Draft February 2020

Draft Lambeth
DESIGN CODE SPD
Part 5: Basements

Lambeth

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Contents

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Introduction

Background

5.1 The council is committed to supporting development that allows everyone in Lambeth the opportunity to make the most of their property in a positive way, not just for them but for their neighbours and the community as a whole.

5.2 Whilst this guidance is primarily for applicants proposing a basement extension to an existing residential property or for those likely to be affected by such a development; the general principles will also be relevant for a range of sites that propose below ground excavation to create floor space.

5.3 The guidance includes:

- Advice for Neighbours
- Design Advice
- Basement Impact Assessment
- Construction Management

5.4 Basement development includes any excavation to form new floor space below ground level or other underground development that requires planning permission.

Planning Permission

5.5 Most basement development will require planning permission, but there are certain circumstances where it may be 'permitted development'. The criteria under which basement work may be permitted development is complex and it is not appropriate here outline it here. The Government's planning website www.planningportal.gov.uk and provides up-to-date advice on this matter. If your property is located in a conservation area, planning permission may also be required for associated demolition works.

5.6 For those undertaking works that do not require planning permission, it is recommended that a Certificate of Lawful Development is sought from the Council; this provides formal confirmation that planning permission is not required. Whether or not planning permission is required, it is advisable to consider the advice in this document as best practice.

5.7 In some areas permitted development rights have been removed by an Article 4 Direction made by the Council. These additional planning controls mean that planning permission is required for an identified list of works. Further information on Lambeth's Article 4 Directions is available on the Council's website www.lambeth.gov.uk.

5.8 Building Regulations compliance is neccessary. Lambeth Building Control provides this service; further information can be found on the council's website www.lambeth.gov.uk.

Listed Building Consent

5.9 Under the Planning (Listed Buildings and Conservation Areas) Act 1990 listed building consent is required for any works of alteration, extension or demolition that would affect the special architectural or historic interest of a statutory listed building. It is the responsibility of Lambeth as Local Planning Authority to decide what works would affect the special interest of a listed building. The council's Conservation and Urban Design team can advise on this matter. When determining applications for works to listed buildings, the Council is obliged by law to pay 'special regard' to the desirability of preserving the special interest of listed building. Further information can be found on the council's website www.lambeth.gov.uk.

Protected Trees

5.10 Where a tree is subject to a Tree Preservation Order (TPO) or if a tree is located within a conservation area, work may require prior consent or formal notification to the council; further information can be found on the council's website www.lambeth.gov.uk.

Planning Policy Context

5.11 Policy Q27 (a) supports such development where no unacceptable impacts will to ground water, slope stability, surface flow and flooding, the ability of trees to thrive, the cumulative effects on the locality, waste to landfill and statutory listed buildings. Part (b) of Policy Q27 sets out general expectations for basement development seeking to protect visual amenity, mitigate against sewer flooding, minimise noise, incorporate sustainable drainage and be naturally ventilated. Part (c) sets parameters for basement development beneath buildings. Part (d) sets parameters for basement development beyond the footprint of buildings. Policy Q27 part (e) relates to the design of basement light wells and areas. Part (f) acknowledges that in non-residential development more than one storey of basement development may be possible. Part (g) places a requirement for applicants to submit a Stage 1 (Screening) Basement Impact Assessment and sets out what it should address. Policy Q27 (h) allows for the Council to request further stages of basement Impact Assessment where necessary and passes the costs of any independent assessment onto the applicant. .

Guidance

Mayor's Sustainable Design and Construction Supplementary Planning Guidance (2014)

5.12 Provides guidance on the implementation of The London Plan policy and includes particular guidance on basements and light wells. It states that where there is pressure for basement developments, boroughs should consider whether there are any particular local geological or hydrological issues that could particularly affect their construction, and adopt appropriate policies to address any local conditions.

Pre-application Advice

5.13 The Council offers a pre-application advice service so that applicants can get advice prior to the submission of a formal application. Endorsed by government in para 39 or the NPPF, pre-application advice can resolve issues for all parties prior to the submission of a planning application allowing for applications to proceed more smoothly through the planning process. For that reason applicants for basements are strongly encouraged to avail of this service. Further information is available on the Council's website www.lambeth.gov.uk.

5.14 Pre-application advice from the Greater London Archaeological Advisory Service (GLAAS) should be sought.

5.15 Basement development is often contentious, in part due to the length of construction work and the disruption this can cause to neighbours. Given the complexity of the basement construction process, it is particularly important that detailed proposals for all aspects of design and construction are fully worked up prior to submission of any planning application.

5.16 Adequately qualified Hydrologists and Engineers should be included in the design team to carry out a Basement Impact Assessment; this is an established process of identifying prior to a decision being taken the impact of a basement on drainage, flooding, groundwater conditions and structural stability. A Draft Construction Management Plan setting out details of the method of construction and how the process will be managed should also be worked up. The various stages of the Basement Impact Assessment will state what the impacts are and ensure that mitigation methods are designed into the basement development.

Pre-application Neighbour Consultation

5.17 Anyone considering basement development is strongly encouraged to consult with all neighbouring occupiers and with their local amenity societies and provide them with details showing how structural matters have been considered by a chartered civil engineer, including the impact on adjoining properties, drainage, nearby trees and on boundary walls. Early engagement (pre-application) will help address genuine concerns of neighbours and can improve the outcome of planning applications for both the applicant and the local community (NPPF, para 40). Applicants are also advised to consult anyone with a freehold interest in the application property and ensure that they have complied with their requirements they might have.

5.18 The impact and duration of the construction works will be of particular interest to neighbours. Applicants should also liaise closely with neighbours throughout construction and notify them of forthcoming noisy works/ changes in programme.

5.19 Applicants should outline any pre-application consultation undertaken within their application submission and explain how consultee concerns have been considered and addressed. The council will consult neighbouring occupiers and amenity societies as part of the application process.

Advice for Neighbours

5.20 If your immediate neighbour is planning a basement development it is in your best interest to fully understand the implications of the proposal on your property. You may need to instruct a Party Wall Surveyor to represent your interest. The person undertaking the basement development should carry the cost of this.

Commenting on a Planning Application

5.21 As part of its consideration of planning applications the council notifies adjoining neighbours and invites comment. Planning applications are assessed against planning policy and all other material planning considerations. To be relevant comments on applications should relate to the relevant planning policies. Some key Local Plan policies are outlined below:

- Policy H5 – Housing standards
- Policy Q2 – Amenity
- Policies Q9 and Q10 – Landscaping and Trees
- Policies Q19, Q20, Q22 and Q23 – Heritage Assets
- Policy T8 - Traffic, road access, parking and servicing (the completed development)
- Policies EN5 and EN6 - Flood risk, ground conditions and land instability

5.22 It should be noted that some non-planning matters are not material planning considerations; they cannot be considered when assessing an application. These include:

I. loss of property value
II. party wall matters
III. land or boundary disputes
IV. matters controlled by other regulations
V. Disturbance of concurrent construction projects

5.23 The structural stability of a buildings is covered by the Building Regulations and is not a material planning consideration. If structures become dangerous Lambeth Building Control should be contacted.

5.24 Noise and pollution falls under a separate legislative framework and comes under The Environmental Protection and Control of Pollution Act. It is enforced by Lambeth's Community Safety Team and not Planning Enforcement. The council as a whole also has a range of powers to take enforcement action on other issues (see Appendix 3 on role of other regulations and organisations).

5.25 Appendix 4 explains further the role of other regulations and controls relevant to a basement development.

Stages

Pre-Planning Design

Get as much information as possible from the owner/applicant/site manager about - programme, visual/other impacts likely on your property.

Understand temporary impacts – construction traffic, noise, vibration, dust.

Understand likely permanent visual/other impacts on your property.

How the temporary and permanent impacts could be minimised.

Discuss any particular issues that you would like them to take into account.

Planning application

Once work starts, contact the site manager in the first instance if any problems arise.

You may wish to keep a photographic record and log of events if you have concerns.

The site managers contact details should be clearly displayed on site.

Ask for a timetable to show what works will be happening and when, and ask to be notified in advance of when particularly noisy works may occur.

Construction

Comment on the proposals in the planning application in writing, keeping to planning policies and within the consultation deadline.

Negotiate the Party Wall agreement. Ensure that you engage a surveyor with experience of basement development. Please note that this is a separate regulation and process to both Planning Permission and Building Regulation compliance; the Local Authority has no involvement.

Post Construction

Contact planning enforcement if you are concerned that the development is in breach of the approved drawings or any attached planning conditions. The council's planning enforcement officers will investigate and can consider formal action if it is required.

Community Safety officers can investigate matters concerning noise, dust and vibration where the relevant environmental protection legislation has been breached

Neighbour checklist

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Design Guidance

Design Code Part 5: Basements

Guidance

Flood Risk

5.26 In line with Policy EN5 and Annex 5 (flood Risk Zones) of the Lambeth Local Plan, the Council will not support self-contained residential units, bedrooms, or non residential uses in areas with a high probability of flooding. For more information in these areas see Section 7. Outside of these areas, where basement accommodation is to provide residential accommodation, it will be subject to the same standards as other housing in terms of space, outlook, daylight and sunlight; along with resilient design techniques in line with the Environment Agency Guidance. Suitable access should also be provided to basement accommodation to allow for an escape route to a floor above the flood level.

Basement Depth

5.27 The depth of a basement has implications for basement construction (such as the amount of excavation waste from a proposal), increased potential to cause ground movement, potentially longer construction times (impact on neighbours), decreased levels of natural light and ventilation to basement areas, increased chances of coming into contact with groundwater and the need for energy-intensive construction techniques.

5.28 Policy Q27 (c) limits basement residential accommodation to one floor below ground. This is seeks to ensure adequate amenity to all residential accommodation. New basement residential accommodation is not supported beneath existing basement accommodation (including semi basements). For non-residential development Policy Q27 (f) acknowledges that in major developments it may be acceptable to have more than one non-residential basement levels of more than one storey in height where applicants can robustly demonstrate that there would be no significant impacts will result. In assessing these cases designers should show that matters of hydrology or the land stability of neighbouring buildings, trees and other structures, have all been fully assessed.

Basement Extent

5.29 Any extension of existing semi-basement accommodation beyond the footprint of the host building will be partially above ground. This is the only circumstance where Policy Q11 (Building Alterations and Extensions) will apply to basement development. See part 4 of this SPD.

5.30 The provision of new full basement accommodation beyond the footprint of a building is covered by Policy Q27 (d) which limits such development to the rear of a property. The overall extent of the basement beyond the footprint of the host building must be no greater than the footprint of the host building AND retain no less than 70% of the rear garden free of basement development and at its original ground level. Designers should show these calculations in their application submissions.

5.31 The location of trees of value, should be taken into account as policies EN1, Q9 and Q10 require new development to integrate existing trees, retain and enhance existing planting and biodiversity value of the land.

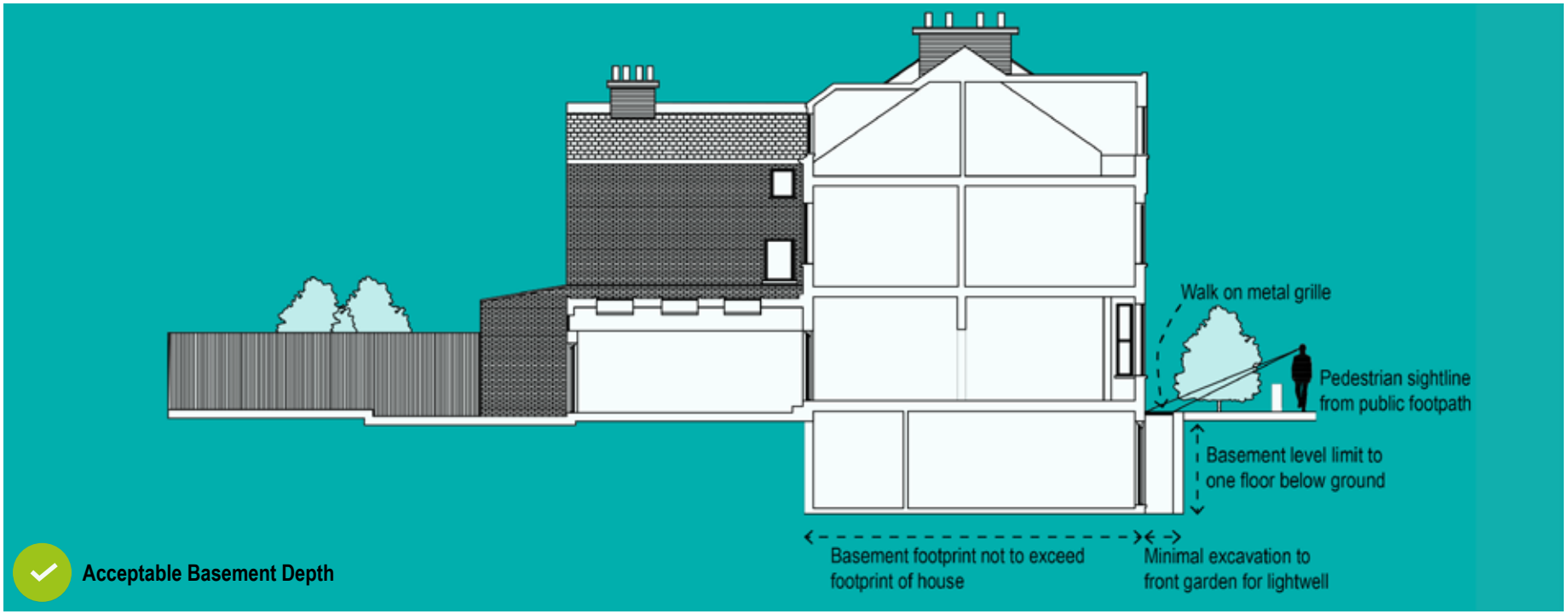
Quality of Residential Accommodation

5.32 Where new basement accommodation meets the requirements of Policy Q27 (c) (i) and (ii) and is acceptable in principle it is essential that it is of a suitable standard.

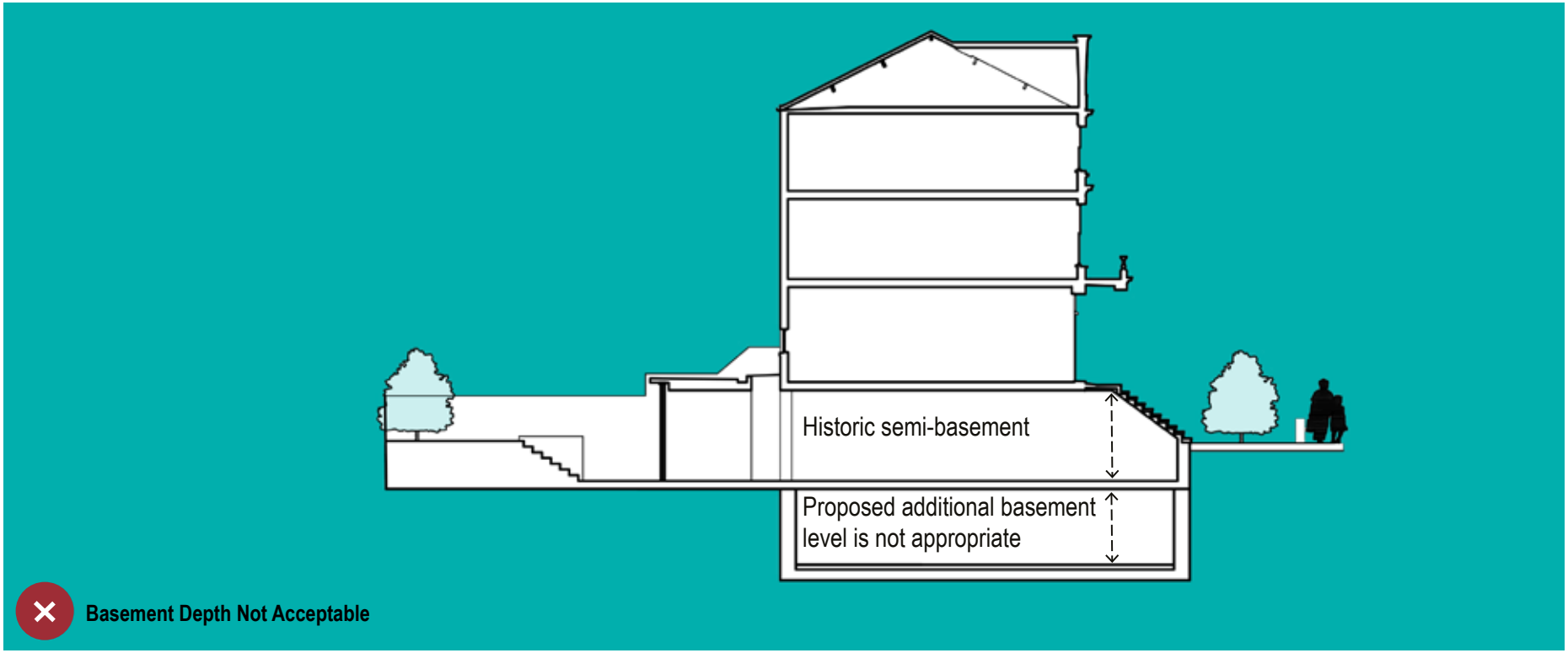
5.33 Policy Q27 (ii) seeks to address this by resisting new residential basement accommodation beneath existing basements. To minimise the amount of excavation and to ensure adequate amenity for users, the floor to ceiling heights of new residential basements should not exceed 3m.

5.34 The very nature of basement accommodation means that issues of outlook, amenity and daylight and sunlight can be challenging. Light-wells for example provide very limited outlook whilst daylight and sunlight can be restricted by adjoining boundary treatments and ground levels. To ensure good quality residential accommodation the Council will generally seek to ensure that the habitable accommodation of new residential units is not solely contained at basement level but instead split over basement and ground floor. Ideally living rooms and kitchens should be at ground level with bedrooms below but some site circumstances may dictate otherwise. Designers should consider layouts that optimise daylight penetration and good ventilation and guard against poor outlook and oppressive sense of enclosure.

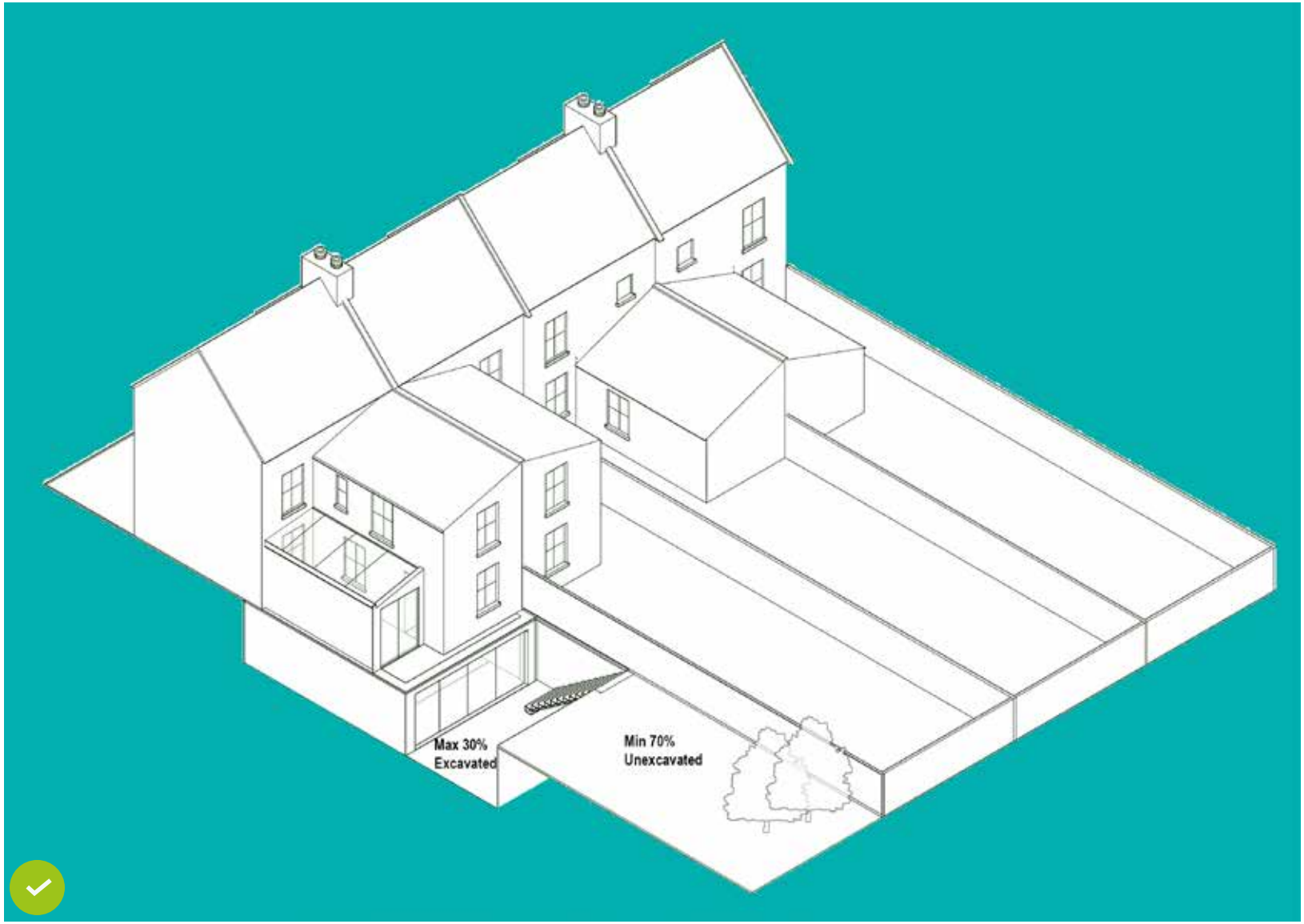
5.35 Whilst basement level courtyard gardens can provide adequate outlook for bedrooms they rarely gain sufficient sunlight to count as usable outdoor amenity space. For living rooms and kitchens consideration should be given to grading the ground outside so that there is better outlook then might be provided by a conventional light-well. Where possible light-wells should be stepped and planted with trailing plants and / or have light reflective finishes such as glazed bricks.



Acceptable Basement Depth



Basement Depth Not Acceptable



Basement Extent - Basement footprint size should not exceed house

Q27

External Character and Appearance

5.36 Policy Q27 (b) requires that the external appearance of basement development and associated excavations (light-wells and basement areas) must respond appropriately to the character and materials of the host building and cause no harm to visual amenity which generally means the streetscape and established patterns of development and landscape.

Historic Precedent

5.37 Semi-basement residential accommodation is a common characteristic of much of Lambeth's early-mid 19th Century housing. When built the accommodation generally contained kitchen and service accommodation. At the front the semi-basement accommodation typically looked into a paved basement area although on some of the grander housing along the arterial roads the garden level was often artificially raised to screen the basement accommodation from view and it looked into a shallow light-well. At the rear the ground level is often a half storey lower to give better outlook from the basement accommodation. Irrespective of variation in the detailed design basement accommodation is always visually subordinate to the property as a whole and carefully integrated into the design. All new basement accommodation should seek to achieve similar visual integration and subordination.

Existing Basement Areas and Light-Wells

5.38 Policy Q27 (e) seeks to protect existing basement areas from inappropriate alteration. This is particularly relevant to heritage assets and within conservation areas.

5.39 On many buildings with existing semi-basements, the front garden levels often ramp up to screen historic semi-basement accommodation. The re-grading of front gardens to slope to a basement, or the excavation of a new basement area, may improve daylight to basement accommodation but such excavation may be inappropriate if exposing the lower levels of the building and changing the levels have an adverse visual impact. Excavations and re-grading of rear gardens is less sensitive but still needs careful consideration.

5.40 Where existing basement area railings are of interest they should be sympathetically retained. Historic examples on neighbouring buildings may inform the design of new work.

Landscaped buffer to lightwell

Discreet walk-on grille

Glazing over lightwells is not supported

Changes to Host Buildings

5.41 Where existing buildings are altered to accommodate new basement accommodation it is essential that the new work seamlessly integrates with the old. Matching materials will generally be required. That means that if a building is brick built all parts of the elevations exposed through excavation of light wells and basement areas should be finished in matching brickwork on heritage assets and in conservation areas.

5.42 Similarly, the treatment of retaining walls, assess steps and other features needs careful consideration in order to be compliant with the relevant regulations and to fully integrate with the character of the host building.

Front and Side Gardens

5.43 Policy Q27 (e) seeks to limit front and side basement areas and light-wells to the minimum size necessary to serve their required use in order to keep external changes to the minimum necessary. In order to achieve this the Council will seek to minimise the amount of excavation in front and rear gardens of existing properties, resist alien features, visual clutter other unsympathetic change. The landscape integrity of front gardens should be retained and, where necessary, additional planting used to screen new works.

New Light-Wells

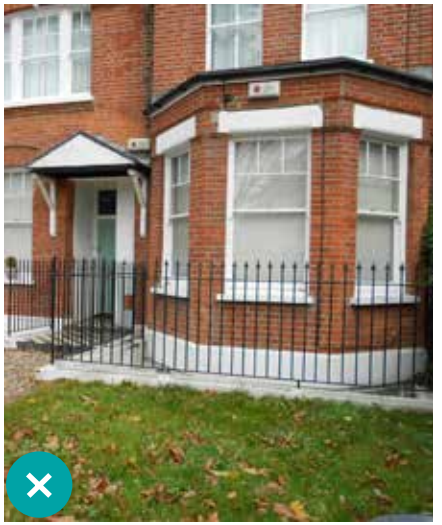
5.44 A light-well is an excavation in front of a basement window provided to allow daylight into the basement accommodation. It also plays a key role in the natural ventilation of basement spaces. Unlike a basement area a light-well is not accessible via a door from within the property and does not have steps up to ground level. Traditionally light-wells are no larger than the window they serve, often are only as deep as the cill level and in most Lambeth examples are finished at ground level with a pavement grill.

5.45 The creation of new light wells, especially in front gardens, can be problematic – if overly large the light-well can be visually discordant especially when enclosed with railings.

5.46 When designing new basement light wells to front and side elevations designers should:

1. Ensure they are the minimum necessary to bring daylight to the space,
2. Design them in keeping with the style and design integrity of the host building,
3. Use pavement grilles to minimise visual impact; and
4. Not reduce existing parking bays to below the minimum standard (where this occurs the council will require the removal of the parking bay).

5.47 The Council strongly encourages the use of pavement grilles to light-wells. The grilles should be constructed flush with the ground level, designed to be visually unobtrusive.



Visually obtrusive lightwell

Shop Forecourts

5.48 The excavation of whole forecourts into a large basement area is unlikely to be supported as the retained shop front is left 'floating' incongruously. In these circumstances it is preferable to enclose the forecourt and landscape it as a front garden and then to insert light-wells or a basement area in the manner supported above.

Front Railings

5.49 Unlike light-wells basement areas are generally too large to be covered by a pavement grille, they therefore require railings to prevent falls. Where basement areas are deemed acceptable in principle care should be taken with the railing enclosures to ensure good design. Where steps are included the gate at the top of the steps should be integrated seamlessly into the railing design. Where appropriate, shrub planting should be used to provide screening.

Rear Basement Development

5.50 The provision of new full basement accommodation beyond the footprint of a building is supported at the rear of properties by Policy Q27 (d). It limits the overall extent of the basement beyond the footprint of the host building to be no greater than the footprint of the host building AND retain no less than 70% of the rear garden free of basement development and at its original ground level.

5.51 Policy Q27 (d) (i) seeks to ensure that the roof surface of any basement accommodation extending into a rear garden is level with ground level and can be used as amenity space. This ultimately means it should be designed to serve as a patio or terrace. In such instances pavement glazing set into the ground can be used to provide light into the basement accommodation. Where the accommodation is occupied by others the glazed surface should be fritted or obscured for to protect amenity.

5.52 The Council supports the grading of rear garden levels down to new basement levels or the provision of broad garden steps as a means improving outlook, daylight of the basement and assess from it to the garden. However, it should be noted that these excavations, must not be within the 70% of the garden that policy Q27 (d) requires to remain unaltered.

Plant

5.53 Plant and machinery should be fully integrated within the basement and any external visual impact should be minimised. Plant will be resisted in front gardens or on front elevations or prominent side locations. Above ground plant should have well designed screening to minimise visual impact and to help to reduce the adverse impact of noise, including that from pumps.

5.54 Basements are more susceptible to flooding, both from surface water and sewage, than conventional extensions. Policy Q27 (b) (ii) requires that new basements are fitted with positive pumped devises to protect the basement from the risk of sewer flooding. Fitting basements with a 'positive pumped device' (or equivalent reflecting technological advances) will ensure that they are protected from sewer flooding. Fitting only a 'non return valve' is unacceptable as this is not effective in directing the flow of sewage away from the building.

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Heritage Assets

Heritage Assets

Conservation Areas

5.55 Conservation Areas (CA), are areas identified as areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance. Conservation Area Statement and Character Appraisal documents are provided by the Council to explain their special character and appearance. The conservation area statements also include design guidance.

5.56 The Council is obliged by law to pay special regard to the desirability of preserving or enhancing the character or appearance of the CA when it assesses applications. Basement development and associated structures can affect the character and appearance of a CA and applications maybe refused if the council considers the impact unacceptable.

5.57 In addition to the design considerations applicable to all development outlined in the above sections, the impact of the external works of any basement proposal on the character or appearance of a CA should be set out in a Heritage Statement included within the planning submission. The Heritage Statement should explain the contribution of the building to the character or appearance of the CA and the impact of the proposals on that significance. In line with NPPF any proposed harm to the significance of a designated heritage asset will require a clear and convincing justification.

5.58 Residential gardens generally make a positive contribution to the setting of heritage assets and to character and appearance of CAs. Where basement development is acceptable in principle changes external alterations should be minimised as far as possible to ensure no harm to the heritage asset occurs.

5.59 Proposals that will have a harmful impact on the significance of designated heritage assets will be required to meet the relevant tests set out in the NPPF. Impacts on non-designed assets will be assessed against Policy Q23.

Statutory Listed Buildings

5.60 The vast majority of Lambeth's listed buildings are early 19th Century houses which have been listed because they are well-preserved examples of an ordinary building types. This means their relatively ordinary historic character and features is what is of value. Listed Building Consent is required for any works of alteration, extension or demolition to statutory listed building. This means that alterations to existing basements – such as lowering floor levels will generally require listed building consent. Listed Building Consent will also be required for new basements or extensions to existing basements to listed buildings. Proposals will be resisted if they will result in harm to the special interest of the listed building. New basements underneath and/or within the curtilage of listed buildings must also be carefully designed so as not to harm the special architectural or historic interest of the listed building or its setting.

5.61 Most of Lambeth's listed buildings listed buildings were designed with a clear hierarchy of floor levels reflecting the uses for which they were designed. Houses tend to have tall principal rooms at ground and first floor levels with generous floor to ceiling heights as these spaces were used for entertaining. At basement level the ceiling heights are low and the character much more intimate because the spaces were generally used as kitchen and service areas. The differences in floor to ceiling heights are part of the significance of this building type. Any basement level works should ensure that the ceiling height remains subordinate to the floor above. Internal features – flooring, joinery, fitted cupboards etc. at basement level should be retained as they will be deemed to contribute to the special interest of the listed building. Loss or inappropriate alteration will be resisted.

5.62 Listed building consent applications should be accompanied by a Heritage Statement which explains the significance of the listed building, the impact of the proposal on that significance and the measures taken to avoid harm. In line with NPPF any proposed harm to significance of a heritage asset will require a clear and convincing justification. Proposals that will have a harmful impact will be required to meet the relevant tests set out in the NPPF.

5.63 Where basement works are deemed acceptable on statutory listed buildings any new basement accommodation should not extend beyond existing footprint of the listed building. This is to ensure subordination and to avoid risks to the structural stability of the property.

Q22

Q23

5.64 Design features that may be acceptable on a typical basement proposal may not be acceptable to a listed building. In developing proposals designers should avoid harm to:

1. Structural integrity
2. Architectural integrity
3. Hierarchy of spaces which includes their floor to ceiling heights
4. Plan form
5. Historic fabric
6. Circulation patterns including access from within the building and from outside
7. Setting (caused by the amount of external excavation relative to the building including changes to retaining walls, steps and gardens).

5.65 Any stair between the original house and the new basement level should preserve / reinforce historic circulation patterns, floor plans and historic structure/fabric. Often the best way to achieve this is to sympathetically extend the existing staircase down into the new basement OR to create a new staircase in a less significant area such as an extension. This will depend on the site circumstances.

5.66 The lowering of an historic basement floor level is only likely to be acceptable where all of the following are met:

I. No underpinning is required i.e. development is retained above footings.

II. It does not entail the removal, alteration and reinstatement of internal features such as joinery, flooring, fire places or the elongation of the doors and architraves etc.

III. Floor to ceiling heights remain subordinate to principal floor levels.

IV. The architectural and historic interest of the building is not harmed.

5.67 Vaults beneath front gardens or pavements are a common feature of historic properties and they, along with associated features such as coal holes, should be retained. The conversion of these spaces into residential accommodation will generally be resisted as the works for damp proofing, ventilation, thermal upgrade etc. are generally so intrusive that harm inevitably results to their historic character and integrity.

5.68 The impact of construction works on historic features such as paving, front steps, garden walls, retaining walls, gates and railings, porches and boot scrapers must also be considered as part of any proposal. Retention on site and robust protection will be required. Should consent be granted for basement development to a listed building, the Council will require details of how features of heritage significance will be protected during the construction process. This should be clearly set out in the Construction Management Plan.

5.69 Structural surveys will be required for any basement work affecting or adjoining a listed building. Significant structural intervention which may be required as part of basement construction, could adversely affect historic fabric. The advice of specialised conservation engineers should be sought to ensure the most appropriate solution. The impact of a proposal on listed buildings should be assessed as part of a Basement Impact Assessment and Construction Management Plan. A contractor or consultant that has experience of working with historic structures should be involved in the design and construction of a basement involving a listed building.

Non-Designated Heritage Assets: Local Heritage List

5.70 Policy Q23 provides the policy context. Designers should note:

1. Buildings and Structures – Many of the considerations relating to statutory listed buildings are relevant. Applicants will be required to provide a Heritage Statement within their Design and Access Statement for proposals affecting these assets.
2. Local historic spaces and designed landscapes - Applicants will be required to provide a site evaluation at application stage.
3. Archaeology - Lambeth has 17 Archaeological Priority Areas (APAs), within which there is a likelihood of archaeological remains. Beyond these areas, there is still scope for the survival of archaeology. An Archaeological Assessment and Evaluation of the site, including an assessment of the impact of the proposed development should be included in the application. Early consultation with the Greater London Archaeological Advisory Service (GLAAS) will be essential to ensure the assessment of the archaeological potential can be carried out in a timely manner. If permission is granted conditions may be attached requiring monitoring and recording of archaeological finds resulting from the works.

Trees, Landscaping & Biodiversity

5.71 Policies EN1, Q9 and Q10 requires new development to be designed positively, to integrate existing trees, retain and enhance existing planting and biodiversity value.

5.72 Basement extensions within the footprint of an existing building are unlikely to have an adverse impact on trees. However, basement which extends beyond the footprint of the host building and the excavation of light wells and basement areas can have significant implications for trees and landscape.

Trees

5.73 Proposals that would result in the loss of trees of amenity, historic or ecological/ habitat conservation value, or give rise to a threat, immediate or long term, to the continued wellbeing of such trees will be resisted. Any application that will adversely impact upon the long term survival of trees will also be refused.

5.74 Where trees are located within a development site, the appropriate arboricultural information should be undertaken (including a site specific tree survey and tree constraints mapping information) to ensure that the proposed layout is sympathetic. This should include existing trees within the site and any situated on adjoining land that might constrain or otherwise influence development. The Arboricultural report should comply with the guidance and recommendations set out in the British Standard document, BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations' and include the following:

1. Survey of all trees on, and adjacent to the site.
2. Plan showing existing tree constraints overlaid with the footprint of the proposed excavations.
3. Identify trees proposed for removal and those to be retained along with justification for removal.
4. Assessment of the impact of the development on the retained trees on and in adjacent site.
5. Explanation of how retained trees will be protected during the construction phase, taking into account site logistics such as storage of building materials, location of site huts, access for piling rigs, removal of spoil from site etc.

Q9

Q10

5.75 Applicants should demonstrate that:

1. trees of value have been retained;
2. the retained trees can be satisfactorily protected from construction impacts and site works during the development stage; and
3. the retained trees have been positively integrated, on a long-term sustainable basis, as part of the site layout.

5.76 Should the proposals be approved tree protection measures will normally be made subject to a condition of the permission. This will normally include a detailed Arboricultural Method Statement.

5.77 Where the removal of trees has been robustly justified, the council will usually require the trees to be replaced within the curtilage of the property, with the aim of replacing the lost canopy. Species selection should conform to the 'right tree, right place' principle.

Landscaping and Biodiversity

5.78 Landscaping should be attractive and contribute to the character of an area, maximise the permeable surfacing of the site and enhance its biodiversity value. Planting should be sustainable and capable of surviving dry periods (potentially drought conditions) without supplementary watering. See also the advice in Part 2 of this SPD relating to the Urban Greening Factor.

5.79 Therefore, it is important that soil above any basement is directly connected with deeper soil beyond the basement in order to draw upon those resources in harsh conditions. Similarly, adequate natural drainage is required in order to ensure that the soil above a basement does not become waterlogged in times of high rainfall.

Sustainable Design & Construction

5.80 Policy EN4 seeks to minimise Lambeth's contribution to climate change. Developments are required to promote sustainable design through minimising their CO2 emissions, maximising passive design and reducing the impact of construction through sustainable use of materials.

Energy Efficiency Measures

5.81 Where a new basement is proposed to an existing building applicants are encouraged to apply appropriate energy efficiency measures to the existing building in addition to providing energy efficient design of the proposal, to help offset the increased operational energy use of the building.

5.82 Applications should be accompanied by a Sustainability Statement addressing the following issues and demonstrate how the proposed design promotes sustainable design best practice, including:

1. passive design measures including optimising the use of natural ventilation, lighting and passive cooling
2. energy efficiency of any artificial lighting, pumps and plant
3. sustainable drainage
4. sustainable material sourcing including potential for re-use and recycled content and avoiding high embodied carbon content
5. water sensitive design including water recycling and water conservation measures.

5.83 The information provided should be proportionate to the proposed scale of development and its likely impact on, and vulnerability to climate change.

5.84 Non-residential basements will also require a pre-assessment demonstrating an 'Excellent' rating of the British Research Methodology (BREEAM) standards, or any future replacement standards will be met.

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Design Code Part 5: Basements

Assessing the Impact of Basement Development

Assessing the Impact of Basement Development

5.85 The impacts of basements on the geological, hydrological and hydrogeological environment, and to other properties, are of concern to both the Borough and local residents. The following sets out key issues that require consideration as part of the planning assessment and will form part of the Basement Impact Assessment; a requirement for all basement development (whether new build or extension to an existing building), which provides extra floor space below ground.

Flood Risk

5.86 All major developments within Flood Zone 1, all development within Flood Zones 2, 3a 3b, or where the development may be subject to other sources of flooding (e.g. surface water, sewer flooding), will require a site specific Flood Risk Assessment (FRA). The FRA should comply with the guidance and recommendations set out in British Standard Institute document, BS8533:2017 Assessing and managing the flood risk in development – Code of practice.

5.87 Policy EN5 seeks to minimise the impact of flooding in the borough. In determining proposals for basements and other underground development, the council will require a Basement Impact Assessment, setting out the scheme's impact and methods of mitigation on drainage, flooding, groundwater conditions and structural stability. The assessment will be required to demonstrate that the proposal would not result in an increase in flood risk or ground instability.

5.88 The potential for flooding in Lambeth is closely related to its topography and the geology: For further information please refer to the Lambeth Preliminary Flood Risk Assessment (PRFA), Lambeth Strategic Flood Risk Assessment (SFRA), Lambeth Surface Water Management Plan (SWMP) and Lambeth Geological, Hydrogeological and Hydrological Study (https://www.lambeth.gov.uk/sites/default/files/PL-Lambeth-Residential-Basement2.pdf) all available on the Lambeth website. More general sources of information on flood risk can be found online at: https://flood-warning-information.service.gov.uk/long-term-flood-risk/ and https://flood-map-for-planning.service.gov.uk/

5.89 As detailed in the London Borough of Lambeth's Local Flood Risk Management Strategy (https://www.lambeth.gov.uk/parking-transport-and-streets/streets-and-roads/flooding-guide¬), Table 1 defines the roles, responsibilities and specific duties of the Risk Management Authorities (RMA) required by the Flood and Water Management Act 2010. Information relating to each flood source may be available from the respective RMA.

EN5

EN6

Sustainable Drainage Systems and Water Management

5.90 All development sites that result in the increase of impermeable surface area are required to mitigate the resulting increase of surface water runoff rate and volume. All major planning applications will require a site specific Drainage Strategy that forms part of or is separate to a Flood Risk Assessment to detail how the site will manage surface water runoff and meet the requirements/standards set out in:

- National Planning Policy Framework;
- Non-statutory Technical Standards for Sustainable Drainage Systems;
- London Plan (Policy 5.13); and
- Lambeth Local Plan (Policy EN6).

5.91 For greenfield sites there must be no net increase in runoff rates and volumes from the site. For sites developed previously the runoff rate and volume must be as close as reasonably practicable to the greenfield condition. Methods used to manage the site's surface water runoff should be clearly detailed in the Drainage Strategy and should be in line with the London Plan Drainage Hierarchy.

5.92 Sustainable Drainage Systems (SuDS) manage surface water and utilise a 'management train' of drainage techniques in series to mimic as closely as possible the natural site's hydrological processes; thereby mitigating and enhancing the development's impact on flood risk, water quality, biodiversity and amenity. SuDS such as green and blue roofs, rain gardens, green infrastructure and attenuation ponds are best practice solutions and the preferred methods due to their multifaceted benefits. Further explanation and guidance on SuDS can be found in The SuDS Manual (http://www.ciria.org/Memberships/The_SuDs_Manual_C753_Chapters.aspx)

5.93 In accordance with Policy EN6, development proposals should:

1. Maximise opportunities for restoring river channels, flood flow pathways and floodplains to their natural state and managing surface run-off above ground and as close to the source as possible to reduce flood risks downstream; and implement sustainable water management through SuDS.
2. Provide compensatory storage to ensure that there is no loss in flood storage capacity where flood storage is removed, as set out in the Strategic Flood Risk Assessment (SFRA).
3. Ensure that the layout and design does not have a detrimental impact on floodwater flow routes across the site.

4. Demonstrate that there will be a net decrease in both the volume and rate of run-off leaving the site by incorporating sustainable drainage systems (SuDS) in line with the London Plan drainage hierarchy and Non-statutory Technical Standards for Sustainable Drainage Systems. Details submitted to the council to demonstrate compliance with this policy should follow the design principles within The SuDS Manual and guidance identified within the council's SFRA or Local Flood Risk Management Strategy (LFRMS) to maximise amenity and biodiversity benefits and improve the quality of water discharges.
5. Seek to improve the water environment in line with the requirements of the European Water Framework Directive 2000 and its associated legislation, and the Thames River Basin Management Plan.
6. Minimise water consumption and the pressure on the combined sewer network, through incorporating water efficiency measures including rainwater harvesting, grey-water recycling and other innovative technologies where practical; and
7. Demonstrate that the local water supply and public sewerage networks have adequate capacity both on and off-site to serve the development; where there is a capacity problem and improvements in off-site infrastructure are not programmed, the developer will need to demonstrate that the necessary improvements will be completed prior to occupation of the development.

Risk Management Authority (RMA) for flood risk management in LBL	Roles and responsibilities under the Flood and Water Management Act 2010 (FaWMA 2010)	Responsibility for Managing Flood Sources from:
Lambeth Council as the LLFA	• Lead on local flood risk management and develop a local flood risk management strategy • Maintain a register of structures and features which are likely to have a significant effect on flood risk • Investigate and report on significant flood incidents • Provide comments and recommendations as the statutory consultee to the Local Planning Authority (LPA) for all major planning applications on surface water flood risk and management • Power to designate structures and features that affect flooding • Responsibility for consenting and enforcement of ordinary watercourse regulation	• Surface Water • Groundwater • Ordinary Watercourses
Environment Agency	• Responsible for managing flooding from main rivers or the sea • Strategic overview for all flooding sources and coastal erosion	• Main Rivers • Estuaries • The Sea • Reservoirs
Thames Water Utilities Ltd	• Responsible for maintaining, improving and extending their water mains and other pipes • Duty to provide and maintain a system of public sewers so that the areas they are responsible for are effectively drained	• Sewer Flooding
Neighbouring LLFAs (Southwark, Wandsworth, Croydon, Merton, Bromley, City of Westminster and City of London)	• Mutual duty to co-operate with Lambeth LLFA as a neighbouring RMA in the undertaking of flood risk management functions • Must work in partnership with Lambeth LLFA to address cross boundary Flood management issues • Carry out duties under FWMA within their own borough boundaries	• Surface Water • Groundwater • Ordinary Watercourses
Transport for London	• Responsible for maintaining any drainage associated with Red Routes in London	• Surface Water drainage from TfL adopted roads and red routes • Gully maintenance
Lambeth Council as the Highways Authority	• Responsible for maintenance of all public roads • Under Highways Act 1980, responsible for provision and maintenance of highways drainage	• Surface Water drainage of highways not covered by TfL • Gully maintenance

Risk Management Authorities roles and responsibilities under the FaWMA 2010

Key Issues

5.92 This section sets out the key impacts that basement development can have upon the built and natural environment and should be addressed as a part of the BIA process.

Surface Water Flow and Flooding

5.93 Basement construction may involve permanent (or temporary) diversion of surface water flows around the building and a loss of permeable ground which otherwise would have received and helped to store or remove rainfall from a site. Basement construction may lead to increases or decreases in surface water reaching the underlying ground, potentially affecting the way underlying groundwater behaves, both on the site and further afield.

5.94 A proportion of rainwater falling on permeable ground is absorbed by the soil which reduces the amount of water remaining on the surface that could contribute to flooding. Construction of a basement under a garden will reduce the infiltration capacity of the ground surface.

Subterranean (Groundwater) Flow

5.95 A solitary, isolated basement, which intersects the groundwater table is unlikely to affect the groundwater flows in the wider area, the water will simply flow around the obstruction. The effects on water level are likely to be small and less significant than seasonal or other existing variations in the groundwater table.

5.96 However, locally, changes in groundwater level may occur. Immediately upstream of the development the groundwater level may rise, whilst immediately downstream the groundwater level may decline. The magnitude of the change in water level will be dependent on the geology of the aquifer, the size and orientation of the development, and the depth of groundwater in the aquifer.

5.97 If the basement is close to sensitive features which rely upon the current groundwater regime such as a well or a spring feeding a surface water feature, the effect of the groundwater taking a new route may result in reduced (or increased) flow to the well or spring. Similarly, a dormant spring may be reactivated or new springs may be activated when flow has been concentrated, causing groundwater to issue in a different location.

5.98 A large basement (or a series of adjacent, contiguous basements) would have a greater impact on the groundwater flow regime.

5.99 The shape of the resulting compound structure in relation to the groundwater flow direction and soil strata should be considered to assess whether any damming or corralling effect could potentially arise.

5.100 Section 3 of the Lambeth Surface Water Management Plan (SWMP) describes the potential groundwater flooding mechanisms and localities that exist in the borough.

Artificial Ground

5.101 In areas prone to groundwater flooding the groundwater level will be close to the surface under normal conditions, and at the surface under flood conditions. New basements constructed in such areas will not change that but they may make the flooding more frequent or the floodwater deeper. These areas are shown on Figure 3.5.1 in the SWMP. The introduction of a basement in areas where the groundwater is a little deeper, and there is no current susceptibility to flooding, may cause the groundwater level to rise adjacent to the structure such that that location becomes prone to groundwater flooding.

5.102 If groundwater in the Upper Aquifer were forced to find an alternative flow route past a basement causing an underground obstruction, that could cause the groundwater level within the zone encompassed by the new flow route to increase locally upstream of the obstruction, and to fall downstream. If the original groundwater level was close to ground surface (within a few centimetres), the impact of an underground obstruction could be to cause, or to increase, waterlogging of the ground upstream, or drying out of the soil downstream.

5.103 There are no known active springs in the borough currently, but there have been springs in the past. It is conceivable that the introduction of a basement close to the location of a historical spring could cause a resurgence of flow.

5.104 Where there is a groundwater rise in areas of the borough underlain by Langley Silt, such that previously dry Langley Silt becomes wet, then there is a potential for subsidence. Minor outcrops of Langley Silt occur to the east and west of Stockwell.

Ground and Structural Movement

5.105 Underground construction will always inherently and unavoidably cause some movement in the surrounding ground. A basement scheme that is poorly designed and/or constructed is likely to cause greater ground movement and have greater potential for damaging adjacent structures and facilities than would a well-designed and well-executed scheme for which ground movements have been minimised. Basements close to the public highway may also affect both buried services and the road surface. The implications of damage induced by ground movements, including the potential for legal proceedings arising from damage to third-party property and structures, are significant.

5.106 The foundations for a new basement or basement extension built under an existing structure will be deeper than that building's original foundations. In clayey soil areas in

London, the problem of seasonal ground settlement “shrink” (in dry summers) and ground heave “swell” (in wet winters) is well known. It is appropriate to consider and discuss whether or not deepening the footings of the party wall could perhaps adversely affect the structure on the other side of the wall in a clay soil area. This is a site-specific factor that should be considered when planning, designing and implementing such works.

5.107 Foundation “stiffness” is the engineering term that describes the amount of settlement of a building due to the load from the building. A new basement or a basement extension built under an existing structure will have deeper and hence, usually, stiffer foundations than that building’s original shallow foundations. It is appropriate to consider whether or not stiffening the footings on one side of a party wall may adversely affect any other structure that shares the party wall.

5.108 Where abstraction (dewatering) from an aquifer, as part of the temporary or permanent works, is necessary to maintain dryness in the basement excavation, there is the potential for subsidence. Land stability is material planning consideration. However, the stability of adjoining properties is a civil matter which must be resolved through Party Wall Agreements etc.

Slope Stability

5.109 A basement may result in instability affecting both that development and the land surrounding it, for example:

1. increases in water content due to alteration of drainage may increase pore water pressures and decrease the strength of the soil material;
2. dewatering for basement construction may cause settlement;
3. removal of vegetation (including tree felling) results in less water extracted from a slope by plants and more water arriving on the slope because of reduced interception of rainfall, which may initiate movement through adverse changes in the pressure of water within the soil pores;
4. changes in loading (i.e. loading a slope or cutting into a slope) may cause activation of old slip surfaces; and
5. excavation in sand and gravel will be at more risk of local instability than clayey deposits particularly where groundwater is present.

5.110 The risk that instability poses will depend on a number of factors though its magnitude will primarily be influenced by the extent of ground that could be mobilised, what lies downhill of that ground, and what rests on or in the ground that could be mobilised. The risk will be specific to each site.

Cumulative Effects

5.111 The granting of permission to one applicant for a basement often triggers similar applications from neighbours. The cumulative effect if any, of several underground developments in a given street could potentially differ from the impact of the initial “pioneer” basement. It is therefore appropriate for applicants to consider whether, the layout and proximity of multiple basement schemes is important, especially any adjacent neighbouring schemes approved or built.

5.112 Groundwater flows through the gaps between basement structures and is prevented from passing beneath the houses with new basements. The effects are an increase in groundwater levels upstream of the structures, and a decrease downstream.

5.113 Where several basements effectively act as a single barrier to groundwater flow, the ground water will be forced to follow a longer flow path, with greater energy loss as a consequence, and therefore the changes in groundwater levels upstream and downstream will be greater. This can result in piping (erosion in the ground, whereby areas of sub soil that have low resistance to water are slowly eroded by water movement. In the early phases of piping small pores are created, over time the constant flow of water enlarges the pores into larger channels, which can cause ground instability) and subsurface erosion of loose sandy material if present.

5.114 The extent to which the cumulative effects of basements may impact groundwater flow and levels is likely to depend on the properties of the aquifer materials. In highly permeable formations groundwater flow can easily be diverted around basements, ultimately leading to a groundwater level increase upstream, less than would be seen for less permeable materials.

5.115 For commercial basement developments, the Construction (Design & Management) Regulations (2015) (CDM) apply in full.

Impact on Statutory Listed Structures, Adjacent and Nearby

5.116 The following section refers to Damage to adjacent Structures and the Burland Scale. For statutory listed buildings anything above Category 0 (Negligible) (Hairline cracks. Less than 0.1mm) on the Burland Scale will be unacceptable; mitigation will be required to be set out in the Basement Impact Assessment.

Non-Planning Considerations

Other Non-Planning Considerations

Damage to Adjacent Structures

5.117 In many cases, two buildings may share a common party wall. In other situations, neighbouring buildings may not share a party wall, but may still lie within the potential zone of influence of the subterranean development works. Structural damage resulting from activities on a neighbouring site may be due to changes caused by a number of effects including ground movements during excavation, heave, foundations at different levels and settlement of the new build due to changes in loading, but the actual nature and extent of the damage will be site specific.

5.118 Basement construction will always cause some movement in the surrounding ground. The area affected could be a distance away equal to four times the depth of excavation, with the impact diminishing with distance from the excavation. It is these ground movements which result in structural damage. In a residential street with houses close together there will always be a risk of some damage to the adjacent buildings. In practice structural damage is rare, and damage is usually limited to minor cracking which can be readily repaired. The precise level of movement can be fairly well predicted but the degree of cracking and damage can only be estimated and requires engineering judgement; it is not something which can be codified. Most of the movements will occur during the works, but in clay soils some movement can occur for several years after completion of the works.

How Much Damage is Acceptable?

5.119 A method of categorising the risk of damage can be undertaken using the Burland Scale Methodology, which is used by the Building Research Establishment and the Institution of Structural Engineers as well as other Inner London Boroughs. The classification system of the scale is based upon the ease of repair of visible damage. There are three broad categories:

1. Visual appearance;
2. Serviceability and function, and
3. Stability.

5.120 Anything above category 1 (very slight) (Fine cracks that are easily treated during normal decoration. Damage generally restricted to internal wall finishes. Close inspection may reveal some cracks in external brickwork or masonry. Typical crack widths up o 1mm) will not be acceptable; mitigation will be required. For statutory listed buildings anything above Category 0 (Negligible) (Hairline cracks. Less than 0.1mm) will not be acceptable and that mitigation will be required. Classification of visible damage to walls with particular reference to ease of repair of plaster and brickwork or masonry.

Category of Damage	Normal degree of severity	Description of typical damage	Approximate crack width (mm)
0	**Negligible**	Hairline cracks	Less than 0.1 mm wide
1	**Very slight**	Fine cracks that are easily treated during normal decoration. Damage generally restricted to internal wall finishes. Close inspection may reveal some cracks in external brickwork or masonry.	Typical crack widths up to 1 mm
2	**Slight**	Cracks easily filled. Redecoration probably required. Recurrent cracks can be masked by suitable linings. Cracks may be visible externally and some repointing may be required to ensure weather tightness. Doors and windows may stick slightly.	Typical cracks are up to 5mm
3	**Moderate**	The cracks require some opening up and can be patched by a mason. Repointing of external brickwork and possibly a small amount of brick work to be replaced. Doors and windows sticking. Service pipes may fracture. Weather tightness often impaired.	Typical crack width are 5-15mm or several > 3 mm
4	**Severe**	Extensive repair work involving breaking out and replacing sections of walls, especially over doors and windows. Windows and door frames distorted, floor sloping noticeably1. Walls leaning1 or bulging noticeably, some loss of bearing in beams. Service pipes disrupted.	Typical crack widths are 15-25 mm, but also depends upon the number of cracks.
5	**Very severe**	This requires a major repair job involving partial or complete rebuilding. Beams lose bearing, walls lean badly and require shoring. Windows broken with distortion. Danger of instability. Typical crack widths are greater than 25mm, but depends upon the number of cracks.	Typical crack widths are greater than 25mm, but depends upon the number of cracks.

Note: 1 local deviation of slope, from the horizontal or vertical, of more than 1/100 will normally be clearly visible.

Overall deviations in excess of 1/150 are undesirable.

Waste to Landfill & Carbon Emissions

5.121 Basement excavation will produce a volume of spoil and require construction materials (notably concrete, which has a relatively high carbon dioxide emission rating). The excavated material is likely to include Made Ground and natural soils which will typically be removed from the site by lorry. These materials will typically be disposed of at a suitable landfill site unless measures are taken to treat and re-use elsewhere. As a rough estimate, a basement of 150m3 (for example 10m length by 5m width by 3m depth) would generate in the order of thirty lorry loads, assuming a lorry is carrying one 6m3 skip per load. The environmental “footprint” of a basement project is therefore not trivial.

Basement Impact Assessment

Basement Impact Assessment

5.122 All applications for basement development (whether new build or extension to an existing building), which provides extra floor space below ground will require a Basement Impact Assessment (BIA). The council will only grant planning permission where applicants can demonstrate that the underground development will not cause harm to the built and natural environment, local water environment, land stability and biodiversity.

5.123 The BIA methodology is a well-established and widely-utilised process of identifying, predicting, evaluating and mitigating relevant environmental effects of development proposals prior to decisions being taken. The following outlines the methodology for specifying and undertaking a BIA.

Non-Technical Summary

5.124 Applicants will need to submit a plain English non-technical summary of the BIA to the Council and it should be in a format which can be easily understood by those with no technical expertise or knowledge. The summary should be in a clear format that allows readers to make relevant conclusions about what is contained within the BIA. The report should be supported by appendices containing the supporting information relied upon including details of all instructive investigations, conceptual ground models, basement and foundation design drawings.

Required Qualifications

5.125 The technical studies should to be undertaken by professionals with no less than the following qualifications. The names of those involved and their qualifications should be provided:

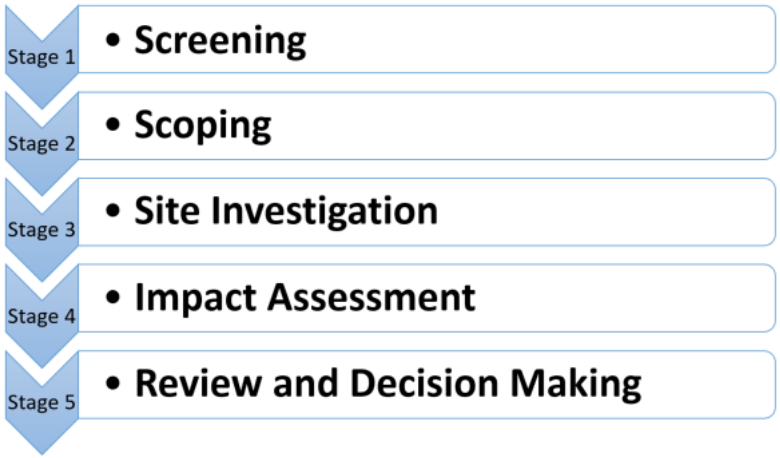
5.126 Flood risk and drainage:

1. A Hydrologist or a Civil Engineer specialising in flood risk management and surface water drainage, with either:
2. The “CEng” (Chartered Engineer) qualification from the Engineering Council; or a Member of the Institution of Civil Engineers (“MICE); or The “C.WEM” (Chartered Water and Environmental Manager) qualification from the Chartered Institution of Water and Environmental Management.
3. A Hydro-geologist with the “CGeol” (Chartered Geologist) qualification from the Geological Society of London.

5.127 Land stability:

1. A Hydrologist or a Civil Engineer specialising in flood risk management and surface water drainage, with either:
2. A Civil Engineer with the “CEng” (Chartered Engineer) qualification from the Engineering Council and specialising in ground engineering;
3. A Member of the Institution of Civil Engineers (“MICE”) and a Geotechnical Specialist as defined by the Site Investigation Steering Group; or A Chartered Member of the Institute of Structural Engineers with some proof of expertise in engineering geology. With demonstrable evidence that the assessments have been made by them in conjunction with an Engineering Geologist with the “CGeol” (Chartered Geologist) qualification from the Geological Society of London.

The 5 stages of the Basement Impact Assessment



Stage 1 - Screening

5.128 The first stage is to identify what issues are relevant to the proposed site, such as flooding, structural and land stability risks and any other relevant factors. All applications will be required to carry out the Screen Stage of a BIA. The Screening process will determine whether or not a full BIA is required; if a decision can be made at an early stage that specific matters are not applicable to a site, then the process is complete and a full BIA will not be required. The applicant should set out clearly why or why not a full BIA is required. Screening flowcharts, in Appendix 3. The flowcharts cover the three main issues:

1. Subterranean (ground water) flow,
2. Slope Stability, and
3. Surface flow and flooding.

5.129 Where the response is "yes" or "unknown" to any of the flowchart questions, these issues need to be carried forward to the scooping stage. For those matters where the response is "no" the Applicant should provide a statement to the council in justification of the "no" response. The statement could be little more than a sentence or brief paragraph in the relevant column of the flowchart.

Stage 2 - Scoping

5.130 The scoping stage requires applicants to identify the potential impacts for each of the matters of concern identified in the screening stage. To undertake the scoping stage of the BIA process, the applicant needs to have some information on the specific project as well as the site. The type of information required at this stage is the same as the list for screening except that at the scoping stage more detailed information is needed. This may involve some preliminary data collection and field work. The Scoping Stage should build on the information obtained for the Screening Stage.

Stage 3 - Site Investigation and Study

5.131 The third step is, to develop an understanding of the site and its immediate surroundings. The degree of investigation will vary and will be dependent upon the matters of concern identified in stages 1 and 2.

5.132 The degree of Site Investigation for a BIA varies depending upon the matters of concern identified in the screening and scoping stages, and is therefore dependent on the location of the proposed basement, its size and setting in relation to the existing development on the site and its relationship to adjacent properties including their basements and nearby features of importance. The assessment should also make allowance for proposed works

that are post planning but yet to be executed. The data and information collected in the Site Investigation is analysed and interpreted by the applicant's specialist, to provide baseline data which, in the next stage of the BIA, can be used in order to make an assessment of the potential impacts identified through the scoping exercise.

Stage 4 - Impact Assessment

5.133 A BIA describes the impacts of the project on the environment by comparing the present situation (the baseline) with the situation as it would be with the basement in place (constructed).

5.134 The BIA should describe, quantify, and then aggregate the effects of the development on those attributes or features of the geological, hydrogeological and hydrological environment which have been identified in the Scoping stage as being potentially affected; i.e. assess cumulative effects on the site and beyond the site boundary.

5.135 A damage assessment of the property and affected adjacent or nearby properties where there is predicted structural damage; the Burland categories should form part of the impact assessment.

5.136 Attributes applicable to the conditions in Lambeth are listed below:

1. Surface (hydrological) flow
    - I. Rate and volume of runoff
    - II. Loss of permeable area
    - III. Direction of overland flow
    - IV. Stream hydrograph
    - V. Surface cover type, soil characteristics and moisture content
    - VI. Frequency of surface flooding
    - VII. Sediment transport (erosion and siltation)
    - VIII. Impact of climate change
2. Subsurface (groundwater) flow:
    - Rate and volume of runoff
    - Groundwater levels
    - Direction of groundwater flow
    - Range of seasonal fluctuation in groundwater levels
    - Spring hydrographs
    - Surface cover type, soil characteristics and moisture content
    - Water quality
3. Surface (hydrological) flow
    - Slope stability:
    - Slope angle
    - Moisture content
    - Porewater pressure
    - Stiffness
    - Compressibility
    - Bearing capacity (strength)
    - Atterberg limits

5.137 The BIA should include:

I. Non technical summary

II. Qualifications of the author

III. Assessment against the Flowcharts in Appendix 2

IV. Analysis of how the excavation of the basement may impact on the water table and any ground water flow, and whether perched water is present;

V. Details of how flood risk, including risk from groundwater and surface water flooding has been addressed in the design, including details of any proposed mitigation measures;

VI. Details of on-going drainage measures and their maintenance regimes, and demonstrate there is an adequate means of drainage/discharge point;

VII. Details of measures proposed to mitigate any risks in relation to land instability;

VIII. Demonstration of how cumulative effects have been considered;

IX. The location of the development in relation to an aquifer or a water course;

X. Appropriate basement construction methods to maintain structural stability of the statutory listed host building and neighbouring statutory listed properties;

5.138 If the consequences are not acceptable, mitigation should be incorporated into the proposed scheme and the changes in attributes re-evaluated and the new net consequences determined. Any mitigation measures incorporated into the proposed scheme should be described in the BIA report with details of how they reduce and/or alter the impact of the proposed basement on the surrounding environment. An applicant may have to revisit the extent of their proposals or indeed decide not to proceed where consequences are not acceptable.

5.139 For example, an applicant proposing a basement will carry out Stages 1 to 3 (Screening to Site Investigation) but find out in Stage 4 (Impact Assessment) that the predicted level of risk to neighbouring statutory listed buildings will exceed the permitted Burland category. In that case, the applicant would incorporate mitigation into the proposed scheme to bring the residual risk down to the acceptable level. If all stages of the BIA are completed before the proposal is discussed with the Council then the mitigation measures should already be incorporated.

Review and decision making

5.140 The fifth and final stage in the BIA process would be the Council's review of the results. The Council would not undertake technical evaluation of submissions, but would use an audit approach to check the adequacy of a BIA. Thus the submission would be audited against the criteria for a BIA which is set out in this SPD.

5.141 Independent verification will be required in the following circumstances:

I. Where a scheme requires applicants to proceed beyond the Screening Stage of the Basement Impact Assessment (i.e. where a matter of concern has been identified which requires the preparation of a full Basement Impact Assessment);

II. Where the proposed basement development is located within an area of concern regarding slope stability, surface water or groundwater flow; or

III. For any other basement applications where the Council feels that independent verification would be appropriate (e.g. where conflicting evidence is provided in response to a proposal).

5.142 This independent verification will be commissioned by the Council and paid for by the applicant.

Managing Construction Impacts to Neighbours

Construction Management Plan

5.143 Basement construction can be complicated and lengthy and may cause significant nuisance and disturbance for neighbours and others in the vicinity, due to additional traffic and to the noise, dust and vibration of construction itself. All construction work and demolition work should be in accordance with the Considerate Constructors Scheme standards https://www.ccscheme.org.uk/, Institute of Civil Engineering Demolition Protocol and to the Greater London Authority's best practice guidance: The Control of Dust and Emissions from Construction and Demolition July 2014 https:https:

//www.london.gov.uk/what-we-do/planning/implementing-london-plan/planning-guidance-and-practice-notes/control-dust-and

5.144 Some of the main issues which should be considered to ensure construction works do not cause undue disturbance are set out below:

1. Traffic Management and Site Access - Traffic and access to the site should be managed to safeguard existing rights-of-way, minimise congestion, and ensure the safety of other road users. The number of proposed vehicle movements should be calculated.
2. Parking and Use of the Highway - Arrangements for parking vehicles of site operatives and visitors must also be considered, as well as the location of items such as skips. The contractor must minimise the use of on street parking and obtain the permits and licences for temporary uses of the highway. They will also be required to make good any damage to the highway they cause, in agreement with the Council's Highways department.
3. Handling Materials and Waste - The recycling and transportation of materials and waste resulting from excavation, demolition and construction works will be a particularly important consideration and applicants should consider how waste can be minimised and reused or recycled where possible.
4. Noise, Vibration and Dust - The contractor should put in place suitable measures to control the emission of dust and dirt during construction and ensure works will not generate noise audible at the site boundaries outside of permitted working hours in accordance with the relevant regulatory environmental protection legislation.

   Hand digging using a spade instead of an excavator may be an option for underpin excavation; using quieter piling plant such as specifically silenced bored piling rigs or push-in sheet piling rigs; using splitting techniques rather than sawing or hammering techniques when trimming concrete or masonry.

   Dust can be reduced through the use of lower energy techniques though it can be further reduced by spraying of water or filtering air extraction ducts. The perimeter of the site should be screened to a sufficient height to prevent the spread of dust.

Construction Management Plan

5.145 A draft Construction Management Plan (CMP) is required as part of planning application and a finalised CMP will need to be submitted as a pre-commencement condition. The CMP is not an alternative for a Basement Impact Assessment but is a separate document that set out in detail how the basement contractor intends to construct the basement.

5.146 The CMP is an umbrella document which will incorporate mechanisms which overlap with or refer to other regulatory regimes (particularly Highways and Environmental Health), which are not enforced through Planning. For Further Information and contact details in the Appendix

5.147 The final CMP should include:

a. Contact Numbers and Programme Timetable

   I. Discussion of how it is intended to minimise the impact of the development on the neighbours including a construction programme including a 24 hour emergency contact number along with the contact details for a site manager which must be clearly displayed on the site so adjoining occupiers know who to contact in the event of problems arising;

   II. Provision of a timetable and programme of works, what is the likely duration of works, anticipated start date and any demolition or noisy works;

   III. Provision of working hours, proposed days and hours of site operation;

   IV. The notification of neighbours with regard to specific works;

b. Ground Stability / Structural Stability / Groundwater Conditions

   I. Detailed monitoring and proactive contingency plans, and discussion of how ground movements will be limited to ensure that previously agreed levels of damage are not exceeded;

   II. Evidence showing that the particular characteristics of the site (e.g. party wall footings, structural condition, groundwater conditions) are understood;

   III. Detailed method statements;

   IV. Evidence of previous experience by the basement contractor and designers on similar projects in similar ground conditions;

   V. An explanation of the provisions made for temporary and permanent support. The CDM and HSE are the regulatory authority for these matters.

   VI. Provision for a suitably qualified and experienced engineer from a recognised relevant professional body to supervise the works;

c. Security Hoardings

   I. Erection and maintenance of security hoardings (including interpretive displays and facilities for public viewing, where appropriate);

d. Parking, Storage, Deliveries, Loading and Unloading

   I. Parking of vehicles of site operatives and visitors (including measures taken to ensure satisfactory access and movement for existing occupiers of neighbouring properties during construction);

   II. Locations for loading/unloading and storage of plant and materials used in constructing the development;

   III. Construction vehicle routing;

   IV. The numbers of and types of construction vehicle, site access and egress arrangements;

   V. Temporary arrangements proposed for the highway to facilitate the works;

   VI. The cumulative impact of construction traffic with that of other developments in the locality and details of participation in the relevant construction vehicle management groups;

   VII. Highway safety and congestion measures;

   VIII. Measures to safeguard the amenity of surrounding residential and other sensitive uses;

   IX. Advance notification of road closures;

   X. Details of measures to prevent the deposit of mud and debris on the public highway; and

   XI. Any other measures to mitigate the impact of construction upon the amenity of the area and the function and safety of the highway network.

e. Managing Dust/Dirt/Noise & Vibration

   I. Measures to control the emission of dust and dirt, noise and vibration during construction both on and off site will be managed, inc. wheel washing facilities;

f. Handling Materials and Waste

   I. A scheme for recycling/disposing of waste resulting from excavation, demolition and construction;

g. Heritage Assets

   I. Measures for the protection of listed buildings and particular features within them;

   II. Identification of site specific risks, and discussion on how these have been or will be mitigated;

   III. The most important thing that the CMP should contain is clear and unambiguous list of mitigation measures proposed by the applicant which will ensure that all temporary construction activities occurring at the site do not unacceptably impact on th surrounding occupants. Applicants should have the Construction Management Plan reviewed by a suitably qualified and experienced engineer. Please see Section 8

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Appendix

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Appendix 1

ARUP's Lambeth Residential Basement Study, 2016
Executive Summary

1. With a shortage of development land and rising land values in the London Borough of Lambeth, the development of basements in residential areas is likely to become a popular way of gaining additional space in homes. Basements can affect the environment and nearby structures in a number of ways. The impacts of such development to the geological, hydrological and hydrogeological environment, and to other properties including listed buildings, are of concern to both the Borough and local residents.

2. While small, isolated basements may have little impact, the cumulative effect of incremental development of basements in close proximity, particularly when these are large, potentially creates a significant impact.

3. Extending downwards beneath an existing building, particularly old, masonry-built properties that were not designed to contemporary engineering standards, is a challenging and potentially hazardous undertaking. The work involved is not trivial and it merits input from experienced professional design engineers and contractors, including underpinning specialists. However, for residential basement developments typical project values tend to be relatively small and the fees for design become a higher proportion of the total cost than for large commercial schemes. There is a need therefore to ensure that corners are not inadvertently cut.

4. LB Lambeth policy on basement development is contained within Policies Q11 and EN5, which do not specifically deal with issues related to the geological and hydrological conditions and particular characteristics of the Borough. This study has been carried out with the objective of providing the
Borough with technical guidance to assist them in framing revisions to the planning policy.

5. The London Borough of Lambeth includes some varied topography and landscape, and a diverse mix of building and development types including 2,500 listed buildings. The Borough is elongated north-south, with Streatham and Norwood comprising higher ground in the south and Kennington and Vauxhall lying within the natural floodplain of the Thames in the north. In terms of geology and topography, the north of the Borough is predominantly floored by a thin cover of alluvium associated with the present course of the Thames. Further south the clay is overlain by sands and gravels representing the ancient alignment of the river, and the highest ground in the south is formed of exposed London Clay. A "lost" river, the River Effra, runs the full length of the Borough from north to south: it is fully enclosed in culvert, but the former channel is evident in the topography and it continues to influence drainage patterns in the eastern half of the Borough.

5. The potential for flooding in Lambeth is closely related to the topography and the geology: in the north of the Borough the risk is associated with the Thames while in the central area, which is largely underlain by terrace gravels, groundwater flooding due to surcharge of shallow perched aquifers is more likely. Flooding due to overloaded stormwater sewers following intense rainfall is a risk throughout the Borough.

7. This study reviews the physical geography, geology, hydrology and hydrogeology of the Borough of Lambeth in relation to the risks posed by development of shallow residential basements. Basement construction methods are reviewed, together with the potential impacts of uncontrolled basement construction upon the environment and neighbouring structures including listed buildings. With good design and appropriate consideration of geology and hydrogeology such development can usually be accommodated without increasing the risks.

8. A planning policy framework which recognises the risks and sets appropriate engineering standards for applications should provide the safeguards necessary to minimise adverse impacts. This study concludes that the current planning policy in Lambeth should be strengthened in respect of basement development, and recommends the introduction of a Basement Impact Assessment (BIA) approach to assessing and mitigating ground-related risks. The requirement for a BIA might be introduced in a Supplementary Planning Document.

9. The BIA would follow the format of the Environmental Impact Assessment (EIA) process. The process would be developer-led, with LB Lambeth providing guidance in the earlier stages and using an audit approach to check the adequacy of the BIA.

Appendix 2 - Subterranean (Ground Water) Flow Screening Chart

Consider each of the following questions in turn, answering either "yes" or "no" in each instance. Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.

Question 1a: Is the site located directly above an aquifer?

Question 1b: Will the proposed basement extend beneath the water table surface?

The location of the geographical strata can be established from British Geological Survey maps (e.g. 1:50,000 and 1:10,000 scale). Note that the boundaries are indicative and should be considered to be accurate to +/- 50m at best.

The Environment Agency (EA) "Aquifer Designation Maps" can be used to identify aquifers. The "Groundwater maps" available on the EA website. The thickness of the geological strata present and the level of the groundwater table is required. This may be known from existing information (e.g. nearby site investigations).

Question 2: Is the site within 100m of a watercourse, well (used/disused) or potential spring line?

Local knowledge and/or site walkovers

Ordnance Survey maps (e.g. 1:25,000 and 1:10,000 scale
British Geological Survey maps (e.g. 1:10,000 scale, current and earlier editions). Current maps will show indicative geological strata boundaries which are where springs may form at the ground surface. Earlier geological maps (e.g. the 1920's 1:10560 scale) maps show the location of some wells.

Aerial photographs

"Lost Rivers of London" by Nicolas Barton, 1962, shows the alignment of rivers in London and their tributaries.
The British Geological Survey (BGS) Geoindex included "Water Well" records website

The location of older wells can be found in well inventory/catalogue publications such as "Records of London Wells" by G. Barrow and L. J. Wills (1913) and "The Water Supply of the County of London from Underground Sources" by S Buchan (1938).

The Environment Agency (EA) "Source Protection Zone Maps" can be use to identify aquifers. The "Groundwater maps" are available on EA website.

The EA hold records of licensed groundwater abstraction boreholes. Where identified, it will be necessary to determine if it is extending into the Lower or the Upper Aquifer.

Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "yes".

Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "unknown".

No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "no".

It is water wells extending into the Upper Aquifer which are of concern with regard to basement development.

Question 3: Will the proposed basement development result in a change in the proportion of hard surfaces / paved areas?

This will be specific to the proposed development and will be a result of the proposed landscaping of areas above and surrounding a proposed basement.

Question 4: As part of the site drainage, will more surface water (e.g. rainfall and run-off) than at present be discharged to the ground (e.g. via soakaways and/or SuDs)?

This will be specific to the proposed development and will be a result of the proposed chosen drainage scheme adopted for the property.

Question 5: Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to, or lower than, the mean water level in any local pond or spring line?

The lowest point will be specific to the proposed development.

Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is “yes”.

Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is “unknown”.

No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is “no”.

Appendix 2 - Slope Stability Screening Flowchart

The Developer should consider each of the following questions in turn, answering either “yes” or “no” in each instance. Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.

It is water wells extending into the Upper Aquifer which are of concern with regard to basement development.

Question 1: Does the existing site include slopes, natural or manmade, greater than 7o (approximately 1 in 8)?

The surface slope can be determined by a site topographical survey. Slopes maybe estimated from 1:25,000 OS maps. Slopes associated with infrastructure e.g. cuttings, it should be ensured that any works do not impact on critical infrastructure.

Question 2: Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7o (approximately 1 in 8)?

This will be specific to the proposed development and will be a result of the proposed landscaping of areas above and surrounding a proposed basement.

Question 3: Does the development neighbour land including railway cuttings and the like, with a slope greater than 7o (approximately 1 in 8)?

The surface slope can be determined by a site topographical survey. Slopes maybe estimated from 1:25,000 OS maps. Slopes associated with infrastructure e.g. cuttings, it should be ensured that any works do not impact on critical infrastructure.

Question 4: Is the site within a wider hillside setting in which the slope is greater than 7o (approximately 1 in 8)?

The surface slope can be determined by a site topographical survey. Slopes maybe estimated from 1:25,000 OS maps. Slopes associated with infrastructure e.g. cuttings, it should be ensured that any works do not impact on critical infrastructure.

Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is “yes”.

Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is “unknown”.

No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is “no”.

Question 5: Is the London Clay the shallowest strata at the site?

The plan footprint of the outcropping geological strata can be established from British Geological Survey maps (e.g. 1:50,000 and 1:10,000 scale). Note that the boundaries are indicative and should be considered to be accurate to +/- 50m at best.

Question 6: Will any trees/s be felled as part of the proposed development and/or are any works proposed within any tree protection zones where trees are to be retained? (note that consent is required from LB Lambeth to undertake work to any trees/s protected by a Tree Protection Order or to trees/s in a Conservation Area of the tree is over certain dimensions).

This will be specific to the proposed development and will be a result of the proposed landscaping of areas above and surrounding a proposed basement.

Question 7: Is there a history of seasonal shrink-swell subsidence in the local area. and/or evidence of such effects at the site?

This can be assessed from local knowledge and on-site observations of indicative features, such as cracking, Insurance firms may also give guidance, based on postcode. Soil maps can be used to identify high-risk soil types. Relevant Guidance is presented in BRE Digest 298 "Low-rise building foundations: the influence of trees in clay soils" (1999); and BRE Digest 240 "Low-rise buildings on shrinkable clay soils: part 1 (1993); and BRE Digest 251 "Assessment of Damage in low-rise building" (1995)

Question 8: Is the site within 100m of a watercourse or a potential spring line?

Local knowledge and/or site walkovers

Ordnance Survey maps (e.g. 1:25,000 and 1:10,000 scale
British Geological Survey maps (e.g. 1:10,000 scale, current and earlier editions). Maps will show indicative geological strata boundaries which are where springs may form at the ground surface. Earlier geological maps (e.g. the 1920's 1:10560 scale) maps show the location of some wells.
Aerial photographs

"Lost Rivers of London" by Nicolas Barton, 1962, shows the alignment of rivers in London and their tributaries.

Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "yes".

Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "unknown".

No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "no".

Appendix 2 - Slope Stability Screening Flowchart

The British Geological Survey (BGS) Geoindex included "Water Well" records website

The location of older wells can be found in well inventory/catalogue publications such as "Records of London Wells" by G. Barrow and L. J. Wills (1913) and "The Water Supply of the County of London from Underground Sources" by S Buchan (1938).

The Environment Agency (EA) "Source Protection Zone Maps" can be use to identify aquifers. The "Groundwater maps" are available on EA website.

The EA hold records of licensed groundwater abstraction boreholes. Where identified, it will be necessary to determine if it is extending into the Lower or the Upper Aquifer. It is water wells extending into the Upper Aquifer which are of concern with regard to basement development.

The Developer should consider each of the following questions in turn, answering either "yes" or "no" in each instance.

Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.

Earlier geological maps (e.g. the 1:10560 scale series from the 1920's) include annotated descriptions such as "old pits", "formerly dug", "brickyard" etc.

Question 9: Is the site within an area of previously worked ground?

Worked ground includes, e.g. old pits, brickyards, cuttings etc. Information can be gained from local knowledge and/or sit walkovers, and from historical Ordnance Survey maps (at 1;25,000 or 1:10,000 scale, or better) and British Geological Survey maps (at 1:10,000 scale, current and earlier editions).

Question 10: Is the site with an aquifer? If so, will the prosed basement extend beneath the water table such that dewatering may be required during construction?

The Environment Agency (EA) "Aquifer Designation Maps" can be used to identify aquifers. The "Groundwater maps" available on the EA website. The thickness of the geological strata present and the level of the groundwater table is required. This may be known from existing information (e.g. nearby site investigations). Determination of the water table level may form part of the site investigation phase of the BIA and may require specialist advice to answer. Depth of proposed development is project specific.

Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "yes".

Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "unknown".

No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "no".

Question 11: Is the site within 5m of a highway or pedestrian right of way?

From local knowledge and/or site walkovers, and from Ordnance Survey maps (e.g. 1:25,000 or 1:10,000scale). Any works should not impact on critical infrastructure.

Question 12: Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?

From local knowledge and/or site walkovers. There may be some details on neighbouring properties from searches of council's databases e.g. planning applications and/or building control records.

Question 13: Is the site over (or within the exclusion zone of) any tunnels, e. railway lines?

From local knowledge and/or site walkovers, and from Ordnance Survey maps (e.g. 1:25,000 or 1:10,000scale) and directly from those responsible for tunnels (e.g. Tfl or Network Rail). Any works should not impact on critical infrastructure.

Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "yes".

Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "unknown".

No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "no".

Appendix 2 - Surface Flow and Flooding Screening Flowchart

The Developer should consider each of the following questions in turn, answering either "yes" or "no" in each instance. Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.

Question 1: As part of the proposed site drainage, will surface water flows (e.g. volume of rainfall ad peak run-off) be materially changed from the existing route?

Question 1: As part of the proposed site drainage, will surface water flows (e.g. volume of rainfall ad peak run-off) be materially changed from the existing route?

Question 2: Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?

This will be specific to the proposed development and will be a result of the proposed chosen drainage scheme adopted for the property.

Question 3: Will the proposed basement result in changes to the profile of the inflows (instantaneous and long term) of surface water being received by adjacent properties or downstream watercourse?

This will be specific to the proposed development and will be a result of the proposed landscaping and chosen drainage scheme adopted for the property, SuDs will be required to compensate any increases in peak flow.

Question 4: Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses?

This will be specific to the proposed development and will be a result of the proposed landscaping and chosen drainage scheme adopted for the property, SuDs will be required to compensate any increases in peak flow.

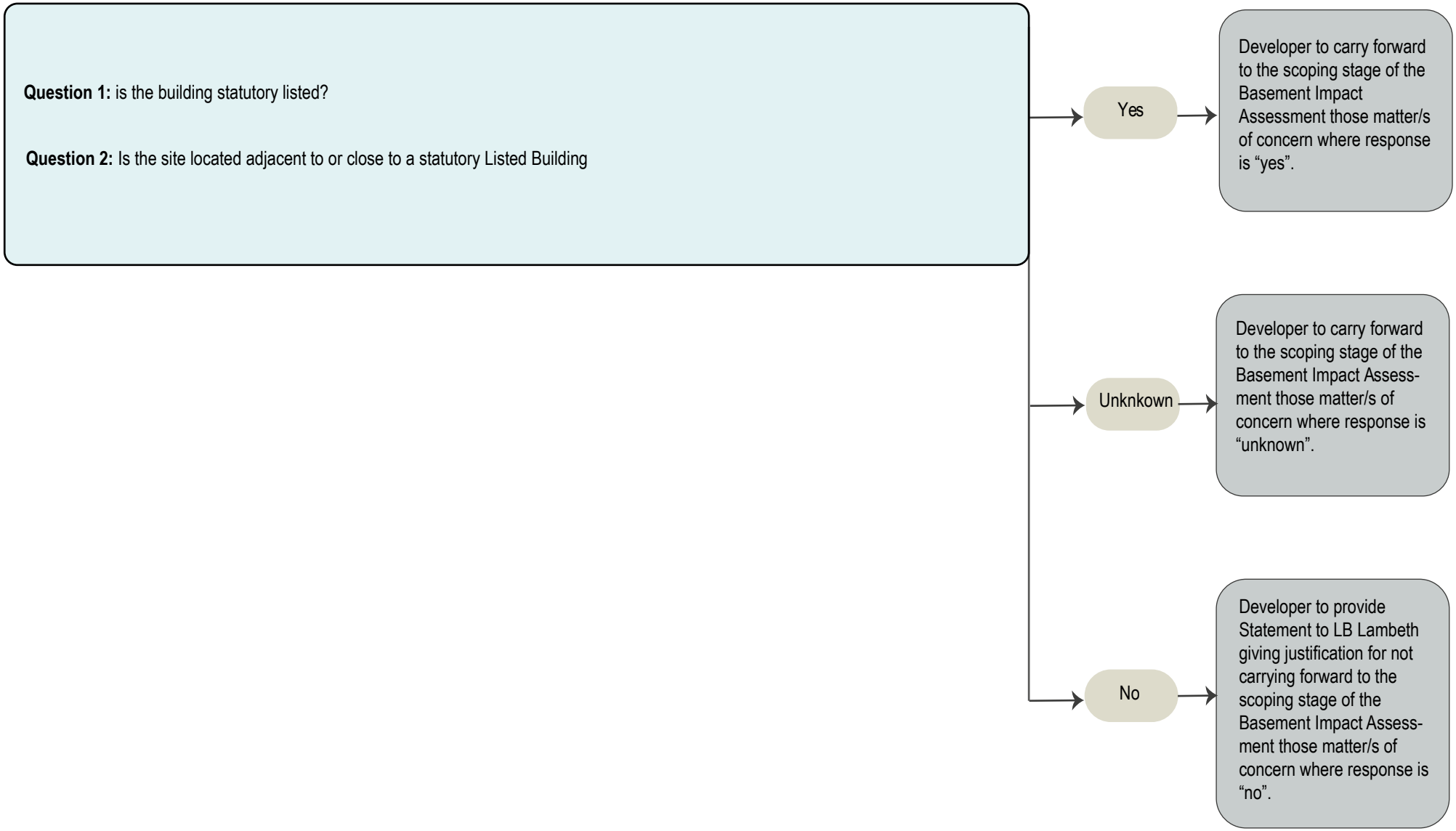
Question 5: Is the site in an area identified to have surface water flood risk according to either the Local Flood Risk Management Strategy or the Strategic Flood Risk Assessment or is it at risk of flooding, for example because the proposed basement is below the static water level of nearby surface water features?

The principles outlined in PPS25 should be followed to ensure that flood risk is not increased.

- Yes → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "yes".
- Unknkown → Developer to carry forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "unknown".
- No → Developer to provide Statement to LB Lambeth giving justification for not carrying forward to the scoping stage of the Basement Impact Assessment those matter/s of concern where response is "no".
- Yes → Developer toto undertake a Flood Risk Assessment in accordance with PPS25.
- Unknkown → Developer toto undertake a Flood Risk Assessment in accordance with PPS25.
- No → Flood Risk Assessment not required

Appendix 2 - Statutory Listed Buildings Screening Flowchart

he Developer should consider each of the following questions in turn, answering either “yes” or “no” in each instance. Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.



Appendix 3

Other Regulations and Controls
Planning is only one part in the process of creating basements. There are a number of legislation and regulative controls involved in the construction of a basement. It is the responsibility of the land owner or person responsible for the works to ensure all relevant statutory legislation and legal obligations are met.

The assessment and enforcement of applications for subterranean development involves a wide range of other legislation. This includes primary legislation (Acts of Parliament e.g. the Environmental Protection Act 1990, Highways Act 1980, Control of Pollution Act 1974), secondary legislation (Statutory Instruments, including Regulations and Orders e.g. the Control of Asbestos Regulations 2012) and statutory guidance and Codes of Practice. It is important to note the different consents and licenses that must be applied for before you start works.

Building Regulations
Building Control enforces minimum standards associated with engineering design and structural stability and ensuring construction work undertaken is professional and competent. In addition to planning permission, Building Regulations approval is required for the excavation or enlargement of a basement, and also to convert a cellar into habitable accommodation. Due to the complexity of the Building Regulations as they affect basements, you should contact the council's Building Control service or an approved inspector in the first instance to discuss your project.

Highways
The Highways Act ensures the efficient and safe use of roads and highways. You will need a licence under the Highways Act for any activities on the highway, such as the placing of skips, the transfer of spoil, or erection of hoardings. Where a new basement extends underneath the public footway or carriageway, the new basement design (or structural alterations in the case of an existing basement) will require Technical Approval to ensure the designs have been undertaken by a suitably qualified engineer and take into account current highway loading standards. Permission is also required for suspension of parking bays or road or footway closures. For most streets you should contact the council as the highway authority but on main roads you may need to obtain relevant permissions from Transport for London. The council will also be able to let you know if you live on a main road which is the responsibility of Transport for London.

Environmental Health (Noise, Vibration and Dust Complaints)
Environmental Health enforces issues related to the Environmental Protection Act and Control of Pollution Act (such as noise and dust). The provisions of the Control of Pollution Act (1974) are the principal mechanisms by which construction noise and vibration is controlled. These are separate from the planning system. Control of dust in the construction phase is dealt with by the Environmental Protection Act (1990). The Environmental Protection Act 1990 enables the council to impose requirements to prevent or abate nuisance from dust and smoke.

Freeholder Permission and other Codes and Guidance
If you are not the freeholder of the property, then landlord permission is likely to be required. You should always contact the freeholder prior to submitting an application and ensure you have complied with their requirements before submitting an application

Other
It will also be the applicant's responsibility to ascertain whether any electric, gas, water or telecommunications services will be affected by works and notify relevant parties of any impacts.

See contacts list at Appendix 5 for detail of who to contact in relation to different issues.

Appendix 4

Party Wall Act The Party Wall Act is in place to control development on each side of a party wall and maintain its integrity and function. If you are undertaking a basement excavation it is likely that you will need a Party Wall agreement with your neighbours. You must give notice to adjoining owners at least one month before works start. The provisions of the Act apply when an adjoining owner is carrying out work in the ground within three metres of the party wall or within six metres if it falls below a line drawn at 45 degrees from the bottom edge of the foundation of the wall. Further advice on the Party Wall Act for both owners undertaking works and adjoining occupiers can be found on the planning portal.

The Party Wall Act is civil legislation and this is therefore always a private matter between neighbours which cannot involve the council. The Act can be used by neighbours to address issues where damage occurs and their Party Wall surveyor can request that a sum of money is held in 'escrow' in case of any damage (meaning a sum is kept as security for example in case there is a need to step in and complete the works to a party wall to repair damage).

This is always a private matter between neighbours which does not involve the council.

It is advisable to seek the advice of a structural engineer with experience on party wall matters. The Professional Institutes listed in the appendices can provide details of engineers with party wall expertise.

Where problems or disputes arise, Common Law can also provide some protection for occupiers of properties in the vicinity of a development, allowing them to seek injunctive relief or damages through the courts. Neighbours adversely affected by a basement development should take legal advice about their potential remedies.

Appendix 5 - Contacts

	Issues Considered	Contact
Lambeth Planning	Queries related to planning policy and process and planning applications	Telephone: 020 7926 1180 Email planning@lambeth.gov.uk
Lambeth Planning Enforcement	Reports of unauthorised development or breach of planning permission or conditions	Telephone: 020 7926 1185 Email planningenforcement@lambeth.gov.uk
Lambeth Building Control or Approved Inspector	Queries related to current Building Regulations applications	Telephone: 020 7926 1278 buildingcontrol@lambeth.gov.uk
Lambeth Building Control	Queries related to building control process Reports of dangerous structures Non- compliance with Building Regulations	Telephone: 020 7926 1278 buildingcontrol@lambeth.gov.uk
Lambeth Highways	Works to highways, licensing of skips, temporary structures licence (hoarding, scaffolding etc.)	www.lambeth.gov.uk/highways-licences-guide
Transport for London (Red Routes)	Advice on works affecting roads managed by Tfl	tfl.gov.uk/info-for/urban-planning-and-construction/highway-licences
Lambeth Community Safety	Complaints related to noise, vibration and dust	Telephone: 020 7926 5000
Lambeth Environmental Services	Contaminated land	sustainability@lambeth.gov.uk
Structural/Civil Engineers: Professional Bodies	Advice on Finding an engineer and party wall surveyor	Institution of Structural Engineers. Telephone: 020 7235 4535 www.istructe.org/contact Institute of Civil Engineers. Telephone: 020 7222 7722 subs@ice.org.uk
Conservation accreditation register for Engineers	A list of engineers accredited in building conservation	Conservation Accreditation Register of Engineers www.istructe.org/about-us/organisation-structure/subsidiary-organisations/conservation-accreditation-register-for-engineers
Health and Safety Executive	Information and advice on managing sites safely including developers responsibilities and duties in relation to health and safety	www.hse.gov.uk/contact/index.htm

	Issues Considered	Contact
Historic England	Advice on archaeological potential for sites	historicengland.org.uk/services-skills/our-planning-services/greater-london-archaeology-advisory-service/
Thames Water	Advice on sewers and drainage	www.thameswater.co.uk
London Underground/Network Rail/Cross-rail	Advice on development above or near to London Underground infrastructure/Railway or Crossrail infrastructure	Network Rail National Helpline Telephone: 03457 11 41 41 www.networkrail.co.uk Crossrail safeguarding: www.crossrail.co.uk