy E4A and need to be accommodated. Plans should support the quality, diversity and infrastructure provision of these designated areas including good road, rail and sustainable transport modes for employees and visitors; and (where possible) water access and proximity to key markets to minimise the number and distance of trips required. LPAs can consider, based on the Infrastructure Delivery Plans, using Community Infrastructure Levy or Section 106 funds to fund infrastructure that can support the delivery of important industrial sites.
- Consider exploring if there are other opportunities to strengthen non-designated industrial sites or areas to help meet demand and designate such areas if they have local importance for industrial and related functions.
- Use site allocations and area-based guidance to:
 - support industrial provision in specific areas; this could also involve strategic clustering of key sectors to facilitate synergies and collaboration – including, for example, sharing infrastructure, or transitioning to the decarbonisation of transport
 - transition non-industrial employment sites or areas such as town centre sites, retail parks or offices to appropriate industrial uses.

3.4.3 The strategy should also promote cooperation. LPAs should do the following:

- Collaborate with neighbouring authorities to address shared strategic demand – for example, within the Central Service Area (see London Plan Policy SD4M and paragraph 6.4.7).
 - Consider industrial substitution, as per London Plan Policy E7E, through a plan-led approach. Substitution could help to provide industrial capacity in more suitable locations (as identified in section 3.3) and potentially serve a strategic demand or free up land for other uses. Simpler land swaps based on development agreements (London Plan paragraph 6.7.3) could also help consolidate industrial areas and release sites for other uses.
- 3.4.4 The LPA’s strategy for industrial capacity should also inform policy considerations around the redevelopment of individual industrial sites, including the following aspects:
- Provision of the required level of adequate industrial capacity considering type, quantum, quality and phasing. This includes the following:
 - Generally providing at least the existing level of industrial floorspace, unless an alternative specific approach is set out in the Local Plan. However, it is not only the floorspace as such that should be considered, but also the type and quality of the provided space, including operational yard space.
 - Considering the characteristics and connectivity of the industrial area, as well as the relationship to character and amenity of local communities.
 - Ensuring that the needs of existing industrial businesses are accommodated, as appropriate; and that these businesses are engaged in this process.
 - Clearly setting out the need for industrial space to be suitably designed, taking account of the indicative building design advice in section 5.3.
 - Viability and operational needs, and the functioning of industrial areas, when proposing affordable workspace requirements for Class B2/B8 developments.
- 3.4.5 The Agent of Change principle set out in London Plan Policy D13 should be applied. This is to ensure the existing nuisance-generating uses are protected and prioritised, and do not have unreasonable restrictions placed on them through the introduction of new sensitive uses such as residential. The principle should also support the intensification of existing or emerging industrial areas.
- 3.4.6 Finally, through the strategy, LPAs should put in place monitoring arrangements to regularly and dynamically assess the disaggregated industrial capacity against forecast demand as part of the strategy for industrial capacity, using the Planning London Datahub and CoStar data; and/or estate agent intelligence. This is important in light of the uncertainties, for example around post-pandemic demand trends, the impact of Use Class E and the deliverability of new industrial intensification and co-location typologies (see section 4). When LPAs are planning to release or downgrade

designated industrial land, they should monitor particularly closely whether demand for different industrial uses can still be met. At the strategic level, the London Plan Annual Monitoring Report identifies any overall net loss of industrial and warehousing floorspace in designated industrial locations across London (based on a rolling average).

3.5 Approach to Use Class E

- 3.5.1 Use Class E was introduced through changes to the Town and Country Planning (Use Classes) Order during the final steps in the process to publish the London Plan in 2021. Therefore, the Plan's approach does not explicitly align with current Class E requirements. This section provides policy guidance to ensure a practical approach in the context of industrial uses.
- 3.5.2 Some industrial operations can take place in Use Class E premises, where these are designed to enable such uses. Most Class E floorspace is located outside designated industrial areas. Supporting industrial Class E floorspace could particularly help to revitalise town centres.
- 3.5.3 Conversely, Class E uses can change, without planning permission, between a wide range of commercial, business and service uses. They can also change to residential uses through Permitted Development Rights. This could undermine a sufficient supply of industrial capacity; and impact upon the function of the wider industrial area, should residential development be introduced.
- 3.5.4 LPAs should recognise these opportunities and challenges of Class E; and take a clear approach to its potential effect on industrial capacity when preparing the strategy for industrial capacity. As part of the strategy for industrial capacity, LPAs should do the following:
- Estimate the demand for Class E industrial uses and related typologies, building on the different types of demand set out in section 3.2. Suitable light industrial premises can, for example, provide space for emerging industrial-related sectors, such as creative industry production and maker spaces.
 - Estimate the existing and potential supply baseline for Class E industrial uses and related typologies, building on the different types of supply established through section 3.3.
 - Estimate how much Class E supply they can count towards meeting industrial demand, with the support of policies seeking to protect and retain this capacity over the long term by considering whether the Local Plan will:
 - require the replacement of Class E floorspace with Class E floorspace designed to cater for the full breadth of Class E uses including Class E(g)(ii) and E(g)(iii) uses (see section 5.3 for design advice)
 - seek to secure, where possible (such as by Planning Conditions), that certain categories of Class E such as Class E(g)(iii) or E(g)(ii) would only be acceptable where it is ancillary to the main industrial use.

- seek to secure, where possible (such as by Planning Conditions), that Permitted Development Rights MA are removed by introducing Article 4 Directions
 - try to protect industrial use, potentially through site allocations, especially where the building, yard space and access lends itself to an industrial use.
 - Estimate how much of the existing industrial Class E supply baseline needs to be discounted as industrial-specific supply, for example, based on historic losses. The impacts of this on the wider industrial areas should also identify and consider the risk of further erosion of industrial sites.
 - Use appropriate town centre locations to address any identified supply shortfall. LPAs should promote and facilitate specifications for the provision of additional Class E(g)(iii) or E(g)(ii) uses in town centres, including suitable servicing locations at the kerbside, where off-street servicing cannot be accommodated. For Class E(g)(iii) or E(g)(ii) uses identified to contribute to industrial capacity, conditions could be used to secure the retention of the industrial use over time. Certain small-scale repair or production activities might, for example, be suitable and benefit from the footfall and active customer interface. Micro distribution hubs for cargo bikes might also be suitable, especially where there is access away from busy pedestrian routes.
- 3.5.5 The above will help to reduce the pressure on designated industrial areas and the Class B2/B8 uses that depend on them. LPAs should not undermine the function and character of designated industrial areas and the separation from sensitive uses. With the focus of these designated areas on Class B2/B8 uses, Classes E(g)(iii) and E(g)(ii) could still help play a role, for example in improving the public realm through uses with active street frontages such as creative industry production or maker spaces.

4 Intensification and co-location

4.1 Introduction

- 4.1.1 This section focuses specifically on industrial intensification and co-location considerations.
- 4.1.2 Intensification and co-location aim to improve land use efficiency; and can, in the right location, support a LPA's strategy for industrial capacity. This can help to meet additional demand and/or free up land and development capacity for non-industrial uses. A plan-led approach or masterplanning process should be undertaken where in SIL industrial intensification is used to compensate the loss of industrial to sensitive non-industrial uses (such as

residential); or where in LSIS industrial co-location with sensitive non-industrial uses is introduced¹⁰ (see further details in sections 4.3 and 4.4).

4.2 Criteria-based screening guidelines

- 4.2.1 Appendix C of the [LILS](#) study provides a method to identify a theoretical industrial capacity uplift of an area. This can inform early considerations across a wider area, but LPAs should consider industrial intensification and co-location carefully to avoid the development of sub-optimal industrial space, and compromising the functions of existing industrial areas. Intensification and co-location will not be suitable for every industrial area or site, and there is little value in LPAs calculating a theoretical industrial capacity across a Local Plan area without recognising local opportunities and constraints. Market conditions and addressing demand for all industrial typologies are also relevant considerations. LPAs should explore, screen and map, at the plan-making stage, areas with potential for industrial intensification or co-location, where this could realistically be considered to help meet the identified industrial demand (see section 3.4).
- 4.2.2 LPAs should protect important SIL-dependent industrial and infrastructure functions such as logistics and aggregates/waste management uses. These uses are generally less suitable for intensification, and even less for co-location, which is not permitted in SIL.
- 4.2.3 When preparing the Local Plan, LPAs should explore and consider **industrial intensification opportunities** in locations where the following criteria apply. These criteria should help LPAs to justify areas identified with the potential for intensification; and ensure that intensified development can accommodate Class B2/B8 uses, as well as light industrial uses.
- Ease of access to the Strategic Road Network, and ideally rail or water freight facilities.
 - Adequate distance to existing sensitive uses (in particular residential) to enable 24-hour industrial operations or vehicle movements en route to the Strategic Road Network.
 - Potential to accommodate large building sizes in terms of a minimum site area that allows for secure off-street loading and manoeuvring, potentially access ramps and other important industrial occupier requirements; see also section 5.3. LPAs should also consider potential building heights that would allow for industrial stacking. The GLA's [Characterisation and Growth Strategy LPG](#) (section 4.4) provides guidance to determine where tall buildings may be appropriate.
 - Redevelopment potential of relatively old industrial stock in need of modernisation, including to meet minimum energy efficiency standards.
 - The type and mix of existing industrial businesses that could operate effectively in an intensified setting – particularly where their retention is

¹⁰ See London Plan Policy E7B

important to meet strategic and local industrial and infrastructure functions.

- Favourable local property market conditions and occupier demand for specific industrial typologies/uses, as well as land ownership structures that would support the viability, deliverability and take-up of intensified industrial premises.

4.2.4 Factors that may limit the opportunity for intensification include:

- the presence of significant logistics operations, utilities facilities and infrastructure, or other strategic businesses that have significant investment in their operations, meaning relocation would not be viable
- restricted access, where access is through, or in proximity to, residential areas or other sensitive uses, or where operations would have to be restricted – for example, in terms of operating hours
- other critical infrastructure capacity constraints that cannot be overcome within an appropriate timescale.

4.2.5 When preparing the Local Plan, LPAs should explore and consider **industrial co-location opportunities** in locations where the following criteria apply. These criteria will help LPAs to justify identified areas with potential for co-location.

- Demand for Class B2/B8 uses can be fully met elsewhere (see section 3.4).
- There is scope to improve transition on the edge of industrial to adjacent sensitive non-industrial areas, such as residential, including public realm and street frontages.
- Good sustainable transport connectivity, with clear segregation of access routes for industrial and sensitive non-industrial uses to ensure safety at all times (particularly for pedestrians and cyclists), and a high-quality local environment and public realm.
- Potential to accommodate large building sizes in terms of minimum site area that allows for secure off-street loading and manoeuvring, and sufficient separation/buffer/mitigation between the industrial and the sensitive non-industrial use so that the 24-hour operation of the industrial uses is not compromised. LPAs should also consider potential building heights that would not significantly limit stacking on top of industrial uses. The GLA's [Characterisation and Growth Strategy LPG](#) (section 4.4) provides guidance to determine where tall buildings may be appropriate.
- The type and mix of existing industrial businesses could operate effectively in co-location setting, particularly where their retention is important to meet local industrial and infrastructure functions.
- Favourable local property market conditions and occupier demand for specific industrial typologies/uses, as well as land ownership structures that would support viability, deliverability and take-up of co-located industrial premises.

4.2.6 Co-location should not be considered in locations where:

- Sensitive non-industrial uses such as residential are introduced into SIL/LSIS without a masterplan or a Development Plan Document review process. Only the latter can amend the SIL boundary removing sites from SIL.
- There is a risk of erosion of a clear line between industrial and sensitive non-industrial areas such as residential.
- Isolated sensitive non-industrial uses are introduced within an industrial area which could compromise the effective operation of a wide range of industrial uses in the area as a whole, for example in terms of restricting access routes or operating hours.

4.3 Plan-led approach

4.3.1 For areas identified with potential for industrial intensification and co-location, in line with London Plan Policies E5B(3), E7B and E7D, LPAs should do the following:

- Follow a plan-led approach in collaboration with the GLA and Transport for London (TfL); and carry out dedicated engagement with local businesses, landowners, industrial agents, community groups and other relevant stakeholders to test the assumptions behind the redevelopment proposals.
- Consider the impacts on the transport network, taking site connectivity and access into account. It will be important to carry out early engagement with TfL.
- Ensure and demonstrate that the designated area that remains, following planned release or co-location, is sufficient to meet industrial needs in terms of both overall capacity and type of use; and ensure this is delivered, protected and monitored.
- Focus any planning for sensitive non-industrial uses, such as residential, in specific locations, without undermining or constraining the effective functioning and servicing of the designated industrial area for a wide range of industrial uses. Vague release prospects may cause uncertainty; negatively impact industrial investment or long-term leases for businesses; or inflate land values.
- Set out urban design and mitigation measures any residential and/or other non-industrial uses should address in order to protect the long-term 24-hour operations of the industrial uses.
- Apply planning conditions to individual planning applications to ensure the new industrial space helps meet identified demand.

- Phase development to ensure that the industrial space is completed before any residential units¹¹ or other non-industrial floorspace are occupied.
- 4.3.2 Development viability should also be considered. This is not a reason to compromise the industrial provision; but it presents challenges, especially for large stacked industrial schemes. Ramps and greater floor loadings, in particular, represent significant additional cost factors. High upper-level floor loadings allow a greater range of potential occupiers – but result in significant structural requirements that reduce occupier flexibility below. Similarly, stacked small industrial units tend to incur higher built costs than medium-size schemes, due to their greater structural and servicing requirements. In co-location schemes build costs tend to be lower for separate residential and industrial buildings alongside each other due to reduced mitigation measures and structural and facade requirements. Market conditions will fluctuate over the lifetime of a plan period. LPAs and developers should analyse up-to-date rents and build costs to ensure the prospects for intensification and co-location are considered realistically – either over the Local Plan period or delivery period of the Masterplan (see section 4.4).
- 4.3.3 Local Plans including site allocations should should be developed to plan for intensification and co-location. The following planning documents could also be used:
- Area Action Plans
 - Supplementary Planning Documents (unsuitable for changes to designation boundaries or site allocations)
 - Opportunity Area Planning Frameworks (unsuitable for changes to designation boundaries or site allocations).

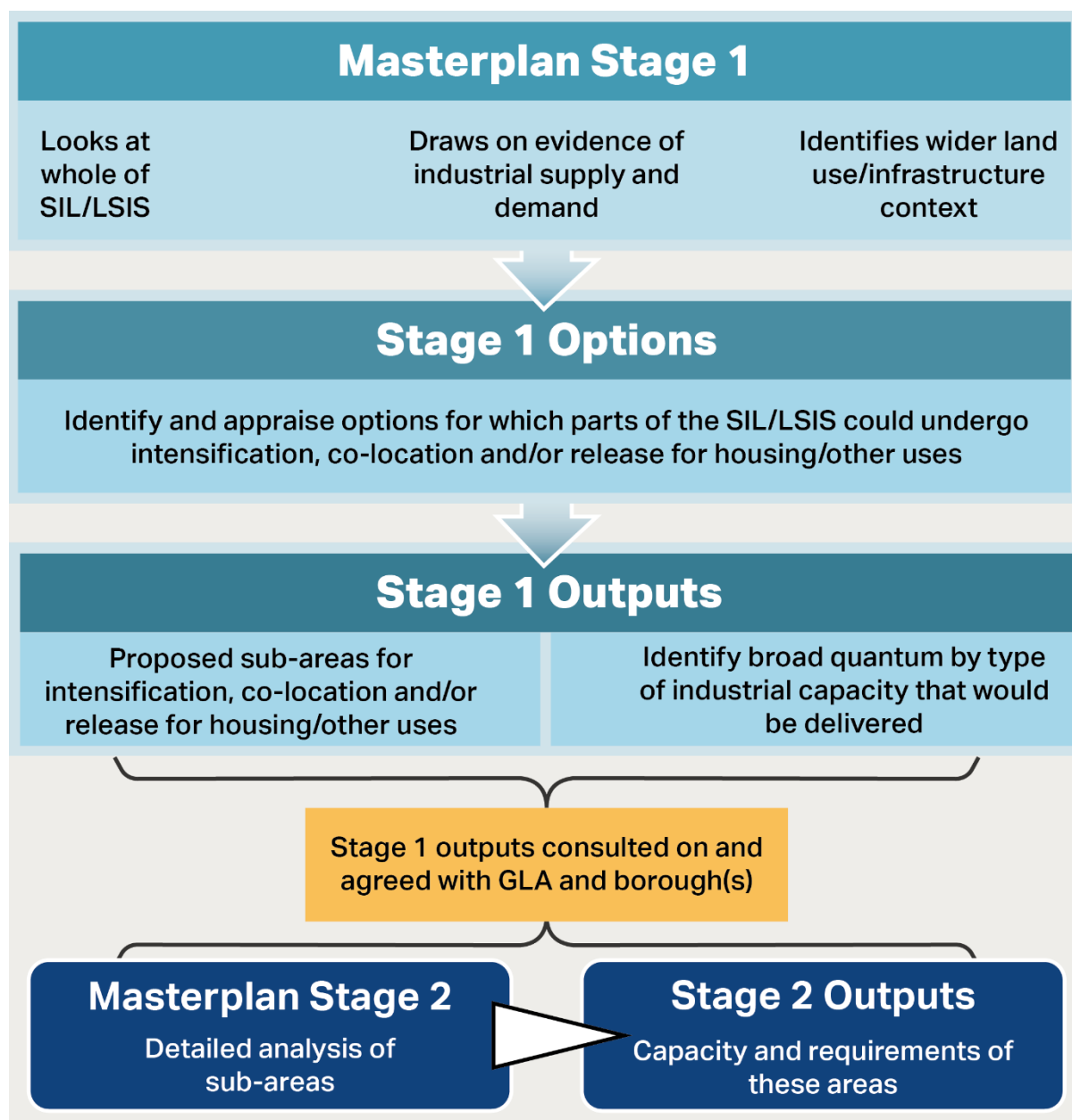
4.4 Masterplan approach

- 4.4.1 In advance of a Development Plan Document, LPAs or developers can also develop a masterplan. For masterplans, a two-stage process should be undertaken.¹² This is set out in Figure 2, below. Stage 1 should identify where and how intensification or co-location can support the delivery of residential or other non-industrial uses. Stage 1 can also serve as Local Plan evidence, and inform industrial capacity considerations. Stage 1 and 2 Masterplans outputs should both be submitted to the GLA for formal consultation and agreement on compliance with London Plan Policy E7.

¹¹ See London Plan Policy E7D2

¹² This updates Chapter 4 of the [Practice Note – Industrial intensification and co-location through plan-led and masterplan approaches](#), November 2018

Figure 2 – Industrial masterplan process



4.4.2 **Stage 1:** In detail, this stage of the masterplan should do the following:

- Include a contextual map of the whole SIL/LSIS, to inform the consultation and agreement on the masterplan boundary with the GLA and, where relevant, neighbouring boroughs. This map should show:
 - relevant sub-areas where development might be proposed
 - any existing or potential industrial sites or masterplan proposals in proximity to the SIL/LSIS
 - functional linkages within the wider borough and with neighbouring boroughs where the wider SIL/LSIS is close to a borough boundary
- Reflect the wider planning policy context.
- Draw upon strategic industrial land demand and supply evidence, as well as additional local evidence (see also section 3).
- Identify and map any of the following, whether they are existing or proposed:
 - SIL, LSIS and other employment designations, including town centres, located in the wider area
 - other designations covering, for example, waste and minerals, hazardous area classifications, other environmental aspects or conservation
 - land use and developments in the wider area, including sensitive uses such as residential
 - links to and broad capacity of the strategic road network, the freight rail and waterways network, and related intermodal facilities – including railheads and wharves
 - links to and broad capacity of the public transport network and resulting PTALs
 - connection to and broad capacity of the utilities infrastructure.
- Identify and appraise a range of options for intensifying and consolidating the SIL/LSIS, also considering:
 - the broad scope for assembling larger sites or areas that would be more suitable for intensification or co-location, including the potential to accommodate Class B2 and B8 uses
 - some broad viability testing over time – also assessing if cross-subsidy across a larger area and different uses and/or public-sector support would be required
 - that the remaining designated area, following planned release or co-location, is sufficient to meet industrial needs in terms of both overall capacity and type; and ensuring this is delivered and protected
 - focus of planning for sensitive non-industrial uses, such as residential, on specific locations, to avoid undermining or constraining the effective functioning and servicing of the designated area for a wide range of industrial uses.

4.4.3 The outputs should include a broad quantum of industrial floorspace capacity and associated yard space that can be delivered including intensification and/or co-location proposals across sites in the selected sub-area(s), broken down by the industrial use categories in London Plan Policy E4A, for consultation and agreement with the GLA and the relevant borough(s). This should form the basis for Masterplan Stage 2.

4.4.4 **Stage 2:** For the identified sub-areas at this stage, the masterplan should:

- provide more detailed maps of development proposals
- set out how the proposals are consistent with the policy context including site allocations, any other relevant planning documents and masterplans
- demonstrate how the evidence has informed the use classes, typologies, unit size and other aspects of development proposals
- identify and map existing and proposed land use and infrastructure in more detail, including:
 - walking and cycling routes and infrastructure
 - nearby local services and social infrastructure
 - links to green infrastructure
- identify land ownerships, and specific opportunities for land assembly – given that large plots can be particularly valuable for intensification and co-location
- undertake and document engagement with landowners, businesses, any existing partnerships, business alliances or Business Improvement Districts
- establish whether existing businesses are intending to stay, grow and invest in the area; identify their operational and servicing requirements; and ascertain their future/functions can be secured through the masterplan
- identify and appraise various options for the development involving detailed testing of deliverability and viability over time – in particular, for co-location schemes, public realm improvements to ensure an adequate residential environment – and identify how affordable housing requirements may impact viability
- undertake an industrial land audit (see section 3.3), where no up-to-date information is available on many of the points above.

4.4.5 The outputs should:

- include a spatial analysis and map of the sites in the sub-areas that are capable of being intensified for industrial-only uses;¹³ any sites for industrial co-location; and the sites for residential or other non-industrial development

¹³ Including the range of industrial uses set out in London Plan Policy E4A.

- include the development capacity of relevant sites in the sub-areas to accommodate development, considering:
 - details of the assumed building typologies and number of storeys (see also section 5.3)
 - the quantum of industrial floorspace that could be delivered, broken down by the industrial use categories in London Plan Policy E4A
 - the quantum of yard space for access, servicing and operational requirements
 - the broad quantum of appropriate space for public realm/landscaping
 - the broad quantum of residential units and non-industrial floorspace, where appropriate
- demonstrate access and servicing capacity for existing and new industrial businesses, with priority by sustainable modes; and mitigation of their potential impacts on the strategic and local road networks
- identify access to public transport and local services, including proposed walking and cycling routes and links to public transport nodes, town centres, local services, and social and green infrastructure
- demonstrate capacity for other infrastructure, including utilities, to support the masterplan proposals
- demonstrate how new development will mitigate its potential impacts (agent of change)
- set out place-making through the development proposals being integrated into the surrounding area, and meeting the criteria in London Plan Policy E7E
- demonstrate viability and deliverability – identifying who is responsible for the nature of any development agreements (if required), and the breakdown of the affordable housing provision and potential funding arrangements,¹⁴ if residential development is proposed as part of the masterplan
- indicate phasing with the industrial development being completed in advance of the occupation of any residential component¹⁵ and any decanting, taking into account the availability and suitability of specifically identified stock for relocated businesses in alternative locations
- demonstrate high environmental and equalities standards, also taking into account relevant aspects included in section 5.

4.4.6 Where suitable, LPAs can use Planning Performance Agreements to support joint working between developers, LPAs and the GLA, covering the development of the masterplanning approach and resulting planning applications.

¹⁴ For context, see draft [Affordable housing](#) and [Development viability](#) LPGs.

¹⁵ See London Plan Policy E7D2

5 Development proposals

5.1 Transport

5.1.1 Developers, applicants and LPAs should apply the following industrial-specific transport considerations early in the site development and assessment process for all industrial proposals. Aspects related to **movement and access** arrangements include the following:

- Dedicated, legible, safe and inclusive access routes and entrances for different purposes are essential.
- Safe access for night workers is particularly important.
- Operational and servicing access should be separate from staff and visitor access, with the latter two minimised.
- There should also be prominent, segregated, convenient and adequately lit access routes and points for people walking and cycling, suitable for different abilities, with appropriately designed doors and ramps with minimal gradient.
- For industrial businesses that require dedicated onsite loading facilities, it is important that there is sufficient space for vans/HGVs manoeuvring safely off the public highway, and away from the routes for people walking and cycling within the site.
- Opportunities to consolidate access and service roads with adjacent businesses should be explored.
- Road Safety Audits can help to identify and address any potential highway concerns.

5.1.2 Aspects related to **trip generation** include the following:

- Developers should work with operator/occupiers to maximise measures to reduce the demand for operational space and minimise movement of vehicles. This should include prioritising active travel; adopting the Healthy Streets approach; and applying the [Sustainable Transport, Walking and Cycling guidance LPG](#). It should also include measures to minimise the need for staff to travel during a shift – for example, by providing a range of services for staff such as a canteen or leisure facilities onsite.
- Where required, Active Travel Zone assessments should be undertaken in accordance with TfL guidance.¹⁶
- Public transport connectivity and capacity should be taken into account, including the need for mitigation of impacts.

¹⁶ This includes guidance on [Transport Assessments](#) and [Active Travel Zone Assessments](#).

- Active travel should be supported by secure and covered cycle parking, including for cargo and non-standard bikes, in line with London Plan Policy T5.
- Staff car parking should not be sized to fully accommodate shift changeovers (two shifts). Carpooling facilities and staff-shuttle services provided by the site operator should be encouraged, to minimise staff/visitor parking in locations that are less well connected.
- Operational parking should be minimised and shared between industrial users, as far as possible.
- Sufficient and safely located electric vehicle charging points for business fleets should support the move towards electric vehicles, where vehicles are necessary.
- Dedicated space for cargo bikes and, where possible, shared consolidation for deliveries and servicing should also be considered to reduce vehicle movements, in line with London Plan Policy T7.

5.2 Environment and amenity

5.2.1 Developers, applicants and LPAs should apply the following industrial-specific environmental and amenity considerations early in the site development and assessment process for all industrial proposals.

- Effective energy and water supply/efficiency measures, as well as the thermal efficiency of the fabric of industrial buildings and natural ventilation,¹⁷ should be maximised. If/where heating is required, there should preferably be a connection to heat pumps or exchangers.
- Some industrial operations may generate waste heat that developers should use.
- Opportunities to address circular economy principles through the design of the frame and materials should allow for its deconstruction and the reuse of building elements.¹⁸ Consideration should also be given to incorporating recycled building materials.
- Urban greening and water spaces with benefits to biodiversity, sustainable urban drainage, cooling and staff/visitor wellbeing¹⁹ should be incorporated as part of a wider green/blue network.
- Large roof surfaces provide particular opportunities for solar panels; rainwater harvesting or sustainable drainage; green roofs; and the

¹⁷ The Mayor's [Energy Planning Guidance](#) sets out what is expected of applicants in terms of energy efficiency, carbon reduction and touches on related issues such as overheating.

¹⁸ The Mayor's [Circular Economy Statement LPG](#) puts in place a clear hierarchy, prioritising the retention of existing structures above demolition.

¹⁹ The Mayor's [Urban Greening Factor LPG](#) provides advice on a range of greening measures.

provision of roof terraces (see also the Roof Space design aspect at section 5.3).

- Well-designed and landscaped circulation, meeting spaces and public realm maximising sunlight, as well as sports facilities supporting healthy lifestyles, are also important for the sustainability and attractiveness of industrial businesses.
- Given that many industrial businesses run 24-hour operations, they should provide adequate resting facilities, including toilets. At night, personal safety and security are particularly important; building design should provide natural surveillance and appropriate lighting.

5.3 Design

- 5.3.1 Developers, applicants and LPAs should apply the industrial-specific design considerations early in the site development and assessment process for all industrial proposals.
- 5.3.2 Where necessary, effective building and yard space layout can help to mitigate impacts of building scale, massing or industrial operations. In particular, where buildings border sensitive non-industrial uses (such as residential), massing, boundary treatments, frontages, public realm and safe/inclusive access arrangements should be carefully designed and considered to respond positively to the surrounding context, whilst meeting operational needs.
- 5.3.3 Industrial development should broadly meet the indicative building design advice of this section, in order to count towards industrial floorspace capacity. However, the advice should not replace scheme-specific technical and professional advice from industrial specialists. It should raise awareness, in particular with local planners and applicants, who may not deal with industrial schemes on a daily basis.
- 5.3.4 Only some representative industrial typologies are covered. There are other important industrial typologies, that for example require more operational yard space or only have few buildings, and therefore some of the design advice will not be relevant. Those representative model typologies the advice is applied to are as follows:
- **ST1** – small standalone single-storey industrial units, which are suitable for any small-scale industrial use.
 - **ST2** – large standalone single-storey industrial units, which are suitable for any large-scale industrial use.
 - **IN1** – industrial intensification by stacking smaller units on top of small units. The typology is suitable for any small-scale industrial uses, but some Class B8 and B2 uses with frequent vehicular movements are less likely on upper floors.
 - **IN2** – Industrial intensification by stacking smaller units on top of larger units. The units on the ground floor are suitable for large-scale. The units

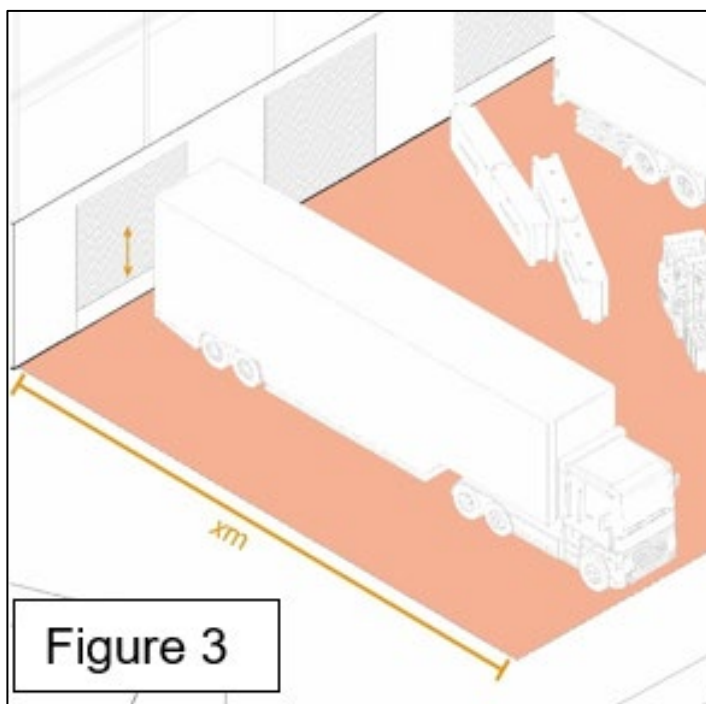
on the upper floors are suitable for small-scale industrial use including Class B8 and B2 uses, although some Class B2 uses with significant detrimental amenity impacts are less likely.

- **IN3** – Industrial intensification by stacking large industrial uses. This is suitable for Class B8 and B2 uses on all floors.
- **CO1** – Industrial co-location by developing small industrial units alongside residential. This is suitable for any small-scale industrial uses, but some Class B8 and B2 uses with frequent vehicular access and/or some Class B2 uses with significant amenity impacts are less likely.
- **CO2** – Industrial co-location by stacking residential on top of workshop or studio units. This is suitable for small-scale Class E(g)(iii) or E(g)(ii) industrial uses, as well as small-scale Class B8 uses, without detrimental amenity impacts or frequent vehicular movements.
- **CO3** – Industrial co-location by stacking residential on top of medium industrial units. This is suitable for medium-scale Class E(g)(iii) or E(g)(ii) industrial uses as well as Class B8 uses without detrimental amenity impacts or frequent vehicular movements.

5.3.5 The indicative design advice covers various aspects of industrial buildings, also illustrated in figures 3 to 11, below. Different advice applies to different model typologies. All figures are indicative minima unless they are ranges, providing broad illustrative advice to support local planners and applicants, who are less familiar with dimensions and arrangements that are common for industrial typologies. This design advice builds on previous studies;²⁰ and has also been informed by input from industry representatives and London boroughs.

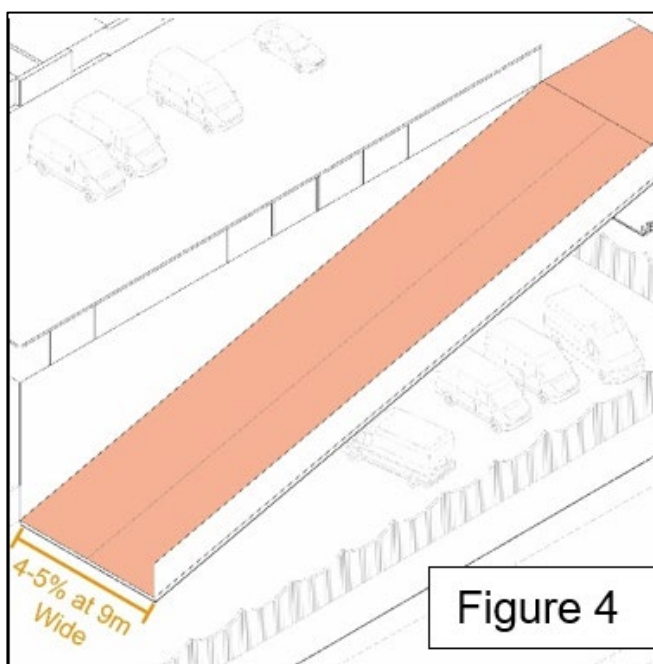
²⁰ GLA's 2017 [Industrial Intensification Primer](#) and 2018 [Industrial Intensification and Co-location Study](#)

Yard space and loading



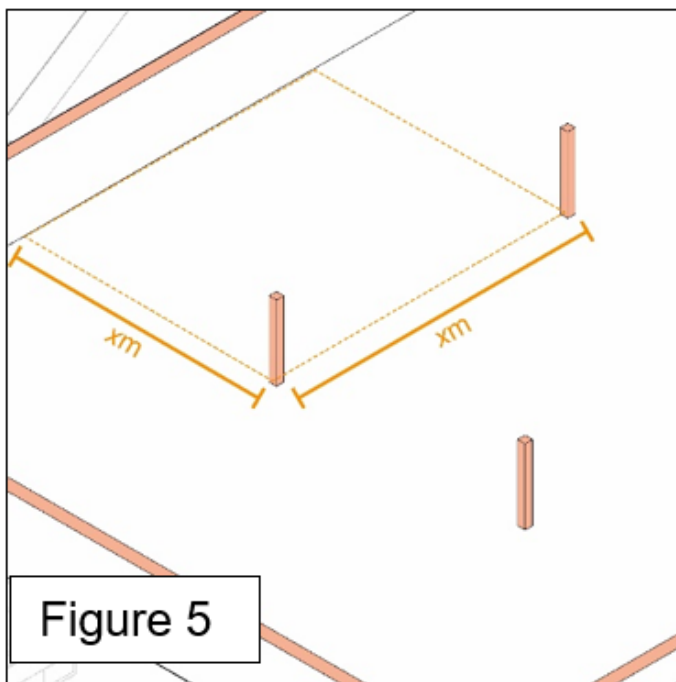
- 16m depth for van and occasional shared HGV access applies to model typologies ST1, IN1, CO1 and CO2
- 27m depth for frequent HGV access, with dock levellers for units larger than 2,300m², applies to model typologies ST2, IN2, IN3 and CO3

Ramped access



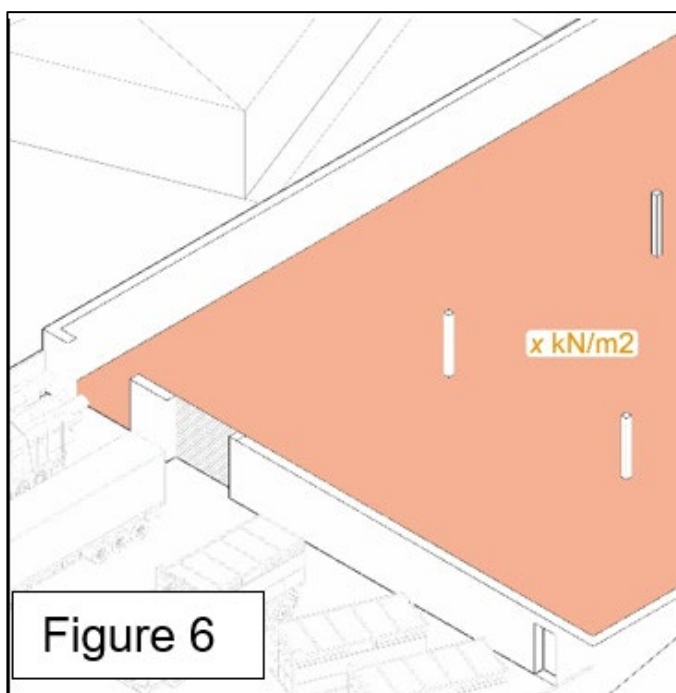
Two-way ramp at 4-5 per cent, 9m wide, with straight ramp being more effective on small sites, and spiral ramp more effective on large sites, applies to model typologies IN2 and IN3 only

Structural grid



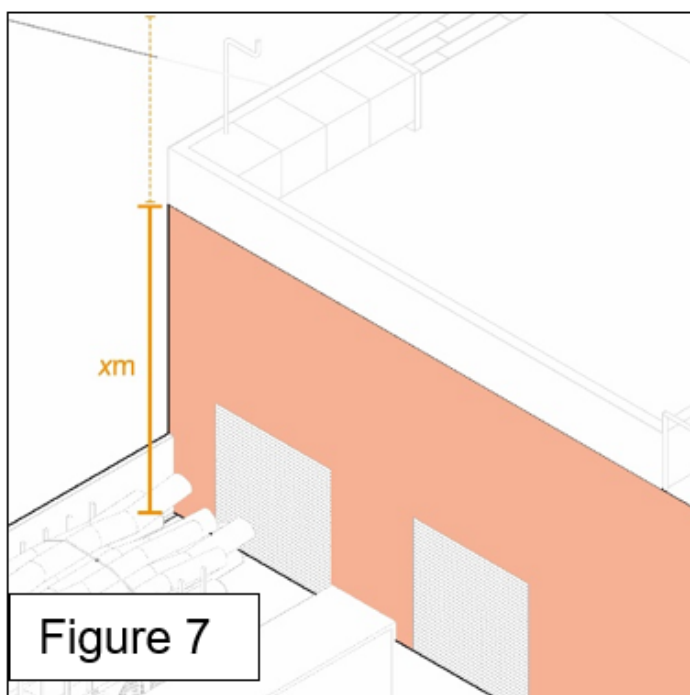
- 10-15m clear span applies to model typologies ST1, IN1 and IN2 as well as the industrial units of typologies CO1 and CO2
- 16m clear span keeping interruptions to the larger industrial unit to a minimum. This applies to model typologies ST2 and IN3, as well as the industrial units of typology CO3.
- 8m clear span for the residential units applies to all co-location typologies.

Slab loadings



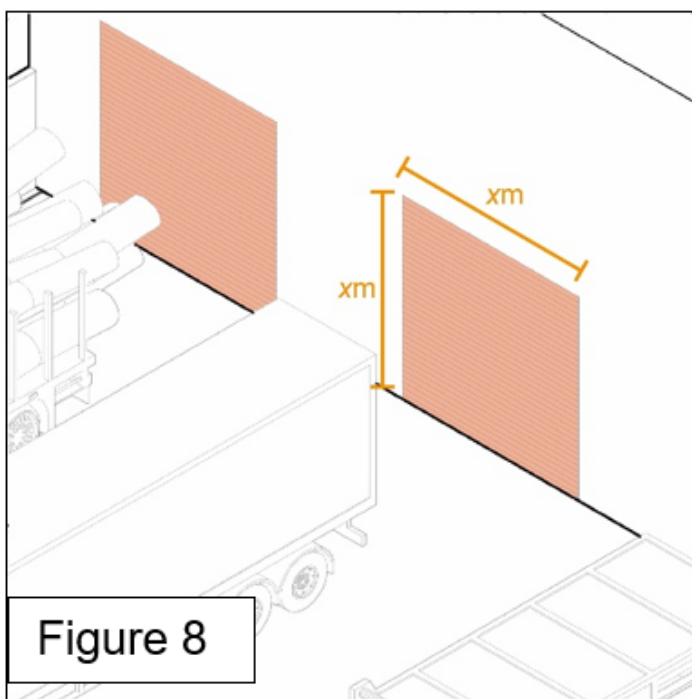
- 2.5-25 kilonewton (kN) floor loading /m² applies to model typologies ST1 and IN1, as well as the industrial units of typologies CO1, CO2 and CO3
- 35kN/m² applies to model typology ST2
- 35-50kN/m² for ground floor and 15-25kN/m² for upper floors applies to model typology IN2
- 35-50kN/m², or 50kN/m² for floor-to-ceiling heights larger than 8m, applies to model typology IN3
- 2.5-7.5kN/m² for residential units applies to all co-location typologies

Floor-to-ceiling height



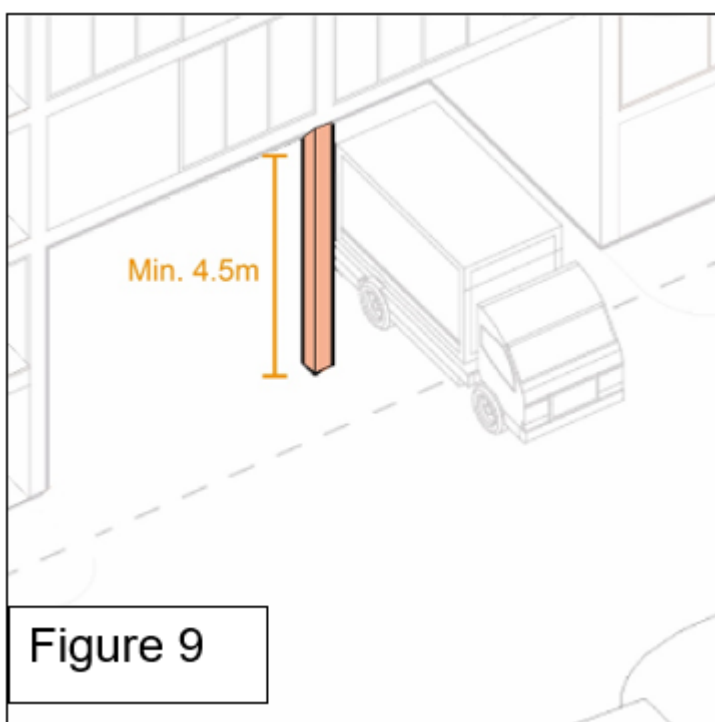
- 4m for industrial units applies to CO2
- 4.5-8m applies to model typologies ST1, IN1, CO1
- 6m for industrial units applies to CO3
- 8m applies to model typology ST2
- 6-10m for ground floor and 4.5-8m for upper floors applies to model typology IN2
- 10-12m, including 2m structural zone between floors, applies to model typology IN3
- 3m for residential units applies to all co-location typologies

Unit entry opening dimension



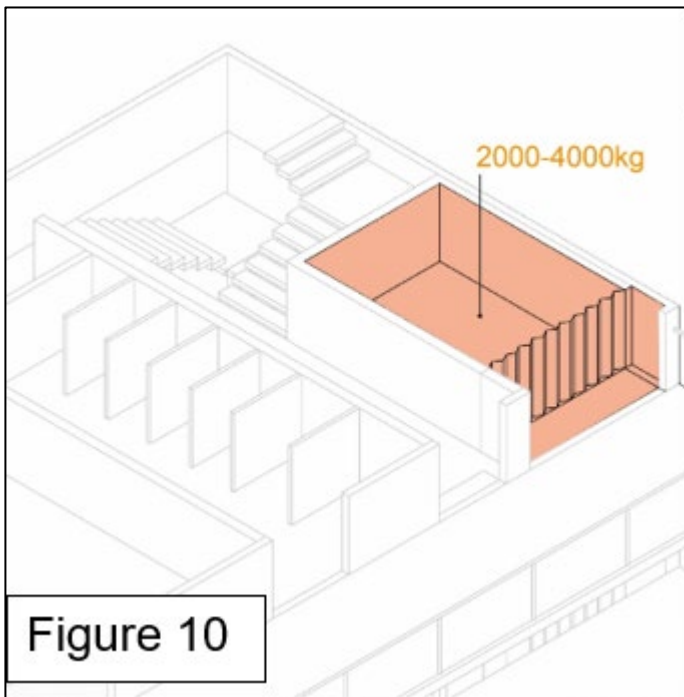
- 2.4-3m width and 3.7m height applies to model typologies ST1, ST2 and IN1, as well as the industrial units of CO1 and CO2
- 2.4-3m width and 4m height applies to model typologies IN2 and IN3, as well as the industrial units of CO3
- 3m height for residential units applies to all co-location typologies

Opening height from ramp or into internal yards



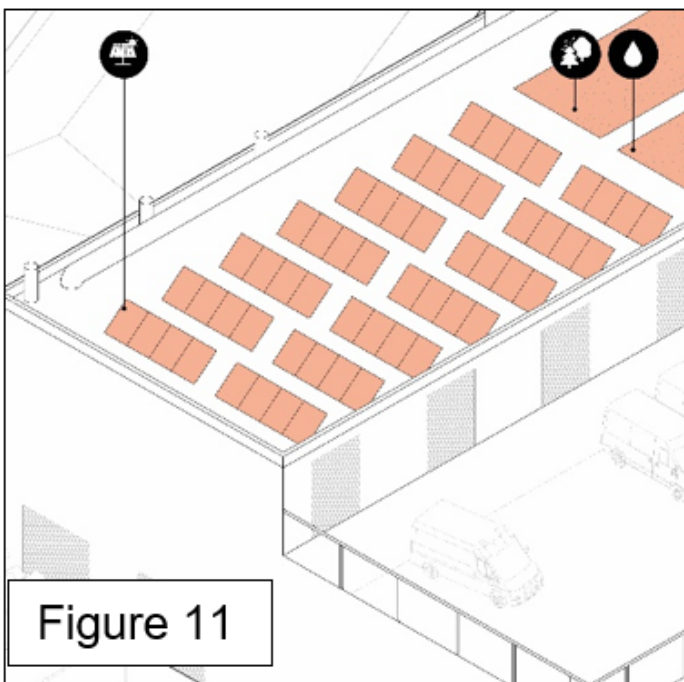
- 4.5m opening height from ramp applies to model typologies IN2 and IN3
- 4.5m opening height into internal yard applies to model typologies CO2 and CO3

Goods lift



Lifts with 2000-4000kg loading for all stacked model typologies. The number of lifts required depends on the number of units, floors and floorspace served.

Roof space



Potential use of space for solar panels, recreation, drainage and rainwater harvesting, and greening/planting (need to ensure sufficient floor loading) and heat pumps (where heating required). This applies to all model typologies.

5.3.6 The following building aspects are also relevant for all typologies:

- acoustic performance: building material as noise insulator with its Rw value (weighted sound reduction index) larger than 43 decibels
- extraction: located away from work, visitor and public areas, with filters where required.

5.3.7 Specifically, in co-location schemes:

- developers with expertise and experience with industrial typologies should be involved at an early stage, alongside residential developers
- applicants should prepare specific design briefs that include industrial requirements
- LPAs should ensure that there is industrial design expertise on Design Review Panels that are consulted
- ancillary uses such as offices, small shops, cafes, meetings spaces or cycle storage can support local identity, and provide a buffer between residential and industrial uses or a more active frontage for the latter
- subject to the necessary safety and security requirements, scope for mutual benefits between industrial and non-industrial uses should be explored (such as shared public realm for residents, workers and visitors)
- residential access should be completely separate to ensure everybody's safety.