

LDF

Building on Success

Subterranean Development

Supplementary Planning Document -Adopted May 2009
Local Development Framework



THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

Subterranean Development

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Executive Summary

This Subterranean Development Supplementary Planning Document (SPD) has been produced to highlight the key planning considerations to be addressed at the earliest stage of preparing proposals and planning applications for subterranean developments. The figure overleaf highlights the key requirements to be addressed in the planning proposal and makes reference to the sections of the SPD where these issues are discussed in greater detail. The SPD also highlights where basements are permitted development and therefore may not require planning permission; identifies the key contact details; provides guidance for neighbours and provides some examples of Conditions which might be attached to certain planning approvals.

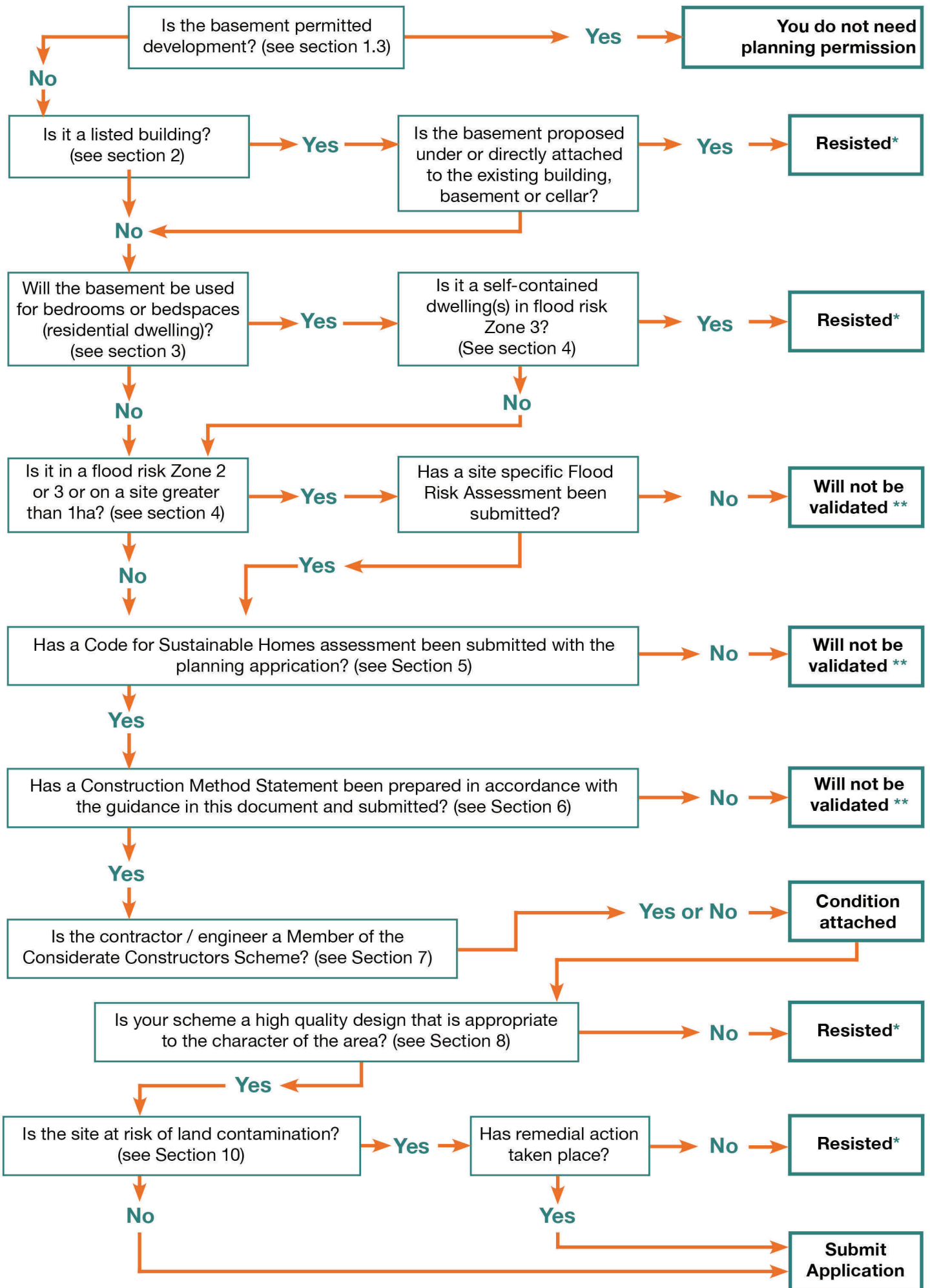
In places, this SPD refers to Arup's Subterranean Development Scoping Study, June 2008, which also provides further guidance on the issues beyond the remit of planning, such as construction techniques. Further information on the legislation beyond the remit of planning is included in Appendix E of this SPD.

Since the publication of Arup's Scoping Study, the government has revised the General Permitted Development Order (GPDO), which makes certain types of development, including many basement extensions, permitted development. Permitted development does not require planning permission and therefore beyond the control of the planning system, although these developments are potentially subject to the control of the Building Control Body, Listed Building Consent and Environmental Health.

However, this SPD is still important as many subterranean developments in the Borough require planning permission. These applications for planning permission will be determined in accordance with the Unitary Development Plan and London Plan policies, together with this and other Supplementary Planning Documents, unless other material considerations suggest otherwise. This SPD is also useful as a best practice guide for those basements which do not require planning permission.

** Applications will be contrary to the development plan and this SPD and are unlikely to receive planning permission unless other material planning considerations suggest otherwise.*

*** All planning applications will have to be validated before they get processed. The Council's checklists for validating planning applications is contained on the following webpage: www.rbkc.gov.uk/Planning/ApplicationForms/pl_app_checklist.asp. In particular for subterranean development, the Council will require a Construction Method Statement; Sustainable Homes Assessment; site specific Flood Risk Assessment (in certain instances – see figure opposite); and Tree Survey before any applications will be validated. Other assessments may also be required at the Council's discretion.*



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1 Introduction

1.1 Background

1.1.1 The Royal Borough of Kensington and Chelsea is currently experiencing an increase in the number of planning applications for subterranean development, from about 64 in 2003, 89 in 2004, 85 in 2005, 110 in 2006, 192 in 2007 and 212 in 2008⁽¹⁾. In this context subterranean development includes new basements and basement extensions, sometimes large enough to accommodate additional living space, swimming pools, garages and/or gymnasiums. This type of development is a direct result of the lack of land; pressure for development; high land values; strict planning controls; and limited opportunity for extensions. In certain instances, subterranean development provides a better alternative to increasing the size of existing dwellings, without the cost burden of moving or proposing extensions which compromise the character and appearance of the borough.

1.1.2 Constructing and excavating a subterranean development is a challenging engineering project that, if not conducted correctly, may raise concerns about ground movement; the structural integrity of existing and neighbouring structures; flooding and the impact on water flows and levels; and environmental concerns such as energy use, transporting construction waste and the removal of trees, which contribute to climate change. This type of development may also impact on the quality of life for neighbours during the course of the works, possibly through noise, vibration, transport and dust. The site might also be contaminated from the previous land use, which may pose a risk to construction workers or spread during the transportation of the construction waste.

1.1.3 However, certain types of subterranean development, such as basements, half basements and vaults, have been constructed in the borough during and since the Victorian and Georgian periods and many of these have helped define the built character of the borough.

1.1.4 The Council commissioned consultants Ove-Arup to consider the issues and impacts of subterranean development in greater detail, which

is presented in the Subterranean Development Scoping Study, June 2008⁽²⁾. The Council consulted on the draft Scoping Study during February and March 2008. Many local interest groups, architects and professional institutions raised questions and comments. These comments have been considered and resulted in amendments to the draft Scoping Study. These comments, together with the Scoping Study, have been used to inform the preparation of this Supplementary Planning Document (SPD) and will inform the Council's emerging policy approach to subterranean development. This final Scoping Study is being used as a technical appendix to this SPD, especially with regards to the construction techniques and analysis of ground water and geology.

1.1.5 Subterranean developments can be built safely in nearly all circumstances, as long as they are well designed by a suitably qualified engineer and constructed by suitably qualified contractors, having regard to the type of building, its age, type of construction, existing geology and ground water conditions. Therefore, this SPD sets out the planning concerns which have to be addressed in planning applications for subterranean development, namely the impact on historic environments, comfort, flood risk, sustainability, structural stability, avoiding nuisance, design quality, trees/landscaping and land contamination. The applicant is required to demonstrate in the design and through supporting statements, how the proposal addresses many of these concerns before the planning application will be validated.

1.1.6 Some subterranean developments are permitted development i.e. they do not require planning permission. This SPD on subterranean development relates to the development and extension of basements that require planning permission (see Appendix B), but we hope that all development, including basements will follow this guidance as best practice.

1.2 Purpose and Status of this SPD

1.2.1 This SPD sets out the Royal Borough of Kensington and Chelsea's supplementary planning policy for subterranean development. Subterranean development includes any development

1 The criteria for selection are based on the word 'terranean', 'swimming pool', 'excavation', 'underground', 'cellar' or 'sunken' appearing in the description of the planning application and therefore differs from the figures in the draft Scoping Study and the draft of this SPD

2 Subterranean Development Scoping Study, June 2008. Ove Arup

underground, either under existing structures or under gardens, and in particular large subterranean rooms and spaces; new basements and basement extensions. In particular, this SPD highlights the key planning considerations to be addressed when designing and formulating proposals for subterranean development in the borough. This SPD predominantly relates to domestic subterranean development schemes, although the issues are similar for commercial schemes.

1.2.2 This SPD provides further guidance and builds upon the criteria used to determine planning applications for subterranean development, as set out in Unitary Development Plan (UDP) Policy CD32, as saved⁽³⁾ by the Secretary of State, which “resists subterranean developments where:

- a. *the amenity of adjoining properties would be adversely affected; or*
- b. *there would be a material loss of open space; or*
- c. *the structural stability of adjoining or adjacent listed buildings or unlisted buildings within conservation areas might be put at risk; or*
- d. *a satisfactory scheme of landscaping including adequate soil depth has not been provided; or*
- e. *there would be a loss of trees of townscape or amenity value.*
- f. *there would be a loss of important archaeological remains.”*

1.2.3 This SPD is a significant material planning consideration in determining applications for planning permission and forms part of the Local Development Framework (LDF).

1.2.4 In certain instances this SPD refers to Planning Conditions or Informatives which may be attached to certain planning permissions. The typical wording for these conditions or informatives is included as Appendix C. However, these conditions or informatives are not used for all planning applications and the wording is not fixed, but the use and content of the conditions will be subject to the characteristics of the site and/or the proposal. The wording and use of these conditions must also comply with government guidance.

1.2.5 In accordance with the Town and Country Planning Act, the Council has the power to attach conditions to planning approvals at its discretion.

The conditions are set out in the Appendix for information only and may be changed independently of this SPD.

1.3 Permitted Development

1.3.1 Schedule 2 Part 1 Class A of the General Permitted Development Order 1995 (as amended in 2008)(GPDO) gives ‘permitted development rights’ for certain types of extensions, including for the construction of far more basement extensions than before. Such basement extensions do not require planning permission, unless they meet certain criteria, as set out in Appendix B. These criteria have recently been amended by the government and came into effect on 1 October 2008.

1.3.2 You are encouraged to seek the advice of the Council’s Development Control service, who will advise whether the proposed basement is permitted development. However, if you would like to put the matter beyond doubt you will need to apply for a “certificate of lawful development”.

1.3.3 The Government is also considering the inclusion of a new Class within the GPDO, which will permit further basement extensions without requiring planning permission. The Council understands that if this new Class of Permitted Development is introduced far more basements will not require planning permission, as long as they meet certain criteria, such as location, height, size, location of the light well and impact on the streetscene.

1.3.4 The requirements of this SPD can not be enforced for those basements which are Permitted Development, although it should be used as good practice for these types of development.

1.3.5 When carrying out any permitted development, there is still a legal duty to preserve protected trees, such as those in conservation areas and those covered by Tree Preservation Orders. Furthermore, ‘Listed Building Consent’ will still be required for any works for the alteration or extension of a listed building, in a manner which would affect its character as a building of special architectural or historic interest. Although not planning considerations, those seeking to construct a basement must have regard to the Party Wall Act and Building Regulations.

3 ‘Saved’ policies are those planning policies from the UDP 2002, which have been saved for the purposes of the new planning system. Several policies have been removed as the Secretary of State has indicated that they replicate existing Regional and National Planning Policies and therefore not required

1.4 Planning Policy Context

1.4.1 The Unitary Development Plan 2002, revised in 2007 (UDP), specifically refers to subterranean development in Policy CD32, which has been ‘saved’⁽⁴⁾ by the Secretary of State. This SPD supplements this policy which “resists subterranean developments where:

- a. *the amenity of adjoining properties would be adversely affected; or*
- b. *there would be a material loss of open space; or*
- c. *the structural stability of adjoining or adjacent listed buildings or unlisted buildings within conservation areas might be put at risk; or*
- d. *a satisfactory scheme of landscaping including adequate soil depth has not been provided; or*
- e. *there would be a loss of trees of townscape or amenity value.*
- f. *there would be a loss of important archaeological remains.”*

1.4.2 Furthermore, UDP Policy CD24 seeks to resist development in, on, over or under garden squares, in order to protect their special character; and promote proposals for their enhancement.

1.4.3 In addition to the UDP and emerging LDF policies, applications for subterranean development will be considered in accordance with National and Regional planning policy, which are considered in detail in Appendix A. In this regard, the SPD needs to be in conformity with national planning policy and general conformity with the London Plan.

1.4.4 In particular, this SPD and proposals for subterranean development must have regard to the following national planning policy:

- **Supplement to Planning Policy Statement 1:** Planning and Climate Change;
- **Planning Policy Statement 3:** Housing;
- **Planning Policy Statement 9:** Biodiversity and Geological Conservation;
- **Planning Policy Statement 10:** Planning for Sustainable Waste Management;
- **Planning Policy Guidance 13:** Transport;
- **Planning Policy Guidance 14:** Development on Unstable Land;
- **Planning Policy Guidance 15:** Planning and the Historic Environment;
- **Planning Policy Guidance 16:** Archaeology and Planning;
- **Planning Policy Statement 23:** Planning and Pollution Control;
- **Planning Policy Guidance 24:** Planning and Noise;
- **Planning Policy Statement 25:** Development and Flood Risk;

1.5 Subterranean Development at Appeal

1.5.1 If an applicant for planning permission does not agree with the Council’s decision to refuse their proposal, they can appeal the decision to the Secretary of State. The Planning Inspector, charged with dealing with the appeal, will assess the merits of the case and make a decision to either dismiss the appeal or allow the appeal. Some relevant Inspectors decisions are set out on the following pages:

22 Pembridge Mews	
Proposal:	Full internal refurbishment, full basement and half sub-basement extension to provide additional accommodation.
Key issue:	The effect of the increased size of the proposed dwelling on the character of the Pembridge Conservation Area.
Inspectors reasons for allowing appeal:	The proposal will introduce additional space for the use of the occupiers but not significantly increase the intensity of the use of the dwelling, and therefore preserve or enhance the character or appearance of the Conservation Area.
	No substantive evidence has been provided to suggest that the development cannot be carried out without undue impact on neighbouring property in respect of ground stability or drainage.
	I have no reason to believe that the noise and disruption caused during the excavation and construction would not be unusually protracted, or that there would be damage to the cobblestones surfaces of the mews. However, this matter could be addressed by condition.

4 ‘Saved’ policies are those planning policies from the UDP 2002, which have been saved for the purposes of the new planning system. Several policies have been removed as the Secretary of State has indicated that they replicate existing Regional and National Planning Policies and therefore not required

3 Halsey Street	
Proposal:	Excavation of a new basement with light wells to the front and rear.
Key issue:	The impact of the proposed works on the special architectural and historic interest of the listed building and the effect on the character and appearance of the Conservation Area.
Inspectors reasons for dismissing appeal:	The proposal is a major design intervention and would result in harmful disruption to the building's historic plan form.
	An additional storey added to the listed building will obscure and confuse the traditional vertical hierarchy of floor levels. The existing basement level is evocative of the historic origins of the building and is an important element of its special interest. The creation of an additional subterranean storey would be to the detrimental of that special interest as it would detract from the original plan form which is an important element of the building's character.
	In order to provide daylight the proposal would include several large openings below ground level. Despite their discrete location they would be at odds with the historic character of both the front and rear elevations of the listed building.
	The proposal is contrary to UDP Policy CD66 and PPG15, which states that the plan of a building is one of its most important characteristics.
	Despite the discreet nature of the proposal, as it would harm the special architectural and historic interest of a listed building which forms an intrinsic element of the character of a Conservation Area, it would also fail to preserve or enhance the character or appearance of the Conservation Area as a whole, contrary to UDP Policies CD61, CD62 and CD63.
15 Mallord Street	
Proposal:	Basement rearward extension and associated internal alterations at basement and ground level and soft landscaping to rear courtyard; and alterations and extension at ground level side and rear, with associated landscaping, to create additional space for the dwelling house.
Key issue:	Effect on the character and appearance of the Grade II listed building and the Chelsea Park Carlyle Conservation Area.
Inspectors reasons for dismissing appeal:	The terrace has squat, horizontal portions and, consistent with its grounded feel and direct engagement with the street, only small storage basements, located under the front part of each dwelling. Originally without significant natural light or ventilation and low headroom, the basements were not intended to accommodate living space.
	The interest of the listed building lies in the historic organisation and use of its spaces, just as much as in their formal qualities of those of the fabric.
	The proposed basement would not be visible from the road or other parts of the house, and there is no reason to fear structural instability or loss of garden. However, to change so radically the relationship of spaces to each other, with the deepening of the basement and its extension throughout the building and under the rear garden, the scale of the basement overwhelming that of the remaining spaces, would not preserve the building or its features of special interest. Moreover, as a significant building in the Conservation Area, the character of the Conservation Area would be harmed rather than preserved.
44 Phillimore Gardens	
Proposal:	Erection of a single storey rear extension at lower ground floor with terrace above, creation of a sub-basement room beneath house and rear garden, and works to front vaults to facilitate their use as living space.
Key issue:	The effect of the proposed development on the character and appearance of no. 44 Phillimore Gardens, the street scene and Kensington Conservation Area.
Inspectors reasons for allowing appeal:	The works proposed to the front vaults would not result in any material change to the character of the house or its appearance as seen from the street.
	Squaring off the basement bays and introducing new steps on either side of the main staircase would not be unduly harmful to the character or appearance of the property or to its setting or that of the garden.
	I consider that the issue of replacing the existing garden, comprising lawn and planted borders with one that is largely paved, could be addressed through a condition on landscaping, which could also cover the replacement of trees and the depth of the garden.
	I do not consider that either the ventilation shafts or the skylights would be materially harmful to the character and appearance of no. 44, its garden or the CA.
	I am not persuaded that a departure from Victorian building form, by way of the sub-basement room or the quantity of extra space involved, would be materially harmful to the character or appearance of no. 44 or the surrounding area.

	Neither the form nor scale of the room would have a significant visual impact on no. 44, its setting or the wider CA. Whilst the room would extend well beyond the rear building line of the house it would be underground and thus not visible.
	While I agree that character and appearance are not the same thing, I do not consider that the appeal proposal would be materially harmful to either.
	The effect of the excavation on the structural stability of no. 44 and adjacent properties is a matter for other statutory regimes, such as the Building Regulations. Concerns about drainage and the implications of excavation, demolition and construction are also matters for other legislation. Concerns about noise, vibration and smells can be dealt with through condition.
60 Hamilton Terrace (LB Westminster)	
Proposal:	Construction of basement extension under rear garden, to contain swimming pool, etc.
Key issue:	The effect of the proposed basement extension under the rear garden to contain a swimming pool and associated works on the character and appearance of the St Johns Wood Conservation Area.
Inspectors reasons for allowing appeal:	I disagree that the proposal would be excessive simply because of its nature and extent.
	I consider it would be possible for soil layer with a minimum depth of 0.8m to adequately support a variety of planting. Trees could also be planted in containers and there is scope for planting around the site's boundaries.
	I consider that, with carefully designed landscaping scheme, the roof lights would be unobtrusive and little different from other garden features or paraphernalia.
	I consider that the proposed basement extension would have a neutral effect on the character and appearance of St Johns Wood Conservation Area.
	Concerns over the excavation work and construction methods, stability of the land and ownership issues are not matters before me. I am mindful of the concern raised by the Council and neighbours regarding the hours of construction work and intend to impose a condition relating to this issue.
44 Priory Avenue , Bedford Park (LB Hounslow)	
Proposal:	The works and development proposed is construction of basement under rear part of house.
Key issue:	Proposals would not be in keeping with the architectural and historic character of the house and listed pair of buildings. Insufficient detail provided to enable an assessment of the likely impact on the structural integrity and condition of the semi-detached pair of houses.
Inspectors reasons for dismissing appeal:	Part of the character of this conservation area is the lack of basements. It is now generally accepted that the lack of basements is a factor that contributes to the character and special interest of the listed buildings.
	The proposed basement will not be visible from the front. However, the effect of the grills and associated works (to the rear) would be visually disturbing and materially detrimental to the character and architectural and historic integrity of the building and its garden setting.
	The stairway access seems to have an adverse effect on the plan form of the house and I consider that the panelled-in projection would reduce the sense of space in the hall.
	There is a lack of information: - There are no cross sections and little detailed information as to the structure of the proposed basement, nor as to the fabric of the existing building which could be affected; - Nor was it indicated in the application what arrangements might need to be made to ensure fire safety, drainage and ventilation/extraction, which could have consequences for the fabric, character and appearance of the building; - Little detailed information as to any movements that had occurred in the structure of the appeal property or its attached neighbour, or that would be likely to occur.
	My reservations as to the level of detailed information submitted with the applications and potential problems with movement of the structures adds weight to my concerns as to the likely harmful effects of the proposals on the character and intrinsic qualities of the listed building and its garden setting.
	It seems that although the consequences for character and setting would not be widely seen, their effect would be to detract from rather than to help preserve or enhance the character or appearance of the area.

2 Historic Environment

2.1 Introduction

2.1.1 The borough has an exceptional historic quality with several important Archaeological Priority Areas; Ancient Monuments; over 4,000 listed buildings and over 70% of the area is within designated Conservation Areas. Use the links below to find out if your property is Listed or located in a Conservation Area or Archaeological Priority Area.

2.1.2 Georgian and Victorian terraces tend to have relatively shallow foundations and tend to naturally move in the soil, especially when located on clay soil. However, English Heritage⁽⁵⁾ and Arup⁽⁶⁾ advise that subterranean development may have minimal structural impact on the existing or adjoining buildings as long as they are designed and constructed with great care. In the light of this advice **the Council will require that the construction and structural stability of the subterranean development, including where appropriate any demolition, excavation or temporary work, incorporates the advice of a Chartered Civil Engineer (MICE) or Chartered Structural Engineer (MI Struct.E).** This is explored in more detail under Section 6, Construction Method Statement.

2.1.3 Furthermore, large mature trees, and especially trees with Tree Preservation Orders, also make an important contribution to the character and appearance of Conservation Areas and the setting and special interest of Listed Buildings. This contribution includes the provision of greening, privacy, views and supports wildlife habitats. This is considered in more detail in Section 9.1 of this SPD.

2.2 Listed Buildings

2.2.1 Apart from the structural considerations, there is a particular concern regarding the impact of subterranean development on the special architectural or historic interest of listed buildings. The special interest is not the same as appearance. Special interest includes the location and hierarchy of rooms and floor levels, foundations, the original purpose of the building, the size and location of any original basement, cellar or vault, and the

integrity of the historic structure, among other things. Whilst roof additions and rear and side extensions have become commonly accepted means of enlarging listed buildings, development beneath the building raises other issues about the relationship of the building to its site, its structure and the degree of intervention involved.

2.2.2 An addition of a new floor level underneath the original lowest floor of a listed building (normally the lower ground floor level) would have a significant impact on the hierarchy of the historic floor levels. For this reason, excavation under the main body of statutory listed buildings is normally resisted in this Borough due to its detrimental impact on the hierarchy of the historic floor levels and the historic integrity, scale and layout of the original building. In addition, the excavation and construction of new foundations may have consequential effects on historic foundations which may impact upon the future stability of the parent building and any adjoining listed buildings.

2.2.3 **The Council will normally resist proposals for subterranean development under listed buildings or directly attached to existing basements, cellars or vaults of listed buildings⁽⁷⁾.** However, the Council may consider proposals for subterranean development under gardens within the curtilage of a listed building, as long as any connecting passage between the existing and proposed structure is narrow and discreet to preserve the integrity and character of the original listed building. In considering such applications account will also be taken of the importance of preserving the integrity of historic boundary walls.

2.2.4 Any works for the alteration or extension of a listed building, in a manner which affects its character as a building of special architectural or historic interest, such as subterranean development, will require Listed Building Consent whether planning permission is required or not.

2.3 Conservation Areas

2.3.1 In Conservation Areas, the main planning issues relate to the external manifestations of subterranean development, which include the provision of light wells and roof lights, structures for safety, access and ventilation, exposed masonry and trees and landscaping.

5 Meeting with English Heritage Structural Engineer, 18 March 2008

6 Subterranean Development Scoping Study (Section 7), June 2008

7 To find out whether a property is listed, go to www.rbkc.gov.uk/Planning/scripts/listedform.asp

2.3.2 In this regard, **the Council will discourage light wells and railings that are visible from the street in areas where these are not a feature of that street and discourage large light wells in rear gardens.** The Council will also adopt a stricter application of the design considerations for light wells, railings and other features associated with subterranean development within conservation areas⁽⁸⁾, as set out in Section 8 of this SPD.

2.4 Archaeology

2.4.1 There is the potential for archaeological remains to be found during excavations, especially within the upper strata of River Terrace Gravels, Archaeological Priority Areas, Sites of Archaeological Importance, or where there is evidence of these on the Greater London Sites and Monuments Record⁽⁹⁾. **The Council will require pre-application consultation with the Greater London Archaeological Advisory Service (GLAAS)⁽¹⁰⁾ for any applications for excavation in these areas.** Depending on the location of the proposal and scale of subterranean development, **the Council will attach Amended Condition C100 requiring a programme of archaeological work as set out in Appendix C.**

8 To find out whether a property is located within a conservation area, go to www.rbkc.gov.uk/Planning/conservationareas/conservationsearch.asp

9 Database of over 73,066 unique records of archaeological sites, artefacts and listed buildings across London, providing information on known archaeological sites to inform decision making in the planning process. (<http://www.english-heritage.org.uk/server/show/nav.1551>)

10 For further information relating to archaeology you are required to contact the Greater London Archaeological Advisory Service on 020 7973 3732 or visit their website at www.english-heritage.org.uk/server/show/nav.8900

3 Use, Comfort and Safety

3.1 Use of the Basement

3.1.1 Some subterranean developments are used for the provision of sleeping accommodation, either self contained or attached to the existing dwelling. **The Council will require that all subterranean developments being used for the provision of sleeping accommodation must have natural light and ventilation.** The Building Regulations require that a bedroom must have a window/opening to the outside in excess of 10% of the floor area of the room. In addition to this, self contained residential dwellings will not be permitted in Flood Risk Zone 3.

3.1.2 Space within subterranean developments is also used for leisure (gyms, play areas, cinemas and swimming pools); kitchens; galleries; and car parking. For these uses, the subterranean development is usually ancillary to the main house, accessible through an internal stair way or lift. Subterranean rooms proposed for uses other than sleeping accommodation will normally be required to provide natural lighting or natural ventilation.

3.1.3 In any event, you are encouraged to seek the advice of the Council's Environmental Health department and appropriate Building Control Body for details of the requirements for light and ventilation. Their contact details are contained in Section of 12 of this SPD.

3.2 Comfort

3.2.1 The Council is keen to ensure that any new subterranean development is comfortable to use and enjoy. **The Council will therefore encourage basement storeys to be a minimum of 2.4m high and must be in accordance with the minimum room sizes shown on Table 3, Chapter 5 of the Housing Standards SPG 2002⁽¹¹⁾**, and set out in the table below.

Room	Square Metres	Square Feet	Comments relevant to this SPD
Living rooms	13 sq. m	140 sq. feet	
First double bedrooms	11 sq. m	118 sq. feet	This would only apply if the proposal is a self contained residential dwelling
Other double bedrooms	10 sq. m	107 sq. feet	
Single bedrooms	6.5 sq. m	70 sq. feet	
Totally enclosed kitchens	5.5 sq. m	59 sq. feet	
Other kitchens	6.5 sq. m	70 sq. feet	

Table 1 Minimum room sizes set out in the Housing Standards SPG, 2002

3.3 Safety

3.3.1 In accordance with the Building Regulations, light wells with a drop of more than 600mm will require a safety railing or a grille cover. These may have unacceptable townscape implications and therefore may not be acceptable. The Council's design requirements for light wells and associated features are set out in Section 8 of this SPD.

3.3.2 The potential risk and impact of flooding on the basement may also raise safety concerns and therefore applicants for planning permission must have regard to the following section on flooding.

11 RBKC, Housing Standards Supplementary Planning Guidance July 2002

4 Flooding

4.1 Introduction

4.1.1 The impacts of flooding on subterranean development and the impacts of subterranean development on ground water flows, drainage and levels are considerations when determining planning applications for subterranean development. In particular, planning is concerned with making sure that subterranean development is safe during periods of flooding. There are several types of flooding relevant to the borough and discussed below. These have been described in Planning Policy Statement 25: Development and Floodrisk, identified by the Environment Agency and addressed in the Council's Strategic Flood Risk Assessment (SFRA)⁽¹²⁾.

4.1.2 The Practice Guide to PPS25 defines basements as self-contained if they have no free internal access upstairs in an event of flood water coming down external access routes.

4.2 Tidal Flooding

4.2.1 Tidal flooding in the borough may be a result of the Thames or other rivers / creeks breaching their flood defences. The Environment Agency divides the borough into 3 tidal Flood Risk Zones⁽¹³⁾. These zones are shown on Map 1 of the Strategic Flood Risk Assessment and described in Section 6.2 of the SFRA⁽¹⁴⁾.

4.2.2 In accordance with PPS25, Table 2 shows which types of development might be suitable within each of the Flood Risk Zones and where site specific Flood Risk Assessments will be required. In accordance with PPS25, **applications for self contained basement dwellings within Flood Risk Zone 3 will not be permitted.**

4.2.3 Self contained basement dwellings in Zone 2 and any other basement uses in Zone 3 are only appropriate if they pass the Exception Test. This test is required by PPS25 (Appendix F) where the Council demonstrates that these uses are appropriate in these zones, as long as the applicant can demonstrate how the development will be made safe and will not result in additional flooding elsewhere.

Flood Risk Zone	Highly Vulnerable development (including self contained basement dwellings)	Other development (More Vulnerable and Less Vulnerable, including all other basement uses)	Flood Risk Assessment required
1	May be acceptable	May be acceptable	No*
2	May be acceptable**	May be acceptable	Yes
3	Not acceptable	May be acceptable**	Yes

** unless the site area is greater than 1 Hectare.*

*** The Council considers that this type of use is suitable in this particular flood risk zone, as justified in the Council's Exception Test in Appendix F. However, applicants will be required to demonstrate, within the FRA, how these will be made safe from any potential flooding and will not result in additional flooding elsewhere.*

Table 2 Flood Risk Vulnerability, Flood Zone 'Compatibility' and FRA requirements (Amended Table D.3 from PPS25)

4.2.4 All planning applications for subterranean development in Flood Zones 2 and 3 and for sites greater than 1 ha in Flood Risk Zone 1 must be submitted with a Flood Risk Assessment detailing the potential for various types of flooding and demonstrating how the development will be made safe. Flood Risk Assessments must be prepared in accordance with Annex E of PPS25 and the Council's SFRA, and in particular incorporate details of how the proposed development complements the Council's Exception Test by demonstrating how the subterranean development will be made safe to address criteria (d), paragraph D9, Annex D of PPS25. The Environment Agency will be consulted on all Flood Risk Assessments for development in Flood Zones 2 & 3 and for sites greater than 1 ha elsewhere, and their advice will be an important consideration in determining the outcome of the planning application.

4.2.5 For subterranean development and basement extensions in Flood Risk 2 and 3, **the Council will attach Informative I166, as set out in Appendix C, to the planning permission, informing applicants of the Environment Agency's free Flood Warning Direct service.**

12 http://www.rbkc.gov.uk/Planning/localdevelopmentframework/ldf_strategic_flood_assess.asp

13 Zone 1 being land having a less than 1 in 1000 annual probability of river or sea flooding in any year and Zone 3 being land having a greater than 1 in 100 annual probability of river flooding or 1 in 200 annual probability of sea flooding in any year

14 www.rbkc.gov.uk/Planning/localdevelopmentframework/ldf_strategic_flood_assess.asp

4.3 Surface Water Flooding

4.3.1 Surface Water Flooding is mainly caused when rain water, often as a result of a storm event, overwhelms the capacity of the drainage system and cannot return to the water table. The Council will seek to ensure that storm water drains are free from blockages. However the capacity and maintenance of the drainage system below ground level is the responsibility of Thames Water. The Council will work with Thames Water to improve the ability of the drainage infrastructure to discharge surface water. Excessive impermeable surfacing, such as paving and buildings, may exacerbate this type of flooding as rain water does not enter the water table close to where it falls or enters the drainage network too quickly. Surface water flooding can be mitigated through the use of sustainable urban drainage (SUDs) measures, which control the rate at which surface water enters the ground water or drainage network. **The requirement for sustainable urban drainage measures for subterranean development under gardens is set out in Section 9.2 of this SPD. However, where 1m of soil above a subterranean development is not required and the garden area is larger than 5m² (measured from the side of dwelling to the appropriate boundary walls) the Council will require a soak away or other type of sustainable urban drainage system.**

4.3.2 Map 17 (Surface Water Flooding) of the Council's draft SFRA identifies the 'worst case scenario' of where surface water flooding might occur, including the potential levels of flooding.

4.4 Sewage Flooding

4.4.1 Sewer Flooding is a result of the sewer infrastructure being unable to cope with extreme amounts of rain over a short period of time, as was experienced in parts of the borough in July 2007. The maintenance of this infrastructure is the responsibility of Thames Water. However, some measures can be taken to reduce this risk, such as water pumps or non-return valves to the sewers, although the latter are not always effective. If water pumps are installed, these need to ensure that excess water / sewerage is pumped to levels above ground before re-entering the sewerage system.

The Council will attach Informative I165, as set out in Appendix C, to all planning applications for subterranean developments.

4.4.2 Map 17 of the SFRA also identifies the broad locations of those properties that reported sewer flooding in July 2007. This map is consistent with the findings from a recent study by Thames Water ⁽¹⁵⁾, which models areas where basements may be at risk of sewer flooding. However, the exact locations of areas at risk of surface or sewer flooding cannot be accurately identified at this stage. The Environment Agency does not comment on planning applications unless they are in flood risk 2 or 3, or sites greater than 1 ha. The Council will therefore not require site specific flood risk assessment where the Environment Agency does not provide comments. However, the Council will work with Thames Water and the Environment Agency to keep Map 17 of the SFRA up to date. **Informative I164, as set out in Appendix C, will be added to all subterranean developments to draw the applicant's attention to the issue of surface water flooding.**

4.5 Ground Water Flows and Levels

4.5.1 With regard to the impact of subterranean development on ground water flows and levels, groundwater flows will find an alternative route if blocked by a subterranean structure, although there may be very small rises in level ⁽¹⁶⁾. These changes in level are likely to be significantly less than the natural variations in the water table associated with seasonal variations.

15 Counters Creek Strategic Sewer Flooding Alleviation: Study Findings and Proposals for 2009 Final Business Plan. Thames Water, February 2009

16 Subterranean Development Scoping Study (para 5.1), June 2008

5 Environmental Sustainability

5.1.1 The excavation, construction, transportation of construction waste and use of a subterranean development produces a significant amount of Carbon Dioxide (CO₂), which contributes to climate change. In particular, CO₂ is produced during construction with the excavation and transportation of spoil, making and setting of concrete, and once in use through the ventilation and lighting of the subterranean development to make it comfortable. However, the Council also acknowledges that subterranean developments will require less heating during the winter months.

5.1.2 In accordance with the London Plan, the Council will require that any proposals for subterranean development, including the excavation, construction and occupancy of the development, makes the fullest contribution to the mitigation of and adaptation to climate change and minimises the emissions of Carbon Dioxide⁽¹⁷⁾. This includes ensuring that the development uses less energy, in particular by adopting sustainable design and construction measures⁽¹⁸⁾; supplies energy efficiently, in particular by prioritising decentralised energy generation⁽¹⁹⁾; and uses renewable energy⁽²⁰⁾. This also includes adopting sustainable principles of waste management, such as reusing or recycling construction waste, or transporting this waste in sustainable ways. The Code for Sustainable Homes also seeks to conserve water, which is an important issue when filling underground swimming pools.

5.1.3 Given the nature of subterranean developments and the complexity of calculating and assessing CO₂ emissions and savings, as a proxy the Council will take a pragmatic approach and **will therefore require that the entire dwelling following the subterranean development meets Level 4 of the Code for**

Sustainable Homes⁽²¹⁾ or BREEAM ‘Excellent’ rating for non residential developments⁽²²⁾. In most circumstances this will secure a substantial carbon saving, while not penalising the owners of properties that already have a low carbon footprint. There may be exceptions to this, such as if the building is listed or exceptional circumstances in conservation areas. The use of water for filling the swimming pool must be considered within the CfSH Assessment.

5.1.4 Therefore, any proposals for subterranean developments will have to be assessed by a “code assessor”⁽²³⁾ before the planning application stage and the results submitted with the planning application. Applications received without this information will not be validated. The dwelling will then need to be assessed again following completion of the subterranean development.

17 Spatial Development Strategy for Greater London - Consolidated with Alterations since 2004 (February 2008) (The London Plan) Policy 4A.1

18 Spatial Development Strategy for Greater London - Consolidated with Alterations since 2004 (February 2008) (The London Plan) Policy 4A.3

19 Spatial Development Strategy for Greater London - Consolidated with Alterations since 2004 (February 2008) (The London Plan) Policy 4A.6

20 Spatial Development Strategy for Greater London - Consolidated with Alterations since 2004 (February 2008) (The London Plan) Policy 4A.7

21 Further information on reaching Code Level 4 of the Code for Sustainable Homes is included in Appendix G of this SPD and can be found from www.communities.gov.uk/thecode. Further information on various renewable energy technologies to help achieve this rating is available from www.london.gov.uk/mayor/environment/energy/london_renew.jsp

22 The CfSH Levels are required in accordance with the emerging Core Strategy policy on Respecting Environmental Limits

23 A ‘code assessor’ is someone specifically trained and certified to assess the environmental performance of a dwelling in accordance with the requirements of the Code for Sustainable Homes

6 Construction Method Statements

6.1.1 The Arup Scoping Study ⁽²⁴⁾ advises that: *“Subterranean development in a dense urban environment, especially basements built under existing vulnerable structures, is a significantly challenging engineering endeavour. In particular, there is a potential risk of damage to the existing and neighbouring structures and infrastructure if the subterranean development is ill-planned, poorly-constructed and does not properly consider the geology and hydrology. However, successful subterranean development has been achieved in London, and in the borough, for many years”*

6.1.2 To address this issue, **the Council will require a Construction Method Statement (CMS) to be submitted with all planning applications and Listed Building Consent applications for subterranean development.** The CMS must provide specific details of the excavation, temporary works and construction techniques, including details of the potential impact of the subterranean development on the existing and neighbouring structures, based on the specific site characteristics, including the type of geology and hydrology found in the area. This must be prepared and signed off by a Chartered Civil Engineer (MICE) or Structural Engineer (MI Struct.E) and submitted with the planning application, before the application will be validated.

6.1.3 The CMS will need to include borehole / soil test results, site specific construction drawings and calculations in a detailed structural engineering report. In particular, the CMS will need to address the following:

- whether the geology is capable of supporting the loads and construction techniques to be imposed;
- the impact of the subterranean development, and associated construction and temporary works, on the structural integrity and natural ability for movement of existing and surrounding structures, utilities, infrastructure and man-made cavities, such as tunnels;
- whether the development will initiate slope instability which may threaten its neighbours;
- the impact of the subterranean development on drainage, sewage, surface water and ground water, flows and levels;

- how any geological, hydrological and structural concerns have been satisfactorily addressed;
- the engineering details of the scheme, including proposals for the excavation and construction;
- the impact of the proposed subterranean development on the structural stability of the existing and adjoining buildings, especially listed buildings;
- the impact of the proposed subterranean development on existing and proposed trees;
- the sequence for the temporary works, which mitigates the effects on neighbours; and
- the details and design of the preferred method of Temporary Works (see the British Standards for Temporary Works).

6.1.4 The Council will cease its current practice of appointing external consultants to assess the CMS and will rely on the professional integrity of the Chartered Civil Engineer (MICE) or Chartered Structural Engineer (MI Struct.E), appointed by the applicant, to ensure that the construction of a subterranean development is safe and will not impact on the structural integrity of the existing or neighbouring properties. However, the Council may choose to consult, at the applicant's expense, an independent Chartered Structural Engineer with expertise in historic structures for specific cases where particularly vulnerable historic buildings or structures may be affected.

6.1.5 The Council draws the attention of those constructing subterranean developments, and neighbouring land owners, to the Party Wall Act which requires an agreement to monitor and control the affects of construction on neighbouring properties. Further information on the Party Wall Act is supplied in Appendix E of this SPD.

6.1.6 In addition to this, applicants seeking planning permission for subterranean developments above or nearby London Underground infrastructure, such as tunnels and stations, should contact London Underground (LU) Infrastructure Protection at an early stage in the process to discuss the design proposals and foundation arrangements. In some instances, London Underground may request that a Condition is attached to the planning permission. The contact details for London Underground are contained in section 12 of this SPD.

24 Subterranean Development Scoping Study (Section 7.4), June 2008

6.1.7 Anyone with concerns that the construction process is not being conducted in a safe and secure fashion, protecting the structural integrity of the existing buildings, should approach the Council's Building Control service.

7 Reducing the impacts of noise, nuisance and transportation

7.1.1 The excavation and construction of subterranean development lasts for a considerable period of time and may cause nuisance and disturbance for neighbouring occupiers in a densely developed area, such as the Royal Borough. This nuisance may include noise; vibration; dust; odours; impact on pedestrian movement; skips; moving spoil and construction materials and suspension of parking bays.

7.1.2 Many of these concerns are controlled and enforced by the Council, such as noise and pollution controlled in accordance with the Environmental Protection Act 1990 by Environmental Health, transportation and parking by Highways and Transportation, and building practices by Building Control. The Council's Environmental Health Noise and Nuisance Officer will consider the Construction Method Statement submitted as part of the planning application and may suggest alternative approaches to the construction or temporary works, which would reduce the impact of noise and nuisance upon neighbours. The contact details for these departments are set out in Section 12 of this SPD and the legislation related to these controls is set out in Appendix E of this SPD.

7.1.3 For all planning applications for subterranean development and certain other planning applications **the Council will attach Informative I167, as set out in Appendix C, to the planning permission, which will inform applicants of their duties under the Control of Pollution legislation.**

7.1.4 Where appropriate, the Council will also attach Condition C109, as set out in Appendix C, requiring the contractor to be a member of the Considerate Constructors Scheme. This Scheme is a national initiative, set up by the construction industry. The developer, architect or contractor registers a site on the Scheme, which is then monitored against a Code of Considerate Practice (the checklist for this is set out in Appendix H). The Scheme has no involvement with the site unless a complaint is made to them by the public, after which they will seek to resolve the problem through mediation and if no solution can be found

they will be removed from the list of members. If the development is not registered on the Scheme, the person carrying out the development or the person with control of the land may be in breach of the planning condition. Further information on the Considerate Constructors Scheme can found at www.considerateconstructorsscheme.org.uk.

7.1.5 The demolition, excavation and construction works required for subterranean development generates significant traffic. If not properly managed, these works may have a serious impact on parking availability, traffic flow, road safety, residential amenity and pedestrian convenience. For these reasons, **the Council will attach Condition C104, set out in Appendix C, or require S106 planning obligations where appropriate to require the submission of a Construction Traffic Management Plan.** It should be noted that the Council will expect construction works to be contained within the curtilage of the development site. Given the high levels of demand for parking and suspensions on-street the Council cannot guarantee that parking suspensions will be granted immediately. Such suspensions, if considered necessary by the Council, must be kept to a minimum in order to reduce the disruption to parking suspensions or other use of the highway is essential before such use will be permitted. Further details of this are contained in the Council's Transport SPD ⁽²⁵⁾.

7.1.6 In addition to these planning conditions, the Council may use Informatives 130 and 131, as set out in Appendix C to advise developers of other controls outside the planning regime.

25 The Council's Transport SPD is available on the Council's website at www.rbkc.gov.uk

8 Design

8.1 Introduction

8.1.1 Subterranean development is predominantly located underground and, apart from their impact on trees and roots, may have little impact on the character and appearance of the streetscene. However, subterranean development can lead to a proliferation of visible impacts, such as light wells, upstands, railings, roof lights, fire escapes, water pumps, air conditioning, plant rooms and exposed masonry. This chapter of the SPD sets out the Council's guidance to ensure that subterranean development is consistent with UDP Policy CD27, which seeks *"to ensure that all development in any part of the borough is to a high standard of design and is sensitive to and compatible with the scale, height, bulk, materials and character of the surroundings."*

8.2 Minimising the visual effect

8.2.1 The Council will aim to ensure that any features associated with subterranean development mentioned in 8.1.1 of this SPD, visible from the street or surrounding properties, are well designed to be discreet.

8.3 Design and location of light wells

8.3.1 Light wells that are visible from the street will not be permitted where they are not a characteristic feature of that street. Light wells visible from surrounding properties will be considered on their merits.

8.3.2 The size of the garden will also affect the size of the light well. **Light wells must not exceed a depth of 1 storey below ground level; be no wider than the width of the existing development; and not exceed more than 1.2m from the external perimeter wall of the above ground building. Excessively large light wells will not be permitted in any garden space.**

8.3.3 A horizontal grille over the light well can often provide a less intrusive alternative to guard rails and has the advantage of providing additional security. In any event, these features should be designed into the scheme without being added as an after thought.

8.3.4 Furthermore, any doors and windows provided within a light well must respect, and preferably be subordinate to, the size, location and symmetry of any existing doors and windows in the existing dwelling immediately above. Any exposed masonry must also respect the character and materials of the existing dwelling.

8.3.5 To ensure that walls, railings and fences are designed to respect the character of the street and are discreet and well screened, the Council may attach Condition C24, as set out in Appendix C, to any planning applications.

8.3.6 Applicants for subterranean development proposals must also have regard to other Council guidance documents, such as Streetscape Guidance and Transport and Streetscape Policies.

9 Trees and Landscaping

9.1 Removal of trees

9.1.1 The Council is concerned about the loss of mature trees and grassed / planting areas, especially as a result of cut-and-cover types of subterranean development under gardens. Trees play an important role in the urban environment, such as providing shade, absorbing water and converting carbon dioxide into oxygen. **The Council will require that no mature trees are removed, felled, uprooted, topped, damaged or harmed in the long term, especially those with Tree Preservation Orders, in Conservation Areas or within the curtilage of a Listed Building, to make way for a subterranean development under a garden.** There are several conditions which the Council may attach to planning approvals to ensure that mature trees are protected, such as Condition C23c set out in Appendix C.

9.1.2 Where in exceptional cases the removal of trees is permitted, the Council **will require that they are replaced or substituted either adjacent to the subterranean development within the curtilage of the property or through the use of sufficient size ‘tree pits’ with access to sub-soil as part of the structure of the new basement.** These tree pits must also be open at their base to facilitate the movement of water.

9.1.3 All applications for subterranean development where there are trees will need to be accompanied by a full tree survey and tree protection proposal (as set out in BS5837:2005 Trees in relation to construction – recommendations).

9.2 Soil above subterranean developments

9.2.1 The Council is keen to protect the green and leafy appearance of the borough and make provision for landscape to be reinstated. In this regard, **the Council will require the following for all basement proposals under gardens:**

- 1m of permeable soil above the top cover of the basement;
- No more than 85% coverage of the garden space (between the boundary walls and existing building), with the remainder of the

space used for drainage, planting and ‘tree pits’; and

- The provision of drainage technology to facilitate the movement of water over and around the basement, to ensure it does not collect on the top of the basement and facilitate sustainable urban drainage systems.

9.2.2 In accordance with UDP Policy CD24, the Council will resist development under garden squares.

9.3 Subterranean development under public footways

9.3.1 **The Council will discourage the use of space below public footways for subterranean developments, such as for vaults and storage space.** This is to protect the planting location and rooting area of existing street trees and protect existing services, including their access for maintenance by statutory undertakers. Where such development is permitted or where subterranean development will require structural works adjacent to the highway or to walls supporting the highway, approval must be secured from the Council's Highways and Construction Department on 0207 341 5240 and must comply with the leaflet "*General requirements for the design and approval of structures supporting the highway*".

10 Land Contamination

10.1.1 The borough has a legacy of land contamination due to the expansion and industrialisation of London during the 19th Century. There are many parts of the borough that have been formerly occupied by a potentially contaminative land use. These potentially contaminative land uses include sites previously used for, among other uses, petrol filling stations. Land contamination can pose health risks to construction workers and occupiers of development if not identified and dealt with appropriately.

10.1.2 The applicant is responsible for determining whether the site may be at risk of land contamination or not. **If a subterranean development is proposed on potentially contaminated land, the Council will require the site to be investigated, risk assessed and if necessary remediated to the required standard.** Further information about dealing with land contamination through the planning process is in 'Annex 2: development on Land Affected by Contamination' of Planning Policy Statement 23.

10.1.3 To check whether your site is contaminated and discuss suitable remedial proposals, please contact the Council's Environmental Health using the details in Section 12.

11 Monitoring Case Studies

11.1.1 The Council is happy to receive any information on the lessons learnt during the construction of past or present subterranean development schemes. However, this information must contain sound advice provided by someone duly qualified to supply such advice.

12 Contact Details

12.1.1 Please use the following contact details to find out more about the process and requirements for constructing a subterranean development:

RBKC - Planning Policy: Able to help with the general borough-wide interpretation of the Council's planning policy on subterranean development.

- Email: planningpolicy@rbkc.gov.uk
- Telephone: 020 7361 3879

RBKC - Planning Applications: Able to help with enquires about site specific planning applications and whether development requires planning permission.

- Email: planning.info@rbkc.gov.uk / planning@rbkc.gov.uk
- Telephone: 020 7361 3012

RBKC – Design and Conservation (Planning): Able to help with enquiries relating the impact of the subterranean development on the character of buildings and surrounding areas, especially conservation areas and listed buildings.

- Email: planning.info@rbkc.gov.uk / planning@rbkc.gov.uk
- Telephone: 020 7361 3012

RBKC - Trees (Arboriculture): Able to help with advice on the protection of trees and requirements for potential development affecting trees.

- Email: trees@rbkc.gov.uk
- Telephone: 020 7361 2767

RBKC - Transportation (Highways): Able to help with advice on development or works affecting the Highway, such as the movement of excavation waste; suspension of parking bays; location of skips; and temporary closure of streets.

- Email: highways@rbkc.gov.uk
- Telephone: 020 7361 3001

RBKC - Building Control: Able to help with issues such as the engineering design; on-site operations; safe working; and standards of workmanship during the construction, to ensure these are conducted in accordance with the Building Regulations.

- Email: building.control@rbkc.gov.uk
- Telephone: 020 7361 3838

RBKC - Environmental Health: Able to help with enquiries relating to the impacts of noise, nuisance, dust, vibration and general pollution.

- Email: environmentalhealth@rbkc.gov.uk
- Telephone: 020 7361 3002

English Heritage: National body responsible for protecting the historic environment.

- Website: www.english-heritage.org.uk/
- Email: London@english-heritage.org.uk
- Telephone: 020 7973 3000
- Greater London Archaeological Advisory Service email: glmsr@english-heritage.org.uk
- Greater London Archaeological Advisory Service telephone: 020 7973 3732

British Geological Foundation: National body able to provide advice on geology, underground soil conditions and groundwater.

- Website: www.bgs.ac.uk
- Email: enquiries@bgs.ac.uk
- Telephone: 011 5936 3143

Environment Agency: National body responsible for protecting the environment and in particular for addressing pollution (air, water and land) and controlling the risk of flooding.

- Website: www.environment-agency.gov.uk/
- Telephone: 087 0850 6506 (General Enquiries) and 084 5988 1188 (Flood Line)

Thames Water: Regional water supplier and also responsible for waste water and sewage water drainage.

- Website: www.thameswater.co.uk/UK/region/en_gb/content
- Telephone: 084 5920 0800

London Underground Infrastructure Protection: For pre-application discussions for subterranean development on land above or adjacent to LU Infrastructure, such as tunnels.

- Information Manager, Southside, 105 Victoria Street, London, SW1E 6AD
- Te: 0207 027 9549

Appendix A: Planning Policy Context

Local Planning Policy Context

The Unitary Development Plan 2002, revised in 2007 (UDP), specifically refers to subterranean development in Policy CD32, which has been 'saved' by the Secretary of State. This policy "resists subterranean developments where:

- a. *the amenity of adjoining properties would be adversely affected; or*
- b. *there would be a material loss of open space; or*
- c. *the structural stability of adjoining or adjacent listed buildings or unlisted buildings within conservation areas might be put at risk; or*
- d. *a satisfactory scheme of landscaping including adequate soil depth has not been provided; or*
- e. *there would be a loss of trees of townscape or amenity value.*
- f. *there would be a loss of important archaeological remains."*

Furthermore, UDP Policy CD24 seeks to resist development in, on, over or under garden squares, in order to protect their special character; and promote proposals for their enhancement.

UDP Policy CD80 seeks to resist development proposals that would result in unnecessary damage or loss of trees. Policy CD86 requires several considerations where development is proposed on sites of archaeological significance or potential.

With regards to Contaminated Land, UDP Policy PU3 requires developers to submit information in association with development proposals on land that is or might be contaminated: a) to set out a full assessment of the condition of the land; and b) to specify adequate measures to negate or minimise the effects of the contamination on the proposed development and adjacent land. Furthermore, UDP Policy PU4 requires that developments of contaminated land include appropriate measures to protect future users or occupiers of the land, the public, new structures and services, wildlife, vegetation, ground water and surface water.

Metropolitan Planning Policy Context

In terms of the metropolitan planning policy context for subterranean developments in London, the Spatial Development Strategy for Greater London: Consolidated with Alterations since 2004 (London Plan), provides particular planning guidance for mitigating climate change, archaeology & geology, floodrisk and construction, demolition and excavation of waste.

In particular, the London Plan requires developers to make the fullest contribution to the mitigation of and adaptation to climate change and to minimise emissions of Carbon Dioxide and ensure the protection and promotion of geodiversity. The London Plan also sets out the various organisations with an interest in protecting archaeology and requires that development protects scheduled ancient monuments and archaeological assets within their area. With regards to mitigating against floodrisk, the London Plan sets out the requirements of PPS25, as addressed below.

National Planning Policy Context

Planning Policy Statement 1: Delivering Sustainable Development, 2005 (PPS1) states that good planning is a positive and proactive process, operating in the public interest through a system of plan preparation and control over development and use of land (para 2). Furthermore, PPS1 seeks to deliver safe, healthy and attractive places to live and development plan policies should ensure that the impact of development on the social fabric of communities is considered and taken into account (para 16).

Planning Policy Statement: Planning and Climate Change, 2007 (Supplement to PPS1) requires, among other things, that new development should be planned to make good use of opportunities for decentralised and renewable or low carbon energy; and climate change considerations should be integrated into all spatial planning concerns (para 10).

Planning Policy Statement 3: Housing, 2006 (PPS3) states that local planning authorities should aim to create places, streets and spaces which meet the needs of people, are visually attractive, safe, accessible, functional, inclusive, have their own distinctive identity and maintain and improve local character; and promote designs and layouts which make efficient and effective use of land, including encouraging innovative approaches to help deliver high quality outcomes (para 14).

Planning Policy Statement 9: Biodiversity and Geological Conservation, 2005 (PPS9) requires that, among others, development plan policies and planning decisions are based upon up-to-date information about the environmental characteristics of the area, which includes relevant biodiversity and geological resources (para 1(i)). Furthermore, PPS9 requires that planning decisions should aim to prevent harm to biodiversity and geological conservation interests, and where the granting of planning permission would result in harm to these areas, the Council must be satisfied that no alternative site is available or the harm can not be mitigated against, otherwise planning permission will be refused (para 1(vi)).

Planning Policy Statement 10: Planning for Sustainable Waste Management, 2005 (PPS10) requires that proposed new development is supported by a site waste management plan, prepared in accordance with the DTI's Site Waste Management Plans: guidance for construction, contractors and clients, 2004. These do not require formal approval by the Council, but should identify the volume and type of material to be demolished and/or excavated, including the identification of opportunities for the reuse and recovery of materials and to demonstrate how off-site disposal of waste will be minimised and managed (para 34).

Planning Policy Guidance 13: Transport, 2001 (PPG13) requires the movement of freight and spoil by sustainable forms of transport, such as water and rail, where possible (para 47).

Planning Policy Guidance 14: Development on Unstable Land, 1990 (PPG14) relates to planning controls over development on land which is unstable or is potentially unstable. PPG14 states that the stability of land in so far as it affects land use is a material consideration which should be taken into account when determining applications for planning permission (para 20). This PPG does not prevent development of such land, but seeks to ensure that it is suitable and that the physical constraints on the land are taken into account at all stages of planning (para 2). PPG14 states that ground movements may cause damage to buildings and structures, but in most cases this can be foreseen if appropriate expert advice had been taken (para 2 and 10). PPG14 also states that the developer should make a thorough investigation and assessment of the ground to ensure that it is stable or that any actual or potential instability can be overcome by appropriate remedial, preventative or precautionary measures (para 16). In addition

to this, the developer should also provide at his own expense such evidence as is required by regulatory authorities to indicate clearly that the problem has been addressed satisfactorily (para 18). This may include a 'stability report' describing and analysing the issues relevant to ground instability, such as ground and ground water conditions, and indicating how they would be overcome (para 28).

Furthermore, PPG14 states that a planning authority does not owe a duty of care to individual landowners when granting applications for planning permission and accordingly is not liable for loss caused to an adjoining landowner by permitting development. Nevertheless, where development is proposed on land which the planning authority knows is unstable or potentially unstable, it should ensure that the following issues are properly addressed by the development proposed:

- the physical capacity of the land to be developed;
- possible adverse effects of instability on the development;
- possible adverse effects of the development on the stability of adjoining land; and
- possible effects on local amenities and conservation interests of the development and of any remedial or precautionary measures proposed. (para 22)

Planning Policy Guidance 15: Planning and the Historic Environment, 1994 (PPG15) requires the Council to have special regard to the desirability of preserving the setting of a listed building, which is an essential part of the building's character (para 2.16). PPG15 places a statutory requirement on local planning authorities to 'have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses' and the Council should use this as a basis for determining applications for consent (para 3.3). With regards to the extensions and alterations, PPG15 states that in judging the effect of any alteration or extension it is essential to have assessed the elements that make up the special interest of the building in question. They may comprise not only obvious visual features such as a decorative facade or, internally, staircases or decorated plaster ceilings, but the spaces and layout of the building and the archaeological or technological interest of the surviving structure and surfaces. These elements are often just as important in simple vernacular and functional buildings as in grander

architecture. With regards to conservation areas, PPG15 highlights that the Courts have recently confirmed that planning decisions in respect of development proposed to be carried out in a conservation area must give a high priority to the objective of preserving or enhancing the character or appearance of the area.

Paragraph C.58 of Annex C relates to listed buildings and states that "The plan of a building is one of its most important characteristics. Interior plans and individual features of interest should be respected and left unaltered as far as possible".

Planning Policy Guidance 16: Archaeology and Planning, 1990 (PPG16) states that developers and local authorities should take into account archaeological considerations and deal with them from the beginning of the development control process. In this regard, PPG16 requires prospective developers to undertake an initial assessment of whether the site is known or likely to contain archaeological remains. PPG16 states that these assessments may take the form of a) consultation between the developer, local authority and heritage organisations; and b) to conduct field excavations.

Planning Policy Statement 22: Renewable Energy, 2004 (PPS22) seeks to ensure that, among other things, development proposals demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures.

Planning Policy Statement 23: Planning and Pollution Control, 2004 (PPS23) advises that any consideration of the quality of land, air or water and potential impacts arising from development, possibly leading to impacts on health, is capable of being a material planning consideration, in so far as it arises or may arise from or may affect any land use (para 2). Furthermore, Appendix 1 of PPS23 states that planning conditions could be used in respect of transport modes, hours of operation where these may have an impact on neighbouring land use, landscaping, plant and buildings, the timescales of the operations, non-PPC processes, and impacts such as noise, vibrations, odour, air pollutants and dust from certain phases of the development such as demolition and construction (para 1.48). It may be possible that the land the subterranean development is being built on/in could be

contaminated due to the previous use of the site. In this regard, PPS23 requires Risk Assessments and Land Contamination Assessments to be carried out.

Planning Policy Guidance 24: Planning and Noise, 1994 (PPG24) states that much of the development which is necessary for the creation of jobs and the construction and improvement of essential infrastructure will generate noise. This PPG states that the planning system should not place unjustifiable obstacles in the way of such development. Nevertheless, local planning authorities must ensure that development does not cause an unacceptable degree of disturbance (para 10). Appendix 4 of PPG24 suggests several conditions to minimise the effect of noise on new noise-sensitive development and conditions restricting noise emitted from industrial or commercial buildings and sites. Furthermore, this PPG suggests that a number of measures can be introduced to control the source of, or limit exposure to, noise. Such measures should be proportionate and reasonable and may include one or more of the following: Engineering, Lay-out and/or Administrative (limiting operating times of source) (para 13).

When determining planning applications, the Council will consider the impact of flooding on subterranean development in accordance with the requirements of **Planning Policy Statement 25:** Development and Flood Risk, 2006 (PPS25), the Council's draft Strategic Flood Risk Assessment, February 2008 (SFRA) ⁽²⁶⁾ and advice from the Environment Agency. PPS25 aims to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas of highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe, without increasing flood risk elsewhere, and, where possible, reducing flood risk overall. The Environment Agency designates several Flood Risk Zones in the borough, for which PPS25 provides guidance on acceptable development, unacceptable development or requirements for site specific Flood Risk Assessments, for each flood risk zone. PPS25 also makes specific requirements for the preparation of a site specific Flood Risk Assessment and the use of the Sequential Test and Exception Test for highlighting the potential impacts of flooding and how these can be mitigated

26 http://www.rbkc.gov.uk/Planning/localdevelopmentframework/ldf_strategic_flood_assess.asp

if alternative sites are unavailable. In particular, PPS25 resists basement dwellings in Flood Risk Zone 3. Basements are defined in the Practice Guide to PPS25 as self-contained, with no free internal access upstairs in an event of flood water coming down outside access routes.

Appendix B: Basements Requiring Planning Permission

Schedule 2 Part 1 Class A of the General Permitted Development Order 1995 (as amended in 2008)(GPDO) gives 'permitted development rights' for certain types of extensions, including certain basement extensions unless the proposed basement:

Within Conservation Areas

- extends beyond the side elevation walls of the original dwelling house
- extends beyond the front wall of the principal elevation of the original dwellings house if it fronts a highway
- extends beyond the rear wall of the original dwelling house by more than 4 metres in the case of the detached house or 3 metres in the case of any other dwellings house (single storey basement extension only)
- extends beyond the rear wall of the original dwelling house (basements greater than 1 storey)

Outside Conservations Areas

- extends beyond the front or side elevations of the original dwelling house where these elevations front a highway
- extends beyond the rear wall of the original dwelling house by more than 4 metres in the case of the detached house or 3 metres in the case of any other dwelling house (single storey basement extension only)
- extends beyond the side elevation of the original dwelling house by more than half the width of the original dwelling house (single storey basement extension only);
- extends beyond the rear wall of the original dwelling house by more than 3 metres or within 7 metres of the rear boundary (basements greater than 1 storey)
- extends beyond the side elevation walls of the original dwelling house (basements greater than 1 storey)

You are encouraged to seek the advice of the Council's Development Control service, who will advise whether the proposed basement is permitted development. However, if you would like to put the matter beyond doubt you will need to apply for a

"certificate of lawful development". Please note that Listed Building Consent is always required for any proposed subterranean development affecting a listed building and Building Control is also required.

Please note that the government is currently revising the GPDO for basements and therefore this Appendix may be updated to reflect any changes. As the GPDO is government legislation, the contents of the GPDO and any future revisions to the GDPO are beyond the remit of this SPD.

Appendix C: Possible Conditions and Informatives

In certain instances this SPD refers to Planning Conditions or Informatives which may be attached to certain planning permissions. The typical wording for these conditions or informatives is set out below. However, these conditions or informatives are not used for all planning applications and the wording is not fixed, but the use and content of the conditions will be subject to the characteristics of the site and/or the proposal. The wording and use of these conditions must also meet strict government criteria.

In accordance with the Town and Country Planning Act, the Council can use its discretion to attach conditions to planning approvals. The inclusion of these conditions does not give them any SPD status and the Council reserves the right to change any of the conditions at the Council's discretion.

Condition C100*: Archaeology – Works Relating to

No development shall take place until the applicant, their agent, or successors in title secures the implementation of a programme of archaeological work in accordance with a written scheme of investigation submitted to and approved by the Executive Director, Planning and Borough Development, has been secured. The development shall only take place in accordance with the detailed scheme so approved. The archaeological works shall be carried out by a suitably qualified investigating body approved in writing by the Executive Director, Planning and Borough Development.

**Amended condition, although the content may be amended to reflect the scale, nature and impact of the proposed development.*

Condition C101*: “Watching Brief”

No development shall take place until arrangements have been made for an archaeological “watching brief” to monitor development groundworks and to record any archaeological evidence revealed. These arrangements are to be submitted to, and approved in writing by, the Executive Director, Planning and Borough Development. The development shall take place in accordance with the “watching brief” so approved. The “watching brief” shall be carried out by a suitably qualified investigating body approved in writing by the Executive Director, Planning and Borough Development.

**Existing condition, although the content may be amended to reflect the scale, nature and impact of the proposed development.*

Informative I164*

Please be aware that surface water flooding occurs within the borough. The areas prone to this type of flooding are shown on Map 17 of the Council's SFRA. You are advised to consider whether your property is at risk of surface water flooding, and if so, to prepare a Flood Risk Assessment highlighting how any mitigation techniques will be integrated into your proposal. If planning permission has already been granted for the subterranean development, the Council will still need to consider the impact of the mitigation techniques on the character and appearance of the street.

**New informative. The content will need to be amended to reflect the scale, nature and impact of the proposed development.*

Informative I165*

Please be aware that sewer flooding has previously occurred in parts of the borough, such as Holland and Norland Wards, and any risk of this type of flooding must be mitigated against and is the responsibility of the owner and/or occupier. Thames Water encourages the use of water pumps, non-return valves and other suitable devices to avoid the risk of backflow, on the assumption that the sewerage network may surcharge to ground level during storm conditions. You are required to consider Part H of the Building Regulations 2000 for all proposals for subterranean development. You are also advised to let Thames Water know if your property has previously suffered from sewerage flooding or as soon as possible if this occurs in the future.

**New informative. The content will need to be amended to reflect the scale, nature and impact of the proposed development.*

Informative I166*

(For approvals of basement extensions in Flood Zones 2 and 3) You have been granted planning permission for a basement or extension to an existing basement. We strongly advise that you sign up to the free Flood Warning Direct service by calling Floodline on 0845 988 1188.

**New informative. The content will need to be amended to reflect the scale, nature and impact of the proposed development.*

Informative I167*: Controlling noisy works:

Please be aware that construction and demolition will be controlled by the Council under Section 60 and 61 of the Control of Pollution Act 1974. In particular, building work which can be heard at the boundary of the site should not be carried out on Sundays and Bank Holidays and shall only be carried out between the following hours:

Monday – Friday: 8:00 am to 6:30 pm

Saturdays: 8:00 am to 1:00 pm

**New informative. The content will need to be amended to reflect the scale, nature and impact of the proposed development.*

Condition C109*: National Considerate Constructors Scheme

No development shall be carried out until such time as the person carrying out the work is a member of the Considerate Constructors Scheme and its code of practice, and the details of the membership and contact details are clearly displayed on the site so that they can be easily read by members of the public.

**New condition. The content will need to be amended to reflect the scale, nature and impact of the proposed development.*

Condition C104*: Construction Traffic Management Plan

The development hereby permitted shall not be implemented until a Construction Traffic Management Plan has been submitted to and approved in writing by the Executive Director, Planning and Borough Development, in consultation with the Director of Transportation and Highways. The statement should include:

- routeing of demolition, excavation and construction vehicles;
- access arrangements to the site;
- the estimated number of vehicles per day/week;
- details of the vehicle holding area;
- details of the vehicle call up procedure;
- estimates for the number and type of parking suspensions that will be required;
- details of any diversion or other disruption to the public highway during demolition, excavation and construction works;
- work programme and/or timescale for each phase of the demolition, excavation and construction works; and
- where works cannot be contained wholly within the site a plan should be submitted showing the site layout on the highway including extent of hoarding, pedestrian routes, parking bay suspensions and remaining road width for vehicle movements.

The development shall be carried out in accordance with the approved Construction Traffic Management Plan.

** Existing condition. The content will need to be amended to reflect the scale, nature and impact of the proposed development.*

Informative I30*

Demolition and building works are subject to the Environmental Protection Act 1990, and appropriate controls over methods, screening, and protection of site, noise, hours of work, or routing of construction traffic, may be imposed by the Council. You are advised to consult the Director of Environmental Health, Council Offices, 37 Pembroke Road, W8 6PW at an early stage.

** Existing Informative, although the content may be amended to reflect the scale, nature and impact of the proposed development.*

Informative I31*

Your attention is drawn to the British Standards Codes of Practice for Demolition, and the Environmental Protection Act 1990 relating to nuisances, the observation of which should considerably reduce the risks and nuisance inherent in demolition work (particularly in relation to fire hazards arising from the practice of burning materials on site) both to operative on site and to the general public.

** Existing Informative, although the content may be amended to reflect the scale, nature and impact of the proposed development.*

Condition C24*

Before the use hereby permitted commences, a fence, wall, railing or other enclosure shall be constructed on ... in accordance with details approved in writing by the Executive Director, Planning and Borough Development. Details of the enclosure shall be submitted to the Executive Director, Planning and Borough Development, within ... months of the date of this permission and the enclosure erected in accordance with this condition shall not be removed or altered without the prior written approval of the authority.

** Existing condition, although the content may be amended to reflect the scale, nature and impact of the proposed development.*

Condition C23c*

A full method statement for the retention and protection during construction works of the ... tree, including the method of excavation within the curtilage of the site shall be submitted to and approved in writing by the Executive Director of Planning and Borough Development prior to the commencement in accordance with the method statement thereafter.

**Existing condition, although the content may be amended to reflect the scale, nature and impact of the proposed development.*

Appendix D: Guidance for Neighbours

If your neighbour is thinking about constructing a subterranean development, we recommend that you consider the following:

1. Instruct a Party Wall Surveyor right from the beginning, although this is a civil matter and not a material planning consideration. The party undertaking the development should be responsible for the costs incurred by appointing a structural surveyor and Party Wall Surveyor. Further details of the Party Wall Act are contained in Appendix E of this SPD and within the Government's advice on the Party Wall Act⁽²⁷⁾.

2. The Council will only take into account 'material planning considerations' when determining whether or not to grant permission for a planning application. These material planning considerations include, but are not limited to, the issues addressed in the main body of this SPD, namely:

- impact on the historic environment (Section 2 of this SPD);
- use, comfort and safety within the basement once constructed (Section 3 of this SPD);
- impacts of flooding and on groundwater flows (Section 4 of this SPD);
- issues associated with Environmental Sustainability (Section 5 of this SPD);
- construction Method Statements (Section 6 of this SPD);
- noise and nuisance caused during the construction (Section 7 of this SPD);
- impacts on the character or appearance of the area (Section 8 of this SPD); and
- issues with trees and landscaping (Section 9 of this SPD).

Please note that the Council will only accept objections to planning applications which raise valid material planning considerations. Furthermore, there are unlikely to be valid planning objections to proposals for subterranean development, as long as the proposed basement complies with the guidance contained in this SPD.

3. Please use the contact details in Section 12 of this SPD should you wish to find out more, or have concerns, about subterranean development. Please contact the Council's Building Control service for

any enquiries during the construction of the basement and the Council's Environmental Health department for any enquiries about noise / nuisance.

27 This can be found at <http://www.communities.gov.uk/publications/planningandbuilding/partywall>

Appendix E: Other Relevant Legislation

Introduction

A key requirement of planning policy under the new LDF process is not to duplicate policy or related legislation. Therefore, this section of the SPD sets out a brief explanation of the extensive legislation not necessarily related to planning, but that would need to be taken into account when proposing and building a new basement or basement extension.

Building Control

The Building Control Body certifies that issues associated with engineering design; on-site operations; safe working; and standards of workmanship in construction are conducted in accordance with the Building Regulations. In particular, the Building Control Body will ensure that the engineering design is professional and competent, the construction work is undertaken in a skilful and proficient manner and that the sequence of working on site (including 'temporary works') is properly planned and carried out.

Construction (Design and Management) Regulations (2007)

The Construction (Design and Management) Regulations (2007) seeks to improve health and safety during the demolition, construction, operation and maintenance of structures. Part of the CDM Regulations apply to all construction projects and part only applies to projects lasting longer than 30 days or taking over 500 man-days to complete. The CDM Regulations require commercial clients to employ competent and experienced organisations to undertake basement works.

Control of Pollution Act (1974)

Section 60 of the Control of Pollution Act (1974) gives the Council authority to serve a notice, prior to, or following the commencement of works to require noisy building works to only be conducted during the Council's permitted building hours.

Section 61 of the Control of Pollution Act (1974) allows those intending to carry out complex or lengthy works to apply for prior consent from the Council.

Party Wall Act (1996) ⁽²⁸⁾

The Party Wall Act applies where any excavation is within 3m of a neighbouring structure and extends deeper than that structure's foundations; or within 6m of the neighbouring structure and to a depth below a line drawn down at 45 degrees from the underside of that structure. The Party Wall Act also applies where it is intended to underpin or carry out other works to a party wall between two properties. In accordance with the Act, any property owner wishing to excavate a basement must notify the adjoining owner with a description of the works and details of whether/how the neighbouring structures will be strengthened or safe guarded. The adjoining owner can dispute the works and has the right to, amongst other things:

- require reasonable measures to be taken to protect their property from damage that is foreseeable;
- not undergo unnecessary inconvenience;
- be compensated for loss or damage caused by the works; and
- request secured expenses to be set aside to cover the risk that the work may be left incomplete, particularly if the stoppage were to happen at a 'difficult' stage in the temporary works when an excavation may be most vulnerable to potential collapse.

In the event of a dissent to a notice both parties must appoint a surveyor to represent their interests. They can agree the same surveyor or appoint one each. The appointed surveyors have statutory authority to determine the detail of and time and manner of carrying out works that come under the scope of the Act. The Royal Borough is not involved in the preparation, review or monitoring of any Party Wall agreements.

28 Further information on the Party Wall Act is available from www.partywalls.org.uk or www.communities.gov.uk/publications/planningandbuilding/partywall

Highways Act (1980)

The Highways Act (1980) gives the Council the authority to deal with long term obstructions, such as plant, materials or abandoned vehicles, left on the Highway. In particular, the Council would need to issue a licence for any activities on the highway, including skips, the transfer of spoil, or the erection of hoardings. The appropriate highway authority would also need to provide consent for any work under any part of the highway, including the footway. In most cases the appropriate highway authority will be the Council, although Transport for London is also responsible for some roads.

Road Traffic Regulation Act 1984 / Road Traffic Act 1991

The Council has produced a Traffic Management Order in accordance with these Acts to control the short term parking of construction vehicles. However, vehicles used for any building operation, including demolition or excavation, can load or unload from single yellow lines for periods of up to 40 minutes within controlled hours without dispensation.

Environmental Protection Act (1990)

The Council has powers under the Environmental Protection Act (1990) to serve an abatement notice for works causing a statutory nuisance for example by generating excessive noise, grit and dust.

Health and Safety at Work etc Act 1974

The Council and the Health and Safety Executive share enforcement responsibilities for the Health and Safety at Work etc Act 1974 with regard to different premises and work activities.

The Health and Safety at Work etc Act 1974 places a duty on every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees. The Health and Safety at Work etc Act 1974 also places a duty on every employer and self-employed person to conduct his undertakings in such a way as to ensure, so far as is reasonably practicable, that he, persons not in his employment and others who may be affected thereby are not thereby exposed to risks to their health and safety. There are also many other Health and Safety Regulations.

Housing Act (2004)

The Housing Act provides a new approach to the evaluation of the potential risks to health and safety from any deficiencies identified in dwellings (the Housing, Health and Safety Rating System). The Housing, Health and Safety Rating System, although not in itself a standard, is a replacement for the Housing Fitness Standard and was developed to allow assessment of all the main potential housing related hazards. There are 29 categories of hazard in the HHSRS the most significant of which in relation to an underground development are likely to be Lighting, Damp and Mould Growth, Excess Cold, Falling between levels and Fire. The Council have a wide range of duties and powers under the Act including the service of statutory notices in relation to the presence of one or more hazards. The notice or order can require works in relation to the hazards or prohibit the use of a dwelling (or part of it).

Appendix F: Exception Test for Subterranean Development in RBKC

In accordance with PPS25, the Council must allocate land for development and infrastructure in accordance with the Sequential Test. The Sequential Test requires that land is first allocated for development and infrastructure in Flood Risk Zone 1. Where there are no reasonably available sites in Flood Risk Zone 1, the Council may consider the allocation of broad locations for development and infrastructure in Flood Risk Zone 2. However, the Exception Test must justify the

suitability of these sites in accordance with the criteria set out in PPS25. Where there are no reasonably available sites in Flood Risk Zone 1 and 2, the Council may consider the allocation of broad locations for development and infrastructure in Flood Risk Zone 3. Again, the Exception Test must justify the suitability of these sites in accordance with the criteria set out in PPS25.

In this regard and in accordance with PPS25, the Council must demonstrate that highly vulnerable development (self contained basement dwellings) in Flood Risk Zone 2 and other basement uses in Flood Risk Zone 3 will pass the Exception Test, which is set out for subterranean development in the following table.

For the Exception Test to be passed:	
PPS25 requirements:	It is the Council's view that criteria (a), (b) and (c) are met for subterranean development, insofar as:
a) it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a SFRA where one has been prepared. If the DPD has reached the 'submission' stage – see figure 4 of PPS12: Local Development Frameworks – the benefits of the development should contribute to the Core Strategy's Sustainability Appraisal.	<p>a) Subterranean development provides wider sustainability benefits to the community as this type of development increases the size of dwellings, with minimal impact on the existing townscape and reduces the demand for development on open space. This in turn increases the length of time households will stay in a particular dwelling and reduce the amount of times families move.</p> <p>In addition to this, dwellings will now be meeting Code Level 4 of the Code for Sustainable Homes and therefore have improved environmental performance.</p> <p>Subterranean development mostly relates to site specific extensions and excavations, which are usually small in scope and have minimal benefit to the Core Strategy Sustainability Appraisal.</p> <p>However, this type of development will not necessarily compromise (or outweigh) flood risk, as subterranean developments will still need to be designed and engineered to have regard to flood risk and facilitate drainage.</p>
b) the development should be on developable previously –developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously-developed land; and	b) Apart from some parks and Garden Squares, the entire borough is considered previously-developed land and the nature of subterranean development is that it is under or directly adjacent to existing dwellings;

<p>c) a FRA must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.</p>	<p>c) The applicant will need to supply a FRA demonstrating how the development will be safe, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall. This might be addressed by setting out, in the FRA, the expected potential and extent of flooding and the techniques that may be used to mitigate this, such as through attenuation of rainfall (SUDS), improvements to surface water flood routing, improvements to the sewerage network, flood mitigation techniques, active drainage technology and permeable paving.</p>
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Table 3 Justification for how subterranean development in RBKC meets the Exception Test

Therefore, it is the Council's view that subterranean development, as set out in Table 2 (Section 4) might be acceptable as long as the applicant can demonstrate (within the FRA) how this can be made safe in order to address criteria (c) of PPS25.

Appendix G: Meeting Code Level 4 of the Code for Sustainable Homes

The Code for Sustainable Homes has been prepared by the Government, and therefore the requirements and assessments should be conducted by an accredited Code Assessor before construction and after completion.

Energy savings: 44% improvement on 2006 Building Regulations requirements

Water usage ⁽²⁴⁾ : 105 litres/person/day

Other credits required: **54**

Other credits are available from:

Category 1: Energy (36.4% weighting)

- Dwelling Emission Rate (**15 credits available**)
- Building fabric (**2 credits available**)
- Internal lighting (**2 credits available**)
- Drying space (**1 credit available**)
- Energy labelled white goods (**2 credits available**)
- External lighting (**2 credits available**)
- Low or zero carbon energy technologies (**2 credits available**)
- Cycle storage (**2 credits available**)
- Home office (**1 credit available**)

Category 2: Water ⁽²⁹⁾ (9% weighting)

- Internal water use (**5 credits available**)
- External water use (**1 credit available**)

Category 3: Materials (2.2% weighting)

- Environmental impact of materials (**15 credits available**)
- Responsible sourcing of materials – basic building elements (**6 credits available**)
- Responsible sourcing of materials – finishing elements (**3 credits available**)

Category 4: Surface Water Run-off (7.2% weighting)

- Reduction of surface water run off from the site (**2 credits available**)
- Flood risk (**2 credits available**)

Category 5: Waste (6.4% weighting)

- Household waste storage and recycling (**4 credits available**)
- Construction site waste management (**2 credits available**)
- Composting (**1 credit available**)

Category 6: Pollution (2.8% weighting)

- Global Warming Potential for insulants (**1 credit available**)
- NOx emissions (**3 credits available**)

Category 7: Health and wellbeing (14% weighting)

- Daylighting (**3 credits available**)
- Sound insulation (**4 credits available**)
- Private space (**1 credit available**)
- Lifetime Homes (**4 credits available**)

Category 8: Management (10% weighting)

- Home user guide (**3 credits available**)
- Considerate Constructors Scheme (**2 credits available**)
- Construction site impacts (**3 credits available**)
- Security (**2 credits available**)

Category 9: Ecology (12% weighting)

- Ecological value of the site (**1 credit available**)
- Ecological enhancement (**1 credit available**)
- Protection of ecological features (**1 credit available**)
- Change in ecological value (**4 credits available**)
- Building footprint (**2 credits available**)

29 Water use will include the water needed to fill underground swimming pools

Appendix H: Considerate Constructors Scheme – Code of Practice

Monitors' Checklist

Items marked in bold are the key requirements for compliance with the scheme's Code of Considerate Practice

Individual items on this Checklist may appear in more than one section.

Site ID number		
A brief description of the site		

This Checklist only relates to the general public, the workforce and the environment.

1. Considerate	
Have introductory letters been sent to those affected by the site activities?	
Has consideration been given to parking for operatives, staff and visitors?	
Is there provision for pedestrians, especially the disabled/pushchair users?	
Are road names and other existing signs still visible?	
Are accesses well identified? Are there route directions to site?	
Does the site have a traffic plan?	
What measures have been taken to allow suitable visitor access to the site office for people of all abilities?	
Are visitors to the site asked to sign in?	
Where appropriate, are visitors inducted into the site?	
What procedures are in place to allow the quick and effective resolution of any complaints, e.g. the authority to reimburse small financial complaints?	
Where appropriate, have notices been printed in other languages?	
Are any diversions clear to motorists, cyclists and pedestrians?	
Are there restricted times for deliveries?	
What precautions are taken to minimise any negative effect caused by plant?	
What provisions have been made to combat the negative effects of smoking e.g. designated smoking areas? Are site/company vehicles smoke-free zones?	

2. Environment	
Does the company have an environmental policy? Is it site specific?	
Are there restrictions on the effects of noise, light, air and water pollution?	
Is waste segregated, recycled or reused, including canteen & office waste?	
Have sensitive plants, trees, etc, been protected?	
How well is the environmental policy being implemented?	

Have environmental issues been included in the site set-up risk assessment?	
Are environmental issues included in the site induction?	
Are site hours and noisy work restrictions flexible?	
Where required, what procedures are in place for the prevention of water pollution?	
Are all lights directional and non-polluting? (i.e. not pointing into the sky)	
Are clearly marked bunds available for oils, paints and chemicals and is spillage clean up equipment available and suitable?	
Is material waste monitored and does the site receive feedback as to how much is recycled?	
Have you considered using local suppliers and materials or using recycled materials?	
Are energy saving measures in place? Is there a monitoring procedure?	
Do you monitor carbon emissions from you site activities?	
Have energy-saving light fittings been considered for the site accommodation and hoardings?	
Does the site have any protected wildlife issues? If so, are they being monitored	
Are hoardings/fences appropriate to the environment, neat and well maintained?	

3. Cleanliness

Does the site appear clean?	
Are site welfare facilities well maintained and clean?	
Are all accesses to the site clean and mud free?	
Are all roads used by site vehicles swept?	
Is site plant and material stored within the site boundary? Is it suitably covered and protected?	
Where materials are stored in a separate compound, are they tidily stacked & where appropriate, protected and covered?	
How are operatives encouraged to keep the site facilities clean?	
What dust prevention measures are taken on site?	
Are the areas around the canteen, offices and skips tidy and clean and, where necessary, screened?	
Are areas around the site cleaned, including the collection of rubbish not related to site?	
Are covered rubbish bins available?	
What provisions have been made for the removal of graffiti?	

4. Good Neighbour

Is this site well presented and does it give a good impression?	
Are communications maintained with neighbours to discuss site activities?	
Is there a single line entry complaints/comments procedure with a record of contacts' names and telephone numbers?	
Have all complaints been properly dealt with? Are they followed up?	
Is site lighting shielded from neighbours?	
Are there viewing points in the hoarding and if so, are regular checks made to ensure that they give the right impression?	
What measures been taken to assist those with mobility, sight or hearing difficulties?	

Is there a published 24 hour hotline available to the general public?	
If security alarms are fitted, are steps taken to minimise false alarms?	
Has consideration been given to storage facilities away from a congested site?	
What measures are used to reduce noise and nuisance affecting neighbours?	
Are any measures in place to reduce negative displacement? (e.g. pigeons)	
Is representation from the local community/Residents Committee encouraged?	

5. Respectful	
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Are the site personnel dressed appropriately? Is there an encouragement or enforcement procedure?	
Does the induction procedure deal with shouting or abusive language as well as behaving in a courteous manner to the general public?	
Is there a no offensive calendar policy?	
Are volume restrictions on radio use enforced?	
Does the site cater for the requirements of all site visitors? (e.g. designated female/disabled toilets.)	
Are toilets screened from public view?	
Are operatives discouraged from having their breaks in view of the public?	
Are site personnel discouraged from using local facilities in soiled clothes?	
Are lockers provided in the drying room? How are these managed?	
Are working, usable showers available? What is being done to encourage the use of these?	
Are suitable changing areas available?	
What action is taken regarding operatives' excessive exposure to the sun?	

6. Safe	
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Are there adequate and well lit warning signs for the benefit of pedestrians and road users?	
Are temporary works, outside of the site boundary, adequate, with security risks being taken into consideration?	
Do pedestrians on the site boundary enjoy suitable, protected passage?	
Are accesses to and from the site office well signed, lit and usable?	
Where the works interrupt the pavement, are ramps put in place?	
Are any temporary pedestrian road-crossings appropriate and in a suitable position?	
Is the scaffolding boxed-in or taped where likely to affect pedestrians?	
Does the hoarding or scaffolding have proper, suitable, external lighting?	
Is scaffold netting in place and well maintained?	
Are visitor emergency escape routes clearly identified?	
Are even the most minor accidents recorded?	
Is there a procedure for operatives to report near misses? What action is then taken?	
What incentives are there to promote and improve safety on site?	
Are there clearly identified fire points, and an assembly station, and do fire drills take place?	
Is there a procedure to investigate serious accidents?	

Are the out of hours security arrangements satisfactory?	
What is done to establish that operatives can read and/or understand English?	

7. Responsible

Is the Site Manager aware of the nearest hospital (with A & E facilities) or minor injuries unit? Is this information clearly displayed?	
Has the Environmental Officer been informed of the presence of the site?	
Is there a clearly identifiable 4 day trained 1 st aider(s) and suitable 1 st aid equipment?	
Are any/all sub-contractor first aiders recorded?	
Are any procedures in place to enable the employment of disabled operatives?	
Are there arrangements in place for out of hours cover? (e.g. a local resident?)	
Have local schools been contacted to arrange site or school visits?	
What professional organisations/bodies does the company belong to?	
Are operatives' skills and or medical conditions recorded?	
Are site operatives provided with suitable identification? (e.g. ID cards)	

8. Accountable

Is all CCS information, including posters, correctly displayed and showing the correct information?	
Are all site personnel, including sub-contractors and consultants, made familiar with the Scheme and its requirements?	
Is the Scheme mentioned in the site induction?	
Has there been a safety inspection and report, and have any points raised been dealt with?	
Are training/toolbox talks provided for site operatives?	
Has there been an HSE inspection and have all requirements been dealt with?	
Are the company's contact details prominently displayed? (tel.no, website, etc.)	
Is the client aware of the Scheme?	
If it is stipulated that the client should not see the report, what is the reason?	
Is all site signage clearly visible at night?	
Does the site have a record of social/community activities?	

Questions

How many complaints has the site received?	
What % of the workforce holds CSCS (Construction Skills Certification Scheme) cards?	%
What is the average number of operatives over the duration of the project?	
Of these how many, on average, are women?	
What is the % of operatives who do NOT have English as their first language?	%
How many reportable accidents have there been?	
How many non-reportable accidents have there been?	
Have there been any fatalities on site?	Yes / No

Is there any awareness of National Construction Week?	Yes / No
Is it something the site has been involved in?	Yes / No
If this is a company's 1 st site on the Scheme, who is the person responsible for registering?	
Ask the Site Manager if he/she has any comment or suggestions about the Scheme.	

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