

11 SUSTAINABLE DESIGN & INFRASTRUCTURE

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What you've told us

More should be done to tackle climate change by:

- Making buildings more **environmentally friendly**, for example, by using **less energy**.
- Creating **decentralised energy networks**, such as in Deptford and Bell Green
- Protecting green and open spaces, and promoting **urban greening**
- Encouraging people to **use cars less**

The council should by lead example in responding to the climate emergency

There are concerns about:

- **Poor air quality**
- **Fly tipping**
- **Flood risk**, especially in residential areas

What we've learned

Carbon emissions falling but remain a concern:

The latest Government data shows emissions decreased by 38% from 2005 to 2017.

Housing is the largest source of carbon emissions in Lewisham, mainly from domestic gas. Transport is the second largest.

Poor air quality in some areas:

Some parts of Lewisham exceed the EU limits for the pollutant Nitrogen Dioxide.

Levels for the pollutant PM10 (Particulate Matter) are within the EU limits but exceed the World Health Organisation guidelines.

Different types of flood risk:

River related flooding is the main form of flood risk in Lewisham.

Large parts of the Borough lie within a Critical Drainage Area, where there is a greater risk of surface water flooding incidents.

Lower levels of recycling:

Recycling rates have been improving but Lewisham is behind the rest of London.



Main issues



Surrey Canal Triangle

Climate emergency

The council declared a climate emergency and aims to be carbon neutral by 2030 - but there are technical and financial challenges to achieve this.

Waste management

Lewisham must play its part in helping London to manage waste more responsibly.

Population growth

Lewisham's population is forecast to rise by roughly 20% by 2040. Carbon emissions will increase unless action is taken.

Air quality

Supporting growth and development whilst improving air quality remains a key challenge.

Flood risk

Climate change is expected to increase flood risk - the location and design of development will be important to ensure the safety of people and properties.

Did you know?

Lewisham Council was one of the first in London to declare a climate emergency. Our aim is to make the borough carbon neutral by 2030. We have prepared a Climate Emergency Action Plan with measures to help achieve this.



We're proposing to...



Help reduce carbon emissions

- Ensure new developments meet the London Plan standards for sustainable design and construction.
- Allow for the limited use of carbon offset payments, where carbon reduction targets cannot be met on-site. Funds will be used on local green projects.
- Prepare an Energy Masterplan to support the creation and use of decentralised energy networks.

Reduce flood risk

- Restore and revitalise Lewisham's river corridors
- Update our borough-wide flood risk study and use this to inform planning decisions.
- Work with partners to maintain and deliver new infrastructure, including flood defences and the Thames Tideway Tunnel.

Reduce and effectively manage waste

- Promote the 'circular economy' – reduce waste by prioritising the re-use and recycling of materials.
- Work with other boroughs to manage Lewisham's share of waste, and safeguard existing facilities.

Improve air quality

- Encourage and enable people to use cars less, or not at all.
- Require new developments to be 'air quality neutral'.

We've also considered

Requiring developments to meet carbon targets on-site in every case (e.g. not allowing flexibility for offset payments).



SD1 Responding to the climate emergency

- A Lewisham Council has declared a climate emergency. In response to this a strategic and coordinated approach will be taken to ensure that the Borough contributes significantly to mitigating climate change and is made more resilient to its environmental, social and economic impacts. Local actions are both necessary and integral to supporting wider regional and national actions to address global climate change.
- B To help ensure that the Borough develops in a way that is environmentally sustainable the Council will:
- a. Help Lewisham to become a net zero-carbon Borough as part of a zero-carbon London;
 - b. Designate, protect and seek to enhance a network of green and open spaces, as well as improve linkages to and between them;
 - c. Designate sites of importance for biodiversity, protect habitats and species within the local ecological network, and seek net gains in biodiversity wherever possible including through urban greening;
 - d. Implement measures to reduce flood risk and ensure resilience against the impact of flooding across the Borough, and seek to improve the quality of water bodies;
 - e. Ensure that new development does not adversely affect the amenity of the local population and habitats, including by mitigating impacts on and improving air quality in the Borough;
 - f. Help London to achieve net waste self-sufficiency by promoting the circular economy in order to increase the re-use and recycling of materials and achieve reductions in waste going for disposal.
- C A plan, manage and monitor process will be used to support the successful transition to a net zero-carbon Borough. This process will help to ensure that the Local Plan reflects the most current national and regional planning policy requirements and standards for carbon management, along with the Council's latest technical evidence and strategies to deliver low and zero carbon outcomes.

Explanation

- 11.1 Lewisham Council is one of the first local authorities in the UK to declare a climate emergency.⁴⁶ This declaration has been made recognising that a changing climate will have severe and enduring social, economic and environmental implications, and that tackling climate change is an issue of inequality as the greatest impact will be on the most vulnerable and those least able to protect themselves. A strategic and coordinated approach to addressing climate change is necessary. Collaborative action will need to be pursued by authorities at different levels and across administrative boundaries – in London, the UK and beyond – in order to realise significant positive gains in carbon reduction and to limit global warming.⁴⁷ At the same time it is imperative that Lewisham’s communities are made more resilient to the on-going effects of climate change. We are committed to accelerating action on climate change understanding that locally specific responses are urgently needed to help address this global issue in a meaningful way, and that local authorities will need to show more leadership in this regard.
- 11.2 The Local Plan will play an important role in helping the Borough respond to the climate emergency. It provides the strategic framework for climate change mitigation and adaptation in respect of the future use and management of land within Lewisham. It also sets out policies to ensure that new development is designed, constructed and operated in a sustainable way. These policies cut across a number of topic areas, many of which are included in the following section, and reflect the complexity of matters that must be taken into account when planning positively for climate change resilience.
- 11.3 The draft London Plan sets a strategic objective for London to become a zero-carbon city by 2050, which we are committed to helping achieve. A plan, manage and monitor process will be used to support the successful transition to a net zero-carbon Borough. We will regularly assess performance against our strategic objectives through the Authority Monitoring Report process. This will help to inform any necessary changes to our policy approaches. In addition, we will take the opportunity to regularly review policies to ensure they reflect the latest requirements and standards at the regional and national levels, also taking account of the Council’s latest technical evidence and strategies. For example, we have committed to preparing a future Climate Change Action Plan and to investigate options and feasibility of becoming a net zero-carbon Borough by 2030. Through the Local Plan review process we will seek to align any future corporate strategies and actions with the local planning framework.
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- ⁴⁶ London Borough of Lewisham. Meeting of Council on 27 February 2019. Motion 2 declared to be unanimously carried.
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- ⁴⁷ The United Nations Framework Convention on Climate Change (FCCC), Decision 1/CP.21, more commonly referred to as the Paris Agreement, seeks to limit global warming to 1.5 degrees Celsius from pre-industrial levels.

SD2 Sustainable design

- A Development proposals will be required to submit a Sustainable Design Statement. This should clearly set out how sustainable design principles have been integrated into the design-led approach, including consideration of the construction and operation phases of development. The statement should be proportionate to the nature and scale of development proposed with a sufficient level of detail to demonstrate that the relevant policy requirements have been satisfied. For major development proposals the Sustainable Design Statement should refer and complement other detailed statements including for:
- Landscape design and urban greening;
 - Nature conservation;
 - Energy use and heat risk management;
 - Air quality;
 - Flood risk and water management;
 - Ground conditions; and
 - Waste reduction and the circular economy.
- B Proposals for new self-contained major and minor residential development will be required to achieve the BRE Home Quality Mark.
- C Proposals for major residential domestic refurbishment will be required to achieve a certified 'Excellent' rating under the BREEAM Domestic Refurbishment 2014 scheme, or future equivalent.
- D Proposals for new non-residential development of 500 square metres gross floorspace or more, including mixed-use development, will be required to achieve an 'Excellent' rating under the BREEAM New Construction (Non-Domestic Buildings) 2018 scheme, or future equivalent.
- E Development proposals for major non-residential refurbishment, including mixed-use development, will be required to achieve a certified 'Excellent' rating under the BREEAM Non-Domestic Refurbishment scheme, or future equivalent.
- F Sustainable retrofitting measures to existing buildings and other development will be supported where they comply with other Local Plan policies, including on the historic environment.

Explanation

- 11.4 A significant step change in the design quality and environmental performance of buildings and spaces is needed to achieve the Local Plan's strategic objectives, particularly for climate change adaptation and mitigation. Sustainable design principles should therefore be considered early in the planning and design stages and be fully integrated throughout the development process, including the construction and occupation stages. The principles cut across a number of topic areas within the Local Plan but are most predominant in the policies included in this section. All applicants will be expected to submit a Sustainable Design Statement explaining how the proposed development positively engages with these principles. The statement will be a key consideration in the determination of planning applications. It should therefore address the relevant policy requirements whilst taking into account the nature and scale of development. The statement should clearly identify the need for any site-specific mitigation and demonstrate that adequate measures will be delivered and effectively implemented.
- 11.5 The Home Quality Mark is a nationally recognised standard for new housing that has been established by the Building Research Establishment. It provides an indication of the expected health and well-being benefits and environmental footprint of new residential development. All proposals for new self-contained residential development should achieve the Home Quality Mark, as demonstrated through an independent assessment by a qualified assessor. Proposals are strongly recommended to achieve a minimum 3 star rating and for developers and/or agents to make the Home Quality Mark assessment publicly available, for example, as part of any promotional material. Published ratings will also assist the Council with monitoring implementation of the Local Plan policies.
- 11.6 Proposals for new non-residential development (including refurbishments) and non-self-contained housing will be expected to meet the Building Research Establishment Environmental Assessment Methodology (BREEAM) 'Excellent' standard. BREEAM provides a nationally recognised sustainable design standard for different types of development and covers a wide range of sustainability considerations. Applications for qualifying development are encouraged to submit BREEAM pre-assessments as part of the Sustainable Design Statement, identifying the credits to be targeted and measures to achieve these. All proposals will be considered having regard to individual site circumstances and the nature of development proposed. Planning contributions, such as carbon offsetting, may be sought where development proposals where the policy requirements cannot be sufficiently satisfied.
- 11.7 For commercial and industrial uses applicants must justify that the required 'Excellent' rating cannot be reasonably delivered on-site, including through evidence of a BREEAM pre-assessment. It is recognised that for some types of developments the BREEAM requirements may pose particular challenges, for example, where there is no defined end-user and/or the Council has agreed that buildings do not need to be fully fitted. However, our expectation is that shell only and shell and core proposals should be capable of meeting the BREEAM credits, taking into account the flexibility provided by the BREEAM methodology.

11.8 Sustainable retrofitting measures can help to improve the energy performance of existing buildings and minimise carbon emissions in the Borough. Even small-scale development, such as householder schemes, can incorporate measures that improve the environmental performance of buildings. This may include internal roof, floor and wall insulation, energy efficient fixtures, or urban greening. We will therefore broadly support sustainable retrofitting recognising

the positive contribution this can play locally. It is important that all such proposals preserve or enhance the significance of heritage assets and their setting (such as Listed Buildings and buildings within Conservation Areas) in line with other Local Plan policies. Where heritage assets are concerned, applicants are encouraged to refer the latest Historic England guidance for further information.

Horniman Museum conservatory, museum extension and timber Conservation Centre with green roof (Allies and Morrison / Peter Cook)





SD3 Minimising greenhouse gas emissions

- A Development proposals should help Lewisham to become a net zero-carbon Borough by reducing greenhouse gas emissions in the operation stage and minimising energy demand (annual and peak) in accordance with the draft London Plan energy hierarchy, as follows:
- Be lean: use less energy and manage demand during operation.
 - Be clean: exploit local energy resources and supply energy efficiently and cleanly.
 - Be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site.
 - Be seen: monitor, verify and report on energy performance.
- B Major development proposals will be required to demonstrate how the zero-carbon target will be met by applying the energy hierarchy, in line with draft London Plan policy S12 (Minimising greenhouse gas emissions). Details of the approach used to meet the target should be clearly set out in an Energy Strategy submitted as part of the Sustainable Design Statement.
- C Major development proposals will be required to achieve a minimum on-site reduction of at least 35 per cent (beyond the baseline of Part L) of the current Building Regulations.⁴⁸ They should also calculate and minimise emissions from any other part of the development that are not covered by Building Regulations (i.e. unregulated emissions).
- D In exceptional circumstances where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, development proposals will be required to make contributions to address the identified shortfall through:
- A cash-in-lieu contribution to Lewisham's carbon offset fund; or
 - Appropriate off-site measures where these can be demonstrated to be deliverable.

⁴⁸ Building Regulations 2013. If these are updated during the plan period, the policy threshold will be reviewed in accordance with the London Plan review process.

Explanation

- 11.9 The draft London Plan sets a strategic objective for London to become a net zero-carbon city by 2050. In order for the Borough to contribute to meeting these objectives in becoming zero-carbon itself, it will be necessary for new development to maximise energy efficiency and reduce carbon emissions. A zero-carbon target for major residential developments has been in place for London (and Lewisham) since October 2016 and will apply to major non-residential developments from 2019. To meet the zero-carbon target an on-site reduction of at least 35 per cent beyond the baseline of part L of the Building Regulations 2013 is required. Should the Building Regulations change over the plan period, then the policy threshold will be subject to review through the London Plan review process.
- 11.10 We will seek to ensure that all development proposals are designed giving priority to on-site carbon reductions. Consideration may be given to off-site contributions where it can be clearly and suitably demonstrated that carbon targets cannot be fully achieved on-site. These contributions will be required to address any shortfall and will be secured by planning obligations. Further details on carbon offset payments are set out in the Council's Planning Obligations SPD. Carbon costing will be established in accordance with the London Plan and its associated guidance.

SD4 Energy infrastructure

- A Development proposals should be designed in response to a site-specific assessment of the most effective and efficient energy supply options, taking into account energy masterplans where appropriate. For large-scale schemes, applicants are encouraged to engage at an early stage with the relevant energy suppliers and bodies to establish future energy and infrastructure requirements necessary to support the development.
- B Proposals for new-build development, and wherever possible proposals for conversions or alterations to existing buildings, should prioritise connection to decentralised heat networks. Major development proposals will be expected to provide a feasibility assessment for connecting to, and if possible extending, existing or planned future heat networks on or in proximity to their site. Minor new-build development proposals should optimise opportunities to connect to existing heat networks.
- C All major and minor development proposals should be designed for future connection to a heat network, having regard to Heat Network Priority Areas of the London Heat Map and other local area opportunities, including those identified in energy masterplans.
- D Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system. The heat source must be selected in accordance with the draft London Plan heating hierarchy, as follows:
- a. Connect to local existing or planned heat networks.
 - b. Use zero-emission or local secondary heat sources.
 - c. Use low-emission combined heat and power (CHP) where there is a case for CHP to deliver an area-wide heat network.
 - d. Use ultra-low NOx gas boilers.
- E CHP and ultra-low NOx gas boiler communal or district heating systems will only be acceptable where it is demonstrated that these sources are necessary, with proposals having fully investigated other options in the heating hierarchy, and there will be no adverse impact on air quality. Proposals will be considered having regard to Policy SD6 (Improving air quality) and relevant London Plan policies. Air Quality Assessments will be required to include full dispersion modelling to assess impacts on nearby receptors.
- F Where CHP and ultra-low NOx gas boiler systems are acceptable in line with (E) above, proposals should be designed in a way that enables, and does not preclude, the decarbonisation of the site wide communal network in the future.
- G Major housing development proposals will be required to, and all minor housing proposals should, submit an estimated heat unit supply price (£/kWh), annual standing charges and projected annual maintenance costs for their proposed Energy Strategy. This should include information detailing any assumptions the calculations are based on.
- H Where site-wide communal and district heating systems are operational, heat and energy service providers will be encouraged to enter into customer charters with domestic and small business customers.

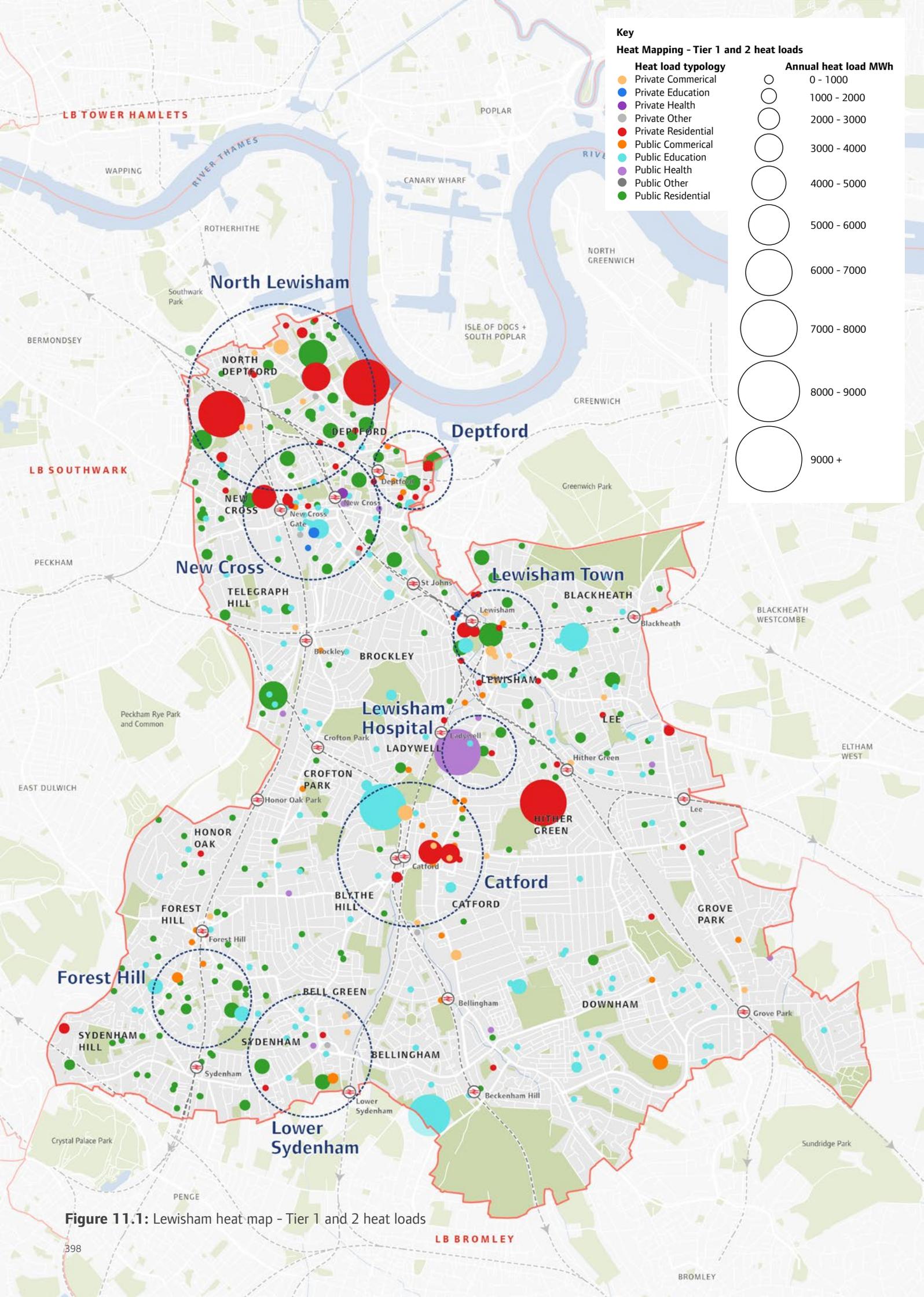


Figure 11.1: Lewisham heat map - Tier 1 and 2 heat loads

Explanation

- 11.11 In order to achieve the strategic objective for Lewisham to become a net zero-carbon Borough it will be necessary to change the way in which energy is used and supplied locally. This means shifting from a reliance on natural gas as the main energy source to a wider range of low and zero-carbon and renewable sources. Decentralised energy covers a range of technologies that do not rely directly on the electricity transmission network or gas grid. It is expected to play an increasingly important role in London's energy supply. Decentralised energy is vital to energy security and helping the Capital become more energy self-sufficient. It also offers opportunities in respect of carbon reduction as a sustainable energy source. In responding to the climate emergency we are committed to promoting decentralised energy locally and will seek to exploit opportunities for network investment, particularly as new development comes forward.
- 11.12 Development proposals should prioritise connection to decentralised heat networks wherever technically feasible. The London Plan identifies Heat Network Priority Areas where there are opportunities to facilitate decentralised energy network development. These areas feature heat densities that are sufficient for heat networks to provide an economically competitive option for supplying energy. They include parts of Lewisham and areas in adjoining Boroughs. Applicants are encouraged to refer the London Heat Map for the latest information on heat demands, supplies and networks across London along with the extent of Heat Network Priority Areas. The Heat Map is accessible online and updated regularly.
- 11.13 The Council has and will continue to prepare a suite of studies investigating the potential for decentralised energy network development in the Borough, drawing on the latest available information. This includes the Lewisham Energy Masterplan (2020), Lewisham Heat Network Feasibility Study (2016), New Cross Heat Network Route Feasibility Assessment (2015) and Lewisham Town Centre Low Carbon and Decentralised Energy Report (2010). Building on this evidence we will prepare an Energy Masterplan to provide an updated position on the most feasible options for network development. All proposals will be expected to refer to the latest local evidence for guidance in considering energy sources, and to ensure that opportunities for decentralised energy are maximised.
- 11.14 All proposals for major residential and commercial development will be expected to submit a feasibility assessment to fully evaluate connecting to an existing or planned future heat network where it is located on or in proximity to the site. The feasibility assessment should evaluate technical and financial viability and consider a range of factors included but not restricted to: capability of the network to supply part of the heat demand, location of development and distance to network pipes, physical barriers and other developments in

the areas that may also be required to connect. For the purpose of this policy, a planned future network is one that is considered by the Council likely to be operational within 3 years of the grant of planning permission. All minor new-build development proposals should also seek to secure connection to heat networks. Proposals will be expected to include an Energy Statement as part of the Sustainable Design Statement. This should provide sufficient information to demonstrate that feasibility has been fully investigated, having regard to the latest London Plan supplementary planning guidance.

- 11.15 In areas where there are no existing or planned district heat networks proposals should be designed for future connection to a heat network. The latest London Heat Manual should be referred for further guidance. Designs should entail a wet heating system, single point of connection into heating system, additional plant room space for thermal substation and low temperature heating systems (60 degrees Celsius or lower) to support low temperature heat networks. This will help to ensure that connection is made more financially viable and technically feasible in future years. Proposals should have regard to the spatial strategy for the Borough as this provides an indication of the areas that are expected to accommodate significant growth and where network development is likely to be delivered over the long-term.

- 11.16 Consistent with the draft London Plan, all major development proposals within Heat Network Priority Areas and elsewhere should have a communal heating system served from a single energy centre, with the heat source for the system selected in accordance with the heating hierarchy. Proposals will be expected to demonstrate that the feasibility and viability of implementing options at the higher end of the hierarchy have been fully investigated before considering the use of CHP or gas boiler systems. We will seek to resist proposals that rely on CHP or gas boiler systems where their use is not sufficiently justified. Where the use of an ultra-low NO_x is justified, this should achieve an emissions rating of <40 mg/kWh. Furthermore, all such proposals must not result in any adverse impact on air quality, in line with Policy SD 6 (Improving Air Quality) and relevant London Plan policies.

- 11.17 Where development proposals including CHP and ultra-low NO_x gas boiler systems are acceptable in principle, they should be designed in a way that enables, and does not preclude, the decarbonisation of the site wide communal network in the future. Proposals should include information on the opportunities and potential measures in this respect. This could include, for example, details describing how the development could accommodate the plant space required for such decentralised energy networks, and how the individual dwellings have been designed to allow for and accommodate future connections.

- 11.18 Heat networks and communal heating systems must be designed, constructed, commissioned and operated in accordance with CIBSE CP1.2: Heat Networks Code of Practice, or the latest version. All developments that are required to connect to an existing or planned heat network in accordance with policy must explicitly demonstrate in their Energy Strategy how the scheme will comply with the above Code of Practice.
- 11.19 Where households and businesses are reliant on decentralised heat networks it is important that there are clear expectations for service standards. We will encourage the use of customer charters or publically available right of challenge in a fair and independent way. Such charters and ombudsman are useful in establishing clarity on matters such as system maintenance and end-user pricing, and can be particularly helpful to more vulnerable uses (for example, those in or at risk of fuel poverty or start-up and micro-businesses). All developments that are required to connect to an existing or planned heat network in accordance with this policy should ensure that the future network operator will be registered with the Heat Trust Scheme (Heat Customer Protection Ltd.) The scheme sets out common customer service standards and protection requirements that are comparative to regulated utilities, drawing on legislation and good practice guidance.



Bermondsey aerial looking west with SELCHP in the foreground



SD5 Managing heat risk

- A Development proposals must minimise internal heat gain and the impacts on the urban heat island through the design, layout and orientation of buildings and spaces, as well through the use of materials and urban greening measures, having particular regard to Policy GR4 (Urban greening and trees).
- B All new development should be designed to reduce the potential for overheating and reliance on air conditioning systems in accordance with the London Plan cooling hierarchy, as follows:
 - a. Minimise internal heat generation through energy efficient design.
 - b. Reduce the amount of heat entering a building through orientation, shading, albedo, fenestration, insulation, and the provision of green roofs and walls.
 - c. Manage the heat within the building through exposed internal thermal mass and high ceilings.
 - d. Provide passive ventilation.
 - e. Provide mechanical ventilation.
 - f. Provide active cooling systems.
- C Development proposals will only be supported where there is sufficient evidence to demonstrate that priority has been given to the implementation of feasible measures at the higher level of the cooling hierarchy through the design-led approach.
- D Major development proposals will be required to submit an Energy Statement to demonstrate how they will meet the requirements of (B) and (C) above
- E Major development proposals incorporating amenity space and public realm should be designed to create a comfortable environment, including through provision of shade and other passive cooling measures.

Explanation

- 11.20 In recent years London has experienced higher than historic average temperatures along with more severe hot weather events. Heat risk is becoming an increasingly important issue, particularly in the context of a growing population and global climate change. All new development should therefore be designed to manage heat risk.
- 11.21 The urban heat island is experienced in areas where there is extensive urban development. Buildings and spaces in these areas absorb and retain heat during the day and night. In a heavily urbanised place like London, this process results in the city being several degrees warmer than its surrounding areas. The urban heat island poses a significant health risk to vulnerable groups, such as older people or those with certain health conditions, particularly during peak summer months. All new development will therefore be expected to minimise internal heat gain and manage heat risk through the design, layout and orientation of buildings and spaces, along with the use of materials. Proposals should incorporate measures in line with the Mayor's cooling hierarchy, recognising that Lewisham should play a role in positively supporting regional planning objectives. This will help to ensure that buildings are better equipped to manage their cooling needs in energy efficient ways over their lifetime.
- 11.22 Applicants should refer the latest Chartered Institution of Building Services Engineers (CIBSE) guidance on assessing and mitigating overheating risk in new developments, including TM59 for domestic development and TM52 for non-domestic development. The London Mayor's Energy Planning Guidance should also be referred. Proposals should undertake dynamic thermal modelling to ensure that development does not overheat, and this should address temperatures likely to be experienced over the lifetime of the development, having regard to CIBSE guidance and datasets included in document TM49.
- 11.23 Severe hot weather events can discourage physical and outdoor activity. Development will therefore be expected to be designed to promote a comfortable environment, by helping to ensure that opportunities for respite, such as shaded areas, are integrated into the public realm and that other indoor amenity spaces are cool and well-ventilated. Where necessary, a contribution to cooling measures for spaces and streets outside the development boundary may be appropriate, for example, to make the public realm more comfortable and attractive for movement by walking and cycling. This is consistent with the Healthy Streets approach advocated by the Local Plan, in line with the draft London Plan.
- 11.24 All major development proposals will be expected to submit an Energy Statement. This should clearly set out how measures at the higher end of the cooling hierarchy have been considered and given priority through the design-led approach. We will seek to resist proposals that use measures at the lower levels of the hierarchy unless there is evidence to demonstrate that this is necessary, for example, for reasons of technical feasibility.
- 11.25 Whilst all development proposals will be expected to give consideration to managing heat risk, it is recognised that the feasibility of measures will be commensurate with the nature and scale of development. Minor developments, and in particular householder extensions, may have limited scope to implement some measures at the higher end of the hierarchy. However all minor development proposals are encouraged to investigate potential measures and incorporate these wherever possible. The urban heat island effect can be mitigated through the cumulative positive impacts of smaller developments. For this reason, the loss of established soft landscape features without replacement will be resisted for all proposals and new soft landscaping will be encouraged wherever possible.

SD6 Improving air quality

- A Air quality is a significant public health issue in Lewisham. All new development should contribute to improving air quality within the Borough and reducing the population's exposure to poor air quality, in line with draft London Plan Policy S11 (Improving air quality) and by supporting the achievement of objectives in Lewisham's latest Air Quality Management Plan.
- B New major development must be at least air quality neutral and all development proposals must demonstrate that they will not:
- Lead to further deterioration of existing poor air quality;
 - Create any new areas that exceed air quality limits, or compromise the achievement of compliance with targets in areas that currently in exceedance of the legal limits; and
 - Create an unacceptable risk of high levels of exposure to poor air quality.
- C Development proposals should be designed to prevent or minimise exposure to existing air pollution and implement measures to help improve air quality. Particular consideration should be given to the siting, layout and design of proposals located in Air Quality Management Areas and Air Quality Focus Areas, as well as for developments that are likely to be used regularly by large numbers of people (including public open space) and vulnerable groups, such as children and older people.
- D Air Quality Assessments will be required to be submitted with proposals for:
- Major development;
 - Minor development within an Air Quality Management Area and/or Air Quality Focus Area if the development is likely to adversely impact on air quality or introduce new sensitive receptors to exposure to an area of existing poor air quality; and
 - Community infrastructure (including health, education and leisure facilities), or other uses that are likely to be used regularly by vulnerable groups.
- E Development proposals must demonstrate how they will comply with the Non-Road Mobile Machinery Low Emission Zone requirements and reduce emissions from the demolition and construction of buildings following the Mayor's 'The Control of Dust and Emissions for Construction and Demolition' SPG (2014), or subsequent guidance.
- F Development proposals will be considered having regard to their individual and cumulative impacts on air quality. Proposals that do not meet the requirements of (B) and (C) above will be resisted unless appropriate measures are implemented to ensure adverse impacts can be mitigated to an acceptable level. Mitigation should be provided on-site. In exceptional circumstances, where it is demonstrated that this is impracticable or inappropriate, off-site provision may be acceptable where equivalent air quality benefits will be delivered in the local area.

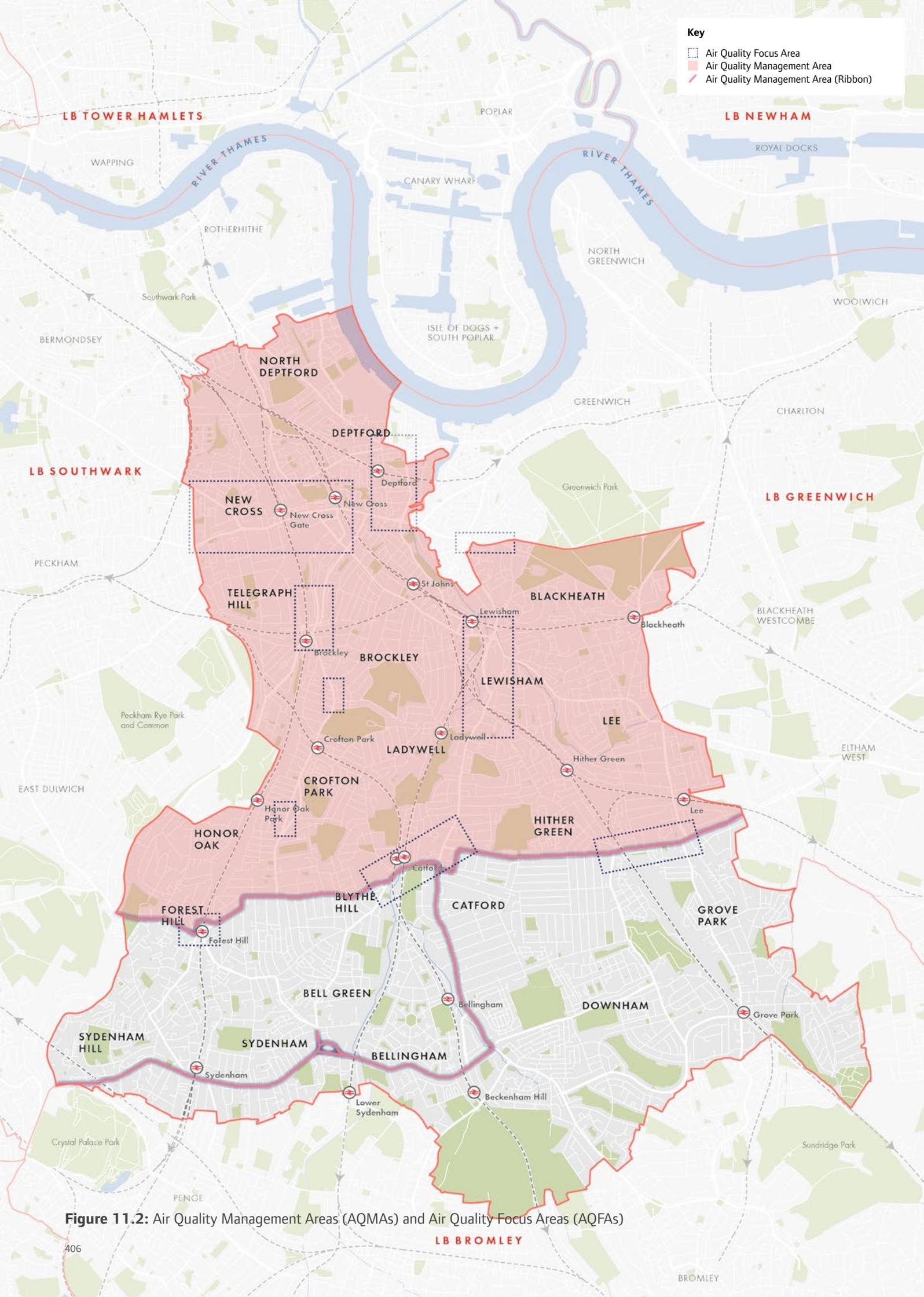


Figure 11.2: Air Quality Management Areas (AQMAs) and Air Quality Focus Areas (AQFAs)

Explanation

- 11.26 Air quality is a significant public health issue in Lewisham and across London. The link between air quality and public health outcomes is well documented. Air pollution is estimated to reduce life expectancy of every person in the UK by an average of 7 to 8 months and in Lewisham, the proportion of all-cause adult mortality attributable to air pollution is 6.5 per cent, which is higher than the national average.⁴⁹ This policy supports the London Mayor's commitment to making air quality in London the best of any major world city. It also helps give effect to the NPPF which sets out that local plans should sustain and contribute towards compliance with the relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas (AQMAs) and Air Quality Focus Areas (AQFAs).
- 11.27 Alongside London Plan, including draft Policy SI1 (Improving air quality), the implementation of this and other Local Plan policies on sustainable transport, green infrastructure, energy, sustainable design and waste management will together contribute towards the objective of improving air quality across the Borough.
- 11.28 There are currently 6 AQMAs in Lewisham. These cover all the areas north of the A205 (South Circular) together with major roads in the south. The AQMAs have been declared for several pollutants. Monitoring indicates that the Borough is exceeding the EU annual average limit for Nitrogen Dioxide at some locations. Furthermore, whilst the Borough is meeting the EU Limits for Particulate Matter (PM10) it is exceeding the World Health Organisation air quality guideline annual average for this pollutant. In addition to AQMAs there are also 10 Air Quality Focus Areas (AQFAs) in the Borough; these areas are locations that have been identified as having high levels of pollution and human exposure. The current AQMAs and the Mayor's 'London Datastore' maintains an up-to-date list of AQFAs across the Capital, taking account of changing circumstances and latest available evidence. AQMAs are identified in **Figure 11.2** and may be subject to periodic review and updating.
- 11.29 New major development will be required to be at least 'air quality neutral' and no development shall lead to a further deterioration of existing poor air quality. Development proposals should also reduce the population's exposure to poor air quality, particularly for those groups who are most vulnerable to its impacts such as children and young people and older people. New development, as a minimum, must not cause new exceedances of legal air quality standards or compromise achievement of compliance in those areas currently in exceedance, as currently provided by the Air Quality Standards Regulations 2010.
- 11.30 Applicants should refer to refer relevant London Plan supplementary planning guidance for further information on the Air Quality Neutral and Air Quality Positive standards. The Council's latest Air Quality Action Plan and associated monitoring reports should also be referred, along with our Good Practice Guide: Control of Pollution and Noise from Demolition and Construction Sites.

⁴⁹ Lewisham Joint Strategic Needs Assessment, A Picture of Lewisham. 2019.

- 11.31 Proposals will be considered taking into account the individual and cumulative impacts of development in an area, consistent with national policy. We will have particular regard to proposals for major development and those located within AQMAs and AQFAs, recognising the existing localised levels of poor air quality and potential impacts of larger schemes. Applicants should take particular care where development is likely to be used regularly by vulnerable groups. This includes proposals community facilities and specialist housing. Exposure to poor air quality can be avoided through the site selection process and/or through site layout and design solutions. New developments will be expected to contribute to actively reducing air pollution in Air Quality Focus Areas, supporting measures to improve air quality.
- 11.32 Air Quality Assessments (AQAs) will be required for certain types of qualifying development. Assessments must address impacts arising during the construction, occupation and operational phases of development. They should also consider the wider cumulative impacts on air quality arising from development within the locality.
- 11.33 Where an AQA indicates a potential negative impact on air quality, appropriate measures that will minimise or offset impacts from the development should be identified and implemented on-site. Planning permission will be refused unless appropriate mitigation measures are adopted to reduce the impact to acceptable levels. In practice, it may not always be possible to achieve Air Quality Neutral standards or to acceptably minimise impacts using on-site measures alone. If on-site measures are insufficient to make the development acceptable, the AQA should demonstrate that it is possible to include measures in the local area with equivalent air quality benefits. Mitigation measures may be secured either by planning condition or legal agreement, where appropriate.
- 11.34 An AQA with full dispersion modelling is required for all proposed Biomass and CHP boilers and this must demonstrate that the impact on nearby receptors is minimal.
- 11.35 Development that involves significant demolition, construction or earthworks will be required to assess the risk of impacts according to the Institute of Air Quality Management Dust Guidance and the London Mayor's SPG on 'The Control of dust and Emissions during Construction and Demolition'. Mitigation measures should be included in the Construction Management Plan. All medium and high risk sites should include real time construction dust monitoring, in line with the London Plan guidance.

SD7 Reducing flood risk

- A The Council will seek to reduce flood risk and ensure resilience against the impact of flooding by:
- Using a sequential approach to the location of new development to avoid, where possible, flood risk to the population and property whilst taking account of the long-term impact of climate change;
 - Directing new development to those areas of the Borough that are at the lowest risk of flooding, having regard to Lewisham's Strategic Flood Risk Assessment (SFRA), by applying the Sequential and Exception Tests in accordance with national planning policy;
 - Requiring that all new development does not increase flood risk in the Borough, reduces the risk of flooding from all sources and is designed to remain safe and operational under flood conditions;
 - Working in partnership with stakeholders to implement the flood risk management actions in the Thames Estuary 2100 Plan; and
 - Seeking that new development maximises opportunities for river restoration, in line with Lewisham's River Corridors Improvement Plan SPD
- B A site specific Flood Risk Assessment will be required for all development proposals within Flood Zone 2, 3a and 3b, all major development in Flood Zone 1, and elsewhere in the Borough where development may be at risk of other sources of flooding. The assessment must provide sufficient evidence for the Council to assess whether the requirements of the Sequential and Exception Tests have been satisfied, and will be expected to:
- Be proportionate with the degree of flood risk posed both to and by the development;
 - Take account of all potential sources of flooding both on and off-site;
 - Make an appropriate allowance for the hazard posed by climate change over the lifetime of the development, informed by the latest Government guidance; and
 - Have regard to the recommendations of the latest Lewisham SFRA and the Lewisham Local Flood Risk Management Strategy.
- C Where proposals satisfy the Sequential and Exception Tests the site layout and design of development should ensure that:
- The most vulnerable land uses are directed to areas of the site that are at lowest risk of flooding;
 - There is no net loss of flood storage capacity and adequate provision is made for flood storage and compensation, with priority given to on-site provision;
 - There is no detrimental impact on the natural function of the floodplain and floodwater flow routes across the site;
 - Appropriate mitigation measures are incorporated to address any residual flood risk, including safe access and egress for all likely users of the development; and
 - Flood risk is not increased elsewhere.
- D Development proposals will be required to provide a site-specific Flood Emergency Response Plan to manage actual and/or residual flood risk, where appropriate.



Figure 11.3: Flood zones and Critical Drainage Areas

Explanation

- 11.36 The water environment is a defining feature of Lewisham. The Borough fronts onto the River Thames and the river poses a potential risk of flooding, although the adjacent land area benefits from the River Thames Tidal Defences. Lewisham also falls within most of the catchment of the River Ravensbourne and its tributaries, including the Quaggy, the Pool and Kyd Brook, which outfalls into the River Thames at Deptford Creek. The Honor Oak Stream (Chudleigh Ditch), another tributary of the Ravensbourne, also passes through the Borough. Elsewhere there are localised areas that are at potential risk from other sources of flooding including through surface water run-off, ground water flooding, surcharge from the sewer network and the blockage of culverts and gullies.
- 11.37 It is important that development does not increase flood risk to people, properties and infrastructure and that all proposals proactively seek to minimise and mitigate risk wherever possible. This is particularly important in locations that are known to be at risk of flooding. Applicants will be expected to consider risk from all sources of flooding using appropriate and up-to-date information. Early engagement with relevant stakeholders, including the Council as Lead Local Flood Authority, the Environment Agency (EA) and Thames Water Utilities is strongly advised.
- 11.38 The Council regularly reviews its Strategic Flood Risk Assessment (SFRA), the latest of which was published in 2019 and includes a Level 1 and Level 2 SFRA. The SFRA maps the Borough into flood zones according to the probability of flooding occurring, discounting the presence of any flood defences and alleviation measures. The flood zone maps have been prepared using the latest available data from the Environment Agency however applicants should consult the EA to establish whether the flood zones have since been updated. Lewisham's Surface Water Management Plan (SWMP) provides additional information on other sources of flood risk. All proposals will be assessed against the latest available information.
- 11.39 In line with the NPPF and its associated guidance we will apply a sequential approach to the location of new development. This is in order to ensure that development is directed to those areas of the Borough, and locations within sites, that are at the lowest risk of flooding. We will consider the appropriateness of proposed uses within the different flood zones having regard to the Sequential and Exception Tests, and informed by Flood Risk Assessments submitted by applicants. Assessments are required to take into account the long-term hazard posed to development by climate change. The latest standing advice on climate change allowances published by the EA should be referred and form the basis of assessments. Furthermore, the Lewisham Level 2 SFRA (2019) sets out evidence of the flood characteristics in the Borough (including flood depth, velocity, rates of inundation and duration of flooding) that should also be considered.

- 11.40 As part of the preparation of the Local Plan the Council has undertaken a Sequential Test to assist in identifying those areas of the Borough that are suitable for strategic sites. Allocated sites that have passed the Sequential Test will not need to apply this test again, unless the proposed use is not consistent with the site allocation.
- 11.41 Where the Sequential and Exception Tests are satisfied we will seek that proposals fully investigate opportunities to avoid, reduce, manage and mitigate flood risk through site layout and development design. This includes appropriate measures to ensure development is safe. Proposals should fully assess and address residual risk, including through flood resistant design (e.g. to prevent water from entering the building and damaging its fabric) and resilient design (e.g. to ensure the building's structural integrity is maintained and that drying and cleaning can be facilitated).
- 11.42 Proposals will need to be accompanied by a Flood Emergency Response Plan to ensure safe access and egress from actual and/or residual flooding, where appropriate. This measure is necessary to ensure that building occupiers can be made aware of the responses to various types and scale of flood threat, evacuation logistics, evacuation routes and other safety arrangements in terms of dry access, egress and refuge. Examples of such developments can include proposals with water compatible uses, alterations to existing buildings and building floor levels that have been raised, but where there is remaining flood risk under the 0.1% AEP event.
- 11.43 The Thames Estuary 2100 Plan sets out recommendations and actions that are needed to manage flood risk in the Thames Estuary, taking account of the long-term impacts of climate change. It promotes a multi-agency approach to implementation of priority strategic and local actions with partners including Government bodies, local authorities and developers. The TE 2100 Plan sets Lewisham Borough within 'Action Zone 2 – Central London'. The Local Plan both supports and helps to set a framework for positively managing development consistent with the TE2100 Plan.

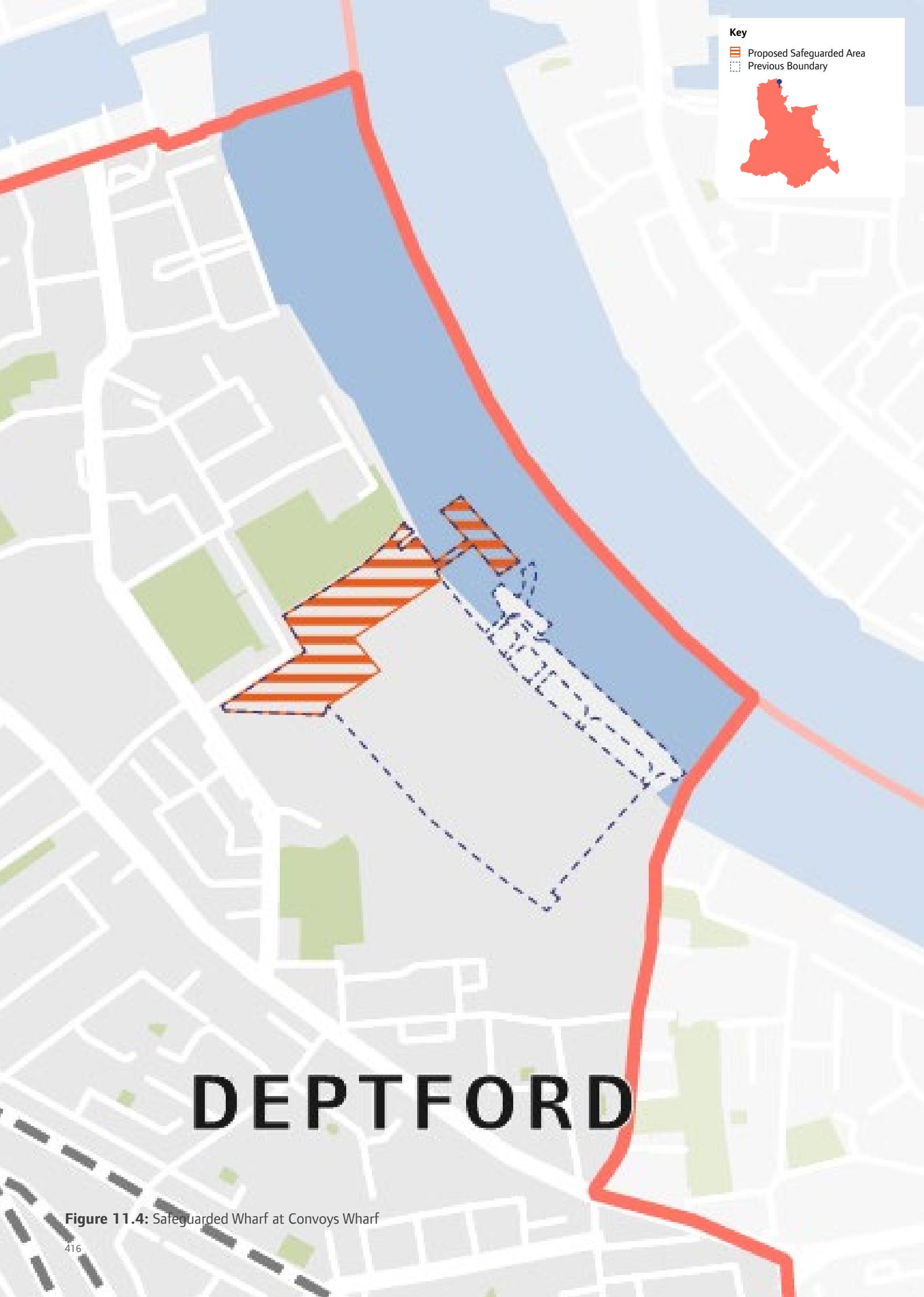
SD8 Sustainable drainage

- A Development proposals should aim to achieve greenfield runoff rates and ensure that surface water runoff is managed as close to its source as possible. Sustainable Drainage Systems (SuDS) should be incorporated into new development wherever possible, with priority given to green and blue over grey features, in line with the London Plan drainage hierarchy, as follows:
- a. Rainwater use as a resource.
 - b. Rainwater infiltration to ground at or close to source.
 - c. Rainwater attenuation in green infrastructure features for gradual release.
 - d. Rainwater discharge direct to a watercourse, unless not appropriate.
 - e. Controlled rainwater discharge to a surface water sewer or drain.
 - f. Controlled rainwater discharge to a combined sewer.
- B All SuDS will be required to meet the Department for Environment, Food and Rural Affairs’ Non-Statutory Technical Standards. They should also be designed to reflect guidance and principles set out in the London Plan Sustainable Design and Construction SPD and the SuDS Manual. In addition, all SuDS should:
- a. Be located and designed having regard to the London Sustainable Drainage Action Plan along with the Council’s Surface Water Management Plan and Local Flood Risk Management Strategy;
 - b. Be sensitively integrated into the development;
 - c. Maximise opportunities to enhance biodiversity and local amenity;
 - d. Improve the quality of water discharges, with provision for clean and safe water at the surface; and
 - e. Function effectively over the lifetime of the development.
- C All proposals for major development and development within a Critical Drainage Area must achieve a greenfield runoff rate and volume leaving the site, as demonstrated through a Drainage Strategy. All other development will be expected to achieve at least a 50% reduction in existing runoff rates. Where a greenfield runoff rate cannot be achieved, or SuDS cannot be implemented due to reasons of technical feasibility or financial viability, proposals must demonstrate that:
- a. Surface water runoff (both in terms of volume and flow) has been reduced as much as reasonably practical; and
 - b. Measures to improve water quality have been investigated and implemented, wherever feasible.
- D Development proposals should be designed to include permeable surfaces wherever possible. Proposals for impermeable paving, including on small surfaces such as front gardens and driveways, will be strongly resisted unless it can be suitably demonstrated that this is not technically feasible or appropriate.

Explanation

- 11.44 Surface water flooding occurs when high intensity rainfall generates runoff which flows and ponds in low-lying areas. It is generally associated with intense rain, saturated soils and an insufficient drainage capacity of the surface water system. Surface water flooding is becoming an increasing issue in London due to continued urban development (increased impermeable area) and climate change (greater rainfall intensity). Lewisham's Surface Water Management Plan (SWMP) identifies 9 Critical Drainage Areas (CDAs) which are particularly susceptible to surface water flooding. The CDAs fall within much of the London Plan Opportunity Area corridor and are also widely present in southern part of the Borough.
- 11.45 New development will be expected to contribute to minimising and mitigating flood risk through the use of Sustainable Drainage Systems (SuDS) and measures. SuDS comprise a sequence of management practices and techniques to slow the rate of surface water runoff and improve infiltration by mimicking natural drainage. This reduces the risk of flash-flooding which occurs when rainwater rapidly flows into the public sewerage and drainage systems. Drainage measures are particularly important in CDAs however we will seek to ensure that new development proactively responds to surface water management throughout the Borough.
- 11.46 Development proposals should seek to reduce flows to a greenfield runoff rate. This is the rate that reflects the natural rate of water runoff from an undeveloped, naturally permeable site. The volume of runoff must be stored on site and be calculated based on the nationally agreed return period value of a 1 in 100 year critical storm event, including an allowance for climate change. For major development and proposals within CDAs, it is particularly important that schemes optimise the use of Sustainable Drainage Systems to achieve these outcomes. The Government has published Non-Statutory Technical Standards for Sustainable Drainage Systems which proposals will be expected to comply with.
- 11.47 SuDS should be viewed as more than just a tool to manage surface water flooding. Where they are well designed and sensitively integrated into development, SuDS can enhance the amenity value of a site and area by improving the quality and attractiveness of the public realm and open spaces. Furthermore, they offer opportunities to support and enhance biodiversity through the creation of habitats such as ponds and wetlands, along with improving the quality of water discharges. All proposals should apply the principles of the latest SuDS Manual published by the Construction Industry Research and Information Association (CIRIA), which is nationally recognised good practice guidance, or other local guidance where appropriate.

- 11.48 SuDS should be designed giving priority to 'green' or 'blue' over 'grey' measures, although it is recognised that technical feasibility issues may constrain opportunities. This policy provides flexibility to implement a variety of SuDS measures, as the techniques used will depend on individual site characteristics and the nature of development proposed. Applicants will be expected to demonstrate that SuDS will function effectively over the lifetime of the development. A Drainage Strategy must accompany all major development proposals and other proposals within a Critical Drainage Area. This should include a SuDS Management Plan setting out long-term management and maintenance arrangements.
- 11.49 If it is suitably demonstrated that the policy requirements cannot be satisfied, for example, by reasons of site condition (e.g. land contamination or other site constraints) or financial viability, we will require applicants to provide evidence that runoff rates have been minimised as far as reasonably practical.



Key
Proposed Safeguarded Area
Previous Boundary



DEPTFORD

Figure 11.4: Safeguarded Wharf at Convoys Wharf

SD9 Water management

Watercourses and flood defences

- A Development proposals on sites containing or adjacent to a main river or ordinary watercourse will be required to:
- Demonstrate how the objectives of the Thames River Basin Management Plan, London River Restoration Action Plan, Marine Plan for the South East and other relevant local guidance, including the River Corridors Improvement Plan SPD, have been taken into account;
 - Ensure that there is no adverse impact on the natural functioning of the watercourse, including by maintaining an undeveloped buffer zone with an adequate set back distance from the watercourse, as agreed with the Council and the Environment Agency;
 - Investigate and maximise opportunities to enhance or restore river channels, flood flow pathways, floodplains and other natural flood management features with the objective of returning them to their natural state wherever possible;
 - Where appropriate, provide a condition survey of existing flood defence and other watercourse infrastructure and if necessary, provide for maintenance, repairs or remediation to secure the functional integrity of this infrastructure over the lifetime of the development; and
 - Incorporate measures to enhance the ecological, amenity, recreational and historic value of water spaces, including by enhancing public access to these spaces.

Water quality

- B All development proposals should seek to improve water quality and must ensure that there is no deterioration in the quality of a watercourse or groundwater, in line with the European Water Framework Directive 2000.
- C Where development is proposed within a Source Protection Zone it must not result in an unacceptable risk to groundwater quality.

Wastewater and water supply

- D Development proposals will be supported where it is demonstrated that the local water supply and public sewerage networks have adequate capacity both on and off-site to serve demand arising from the development; or where such capacity does not exist and there are no programmed works, arrangements are made to ensure adequate provision prior to the occupation of development. A Water Supply and/or Drainage Strategy may be required to demonstrate that suitable arrangements are in place to service the development.
- E Development proposals should ensure the separation of surface and foul water systems, including by rectifying misconceptions. The Council will give preference to mains foul drainage and seek to restrict the use of non-mains drainage for foul water disposal, particularly in Source Protection Zones. Where non-mains drainage is proposed for foul water, proposals should implement the most sustainable drainage options as supported by a Drainage Strategy.

-
- F All proposals for new development should maximise opportunities to alleviate water scarcity and be designed to minimise pressure on the combined sewer network by incorporating SuDs in line with Policy SD 8 (Sustainable Drainage), and by meeting the draft London Plan requirements for water efficiency, as follows:
- a. All proposals for new residential development should achieve mains water consumption of 105 litres or less per head per day (excluding allowance of up to five litres for external water consumption);
 - b. Major non-residential development should achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent.

Strategic role of waterways

- G Waterways provide multifunctional social, economic and environmental benefits that support sustainable communities. Development proposals should identify and respond positively to the unique attributes of waterways, giving particular consideration to their:
- a. Environmental function and ecological qualities;
 - b. Contribution to the Borough's network of open spaces;
 - c. Recreational and amenity value;
 - d. Distinctive features that help to shape and reinforce the Borough's physical, cultural and historical character;
 - e. Support for the visitor economy; and
 - f. Potential to facilitate water transport.

- H The Lewisham section of the Thames Policy Area is designated in the Local Plan, as

reflected in the Policies Map. All new development within the Thames Policy Area will be expected to respond positively to the distinctive character and qualities of the River Thames and its surrounds, in line with Policy LNA 4 (Thames Policy Area and Deptford Creekside).

- I Convoys Wharf is included within London's network of safeguarded wharves. The Council will continue to safeguard Convoys Wharf taking into account extant planning consents and any future safeguarding Direction. Development proposals involving water transport at Convoys Wharf will be considered having regard to draft London Plan Policy SI15 (Water transport), along with other relevant policies.
- J Proposals for water and marine based residential, commercial, community and transport uses (including moorings and jetties) alongside or within a waterway will only be supported where they:
 - a. Are demonstrably a water-dependent use;
 - b. Are appropriately located and designed, taking into account the nature and scale of the proposed use;
 - c. Respond positively to, and do not adversely impact on, the open character, historic setting and views of the waterway, its frontage (including foreshore) and the surrounding area;
 - d. Do not have a detrimental impact on river navigation and flood defence infrastructure;
 - e. Do not have a detrimental impact on the environment, including water quality in line with (B) above;
 - f. Do not impede or compromise existing public access points to the waterway, and extend or enhance access wherever possible; and
 - g. Ensure adequate access and servicing arrangements for all intended users of the development.

Explanation

Watercourses and flood defences

- 11.50 Watercourses within Lewisham form part of the network of rivers and streams within the London basin and are one of the defining features of the Borough. They contribute to local character and visual amenity, offer health benefits through recreational opportunities and provide the setting for Borough's historical past. Watercourses also have an important environmental role in supporting biodiversity and are critical to climate change adaptation through their flood management function. We will seek to ensure that watercourses are positively managed recognising the many important contributions they make to sustainable and resilient communities.
- 11.51 All proposals will be expected to demonstrate how they have taken into account the Thames River Basin Management Plan and the London River Restoration Action Plan, particularly in contributing to the European Water Framework Directive (WFD) 2000 objectives. Furthermore, applicants should refer Lewisham's River Corridors Improvement Plan SPD. The SPD sets out local guidance to secure high quality development along the Borough's river corridors whilst balancing objectives for environmental protection and flood risk management.
- 11.52 Lewisham's river corridors are heavily constrained by urban development along much of their respective lengths. The River Thames has been heavily modified over time with the growth of London, including the construction of raised defences along much of its width. Considerable modifications have also been made to other river channels in the Borough over the past decades including through
- canalising and culverting. The compromising of natural river processes can adversely impact on biodiversity and water quality. The Council has recently worked with the Environment Agency and other partners to deliver investment in river corridor improvements as part of its ongoing regeneration programme. This includes works along the Rivers Ravensbourne and Quaggy to provide improved defences and dedicated landscaped areas for flood storage, local amenity and improved biodiversity. These schemes have demonstrated that it is possible to put rivers back at the heart of new development and we aim to continue building on these successes.
- 11.53 In order to ensure there is no adverse impact of the natural functioning of a watercourse, or the integrity of a flood defence, all new development must maintain an undeveloped buffer zone with an adequate set back distance from the watercourse. A relief of 8 metres from a main river and 5 metres from an ordinary watercourse should be secured, unless otherwise agreed by the Council and the Environment Agency. Buffer zones should be left free of permanent structures, ensure adequate access for the maintenance of flood defences and be sensitively integrated into development in order to enhance their amenity value. Development within 20 metres of a bank of a main river will need Environment Agency consent. Some rivers have defined flood defence assets and proposals will be required to identify assets and these into consideration, where appropriate.
- 11.54 On sites with existing flood defence infrastructure we will seek to ensure that the functional integrity of this infrastructure is secured over the lifetime of the development. We may require proposals

to include a Condition Survey of all existing infrastructure and if necessary, make provision for any necessary repairs or maintenance, to be secured through a legal agreement or planning conditions. Culverts are considered flood defences and sites with existing culverts will be expected to investigate the feasibility of deculverting, with robust justification provided where this is not considered possible.

Water quality

- 11.55 The European Water Framework Directive 2000 (WFD) provides the legal framework for the protection, improvement and sustainable use of waterbodies including rivers and groundwater. The improvement of waterbodies to 'good' ecological status or potential, and not allowing the deterioration in the status of waterbodies, are key requirements of the WFD. Applicants are encouraged to refer the Thames River Basin Management Plan for details of the quality of waterbodies in the Borough and throughout the basin district, along with measures needed to meet the WFD objectives for water quality. Proposals will be expected to investigate and maximise opportunities to integrate these measures.
- 11.56 There are groundwater abstraction points in Lewisham that are used for the public water supply. It is important that groundwater at these points is protected from new sources of pollution, and its quality improved wherever possible. The Environment Agency has identified and mapped Source Protection Zones (SPZs) and aquifers within the Borough. We will seek to ensure that all proposals appropriately consider and manage risk to groundwater contamination in these areas and elsewhere across the Borough. Proposals that

present an unacceptable risk to groundwater quality will be resisted.

Wastewater and water supply

- 11.57 It is vital that development sites and localities are supported by efficient and well-functioning sewerage and wastewater infrastructure, particularly as this plays an important role in the management of flood risk and water quality. Lewisham has a mix of separate and combined sewer systems. Sewer flooding can arise in the foul system when surface water enters via misconnection, or where the capacity of combined systems is exceeded. In both cases this results in surcharge of contaminated surface water. Applicants are encouraged to consult with Thames Water who record sewer flooding incidents by postcode area, and this information gives an indication of sewer flood risk at sites across the Borough.
- 11.58 All proposals will be expected to demonstrate that there is adequate water supply, surface water, foul drainage and sewerage capacity both on and off-site to service demand arising from the development. Applicants are therefore encouraged to engage with Thames Water, or other water and sewerage undertakers as appropriate, early in the planning and design stage. Where there is a capacity issue and there are no planned capacity works or upgrades, the applicant should agree with the infrastructure provider a programme of necessary improvements. These should be implemented prior to the occupation stage. In some circumstances we may require submission of a Water Supply and/or Drainage Strategy, such as where major development is proposed in an area where there are concerns about existing infrastructure provision. This supporting information should

include a detailed model of the network capacity to determine whether mitigation is required.

11.59 For surface water, development should ensure that storm flows are attenuated or regulated into the receiving public network through on or off-site storage. Where it is proposed to connect to a combined public sewer, the site drainage should be separate and combined at the final manhole nearest the boundary. Where it is proposed to discharge to a public sewer prior approval from Thames Water Utilities will be required.

11.60 The Thames Tideway Tunnel is a major project being undertaken by Thames Water and Thames Tideway Limited. The project will assist in upgrading to London's sewerage system to cope with long-term future demands. A new 25-kilometre interception, storage and transfer tunnel is being constructed, running up to 65 metres below ground and below the River Thames. The sewer will run across London and capture flows from sewer overflow points along the River Thames. There are two temporary major works sites within Lewisham, one at Earl Pumping Station and one at Deptford Church Street. We will continue to work with stakeholders to secure the delivery of this strategic infrastructure.

11.61 The built environment plays a significant role in the way water is consumed, distributed and disposed of. London experiences lower rainfall than the national average while having a very large population. It has been declared an area of serious water stress and this trend is likely to be exacerbated by climate change. The Council supports London Plan objectives for delivering a sustainable and secure water supply, and addressing water scarcity,

particularly in the context of a growing population and increased demand for this valuable resource.

11.62 All development should be designed to maximise water efficiency. New residential development will be required to meet the draft London Plan target for mains water consumption, which reflects the Optional Requirement set out in Part G of the Building Regulations. Major non-residential development will be expected to meet BREEAM excellent standard for the 'Wat 01' water category, to achieve at least a 12.5% improvement over defined baseline performance standard. In addition, major developments and high or intense water use developments (such as hotels) should include a grey water and rain water harvesting system, and applications will be required to submit robust justification where such a system is not considered feasible.

Strategic role of waterways

11.63 The term 'waterways' refers to the network of linked waterways in London – also known as the Blue Ribbon Network – which includes the River Thames, its tributaries, canals and other water spaces. Waterways are of strategic importance, particularly in Lewisham given its Thames-side location, and provide multifunctional benefits to the environment and local communities. The Lewisham Characterisation Study (2019) is helpful in explaining the significant role waterways have played in the Borough's historical and cultural development, and the way in which they contribute to local character today. Waterways also form part of the local network of open space, offering recreational opportunities and amenity value for residents and visitors. Further, as set out elsewhere in this section,

the water environment is crucial to supporting biodiversity and flood risk management. All development proposals will be expected to respond positively to the unique attributes of Lewisham's waterways. Applicants should provide planning statements that detail how the different functional values of water spaces have been taken into account. This is particularly important for proposals within the Thames Policy Area, for which further detailed policies are set out in Policy LNA 4 (Thames Policy Area and Deptford Creekside), and reflect the key objectives for the Thames Policy Area: Bermondsey to Woolwich set out in sub-regional strategies.

11.64 There is a network of wharves along the River Thames that are protected for use as a wharf by a safeguarding Direction issued by the Secretary of State for Housing, Communities and Local Government. The existing network dates from 2005 and includes one wharf in Lewisham, Convoys Wharf. The London Mayor undertook a review of the network in 2018⁵⁰ and this included some recommended changes. The Council submitted representations through the formal consultation process, and highlighted its position that the review did not reflect the extant outline planning permission at Convoys Wharf, granted by the Greater London Authority in 2015. In particular, the planning permission has effectively reduced the size of the wharf and sets conditions with respect to its future use. The London Mayor is currently considering consultation responses and will submit recommendations for safeguarding to the Secretary of State, who will then make a determination on the matter. The

Council will continue to safeguard Convoys Wharf taking into account the extant planning consent and any future safeguarding Direction.

11.65 We strongly support the use of Convoys Wharf to facilitate delivery of the Lenox Project, consistent with the extant planning consent at this strategic development site. This involves the restoration of the Lenox, a state-of-the-art naval ship that was built in 1678 in Deptford and was the first of Charles II's thirty ships. The project has significant potential for heritage-led regeneration in the Borough, and will help to promote the visitor economy as well as understanding of Lewisham's historical and cultural development.

11.66 It is important that water infrastructure, including residential and commercial moorings, do not adversely impact on the Borough's waterways. Where new development is proposed on or within a waterway, including the foreshore, we will expect applicants to consult with the relevant authorities and bodies including Environment Agency, Port of London Authority and the Canal and River Trust. Early engagement will help to ensure that development is appropriate to its location and does not result in a detrimental impact on waterways, including on navigation, water quality, biodiversity, flood defences and local character. Proposals must demonstrate that there will be adequate access and servicing arrangements to support all intended users of the development, and that any new provision is sensitively located into the site and its surrounds. We will strongly resist proposals that inhibit or detract from existing public access to waterways, or preclude future opportunities for enhanced access from being delivered.

⁵⁰ The Safeguarded Wharves Review 2018. Greater London Authority. 2018.

SD10 Ground conditions

Contaminated land

- A Development proposals must demonstrate that any risks associated with land contamination, including to human health and the environment, can be adequately addressed in order to make the development safe.

- B All proposals for development on land which is suspected of being contaminated or potentially contaminated, or if a sensitive use is proposed, will be required to submit a Preliminary Risk Assessment (Phase 1 Study) to identify the level and risk of contamination on the site and adjacent land, and where necessary:
 - a. Undertake a Site Intrusive Investigation (Phase 2 Study) to provide a detailed assessment of contamination and risks to all receptors;
 - b. Prepare a Risk Management and Remediation Strategy appropriate to the individual site circumstances; and
 - c. Submit a Verification Plan and Closure Report prior to the occupation of the development.

Hazardous substances

- C Development proposals involving the storage or use of hazardous substances, or development of a site in the vicinity of a hazardous installation, will only be permitted where it is demonstrated that appropriate safeguards are in place to ensure there is no unacceptable risk to human health, safety and the environment.

Explanation

Contaminated land

11.67 Contaminated land is defined within the Environmental Protection Act 1990. It refers to land that has been polluted with harmful substances to the point where it could pose an unacceptable risk to human health and the environment. Environmental health and planning legislation requires the Council to ensure that land is assessed for contamination and made suitable for current and proposed future uses. Through the planning process we will seek that all development is appropriate to its location, whilst requiring landowners and developers to fulfil their responsibility for securing safe development where a site is affected by contamination.

11.68 In order to appropriately identify and manage the risks associated with land contamination we will require proposals to undertake a series of steps to ensure that development is safe. In the first instance a Preliminary Risk Assessment must be undertaken. This should consist of a desktop study and site walkover report that shows all previous and existing uses of the site and adjacent land. It should assess the potential contamination risks to identified receptors. Following this preliminary assessment applicants will be required to submit, where appropriate:

- A Site Intrusive Investigation which provides a more detailed assessment of site characteristics and risks to receptors;
- Where contamination is present, a Risk Management and Remediation Strategy to deal with the identified hazards to human health and the environment, along with site management and monitoring arrangements;

- A Verification Plan for any remediation works, completed by a suitably qualified professional, in order to ensure effective measures to protect: occupiers of the development and neighbouring land uses; the structural integrity of new and existing buildings; and any watercourses or aquifers; and
- A Verification/Closure Report, to be submitted prior to occupation, which demonstrates completion and validation of the works set out in the approved Risk Management and Remediation Strategy, including results of sampling and monitoring carried out in accordance with the Verification Plan.

11.69 The Council's Environmental Protection (EP) service maintains a Contaminated Land Register and the EP website pages provide information that can direct applicants to further resources which may assist with site investigations and possible remedial measures. Planning conditions may be used to secure appropriate measures prior to the commencement and occupation of development.

11.70 When contaminated land has the potential to affect watercourses or groundwater, the Environment Agency should be contacted, as in certain circumstances it is the responsible authority under the Environmental Protection Act 1990.

Hazardous substances

- 11.71 Hazardous installations consist of sites and facilities for chemical processing, fuel and chemical storage and pipelines. It is important that any risks associated with hazardous substances (including to human health, safety and the environment) are appropriately managed and mitigated. There are listed hazardous installations both within and in proximity to the Borough, including the Lower Sydenham Gas Holders. Whilst hazardous substances are controlled by the separate need for hazardous substances consent along with health and safety regulations, the Local Plan also has a role in ensuring public safety from major accidents, consistent with the NPPF and its associated guidance.
- 11.72 All planning applications for hazardous installations, or the use of land in proximity to them, must suitably demonstrate that development will not constitute a risk to the population or the environment. In considering proposals and potential risks, we will apply the Health and Safety Executive (HSE) land use planning methodology and consult with the HSE, Environment Agency and other stakeholders as appropriate. Depending on individual site circumstances proposals may be required to submit a Preliminary Risk Assessment and/or a Risk Management Strategy that clearly identifies risks and sets out measures to appropriately manage and mitigate these.

Table 11.1: Safeguarded waste sites

FACILITY	ADDRESS	SITE SIZE	LICENCED CAPACITY (TONNES)	AVERAGE ANNUAL THROUGHPUT (TONNES)
South East London Combined Heat & Power (SELCHP) energy recovery facility	Landmann Way, New Cross, SE14 5RS	2.30 ha	464,000	426,880
Deptford Recycling Centre	Landmann Way, New Cross, London SE14 5RS	0.63 ha	130,000	52,000
Landmann Way Reuse & Recycling Centre	Landmann Way, New Cross, Lewisham, SE14 5RS	0.24 ha	TBC	5,660

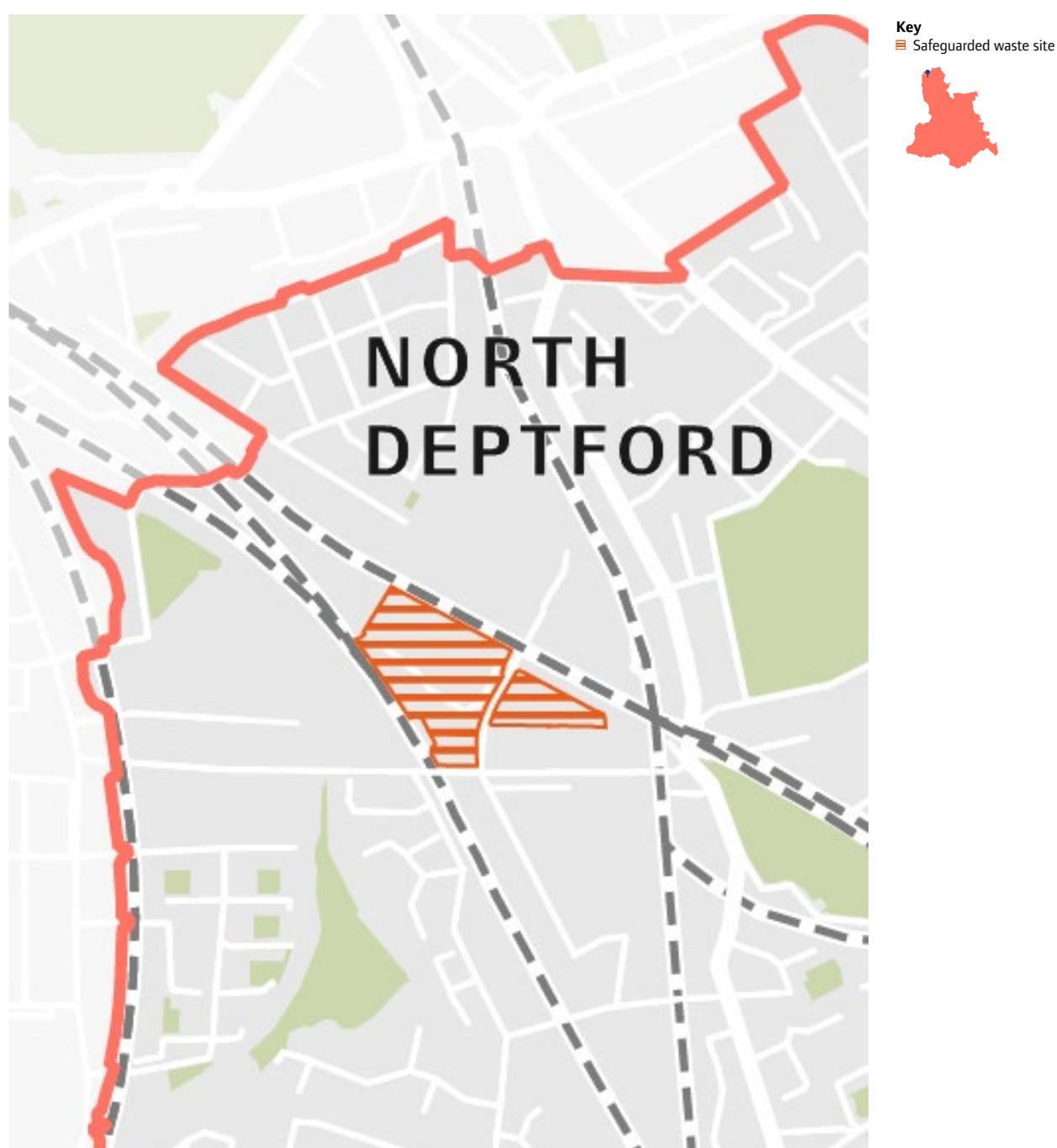


Figure 11.5: Safeguarded waste sites

SD11 Reducing and managing waste

- A A circular economy approach will be promoted in Lewisham in order to make a more efficient use of resources, to achieve increases in the re-use and recycling of materials and reductions in waste going for disposal. Development proposals should apply circular economy principles in the design and construction process, in line with Policy SD 12 (Design to support the circular economy).
- B To help London achieve net waste self-sufficiency and ensure the Borough's strategic waste apportionment target is met, the Council will work in partnership with the local authorities comprising the South East London Joint Waste Planning Group to identify and safeguard strategic sites suitable for waste management. The following existing sites will be safeguarded in Lewisham:
- a. South East London Combined Heat and Power (SELCHP) energy recovery facility, New Cross
 - b. Recycling Centre (HTL Waste Management Services), New Cross
 - c. Reuse & Recycling Centre (London Borough of Lewisham), New Cross
- C Development proposals for new waste management facilities will only be permitted where:
- a. They are required within the Borough to meet an identified strategic need;
 - b. It is demonstrated that the waste management capacity at existing safeguarded waste sites has been maximised, and there are no opportunities for appropriately increasing capacity at these sites to meet the identified need;
 - c. They are located within a Strategic Industrial Location;
 - d. They achieve a positive carbon outcome or demonstrate that steps are in place to meet the minimum greenhouse gas performance target, in line with draft London Plan Policy SI8 (Waste capacity and net waste self-sufficiency); and
 - e. They will not result in any adverse impacts on human health, the natural environment and local amenity, having regard to relevant legislation and other development plan policies.



50 yds
←

← Rotherhithe 

 Greenwich →

← Surrey Quays
Millwall 



GIVE WAY
70 yds

Surrey Canal
Road SE14

E 011

Explanation

- 11.73 The draft London Plan advocates the ‘circular economy’ as a strategic approach to the sustainable use and management of materials and waste. The circular economy is one where materials are retained in use at their highest value for as long as possible and are then re-used or recycled, leaving a minimum of residual waste. The main principles of the circular economy, which are explained in detail in the draft London Plan, are reflected in the **Figure 11.6**. These principles should be applied in the design and construction stages of all new development. The successful implementation of these principles will help to reduce the volume of waste that is produced and will need to be managed both in Borough and across London. Transition towards the circular economy in Lewisham is necessary to support wider regional and national strategies on sustainable waste management. This is recognising that the continuation of the current linear economy approach (where resources are taken to make products, which are then disposed of at the end of their useful lifetime) would require significant investment in additional waste infrastructure along with land to support this.
- 11.74 The draft London Plan includes a strategic objective for London to be net waste self-sufficient by 2026. This means that all waste generated in the city should also be managed within it, rather than being exported elsewhere. To support this objective the London Plan apportions a per cent share of London’s total waste to be managed by each Borough, which is set out in tonnes. It then requires Boroughs to allocate sufficient land or sites, and identify facilities, to manage the apportioned tonnages of waste.
- The Council will continue with the approach to pool and manage the waste apportionment within its sub-region, working in partnership with other local authorities in the South East London Joint Waste Planning Group. This includes Lewisham along with Bexley, Bromley, Royal Borough of Greenwich, Southwark and City of London. The South East London Joint Waste Technical Paper provides further details on the pooled apportionment and strategic sites with capacity to manage this over the long-term. There are 3 waste management sites safeguarded in the Local Plan, which are located within the Strategic Industrial Location at Surrey Canal Road.
- 11.75 The South East London Joint Waste Technical Paper provides that there is currently sufficient waste management capacity in the constituent Boroughs to meet the London Plan pooled apportionment. Proposals for new waste management facilities (including extensions to existing facilities) will therefore only be supported where they are required to meet an identified strategic need within the Borough, taking into account the pooled capacity within the sub-region. We will expect all applications to provide evidence of a local need and to demonstrate that capacity at existing sites has been fully maximised before pursuing other development alternatives. Consideration should be given to the enhancement of existing facilities through the site selection process. We will require that all proposals for new or enhanced waste management facilities are located within Strategic Industrial Locations, which are the Borough’s designated locations for general industrial and storage uses.

Other employment areas are not appropriate for this type of use. This is because the successful delivery of spatial strategy relies on the intensification of Mixed-use Employment Locations and Locally Significant Industrial Sites, giving priority to Class B1 (light industrial) uses to meet future employment needs. All proposals for waste management facilities will be required to

demonstrate that there will be no adverse impacts on human health, the natural environment and local amenity. Proposals will be assessed against relevant London Plan policies, including draft Policy S18 (Waste capacity and net waste self-sufficiency).

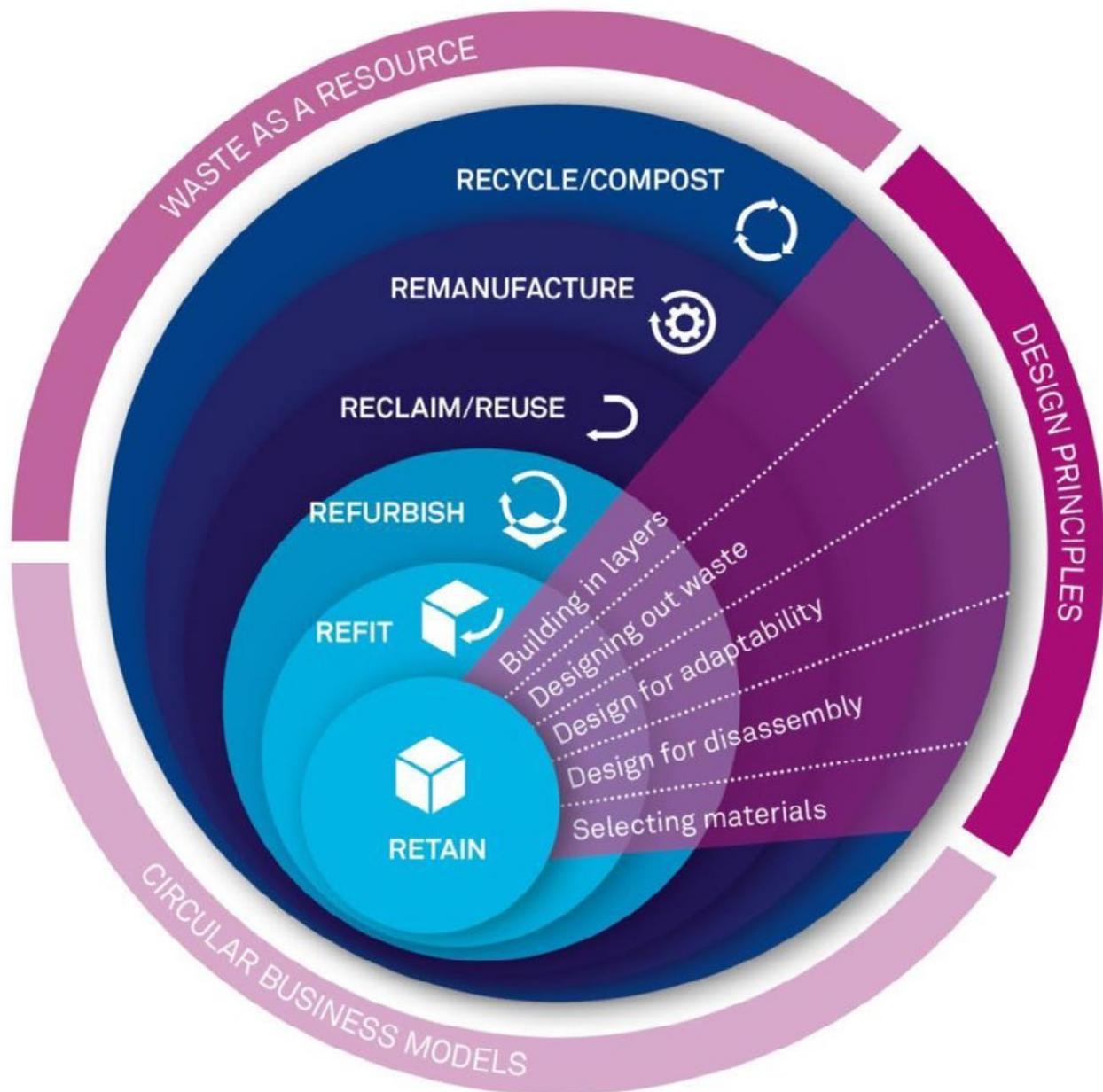


Figure 11.6: Circular economy principles (London Plan and Dave Cheshire, AECOM)

SD12 Design to support the circular economy

- A All development proposals will be expected to apply circular economy principles in order to minimise waste and support the delivery of sustainable development in Lewisham. Consideration should be given to the circular economy hierarchy for building approaches, as set out in the draft London Plan, at the start of the design process taking into account the following principles:
- Building in layers, ensuring that different parts of buildings and spaces are accessible and can be maintained and replaced when 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 adaptability;
 - Designing for disassembly; and
 - Using materials that can be re-used and recycled.
- B Major development proposals should aim to be net zero-waste. They will be required to submit a Circular Economy Statement, as part of the Sustainable Design Statement, in line with the requirements of draft London Plan Policy S17 (Reducing waste and supporting the circular economy).
- C Development proposals will be expected to sustainably manage both the type and volume of recyclable materials and waste arising from the development during the construction and operational phases.
- D Development proposals must be designed to ensure adequate on-site provision for the sorting of recyclable material, composting of organic material and the disposal of general waste during the occupation stage. Proposals will be expected to make provision for:
- Dedicated internal and external storage facilities, with flatted residential development including temporary storage space for each unit and communal storage for waste materials pending collection;
 - Safe and convenient access to storage facilities, both for building occupiers and collection services;
 - Well sited and designed development that avoids and mitigates adverse impact on the amenity of building occupiers and neighbouring site users and uses; and
 - Separate provision for commercial and household waste where mixed-used development is proposed.
- E All proposals for new multi-storey flatted residential development, including mixed-use development, must also make provision for sensitively designed storage and collection systems at each floor. Proposals should fully investigate design options for basement servicing before giving consideration to the use of forecourts or ground floor internal storage.
- F Where public realm is included as part of a development proposal provision for recycling and waste management facilities appropriate to this element will be required. Provision should be sensitively located and designed. This includes accessible and clearly legible facilities to enable the public to easily distinguish between options for sorting of recyclable material, disposal of general waste and where appropriate, composting of organic material.

Explanation

- 11.76 The circular economy supports a holistic and sustainable approach to the use and management of materials. Lewisham can make a significant contribution to helping London achieve net waste self-sufficiency if new buildings and spaces within the Borough are designed in a way that avoids and reduces waste arisings and supports high recycling rates. By seeking that new developments apply circular economy principles in the design and construction process, we aim to prioritise the re-use and recycling of materials over their disposal.
- 11.77 Applicants should refer London's circular economy route map ⁵¹ for further guidance on the application of circular economy principles. Large-scale developments present significant opportunities to support the transition to more sustainable and innovative building design and construction, particularly where they are to be delivered through the comprehensive redevelopment of sites. In line with the draft London Plan, major development proposals will be required to submit a Circular Economy Statement demonstrating how the circular economy hierarchy has been taken into account. This should be included as part of the Sustainable Design statement. The London Mayor has committed to providing further guidance on Circular Economy Statements, covering the construction phase of development.
- 11.78 Development proposals should seek to maximise opportunities for adaptable design of buildings and spaces. Residential developments are unlikely to come forward for a change of use over the long-term given housing needs in the Borough. However this should not discourage applicants from considering building options that can extend the life of developments, for example, by using durable materials and designing spaces that can be modified to the needs of different users. Non-residential developments, such as retail and commercial uses, are likely to have shorter lifespans and are therefore well positioned to support more comprehensive approaches to adaptive design. This is in part owing to the changing requirements of building occupiers and business turnover, particularly in the context of London's competitive and evolving economy.
- 11.79 All development proposals will be expected to consider options for sustainably managing the materials used and arising from the development. Consideration at the early stages in the design process will help to ensure the most appropriate and practical solutions are employed during the construction and occupation stages. It is important that recycling, composting and waste management facilities are well designed and sensitively integrated into new development. This will help to ensure protection of amenity and avoidance of nuisance, both for site occupiers as well as those in surrounding properties. New multi-storey flatted development poses unique challenges given the number of households that require provision, the limited space available for sorting, collection and servicing, and the unique nature of managing waste through vertically

⁵¹ London's circular economy route map, GLA & London Waste and Recycling Board. 2017.

stacked buildings. However, this should not preclude occupiers benefitting from suitable and convenient access to facilities, and that waste collection services are not compromised by poorly designed and laid out buildings.

- 11.80 Public realm must also be adequately serviced with readily accessible and clearly legible recycling and waste management facilities. Public spaces should include adequate provision of facilities that encourage easy separation of recyclable and waste materials at the point of disposal. Not only will this assist with reducing waste but it can help to protect local amenity through the avoidance of unsightly litter.