



Basements Supplementary Planning Document

April 2016



THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

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Foreword

I would like to stress how very important the issue of sustainable basement development is in the Royal Borough. Without any doubt the construction of basements, and the subsequent effect that large scale excavations inevitably have on immediate neighbours and the wider local community, has been a cause of great concern to our residents.

There were 393 planning applications which included basements in 2014; this compares to only 180 in 2010 when the Core Strategy (now called the Local Plan) was adopted. We have a new Policy CL7 in the Local Plan which sets out the limits of basements development. It also includes dealing with character and appearance, listed buildings, structural stability, trees, gardens and ecology and sustainable drainage.

Every place is unique, but Kensington and Chelsea does genuinely have a claim to be different. We have the highest residential property values in the country. We also have the highest household density, the tightest built environment and 73% of the Borough is within conservation areas. Some property owners have the resources to spend huge sums of money on their houses. Some want to enhance the value of their property. Others are simply households wishing to extend. Basements are built under large villas, small terraced houses and even mews houses with the narrowest of accesses.

Whilst the scale of development will be curtailed by the new basements policy, there will still be major excavation work going on right next door to elderly residents, families with young children, people who work from home, doctors' surgeries and other quiet activities. Therefore the impact of basement development needs to be managed carefully.

In developing our policy, we gave a great deal of thought to the balance that needs to be struck. The number of consultations carried out in formulating the planning policy indicated a consistent message – construction impacts of basements needed to be minimised.

This SPD provides guidance on how construction impacts can be managed and the interplay between various regimes in mitigating the impacts. It provides guidance on what applicants should be doing and what neighbours can expect during basement development. There is also design guidance and how structural design should be considered when designing a basement.

This SPD together with the adopted policy is designed to help applicants address all the issues related to basement development successfully in planning applications. It is also designed to help residents understand the various issues the Council takes into account in assessing basement applications. I am confident that this document will provide more clarity for all concerned with basement development.



Councillor Timothy Coleridge
Cabinet Member for Planning Policy, Transport and the Arts

1. Introduction

Basement developments in the Borough can be afforded more easily and can have a greater adverse impact than elsewhere in most parts of England and Wales. (Inspector's Report on the Examination of Policy CL7, December 2014)

Background

- 1.1 The Council adopted Policy CL7: Basements on 21 January 2015 and it forms part of the Local Plan. The policy is based on a robust and extensive evidence base. The Inspector's report on the policy acknowledged the special character of the Royal Borough and the issues relating to basement development. The Borough has seen an increasing number of basement planning applications. It is largely residential with a dense built environment, very high property values and a high quality historic environment.
- 1.2 Policy CL7 is the first of its kind in setting limits on the extent of development. The policy preparation and its adoption took over two years with a very lengthy examination process for a single policy. The examination hearings took over four and a half days which reflects the controversial nature and the level of interest in the policy.
- 1.3 The policy sets out a number of criteria which seek to manage the impact of basement development on residents, the environment and on the character and appearance of the Borough. One of the main objectives of Policy CL7 is to bear down on the volume of excavation in order to curtail not only the individual but also the cumulative effect of basement development on living conditions. Map 1 demonstrates the great number of planning applications relating to basement development between 2001 and 2015. Whilst the mapping is over a long time period, it still serves to demonstrate the importance of considering cumulative impacts. The impacts relate to the whole Borough, and the intention of the policy is therefore to mitigate the cumulative impact across the whole Borough. In considering each application and appeal it is therefore important not just to limit consideration to the properties either side of the application site or even the street but apply the policy consistently. A 'case by case' analysis of each site negates the very basis of the policy as such an approach fails to consider the cumulative impacts that the policy is designed to mitigate. The policy does include some exceptions for 'large sites' as set out later in this document.
- 1.4 The policy criteria and reasoned justification make it very clear that construction impacts are a material planning consideration in this Borough. These cannot be adequately dealt with by a planning condition. The full

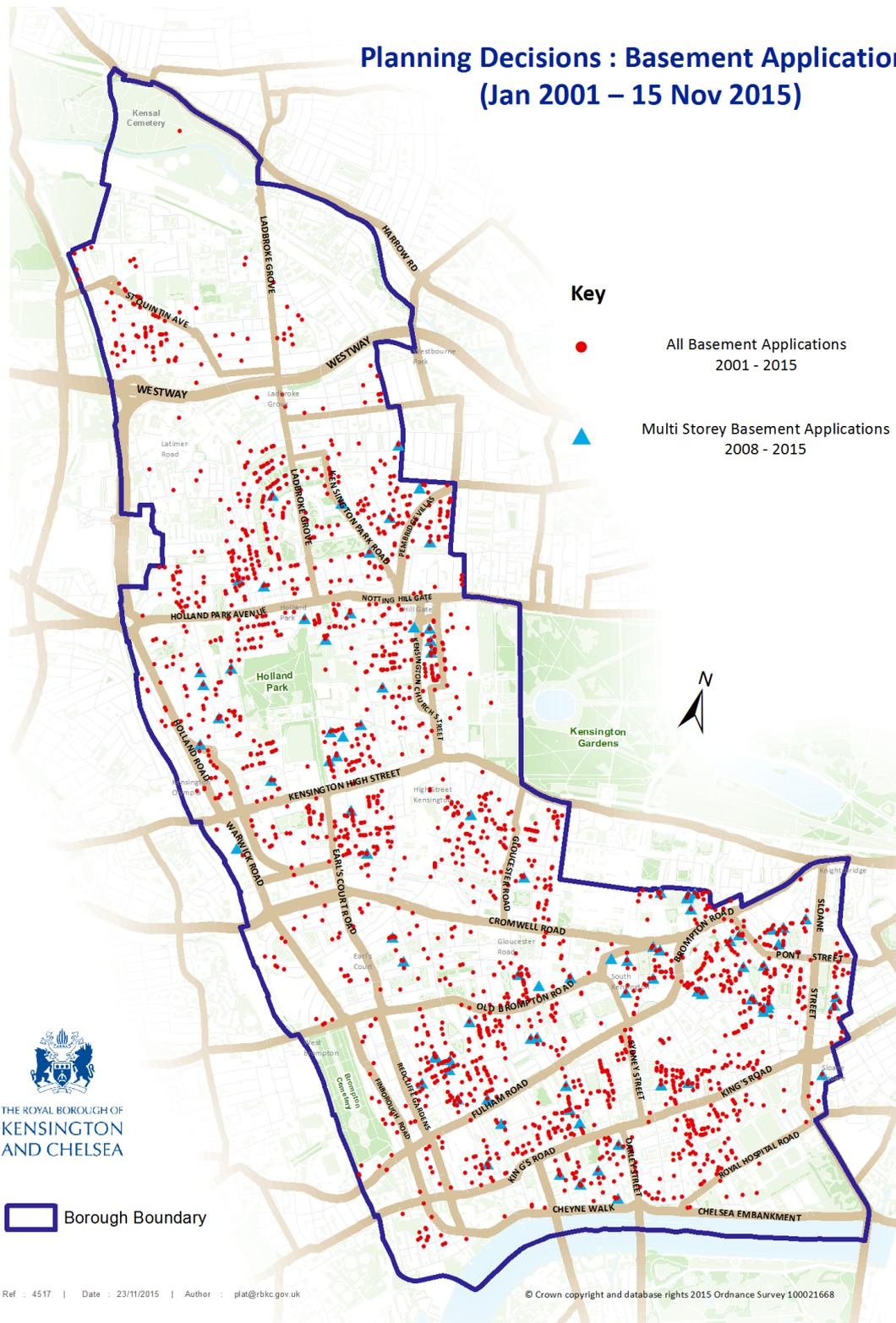
proposal regarding mitigating these issues needs to be submitted with the planning application to be considered properly and comply with the policy.

- 1.5 Given the complexity and the issues surrounding basement development in the constrained urban environment in this Borough, it is necessary to provide further guidance on the adopted Policy CL7.

Purpose of this document

- 1.6 This Supplementary Planning Document (SPD) provides more detailed guidance and advice on the adopted Local Plan Policy CL7: Basements. It is designed to help applicants make successful planning applications and for residents to understand the various issues that the Council will consider in assessing planning applications. The SPD includes -
- Importance of pre-application consultation.
 - The role of various regulatory regimes in basement development.
 - Design guidance on the extent of basements under gardens and on their external elements.
 - Further clarity on 'large sites' where exceptions may be made to criteria (a) and (b) of Policy CL7.
 - Structural Design – this covers what should be included in a Construction Method Statement and includes special considerations in relation to listed buildings.
 - Detailed guidance on minimising construction impacts – this includes guidance on preparing a Construction Traffic Management Plan (CTMP) and keeping noise, vibration and dust to acceptable levels.
 - Consideration of various types of flooding including provision of Sustainable Drainage System (SuDS).
 - Consideration of the impact on trees as part of basement development.

Planning Decisions : Basement Applications (Jan 2001 – 15 Nov 2015)



Map 1: Basement Planning Applications January 2001 to 15 November 2015

2. Pre-application Consultation

Applicant Checklist

- Engage with neighbours before submitting the planning application and where this has been undertaken provide evidence with the planning application.

“Local planning authorities have a key role to play in encouraging other parties to take maximum advantage of the pre-application stage. They cannot require that a developer engages with them before submitting a planning application, but they should encourage take-up of any pre-application services they do offer. They should also, where they think this would be beneficial, encourage any applicants who are not already required to do so by law to engage with the local community before submitting their applications (National Planning Policy Framework (NPPF), paragraph 189).”

- 2.1 The pre-application stage as set out in the above excerpt from the NPPF has two aspects – (1) the applicants engaging in a pre-application advice process with the Council and (2) the applicants involving the local community/ neighbours in preparing their proposals before making a planning application. In-line with the NPPF, the Council strongly encourages applicants to undertake both of these.
- 2.2 The Council offers a pre-application advice service for applicants. Detailed information on the [planning advice service](#) is available on the Council’s website. As set out in the NPPF (paragraph 188), *“Early engagement has significant potential to improve the efficiency and effectiveness of the planning application system for all parties. Good quality pre-application discussion enables better coordination between public and private resources and improved outcomes for the community.”*
- 2.3 Applicants should consult with the neighbours living in the vicinity of the site before formalising proposals. Such consultation can improve the outcome of the planning application both for the applicant and the local community.
- 2.4 The consultation that applicants undertake should be proportional to the scale of the proposed development and reflect the location. Therefore for a small proposal, such as works to an existing cellar, consulting with the adjoining neighbour who may share a party wall may suffice. For a larger basement, consulting a wider area, including properties that back on to the site, are across the road and those that are further down the street may be more appropriate. Whilst the basement itself will be contained on a single site, the

related construction traffic could affect the whole street for example. Similarly even modest development in a small mews, cul-de-sacs or narrow streets may cause a significant amount of local disruption given the confined nature of the street.

- 2.5 For consultation on the plans and the Construction Method Statement, the immediate neighbours will be the most affected and should be targeted. Construction traffic, however, can affect a much wider number of households and businesses, so consultation on the Construction Traffic Management Plan (see Section 6) should be wider.
- 2.6 Appendix 1 explains the role of various parties in bringing together a basement development and includes the further benefits of early consultation. Also see Appendix 2 for a compact for residents.
- 2.7 Where applicants have undertaken pre-application consultation with neighbours and/or the local community they should submit evidence of this. The evidence should include who was consulted, when and how. It would also be extremely helpful to state how such consultation has influenced the submitted proposals. Experience suggests that properly undertaken consultation achieves better results for planning proposals and makes for better relations with neighbours during the construction process.

3. Design Guidance

Applicant Checklist

- Include not just the garden but any existing open areas such as existing lightwells when calculating the 50% maximum extent.
- Design the basement (adjoining the building) so that the unaffected garden remains in a single area including where the basement is proposed underneath a detached or semidetached house.
- Study the site and context carefully to establish the suitability of external elements especially to the front and side.
- Design any external elements so that they are discreetly sited, preferably close to the existing building.
- In relation to listed buildings consider locating the link to the proposed basement (situated in the garden) from an above ground extension (if there is one that is suitable).

50% Garden Extent

“CL7 (a) – Not exceed a maximum of 50% of each garden or open part of the site. The unaffected garden must be in a single area and where relevant should form a continuous area with other neighbouring gardens. Exceptions may be made on large sites;”

3.1 As stated in the policy the 50% maximum extent will be measured separately for each garden within the site e.g. front, back or side. An existing lightwell with no built structure below should be regarded as forming part of the ‘garden’ or ‘open part’ of the site. The Royal Borough is characterised by terraced houses and in most cases the front and back gardens will be clearly separate and the measurements straightforward as shown in figure 1.

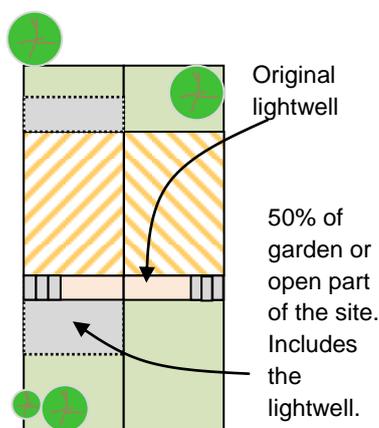


Figure 1: 50% Garden Extent in terraced houses

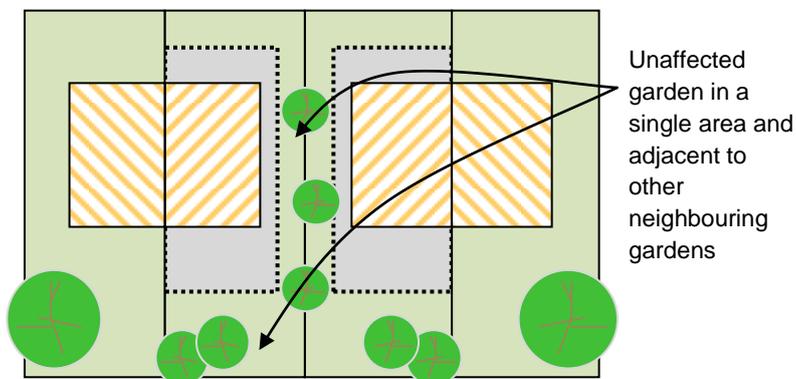


Figure 2: 50% Garden Extent in semi-detached houses

- 3.2 Some basement construction would involve a detached or semi-detached house with no physical separation between the gardens. In such instances it is preferable to keep the basement close to the building line and leave a margin that is free of development in each garden as shown in figure 2. Such a configuration could result in a maximum of 50% of the whole garden being utilised with slightly less or more in the front or rear for example (although the extent in each garden should still be close to 50%). The policy objective to provide a significant space free of development to enable natural surface water drainage and a planting area should be considered. It is important in locating the basement that account is taken of leaving the unaffected portion of garden connected to other unaffected neighbouring gardens.

Design of external elements

“CL7 (g) - not introduce light wells and railings to the front or side of the property where they would seriously harm the character and appearance of the locality, particularly where they are not an established and positive feature of the local streetscape;”

“CL7 (h) - maintain and take opportunities to improve the character or appearance of the building, garden or wider area, with external elements such as light wells, roof lights, plant and means of escape being sensitively designed and discreetly sited; in the case of light wells and roof lights, also limit the impact of light pollution;”

Lightwells

- 3.3 Most of the Borough is within designated conservation areas. In addition to the relevant policy criteria set out above the Council is also bound by its general duty in relation to conservation areas as set out in the Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended). Section 72 of the Act sets out that in determining planning applications in conservation areas, the Council should pay, *“special attention to the desirability of preserving or enhancing the character or appearance of that area.”*
- 3.4 Lightwells are one of the most obvious external elements of a basement. Many streets in the Borough are characterised by terraced housing with historic lightwells and railings forming part of the special street character and/or appearance of the conservation area. In contrast there are other streets where the lack of lightwells contributes to the special character and/or appearance of the conservation area.
- 3.5 The creation of a new lightwell where it could potentially harm the character and appearance of the conservation area will have to be considered in relation to Policy CL7 (g) and (h) and also in relation to the Council’s general duty stated above. Clearly where lightwells are not part of the established character of the streetscape, the creation of a new lightwell with railings can

be incongruous to the context. In such a situation they would be more discreetly sited by locating them to the back of the building. Such a configuration is likely to reduce the visual impact.

- 3.6 Whether proposed in the front, side or back, the addition of railings and balustrades often makes lightwells more conspicuous. Where the location of new lightwells is acceptable they can be made more discreet by the use of grilles as opposed to open lightwells with railings. Grilles can be flush with the ground level and be of a discreet colour which helps further in making them less noticeable and visually intrusive.

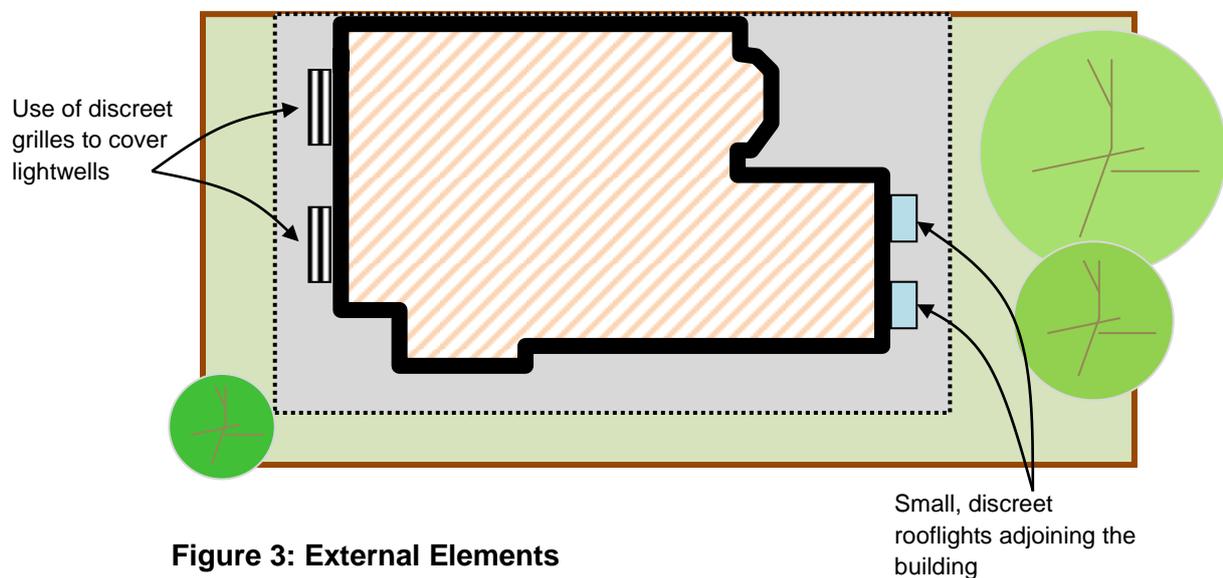


Figure 3: External Elements

- 3.7 Where there are existing front lightwells, the further deepening of these lightwells to provide light to a new basement underneath can have an adverse visual impact and be harmful to the character and/or appearance of the conservation area. Where a back garden directly adjoins a communal garden, care will need to be taken to avoid elements that adversely affect the character of the communal garden.

Rooflights

- 3.8 Rooflights are often proposed as a way of providing natural light to basements in addition to or as an alternative to lightwells. Such artificial features appearing away from the building line in the middle of private gardens can often be visually harmful particularly when illuminated at night. Where they are

proposed they should be kept flush with the ground level, be close to the building and be proportionately small as shown in figure 3.

- 3.9 Sometimes the use of planting or internal blackout blinds are proposed by applicants to mitigate their visual impact. However, planting is not viewed as a permanent solution, often changing with the owner and it is difficult if not impossible to enforce. Similarly black out blinds are internal to the building and cannot be enforced through the planning regime. Therefore such measures are not sufficient to mitigate the harmful effects.

Staircases

- 3.10 Basement proposals that include an emergency escape staircase (secondary means of escape) should incorporate these into the design of the proposal. Staircases or associated above ground structures appearing deep in the garden are normally not acceptable and similar to other external elements, should be kept close to the building.
- 3.11 External staircases, in a similar way to lightwells, can be visually prominent unless they are already a feature of the area. Similar considerations as for lightwells should be taken into account where they are proposed.

Plant and Machinery

- 3.12 Any plant and machinery associated with basements, such as air conditioning units or plant used for swimming pools etc. should be incorporated within the design. Ideally any plant and machinery should be located within the building and any external visual impact should be avoided. Where any external plant or equipment is proposed a noise survey and report prepared by a competent acoustician who is a member of the Institute of Acoustics should be submitted. This is in-line with the Council's adopted [Noise SPD, 2009](#).

Basements in the curtilage of Listed Buildings

“CL7 (e) – comply with the tests in national policy as they relate to the assessment of harm to the significance of heritage assets;”

“CL7 (f) – not involve excavation underneath a listed building (including vaults);”

- 3.13 Criterion (f) of the policy precludes excavation underneath a listed building. However, it may be possible to construct a basement in the garden of a listed building subject to a number of considerations. Criterion (e) of Policy CL7 makes it clear that such proposals would need to comply with the tests in the national policy; in particular the advice outlined in paragraphs 132 to 134 of the NPPF. The Council's general duty in relation to listed buildings is set out in section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990. This is 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.”.

- 3.14 Paragraph 34.3.60 of the reasoned justification to Policy CL7 explains that where a basement is built only in the garden it is beneficial for the adjoining buildings if this basement is structurally independent of the adjoining houses and executed with special care. Structural considerations for such basements are set out in Section 5.
- 3.15 Proposals involving basements in the gardens of listed buildings normally connect to the main building by means of an underground link. As explained in paragraph 34.3.60 of the reasoned justification to Policy CL7 any such link should be discreet and of an appropriate design. The best place to form the link to a basement in the curtilage of a listed building may be from a later extension provided such an extension does not in itself contribute to the special architectural or historic interest of the listed building. It should be noted that any object or structure fixed to the building is also listed. In each case proposals should consider the configuration that is least likely to cause harm to the original plan-form and historic fabric of the listed building.

Assessing Archaeological Potential

- 3.16 Paragraph 34.3.63 of the reasoned justification to the basements policy highlights the importance of conserving and protecting archaeological remains. The Borough's sites of archeological significance or potential known as Archaeological Priority Areas are identified in the Proposals Map and Policy CL4 (g). Policy CL4 (g) requires a desk based assessment and where necessary archaeological field evaluation before development proposals are determined where development is proposed on sites which fall within an Archaeological Priority Area. The [Greater London Archaeology Advisory Service](#) (GLAAS) are the specialist advisers on archaeology for London Boroughs and they should be contacted for further advice.

4. Large Sites

Applicant Checklist

- If any exceptions to criteria (a) and (b) of Policy CL7 are proposed, consider if the site has similar characteristics to those presented in this section.

- 4.1 Criteria (a) and (b) of Policy CL7 restrict basements to a maximum of 50% of each garden or open part of the site and to one storey. However, they also state that “*exceptions may be made on large sites.*” Large sites are explained in the reasoned justification to the policy as follows:

“On large sites, basements of more than one storey and greater than half the garden or open part of the site may be permitted in certain circumstances. These will generally be new developments located in a commercial setting or of the size of an entire or substantial part of an urban block¹. They should be large enough to accommodate all the plant, equipment and vehicles associated with the development within the site and offer more opportunity to mitigate construction impacts and carbon emissions on site.” (paragraph 34.3.56 Policy CL7, January 2015)

- 4.2 The reasoned justification (paragraph 34.3.56 above) of Policy CL7 refers to large sites as generally being in a commercial setting, amongst other characteristics. Developments in a commercial setting can help deliver more homes and a range of uses which contribute to the economy and quality of life in the Borough. For the avoidance of any doubt the exception for large sites does not apply to the normal detached, semi-detached and terraced houses in the Borough. As stated earlier in paragraph 1.3 a ‘case by case’ approach is not appropriate for these normal housing typologies in the Borough, as it fails to meet the objective of the policy to address the cumulative impacts across the Borough.
- 4.3 The following examples help to explain what is meant by ‘large sites’. The Council expects that such sites have similar characteristics to the large sites presented below in order to be considered as a ‘large site’. Examples are also provided of sites that the Council does not consider to be large to further aid clarity. Please note that the site boundaries shown indicate the general size and extent of the sites and should not be taken as exact.

¹ Urban blocks are generally bound by roads on all sides and can contain a mix of uses.

Large Sites

Odeon Cinema, High Street Kensington

- 4.4 **Site Characteristics** – Commercial location within the Secondary Frontage of Kensington High Street Major Shopping Centre.
- 4.5 **Site size** – 0.51 hectares, forms a substantial part of an urban block.
- 4.6 **Access** – Fronting a major road (Kensington High Street) to the north and another major artery (Earl's Court Road) to the east. There is an access road to Pembroke Place to the south.
- 4.7 **Construction Impacts** – All plant, equipment, vehicles to be accommodated on-site. Traffic is routed through the site with entry from Earl's Court Road and exit on Kensington High Street. Gantries are proposed over part of the footpath in Earl's Court Road, Kensington High Street and Pembroke Place.



Chelsea Cinema, King's Road

- 4.8 **Site Characteristics** – Commercial location within the primary Shopping Frontage of King's Road Major Centre.
- 4.9 **Site size** – 0.56 hectares, forms a substantial part of an urban block.
- 4.10 **Access** - Fronting King's Road to the south and Chelsea Manor Street to the west.
- 4.11 **Construction Impacts** – Equipment to be accommodated on site. It will involve a bus stop being re-located and the footway closed at Chelsea Manor Street. There are no parking suspensions.



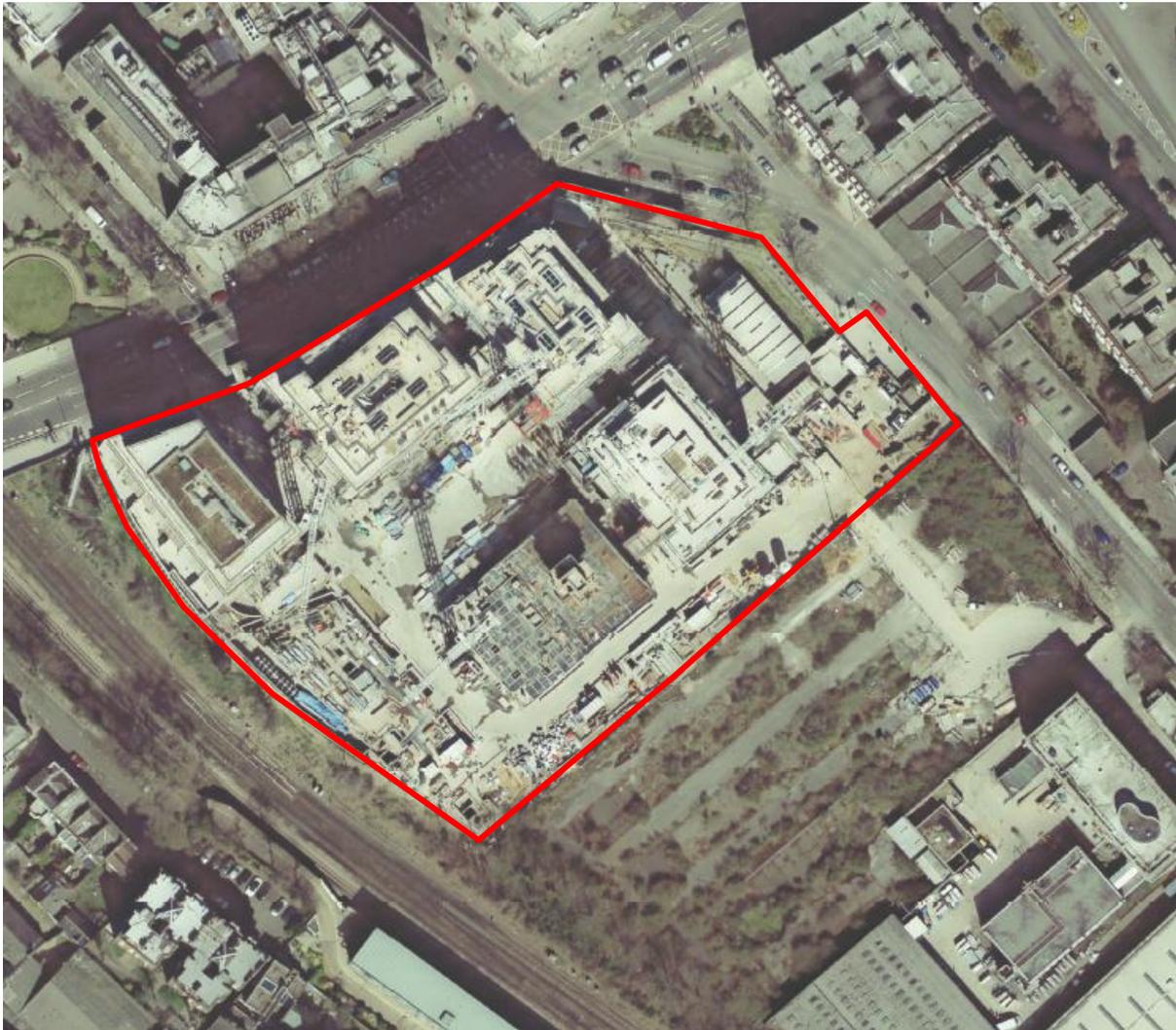
Gordon House, Royal Hospital

- 4.12 **Site Characteristics** – Discrete large house set in extensive grounds. It is located in the south west corner of the Royal Hospital site, which provides residential accommodation and care for retired soldiers.
- 4.13 **Site size** – 0.79 hectares, forms a substantial part of an urban block.
- 4.14 **Access** – Eastern boundary fronts West Road which is a private road, part of the Royal Hospital compound and there is emergency access from Tite Street. It is proposed to have the main access of the completed development from Tite Street.
- 4.15 **Construction Impacts** – All plant and equipment is to be accommodated on-site. Construction access will be from West Road through Royal Hospital grounds.



Charles House, 375 Kensington High Street

- 4.16 **Site Characteristics** – Commercial location close to Kensington Olympia Station.
- 4.17 **Site size** – 1.38 hectares, forms part of a large urban block – one of the four sites in the Warwick Road Planning Brief SPD.
- 4.18 **Access** – Fronting Kensington High Street and off Warwick Road.
- 4.19 **Construction Impacts** – Equipment was accommodated on site for the basement.



Sites which are not 'large'

Allen House, 8 Allen Street, Kensington

- 4.20 **Site Characteristics** – Predominantly residential location, although bounded to the north by the commercial properties on Kensington High Street (nos. 183-195). To the south is Phillimore Terrace, to the east Eden Close, all in residential use. To the west the site fronts on to Allen Street.
- 4.21 **Site size** – 0.14 hectares. Site does not form a substantial part of an urban block.
- 4.22 **Access** – Access is pedestrian only, via footway to Allen Street - a mainly residential street. During construction, smaller vehicles will access the site through an opening created in the retained facade.
- 4.23 **Construction Impacts** – The initial phase of demolition, facade retention, underpinning and construction would require six temporary road closures. This would be necessary to facilitate the delivery and installation of demolition equipment, piling rig and equipment and then the removal of this equipment and tower crane erection. Later fit out phase would require one road closure to remove the tower crane. Four parking bays would be suspended to the front of Allen House for parking of larger vehicles. Smaller vehicles would enter the site directly via hoarding vehicle gates. A loading area would be set up at front of the site under facade retention steelwork. The pedestrian footway will maintained with a hoarding over the pavement. Skips, plant and materials are to be stored on site.



General Individual Plots

- 4.24 Individual plots such as the ones within the red line shown on the aerial photograph below, comprising detached, semi-detached and terraced houses are not considered large sites.



5. Construction Method Statement

Applicant Checklist

- Submit a Construction Method Statement (CMS) with the planning application which follows the sequential process described in figure 4.
- The CMS must be signed by a Chartered Civil Engineer (MICE) or Chartered Structural Engineer (MI Struct. E.).
- The CMS should include a non-technical executive summary setting out clearly the key elements of the report and a clear statement concluding compliance with Policy CL7 (m).
- For listed buildings, in addition to all the guidance that normally applies, further guidance in paragraphs 5.15 to 5.23 should also be followed and demonstrated in the CMS.

In most situations the design and construction are technically demanding and should not be underestimated. Problems generally do not arise when the design and construction are thoroughly and fully considered and the interaction between design and construction is properly explored and taken into account. (Residential Basement Study Report, Alan Baxter and Associates, RBKC March 2013)

“CL7 (m) - be designed to safeguard the structural stability of the existing building, nearby buildings and other infrastructure including London Underground tunnels and the highway;”

- 5.1 Applicants should demonstrate compliance with Policy CL7 criterion (m) (set out above) by submitting a clear Construction Method Statement (CMS). Figure 4 sets out the sequential steps that should be followed by the applicant and the design team.
- 5.2 The CMS must be signed by a Chartered Civil Engineer (MICE) or Chartered Structural Engineer (MI Struct. E.), appointed by the applicant. The Council will rely on the professional integrity of the person signing the CMS to ensure that the construction of the basement can be undertaken safely and will safeguard the structural stability of the existing building and other nearby buildings. The CMS should include a non-technical executive summary setting out clearly the key elements of the report and a clear statement concluding compliance with Policy CL7 (m).
- 5.3 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. This would normally be carried out as part of the consideration of the planning application.

Figure 4 – Steps to be taken to prepare a CMS

A. Actions by applicant

- Appoint an experienced design team including a Chartered Structural or Civil Engineer.
- Retain the services of a Chartered Engineer for the duration of the project.
- Engage in consultation with adjoining owners and others who may reasonably be affected by the proposals.
- Engage a contractor with relevant experience.



B. Pre-planning work by design team

- Carry out a detailed desk study.
- Visually appraise the existing and adjoining building for any signs of historic or ongoing movement.
- Carry out a site investigation to establish ground conditions and any groundwater levels.
- Determine the nature of existing foundations.



C. Engineering design work

- Develop detailed scheme design.
- Consider effects on groundwater, drainage, SuDS and flooding.
- Consider effects on trees and, existing structures.
- Show how the basement can be constructed safely.
- Assess ground movements and potential damage category.



D. Construction Method Statement (CMS)

The CMS should provide the following:

- Executive Summary*
- Results of the desk study.
- Details of a site specific investigation including groundwater and monitoring results.
- Details of the structure and foundations of the existing building and relevant adjoining structures.
- An assessment of the impact of the basement on groundwater including cumulative effects.
- Details of surface water and SuDS proposals.
- A flood risk assessment.
- A sequence of construction together with a temporary works scheme design.
- An assessment of predicted ground movements and the damage category for surrounding buildings.
- Extent of root protection areas and tree protection proposals where relevant.
- Details of any building or site specific issues which may be affected by the basement proposal.

Figure 4 – Steps to be taken to prepare a CMS continued....

***Executive Summary**

- Include a non-technical executive summary clearly stating that a sequential approach as shown in this flow chart has been followed.
- The executive summary should set out the key elements of the report.
- It should include a clear statement concluding compliance with Policy CL7 (m).

5.4 Applicants should follow the guidance presented in the following paragraphs in preparing a Construction Method Statement. It should be noted that the steps presented below are sequential and this approach should be clear in the CMS.

A. Actions by the Applicant

- Appoint a design team who have experience in the design of residential basements including a Chartered Structural or Civil Engineer experienced in the design and construction of basements in residential buildings, to design the new basement structure and monitor its construction. The Engineer's brief should include reviewing the contractors' construction proposals, method statements and temporary works. Evidence of this appointment should be provided in the CMS.
- Retain the services of the Chartered Engineer or if, for some reason, the Engineers' appointment is terminated, appoint a replacement Engineer with relevant expertise to continue with the project both as designer and construction monitor.
- Engage in consultation with adjoining owners and nearby residents to explain what is proposed, what the implications for adjoining owners and other residents will be and what mitigation measures are to be put into place. Where neighbours refuse to engage in consultation, provide evidence in the CMS that the relevant information has been provided to them.
- Engage and provide evidence of engagement of a builder or contractor experienced in the construction of basements similar to that being proposed on the site.

B. Pre-planning Work by the Design Team – Desk Study and Site Investigation

B.1 Desk Study

5.5 A thorough desk study must be carried out and presented in the Construction Method Statement. The desk study should establish at least the following:

- a) The site history
- b) The age of the property
- c) The topography
- d) The geology and ground conditions – sections should be drawn using information obtained from the site investigation and British Geological Society borehole logs
- e) Rivers and watercourses whether existing or old
- f) The surface water and ground water regimes
- g) Flood risk issues
 - Fluvial flooding
 - Surface water flooding
 - Critical Drainage Areas
 - Groundwater flood potential
- h) Underground infrastructure, particularly London Underground Limited assets, main drains and utilities

B.2 Site Investigation

5.6 The following site investigations should be carried out. The results of the visual investigation should be presented in the CMS with photographs where appropriate. The results of these physical investigations must be clearly presented in the CMS with accompanying drawings and sketches including plans and sections to show the layout and details of the existing structure and foundations.

B.2.1 Visual assessment of the existing building and its neighbours

5.7 A visual assessment of the existing buildings and the adjoining buildings should be undertaken to establish whether there is any historic or ongoing movement and to establish the likely overall condition of the buildings. Past

alterations to the host structure and to the structure of adjoining buildings should also be considered. This assessment should inform the feasibility of the basement proposals and be used to determine appropriate engineering design solutions. The visual assessment should extend to looking at buildings in the area generally.

B.2.2 Physical site investigations

Borehole Investigation

- 5.8 A site investigation should be undertaken to establish the ground conditions including the geological strata and the presence of the Upper Aquifer. It is particularly important to distinguish between sites where the subsoil is clay and those where it is sand or gravel. The site investigation should be undertaken using boreholes on the application site. Variations in ground conditions can occur within close proximity therefore the borehole investigation may need to be undertaken at various locations spread across the site.
- 5.9 Where underpinning is proposed in areas where the near surface subsoil is gravel, the depth of the borehole should be up to the London Clay. Where piling is proposed, the depth should be up to the depth of piling and 4 to 5 metres more.

Groundwater Monitoring

- 5.10 Where there are over-lying layers of sands and gravels, there is usually water at the top of the London Clay, known as a perched water table, or the Upper Aquifer (Alan Baxter Report, March 2013). Ground water monitoring should be implemented where the Upper Aquifer is present, so that a thorough understanding of the ground water regime on the site is known and how the level of this relates to the foundations of adjoining and nearby properties.

Trial Pits

- 5.11 Trial pits should be dug on all walls to be underpinned or have piled walls built close to them to establish the details of the existing foundations and their condition. The Engineer needs to decide on how extensive these trial pits need to be.
- 5.12 Opening up of the existing structure may be needed to establish its details and condition if these are important. Such investigations may need listed building consent if the subject building is listed.

C. Engineering Design Work

5.13 For the planning application, the engineering design should be advanced to Detailed Proposals Stage (equivalent to RIBA Stage D) as set out in the Services of ACE (Association of Consultancy and Engineering) Agreement 1: Design, 2009 Edition). Appropriate drawings must be prepared and submitted that describe the detail of the engineering designs and that illustrate how the construction addresses the following:

- a) Groundwater
- b) Drainage
- c) SuDS
- d) Flooding
- e) Vertical loads
- f) Lateral loads
- g) Movements
- h) Ground Conditions
- i) Trees and planting
- j) Infrastructure
- k) Vaults
- l) Existing Structures
- m) Adjoining buildings and structures
- n) Overall stability (permanent and temporary works)
- o) Underpinning (if proposed)
- p) Piling (if proposed)
- q) Special considerations e.g. cantilevered stone stairs and landings, balconies or other important functions or features in an existing building which need special consideration.

D. Contents of the Construction Method Statement (CMS)

5.14 The Construction Method Statement is required to accompany the planning application. It needs to show how all relevant design issues have been

addressed and how these relate to or influence the construction of the basement. No basement design should be undertaken without consideration by the designer as to how it can be constructed. In particular the CMS should clearly contain the following information:-

- a) Executive Summary
 - i. Include a non-technical executive summary clearly stating that a sequential approach as shown in this flow chart has been followed.
 - ii. The executive summary should set out the key elements of the report.
 - iii. It should include a clear statement concluding compliance with Policy CL7 (m).
- b) The Desk Study information and an analysis of the findings in relation to the proposals (see Section B above).
- c) The site investigations (see Section B above) with an engineering interpretation of the results.
- d) An appraisal of the existing building structure and an understanding of the structural arrangement and condition of the adjoining buildings (and listed walls) with particular reference to condition and history of movements. Ongoing movements should be considered.
- e) A statement on groundwater with relevant proposals to deal with it when the new basement is below the water table level. In such cases, consideration should be given to the possible cumulative effect of the basement with other basements nearby, on the groundwater regime. Where the groundwater at a site lies close to the underside of existing ground or lower ground floor levels of the building or those of its neighbours, the potential for the new basement to cause a local rise in the water level of the Upper Aquifer should be carefully considered and dealt with in the proposals.
- f) An analysis of the surface water conditions on the site and how surface water will be dealt with when the basement has been constructed, demonstrating how the status quo is maintained without increasing surface water flows into the curtilage of adjoining properties. The policy requires the provision of SuDS and section 9 provides further guidance.
- g) A statement on flooding and flood risk taking account of fluvial flooding, surface water flooding and Critical Drainage issues (including sewer flooding) explaining how these are accounted for in the design. Sites

within Critical Drainage Areas require a full Flood Risk Assessment (NPPF compliant).

- h) Consideration by the designer as to how the basement structure is likely to be built. This should include the envisaged sequence of construction, temporary propping and the relationship between the permanent and temporary works. In particular, attention must be paid to how the vertical and lateral loads are to be supported and balanced at all stages especially when there is to be load transfer and what must be done to limit movements of the existing structure and adjoining buildings. This should be presented in either written or drawn form.
- i) An assessment of movements expected and a written statement of how these will affect the existing property, adjoining buildings and other adjacent structures. This assessment can be from computer modelling or use empirical means (such as those set out in CIRIA² C 580 Embedded Retaining Walls: Guidance for Economic Design) with appropriate justification. The assessment needs to cover both short term and long term movements relating to the construction and the performance of the permanent works. The design and construction methodology should aim to limit damage to the existing building on the site and to all adjoining buildings to Category 1 as set out in Table 2.5 of CIRIA report C 580 and should never be more than Category 2. The CMS should explain clearly how this is to be achieved. (Category 1 is 'very slight' up to 1 mm, Category 2 is 'slight' up to 5mm).
- j) The extent of root protection areas and tree protection proposals in-line with section 7: Trees.
- k) Details of any building or site specific issues which may be affected by the basement proposal should be included.

² CIRIA is the Construction Industry Research and Information Association, a member based research and information organisation dedicated to improvement in all aspects of the construction industry.

Additional Requirements for CMS in relation to listed buildings

- 5.15 The CMS related to a listed building should address all the issues set out above that apply to any basement proposal. In addition it should address the following points in detail.
- Assess historic or ongoing movements.
 - Provide details of any historic fabric which is proposed to be removed (consistent with the application drawings) – this will include providing record details of the existing structure following site investigations.
 - An assessment of the structural impact of the proposals on the listed building.

Background

- 5.16 Policy CL7 (f) prevents excavation underneath listed buildings. Basement development may be possible under the gardens within the curtilage of listed buildings (provided all other requirements are also met) but not the building footprint (also see paragraphs 3.13 to 3.15). In terms of structural design in these instances, the most significant factor to consider is whether or not the listed building and its attached neighbours (in a terrace or as a semi-detached pair of houses) have a history of ongoing movement. If this is the case, a basement under the garden should not be attached to the host property. It may not be acceptable to form an underground link to the existing listed building if this creates a hard spot locally in the foundations.
- 5.17 Assuming that a basement is feasible in engineering terms, there are two main issues that must be thought about when considering the design of the basement underneath the garden area. These are:
- a) The need to avoid, as far as possible, any disturbance to, or loss of fabric of the listed building.
 - b) The way in which the access to the basement is arranged from the host property.

The two points are related.

Minimising disturbance and loss of fabric

- 5.18 This can be achieved by positioning the basement away from the adjacent wall(s) of the listed building. The distance of the separation will depend on the proposed form of construction. If a stiff propped contiguous or secant piled wall is used, a structural separation of 1.5 to 2.0m is likely to be sufficient. If

the basement is to be built in an open excavation, a much greater separation (possibly up to 5.0m or more) may be needed.

Arranging the access from the house to the basement

- 5.19 Forming a link from the lowest floor of the house to the new basement needs careful consideration.
- 5.20 If the existing property has a basement or lower ground floor, the connection is likely to be more straightforward in structural engineering terms.
- 5.21 A link will require an internal stair and possibly a lift to the level of the basement, and the construction of a below ground link corridor. It is likely that this will require part of the listed building to be underpinned. If a lift is proposed, a lift without a pit should be considered.
- 5.22 In this situation, the extent of underpinning and disruption to the existing fabric of the building should be limited to that reasonably required to form the connection. The underpinning should be stepped in accordance with good engineering practice to minimise any large discontinuities in the level of the underpinning of the existing foundations.
- 5.23 The sketches in Appendix 3 show a possible arrangement of an access stair and link corridor to a piled basement in the garden. The basement is positioned several metres from the rear wall of the listed building. The actual details will depend on the spatial arrangement of the listed building. If the basement is beneath the rear garden and the house has a rear extension, it is normally preferable for the link to be formed in the extension. This enables the original fabric and layout of the host building to remain unaltered. In engineering terms, the access stair should be located to minimise the extent of underpinning required to the listed building, and the depths of the underpinning should be stepped to avoid sudden changes in founding levels where feasible.

6. Managing Construction Impacts

Applicant Checklist

- When constructing a basement engage a contractor who is a member of the Considerate Constructors Scheme.
- Submit an acceptable draft CTMP with the planning application using the template provided in Appendix 4.
- Submit a Final CTMP using the same template provided in Appendix 4 to discharge the planning condition. This should update the draft CTMP with any necessary changes such as taking account of other on-going schemes close to the start of construction and include the contractors name and details.
- At the planning application stage, provide details of noise, vibration and dust mitigation measures using the guidance provided in this section and the checklist in Appendix 5.
- Submit a S61 'Prior Consent' notice for construction works to Environmental Health before starting construction.

6.1 Construction impact is a major cause of public concern in relation to basement development. It is further exacerbated when there is more than one basement development in close proximity or in the same street. The construction impacts of most concern relate to construction traffic, parking suspensions, noise, vibration and dust. As stated in paragraph 1.4 construction impacts are a material planning consideration in this Borough. These impacts cannot be adequately dealt with by planning conditions which are imposed when planning permission is granted as a means of making unacceptable development acceptable. The full proposal regarding mitigating these issues needs to be submitted with the planning application so that they can be considered properly at the outset and comply with the policy.

6.2 One of the most important objectives of Policy CL7 is to bear down on the volume of excavation in the Borough by restricting the dimensions of basement development, in order to rein in the overall impacts of construction. Criteria (k) and (l) of the policy also aim to mitigate these harmful impacts and this section of the SPD provides more guidance on the subject.

Considerate Constructors Scheme

6.3 The Council will require the basement contractor responsible for the development to be a member of the Considerate Constructors Scheme and to display the details of the membership and contact details on the site so that

they can be easily read by members of the public. This will be required by attaching a planning condition to the relevant planning permission.

6.4 The Considerate Constructors Scheme has a Code of Construction Practice which applies to all registered sites. The basic tenets of the Code are as follows –

- **Care about appearance** – Constructors should ensure sites appear professional and well-managed.
- **Respect the Community** – Constructors should give utmost consideration to their impact on neighbours and the public.
- **Protect the Environment** – Constructors should protect and enhance the environment.
- **Secure everyone's Safety** – Constructors should attain the highest levels of safety performance.
- **Value their Workforce** – Constructors should provide a supportive and caring working environment.

6.5 Further details about the scheme can be found on the Considerate Constructors Scheme website <http://www.ccscheme.org.uk/> .

6.6 The Considerate Constructors Scheme website offers advice to those affected by works. This includes the advice that -

“Any site or company registered with the Scheme should act considerately towards all those who are affected by the work.” The website states -

“Registered sites and companies must adhere to the Code of Considerate Practice, which outlines the Scheme's expectations and describes those areas that are considered fundamental for registration with the Scheme.

Registered sites and companies are expected to deal in a considerate manner with any complaints or concerns resulting from the site's or company's activities.

Complaints received by the Scheme will be dealt with by the Scheme's public liaison officer who will mediate between the complainant and the relevant site or company manager until the matter has been satisfactorily resolved.”

6.7 A registered site is monitored as part of the Scheme. Sites are normally monitored twice, usually one quarter and two thirds of the way through the registration, unless they are of short duration when they receive only one visit.

Construction Traffic Management Plan

CL7 (k) “ensure that traffic and construction activity does not cause unacceptable harm to pedestrian, cycle, vehicular and road safety; adversely affect bus or other transport operations (e.g. cycle hire), significantly increase traffic congestion, nor place unreasonable inconvenience on the day to day life of those living, working and visiting nearby;”

- 6.8 The Borough has the highest household density anywhere in the UK. With people living in such close proximity and given that the very nature of basement development involves large amounts of excavation and the delivery of materials and plant, it is important to manage construction traffic. The Borough is also characterised by narrow streets with immense pressure for on-street parking. This makes the movement of large construction vehicles, placement of skips and parking suspensions a cause of great concern for residents. It will often require flexibility and innovative approaches to make proposals acceptable.
- 6.9 To help manage these impacts, the Council will require an acceptable draft Construction Traffic Management Plan (CTMP) to be submitted with each application for basement development. The purpose of providing a draft CTMP at the outset is to ensure that developers have thought about how construction traffic is to be handled and to give neighbours of the development site a chance to see and comment on the way construction traffic and parking are to be dealt with. As stated earlier in paragraph 6.1, construction impacts (including traffic) related to basement development is a material planning consideration in this Borough. Therefore the draft CTMP should provide sufficient details to demonstrate how criteria (k) of Policy CL7 is being met.
- 6.10 In addition a condition will also be attached to each relevant planning permission seeking a final CTMP before works begin. This is because conditions may have changed between the date of the planning decision and the commencement. There is also a need to take into account cumulative impacts with other developments closer to starting works so these can be co-ordinated. Early engagement with a contractor is advised so that the CTMP is relevant and realistic.
- 6.11 The CTMP must demonstrate that the proposals comply with criterion (k) of Policy CL7 (above). Both the draft and the final CTMP should be prepared using the template in Appendix 4. The latest version of the [CTMP template](#) is available on the Council’s website which also provides an editable electronic version. The CTMP template includes further guidance on what the Council expects CTMPs to achieve. The completion of this template, which covers all pertinent construction traffic issues, will result in a comprehensive plan, suitable for consideration. If applicants choose not to use the template they

still need to provide answers to the questions in the template and should use the further guidance in the template to prepare their CTMP.

6.12 Applicants must provide an accurate (to scale) site layout drawing as an integral part of their CTMP; annotated with dimensions showing:

- all points of site access (vehicular and pedestrian);
- where materials, skips and plant will be stored;
- position of hoarding;
- position of nearby trees;
- where construction vehicles would wait to load/unload;
- surrounding properties and their accesses;
- parking bay suspensions;
- a minimum of 1.2m clear footway width to be retained at all times and;
- a minimum of 3m clear carriageway width to ensure that development activity does not block the road.

6.13 Failure to provide a satisfactory site layout drawing is likely to result in a CTMP being rejected for non-compliance with CL7 (k). CTMPs should also be supported by construction traffic route plans and vehicle tracking swept path analyses to demonstrate that construction traffic vehicles can access loading positions satisfactorily and that local traffic would not be blocked by construction activities.

6.14 The Council's [CTMP template](#) is structured as a questionnaire and includes the following topics along with vital guidance and explanatory text for each question.

1. Pre-submission neighbour consultation
2. Routeing of Demolition, Excavation and Construction Vehicles
3. Permitted Construction Traffic Hours
4. Vehicle call up procedure
5. Scheduling
6. Site Access
7. Impact on other Highway Users
8. Parking Suspensions and Highways Licences
9. General Management Issues
10. Programme/ Key Dates

6.15 In proposing the type of construction vehicles that would service or access the site on a regular basis, the CTMP (both draft and final) should take account of

the narrow road widths characteristic of the Borough including in mews, cul-de-sacs and other narrow streets. It should also take account of parking restrictions. The carriageway should remain operational for other vehicles by keeping a minimum of 3m of the carriageway unobstructed at all times wherever possible.

- 6.16 In narrow streets, the use of narrow-bodied vehicles, a maximum of 2m wide, excluding wing mirrors, will be required (see Appendix 4, Questions 19 and 29). Such vehicles can be fully accommodated within the borough's on street parking bays and their use should avoid construction vehicles impacting on parked cars.
- 6.17 The footway adjacent to a site must have a minimum of 1.2m clear width for pedestrians and wheelchair users at all times. As stated in the reasoned justification of the policy every effort should be made to locate the building compound and the skip on site or in exceptional circumstances on the highway immediately outside the application site. The number and duration of parking bay suspensions required to carry out the development must be minimised.
- 6.18 There are three primary methods of removing spoil by road from excavation sites: "grabbing", "skip exchange" and "wait and load".
- Grabbing involves grab lorries removing spoil from the side of large skips or hoarded compounds either on-street or within the site itself using a mechanical claw. This method is often the most efficient way to remove large quantities of spoil quickly however it relies on large vehicles that block narrow streets and typically impact significantly on traffic flow elsewhere. A grabbing operation typically lasts 20 minutes. The provision of hoarded compounds (also known as spoil boxes) on the highway usually results in a number of parking bays being unavailable, day and night, for the duration of the dig. If a hoarded compound is provided within a front garden area, grabbing over the footway will result in pedestrian passage being impeded. The shortcomings of the grabbing methodology mean that it is only suitable at a limited number of spacious lightly trafficked locations.
 - The skip exchange method involves the delivery of empty skips and the collection of skips, laden with spoil. The capacity of a typical skip is lower than that of a hoarded spoil box. As a result the routine exchange of skips involves a greater number of construction traffic movements than the grabbing method. Skip exchanges can be executed relatively quickly (c. five minutes), so in most cases each movement has a lesser impact on highway operation than grabbing. Skip lorries are particularly wide as they are designed to clasp skips from both sides. These vehicles struggle to

negotiate narrow streets and such streets can become blocked when skip lorries reverse at an angle to pick up a full skip (in some circumstances angled reversing could be avoided if sufficient clear kerbside is available. This could involve additional parking suspensions). Typically two parking bay suspensions are required; one for the skip and one to assist the angled manoeuvring of a skip lorry. The second bay would be available for overnight parking outside of controlled hours. A third parking bay suspension could allow a skip lorry to straighten up fully. This may be essential at locations where any disruption to traffic flow would be unacceptable. The Council will not agree to the placing of skips on streets that experience saturated parking conditions overnight (90% occupancy on residents' parking bays) and where alternative methods of spoil removal could reasonably be carried out. The depositing of skips in front garden areas will only be acceptable if this activity does not impact on pedestrian safety or risk blocking the street.

- The wait and load method involves spoil removal vehicles being loaded from the kerb edge directly in front of the site. A vehicle size can be chosen to suit the dimensions of the street and the access route. Outside of construction traffic hours the kerbside will be available for others to use. This method has no impact on overnight parking. A wait and load vehicle will typically be in attendance at a site for up to 40 minutes. This method is appropriate for the vast majority of locations. If the circumstances of the site are such that it is undesirable for a vehicle to be present for an extended period of time, such as opposite a road junction, skip exchange may be more appropriate.

6.19 There are two primary methods of transferring spoil across the footway, elevated conveyor and manual handling. Other methods such as grabbing or barrowing are not favoured as they impact unduly on pedestrian movement and risk pedestrian safety.

- Elevated conveyors, provided on temporary gantries that oversail the footway are an efficient way of transferring spoil across footways to skips, spoil boxes or wait and load vehicles whilst safeguarding uninterrupted pedestrian passage in front of sites. At constrained locations where the provision of a gantry structure may be inappropriate, spoil should be transferred manually in bags.
- The manual transfer of spoil should occur at sites where narrow bodied vehicles are being used. At such locations the delivery of materials including concrete should also be manually handled.

6.20 Both the draft and final CTMP should include details of how traffic connected with other construction sites has been taken into account as well as at any

relevant markets, schools, road closures etc. They should clearly state if the construction traffic would need to drive over the footway (even if it is proposed to do so once a day). It should be noted that driving over the footway in the absence of a temporary crossover licence is not acceptable.

- 6.21 The CTMP (both draft and final) should be in accordance with other aspects of the planning permission such as identified root protection areas where there are existing trees on-site, on the street or nearby. Proposed construction traffic should take account of the crown and foliage of the trees on the street or fronts of property.
- 6.22 In formulating the CTMP, it is important that applicants engage with the neighbours likely to be affected by the basement development to ensure that their concerns and views are taken into account. Local knowledge can be an asset in informing the CTMP. As a draft CTMP must be submitted with the planning application, it will be subject to the normal consultation processes and public scrutiny regarding planning applications. Engaging with neighbours beforehand is likely to result in more favourable outcomes for all parties.
- 6.23 All CTMPs will be reviewed by the Transport and Highways Department as part of assessing the planning application. The Council will consult Transport for London on CTMPs that could impact on the Transport for London Road Network or the Strategic Road Network. These include CTMPs for developments on or adjacent to the Transport for London Road Network or Strategic Road Network or strategic development proposals that are referred to the Mayor of London. The Transport and Streets SPD, which applies to all classes of development, provides further advice on reducing the impact of construction on the highway.
- 6.24 Further guidance on what the Council expects CTMPs to achieve is included within the CTMP template at Appendix 4.

Noise, Vibration and Dust

CL7 (I) “ensure that construction impacts such as noise, vibration and dust are kept to acceptable levels for the duration of works;”

- 6.25 The construction of a basement will inevitably involve several stages but in broad terms includes the demolition (normally of the ground floor slab), excavation and formation of the basement itself. The applicants should identify who is likely to be affected by noise, vibration and dust around the site bearing in mind the guidance in Section 2 and Appendix 2 of this SPD.
- 6.26 Mitigation measures in relation to noise, vibration and dust required to ensure compliance with criterion (I) of Policy CL7 should be submitted with the planning application using the checklist provided in Appendix 5. Applicants should address all the processes involved in the construction of their basement and describe mitigation measures to be used to keep noise, vibration and dust to acceptable levels.
- 6.27 The Council has also published the [Code of Construction Practice \(CoCP\)](#), April 2016. The CoCP covers all types of construction in the Borough and provides detailed guidance on best practice in mitigating construction impacts. The submitted information should take account of the guidance in the CoCP. The Greater London Authority’s (GLA) Supplementary Planning Guidance (SPG) on [The Control of Dust and Emissions during Construction and Demolition, July 2014](#) should also be referred to in proposing dust mitigation.
- 6.28 In addition to the construction processes, construction traffic can also be a source of noise, vibration and dust. Therefore the mitigation measures proposed should be co-ordinated with the details of construction traffic set out in the CTMP. For example on a constrained site, it may not be possible to accommodate large equipment/ construction vehicles. This may dictate the type of construction method that would be practical on that particular site. Applicants should make sure that the information submitted in various technical documents (CMS, CTMP and noise, vibration and dust mitigation) is co-ordinated as these are inherently interlinked.

Environmental Health general requirements

6.29 The Council's Environmental Health department deals with issues relating to noise, vibration and dust during the practical implementation of basement construction on a day to day basis. Environmental Health have powers under a number of relevant acts, principally the Control of Pollution Act 1974 (COPA) and Environmental Protection Act (1990). Whilst these powers are outside of the planning regime, it is considered useful to highlight that Environmental Health requirements would also apply to basement development. Using the guidance provided in this section will ensure that applicants are prepared in advance to meet these requirements. The following section sets out what applicants should do during the planning process to make sure Environmental Health requirements are also met.

Steps to take at various stages of the basement project

Pre-application

- Guidance on the control of noise and vibration on construction sites is found principally within British Standard 5228-1&2: 2009: Code of practice for noise and vibration control on construction and open sites. As stated earlier the Council also has the Code of Construction Practice which provides guidance tailored to the Royal Borough. Applicants, developers and contractors should familiarise themselves with the advice and recommendations in these documents when preparing the mitigation measures. The checklist in Appendix 5 of this SPD provides a template for the relevant information to demonstrate compliance with Policy CL7 (I) and should be used as stated above.

Planning application stage

- Details of the mitigation measures in relation to noise, vibration and dust should be submitted with the planning application, using the checklist provided in Appendix 5.
- The purpose of the checklist in Appendix 5 is to act as a trigger for the information that would be relevant to ensure compliance with criterion I of Policy CL7. Use of the checklist will also assist with the submission of a Section 61 Prior Consent Notice under the Control of Pollution Act 1974 or if this is not undertaken will assist the Council in serving of a Section 60 Notice under the same Act.
- Where planning permission is granted the Council will include an informative on the decision notice to alert applicants of the Environmental Health requirements post-planning permission but before works commence. These are set out below.

Post planning permission

- Applicants are strongly encouraged to apply for a Section 61 Prior Consent for work on construction sites in accordance with the Control of Pollution Act 1974 before starting work. The Council has 28 days to make a decision on the Section 61 from the date it is submitted. Therefore applicants should allow sufficient time before starting works to enable this to happen. The information submitted using the checklist in Appendix 5 should form the basis for the Section 61.
- Sites where a Section 61 Prior Consent is not applied for will be subject to the same controls via the serving of a Section 60 notice by the Council under the Control of Pollution Act 1974. Therefore it will be in the applicant's interest to submit a Section 61 notice instead, as this is voluntary and applicants have more control in offering the mitigation measures suited to their site.
- To enable the Council to serve a Section 60 notice, applicants should notify the Royal Borough's Noise and Nuisance Team of the date that works on site will commence and their projected duration as soon as this information has been confirmed. The Council recommends that this is done at the very least 28 days before works commence but it should preferably be longer.
- Guidance on Section 61 Prior Consent and Section 60 notice is provided in section 13 of the Royal Borough's Code of Construction Practice.

7. Trees

Applicant Checklist

- Carefully consider existing trees on the site, in adjoining properties and on the street when designing a basement.
- Where basement development is likely to affect any tree, the applicant should submit an Arboricultural Impact Assessment (AIA) in accordance with BS 5837 2012 with the planning application.

“CL7 (d) – not cause loss, damage or long term threat to trees of townscape or amenity value;”

- 7.1 As stated in the reasoned justification to Policy CL7, trees make a much valued contribution to the character of the Borough, and bring biodiversity and public health benefits. Works to, and in the vicinity of, trees, need to be planned and executed with very close attention to detail. Most of the Borough, as stated earlier, is within conservation areas. There is a requirement under Section 211 of the Town and Country Planning Act 1990 to notify the Council before undertaking any works to trees in a conservation area (this only applies to trees with a stem diameter of 7.5cm or over measured at 1.5m above ground level). There is also a requirement to apply to the Council, in writing, for permission to undertake works to trees subject to a Tree Preservation Order (TPO).
- 7.2 Existing trees on the site, in adjoining properties or on the street should be carefully considered when designing a basement. All applications for basements likely to affect any tree whether on the site itself or outside would need to be accompanied by a full tree survey. The design of the basement should take account of any constraints posed by trees.
- 7.3 Where basement development is likely to affect any trees, applicants should submit an Arboricultural Impact Assessment (AIA) in accordance with BS 5837 2012: Trees in relation to design, demolition and construction. This should include the following information –
- A survey of the all trees on, and adjacent to, the site using the guidance in BS 5837 2012: Trees in relation to design, demolition and construction – Recommendations.
 - A plan showing the footprint of the proposed buildings overlaid with all the existing trees.
 - A list of those trees proposed for removal and those to be retained together with justification.

- An assessment of the impact of the development on the retained trees and those in adjacent gardens or property.
- How retained trees will be protected during the construction phase, taking into account site logistics such as storage of building materials, location of site huts, access for piling rigs, removal of spoil from site etc. The CTMP should also take into account any necessary tree protection.

7.4 Further and more detailed information is available in our 2010 Trees and Development SPD.

7.5 The Council has a separate Policy CR6: Trees and Landscape in the Local Plan which would also apply.

8. Flooding

Applicant Checklist

- Establish if the site is likely to be affected by any source of flooding as set out in this section.
- Submit a flood risk assessment if required (see Table 1).
- Where required, prepare the flood risk assessment using the checklist provided in the National Planning Practice Guidance (NPPG).

“Policy CE2: Flooding - The Council will require development to adapt to fluvial flooding and mitigate the effects of, and adapt to, surface water and sewer flooding.”

- 8.1 Flooding can be caused from a number of different sources. By their very nature basements are more susceptible to flooding from all sources. As a result there are different requirements for applicants to demonstrate that flood risk has been considered and risks minimised in their proposals.

River and Tidal (Fluvial) Flooding

- 8.2 The southern boundary of the Borough runs along the River Thames. The Environment Agency prepares flood risk maps which classify flood risk into the following zones – 1 (low probability), 2 (medium probability) and 3 (High probability). These Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency’s [Flood Map for Planning \(Rivers and Sea\)](#).
- 8.3 The River Thames is protected against a 1 in 1000 year fluvial flood event by a combination of the river wall and the Thames Flood Barrier. A small proportion of the Borough is within Flood Zones 2 and 3. Figure 1 in the [Royal Borough of Kensington and Chelsea Strategic Flood Risk Assessment](#) (SFRA) (March 2014) shows where they are.
- 8.4 Self-contained basement dwellings are classed as ‘highly vulnerable’ development in the National Planning Practice Guidance (NPPG) and are not permitted in Zone 3. In Zone 2, the ‘exception test’ as set out in [paragraph 102 of the NPPG](#) is required to be passed before a self-contained basement can be permitted. In Zone 3, the exception test is required to be passed for ‘more vulnerable’ developments which includes basement extensions.
- 8.5 Parts of the Borough close to the River Thames are at risk of breach of the river walls in a significant flood event if there was a failure of the Thames Barrier (see SFRA, figures 9 – 11.3.8). Whilst this is a low probability event, all

thresholds to new basements in these areas (i.e. the unprotected access points above the enclosing walls and roof slabs) should, where possible, be set to prevent water ingress in the event of breach, ensuring that both access and egress will be safe, particularly if they include living accommodation. Further information is available in the [Royal Borough of Kensington and Chelsea Strategic Flood Risk Assessment](#) (March 2014) paragraph 5.4.3 (page 30). Where such levels cannot be achieved flood management plans can be considered as an alternative approach. These need to deal with safe exit from basements in the event of flooding (among other things).

Surface Water Flooding

- 8.6 During periods of very heavy rain, rainwater is sometimes unable to soak sufficiently into the ground, partly because of large impermeable areas and as the ground may already be saturated.
- 8.7 The Council has produced a [Surface Water Management Plan](#) (SWMP), February 2014 and a [Strategic Flood Risk Assessment](#) (SFRA), March 2014. These provide an indication of the estimated surface water depth and surface water flood hazard rating. They are based on surface water modelling and have been validated with historic flood records. The maps relate to several events, and figures 3 and 4 of the SFRA show a 1 in 100 year event. These maps give a general indication of flooding in an area rather than being property specific. They give a reasonable indication of above ground flow paths for this surface water flooding and areas where surface water flooding might occur in local depressions. This information should be taken into account when designing basement development.
- 8.8 Surface water flooding can be mitigated through the use of Sustainable Drainage Systems (SuDs). Criterion i of Policy CL7 requires provision of a sustainable drainage system for all basement development and that these should be retained thereafter. Further details on SuDS is provided in Section 9.

Critical Drainage Areas

- 8.9 The Surface Water Management Plan identifies four [Critical Drainage Areas](#) (CDAs) in the Borough. The map of these areas as well as a list of addresses within the Critical Drainage Areas is available on the link above.
- 8.10 A Critical Drainage Area is defined in the [Surface Water Management Plan](#), RBKC (February 2014) paragraph 4.1 as “a discrete geographic area (usually a hydrological catchment) where multiple or interlinked sources of flood risk cause flooding during a severe rainfall event thereby affecting people, property or local infrastructure.” In simple terms, in these defined areas, there

could be flooding due to a combination of different sources of flooding such as surface water, ground water and sewers.

- 8.11 The Council requires a flood risk assessment (FRA) for any basement development within the Critical Drainage Areas.

Ground Water Flooding

- 8.12 The underlying material in the Borough's geology is London Clay. Where there are over-lying layers of sands and gravels, there is usually water at the top of the London Clay, known as a perched water table, or the Upper Aquifer (Alan Baxter Report, March 2013). This is constantly topped up by rain (and burst or leaking water mains). Where the water table meets the surface, groundwater or springs can appear. The Surface Water Management Plan (SWMP) (February 2014) includes a Borough-wide map at Figure 5 which shows the susceptibility to groundwater flooding with reported historic incidents. This map shows that the area with 'high susceptibility' lies to the south of the Borough.
- 8.13 Ground water issues need to be considered in the structural design of basements and further information is presented in Section 5.

Sewer Flooding

- 8.14 Basements are generally below the level of the sewer network and therefore the gravity system normally used to discharge waste above ground does not work. During periods of prolonged high rainfall or short duration very intense storms, the main sewers can become overloaded and unable to cope with the storm flows.
- 8.15 The Borough is located at the lower end of the sewer catchment (which extends as far as Camden and Brent). As a result there have been several instances of the sewer system backing up and flooding properties in periods of intense rainfall. Properties along Counter's Creek have reported high levels of sewer flooding historically. Thames Water has been involved in mitigating sewer flooding in existing residential properties in these areas.
- 8.16 The policy therefore requires all new basements to be protected from sewer flooding through the installation of a suitable (positively) pumped device. This criterion of the policy will only apply when there is a waste outlet from the basement i.e. a basement that includes toilets, bathrooms, utility rooms etc. Applicants must show the location of the device on the drawings submitted with the planning application.
- 8.17 It should also be noted that during the construction of many basements groundwater dewatering is required. This groundwater needs to be diverted

into the public sewer which in most cases is a combined sewer. A discharge consent from Thames Water is required to permit this short term discharge.

Table 1: Basement Development and Different Sources of Flooding

	Policy restrictions on Basement Development based on flooding issues	Flood Risk Assessment Required³
River and Tidal (Fluvial) Flooding		
Flood Risk Zone 3	No self contained basement dwelling ⁴ permitted. Exception test should be passed for all other basement development (including extensions).	Yes
Flood Risk Zone 2	Exception test should be passed for self contained basement dwelling.	Yes
Flood Risk Zone 1	No restriction	No (but see footnote 3)
Surface Water Flooding	NA	Yes but only if it falls within a CDA.
Site is in a Critical Drainage Area	NA	Yes
Ground Water Flooding	NA	Yes but only if it falls within a CDA.
Sewer Flooding	NA	Yes but only if it falls within a CDA.

Flood Risk Assessment

8.18 Where a flood risk assessment is required the guidance in the national [NPPG ID: 7-031](#) should be followed. [NPPG ID: 7-068](#) provides a checklist for site-specific flood risk assessment and should be followed in producing a flood risk assessment.

³ All developments on sites of 1 hectare or more require a flood risk assessment.

⁴ A self contained basement dwelling is one which does not have internal access to the floors above. Therefore these do not have a safe exit to evacuate above potential flood levels.

8.19 In addition the Environment Agency has produced a [Flood Risk Assessment: Local Planning Authorities](#) which may also be useful for applicants preparing a flood risk assessment.

9. Sustainable Drainage Systems (SuDS)

Applicant Checklist

- Include provision of Sustainable Drainage Systems (SuDS) as part of the basement proposal.
- SuDS can be provided by means of 1m of permeable soil over the basement and connecting them to the unaffected part of the garden to ensure drainage.
- If the applicants choose to provide SuDS in other ways they should show its location and dimensions on drawings and submit a report on SuDS.

“CL7 (i) include a sustainable drainage system (SuDS), to be retained thereafter;”

“CL7 (j) include a minimum of one metre of soil above any part of the basement beneath the garden;”

- 9.1 Since a basement can affect the natural drainage on a site, policy criterion (i) requires the provision of Sustainable Drainage Systems (SuDS) in all basement development. Where planning permission is granted there would be a planning condition requiring these to be retained in perpetuity.
- 9.2 It should be noted that there are two relevant criterion in Policy CL7, the first of these criterion - (i) requires provision of SuDS whilst the second (j) requires a minimum of 1 m of soil above any part of the basement beneath a garden. The reasoned justification explains that the 1m of soil can perform both functions – the provision of SuDS and landscaping. If the applicants choose to use the one metre of soil as the SuDS, they should ensure that this is permeable and connected to the unaffected part of the garden to ensure drainage as shown in figure 5.
- 9.3 If the applicants choose to provide SuDS in other ways they should show its location and dimensions on drawings. The applicants should also note that providing SuDS in other ways does not override criteria (j) and they still need to provide the 1m of soil. The applicant should submit a report explaining the type of SuDS chosen, how it will work, the amount of surface water run-off that it will mitigate and how it will be maintained.

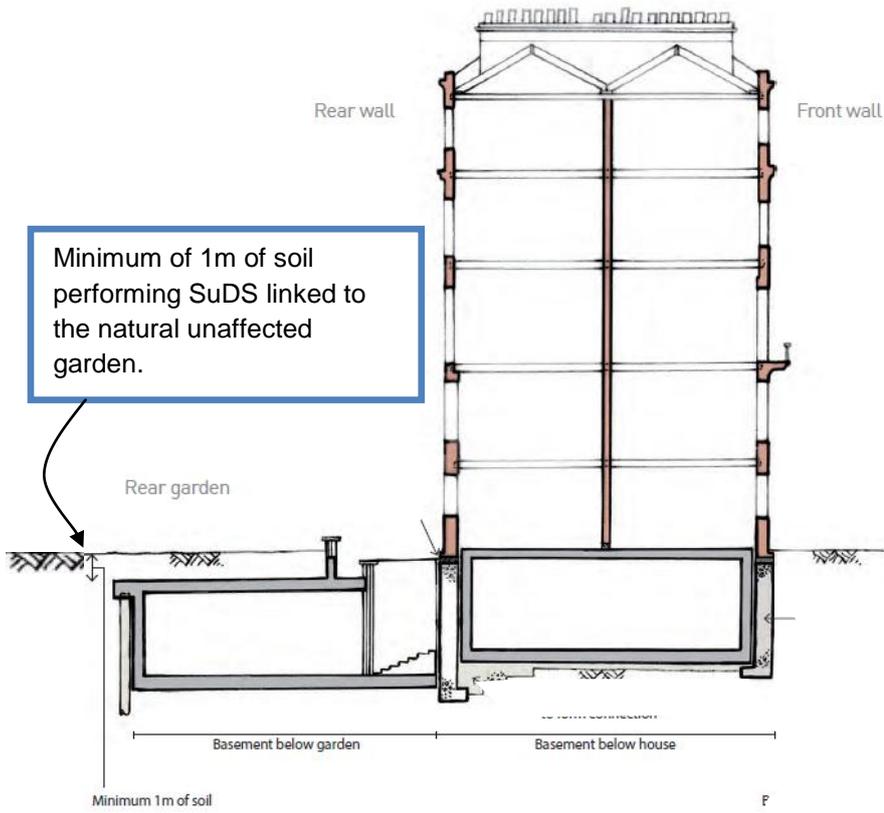


Figure 5: Minimum of 1m of soil performing SuDs

(Source: Taken from Figure 17 Residential Basement Study Report, Alan Baxter and Associates, March 2013)

10. Consolidated Checklist for Applicants

- 10.1 This section brings together all the checklists stated at the beginning of each section as it may assist applicants to see them altogether in one place.

Consolidated Applicant Checklist

Pre-application Consultation

- Engage with neighbours before submitting the planning application and where this has been undertaken provide evidence with the planning application.

Design Guidance

- Include not just the garden but any existing open areas such as existing lightwells when calculating the 50% maximum extent.
- Design the basement (adjoining the building) so that the unaffected garden remains in a single area including where the basement is proposed underneath a detached or semi-detached house.
- Study the site and context carefully to establish the suitability of external elements especially to the front and side.
- Design any external elements so that they are discreetly sited, preferably close to the existing building.
- In relation to listed buildings consider locating the link to the proposed basement (situated in the garden) from an above ground extension (if there is one that is suitable).

Large Sites

- If any exceptions to criteria (a) and (b) of Policy CL7 are proposed, consider if the site has similar characteristics to those presented in Section 4.

Construction Method Statement

- Submit a Construction Method Statement (CMS) with the planning application which follows the sequential process described in figure 4.
- The CMS must be signed by a Chartered Civil Engineer (MICE) or Chartered Structural Engineer (MI Struct. E.).

- The CMS should include a non-technical executive summary setting out clearly the key elements of the report and a clear statement concluding compliance with Policy CL7 (m).
- For listed buildings, in addition to all the guidance that normally applies, further guidance in paragraphs 5.15 to 5.23 should also be followed and demonstrated in the CMS.

Managing Construction Impacts

- When constructing a basement engage a contractor who is a member of the Considerate Constructors Scheme.
- Submit an acceptable draft CTMP with the planning application using the template provided in Appendix 4.
- Submit a Final CTMP using the same template provided in Appendix 4 to discharge the planning condition. This should update the draft CTMP with any necessary changes such as taking account of other on-going schemes close to the start of construction and include the contractors name and details.
- At the planning application stage, provide details of noise, vibration and dust mitigation measures using the guidance provided in Section 6 and the checklist in Appendix 5.
- Submit a S61 'Prior Consent' notice for construction works to Environmental Health before starting construction.

Trees

- Carefully consider existing trees on the site, in adjoining properties and on the street when designing a basement.
- Where basement development is likely to affect any tree, applicants should submit an Arboricultural Impact Assessment (AIA) in accordance with BS 5837 2012 with the planning application.

Flooding

- Establish if the site is likely to be affected by any source of flooding as set out in section 8
- Submit a flood risk assessment if required (see Table 1).
- Where required, prepare the flood risk assessment using the checklist provided in the National Planning Practice Guidance (NPPG).

Sustainable Drainage Systems (SuDS)

- Include provision of Sustainable Drainage Systems (SuDS) as part of the basement proposal.
- SuDS can be provided by means of 1m of permeable soil over the basement and connecting them to the unaffected part of the garden to ensure drainage.
- If the applicants choose to provide SuDS in other ways they should show its location and dimensions on drawings and submit a report on SuDS.

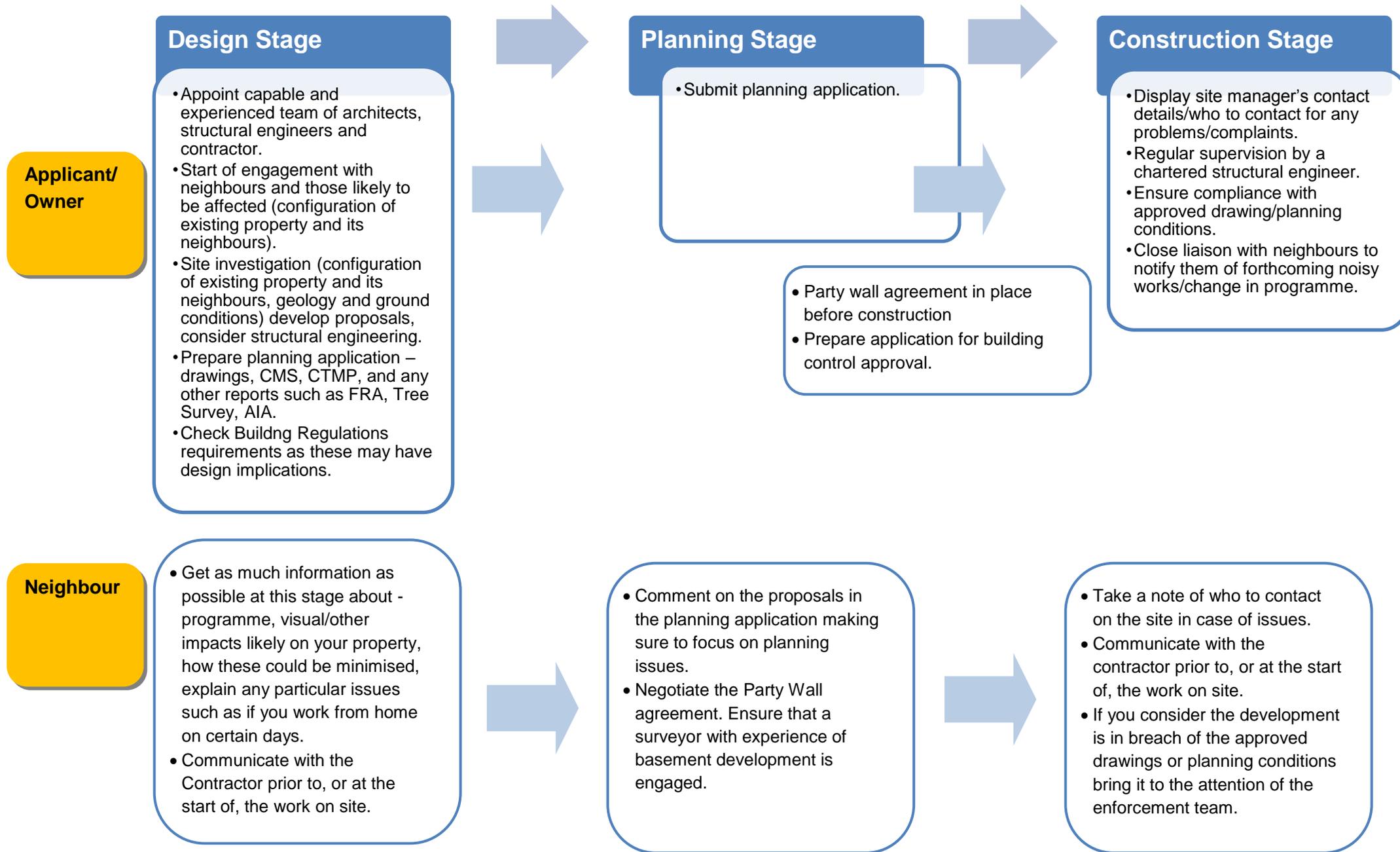
Appendices

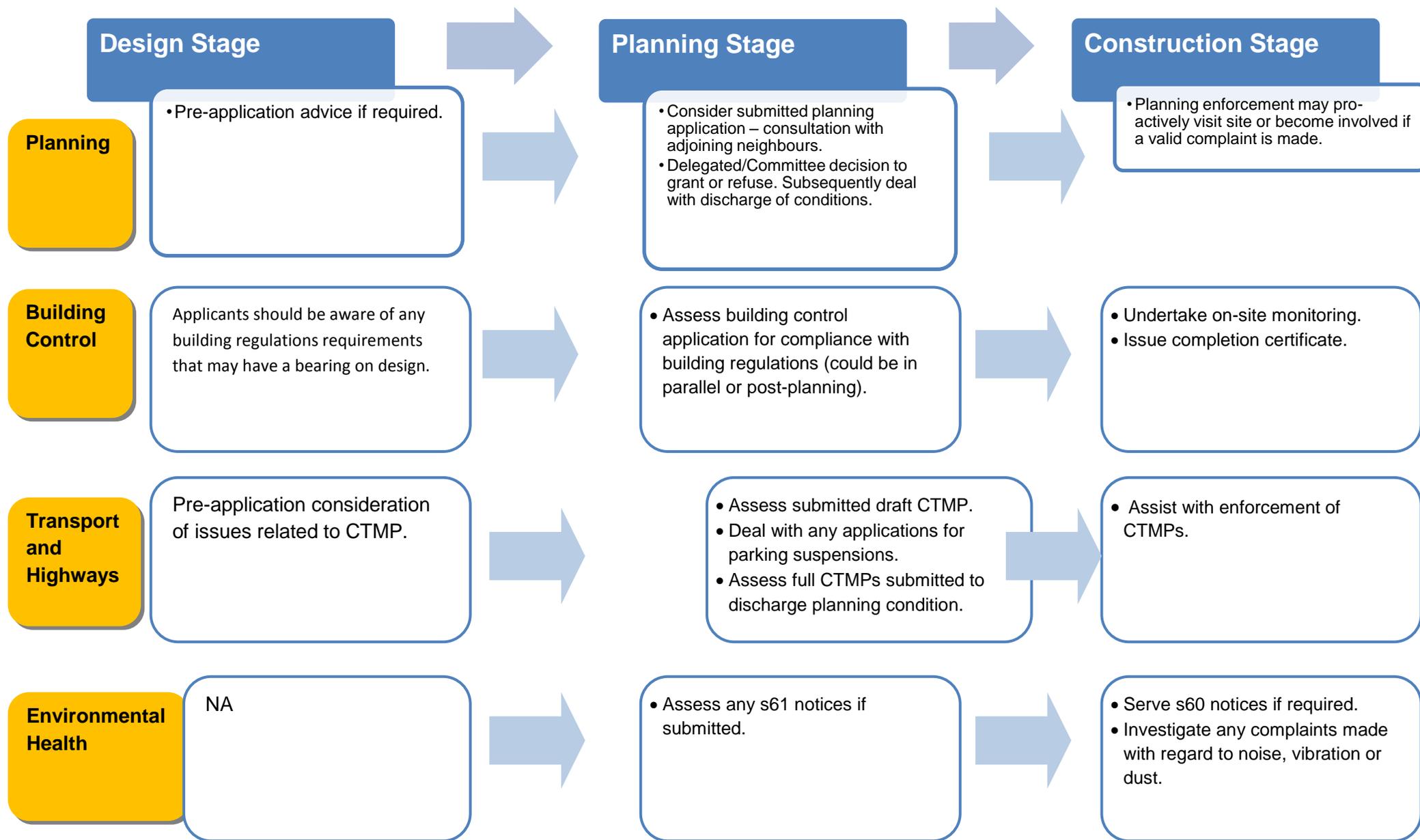
Appendix 1: Role of Various Parties

“When contemplating basement construction on a site of an existing residential building, it is important that the overall situation is considered so that feasibility is judged not simply on a spatial brief, but also on the basis of adjoining ownership, planning policy and technical feasibility, taking account of the constraints that will influence the planning, design and construction of the proposed project.” (Alan Baxter and Associates, RBKC Feb 2014)

1. Planning is only one part in the process of creating a new basement. In reality there are a number of parties as shown in figure A.1. The applicant/owner has the biggest responsibility as the instigator of the development. Clearly it is the owner of a property who conceives the idea of a basement development and the onus is on the applicant/owner to propose a development that is right for the site. The impact on neighbours should be considered right at the outset and addressed as far as possible in the design and implementation of the scheme.
2. When contemplating basement construction on a site of an existing residential building, it is important that the overall situation is considered. Feasibility should not be judged simply based on the confines of the proposal site, but also on the basis of adjoining ownership, planning policy, and technical feasibility which have a bearing on the planning, design and construction of the proposed project.
3. Dialogue with neighbours is essential to getting the right development. Early neighbour engagement can help address the genuine concerns of neighbours and may result in fewer objections at the application stage. Engagement with neighbours should be an iterative process starting at the conception stage and carrying on well into the implementation of the scheme.
4. Planning plays a role in ensuring that the right development goes on site. The adopted Policy CL7 ensures that the scale of development is controlled and a number of other criteria are met to enable sustainable development. There could also be other planning policies in the Local Plan that apply depending on site location and other constraints.
5. The following flowchart shows the role of different parties at the different stages of basement development.

Figure A.1: Role of a number of parties at different stages of basement development





Appendix 2: A compact for residents

1. Given the issues highlighted by residents relating to basement development, the Council has made a number of commitments to ensure development takes place in a positive manner with the least disruption to residents. However, as pointed out earlier Council departments are only part of the picture and it is important that applicants and resident organisations also make some commitments. With this in mind the following compact for applicants, residents and the Council provides a useful reminder.

Applicants

Before making a planning application:

- Liaise with neighbours before the start of the project and maintain communication throughout the works. Approach it as a genuine consultation exercise where you consider how your scheme can accommodate the wishes of neighbours.
- Offer an opportunity for neighbours to discuss your proposals with your architect and other consultants and ask them to let you know any immediate concerns. Provide an email address where they can contact you and provide a date by which comments should be made.
- For your draft Construction Traffic Management Plan, involve a wider group of neighbours to reflect the wider impact of the traffic. In some cases there may be a residents' association which may be willing to act as a point of contact. If there is not, residents could form an informal grouping.
- Prepare proposals for basement development in compliance with planning policies in particular Policy CL7 and the Basements SPD.
- Prepare proposals for mitigating noise, vibration and dust with reference to the Council's Code of Construction Practice.
- If you are seeking advice from the Council, share with the planning officer any comments you have received from neighbours.
- Once your plans are finalised, inform your neighbours and offer them a further opportunity to look at them. Consider if there are ways in which your proposal can be modified to meet at least some of the concerns.
- Provide a copy of the plans and accompanying information to your neighbours when you make your application.

Before work begins:

- Submit any information required by planning conditions.
- Approach the Council's Environmental Health team to agree measures to minimise disturbance under Section 61 of the Control of Pollution Act.
- It would be helpful to establish if the neighbours have any particular circumstances that could be taken into account such as whether they work from home or whether there are vulnerable people in the household.
- Complete any Party Wall Act arrangements with neighbours.
- Employ a builder or contractor experienced in constructing basements similar to the one you propose.
- Give neighbours at least one or two week's notice of the start of the work.
- Send letters to neighbours explaining the following:
 - The hours of work, an outline of phases (e.g. demolition, ground works, construction) and their expected duration.
 - When any particular noisy or disruptive operations are likely to be, their duration and why quieter methods are not possible.
 - Telephone and email details of the site manager who can be contacted by residents and a 24 hour telephone number for site emergencies (or a community liaison officer for larger projects).
- It would help establish good neighbourly relations if the contractor has gone round to the neighbour before work starts to ask if they can do any small things to reduce problems.

During construction

- Display the site manager's contact details and who to contact for any problems/ complaints, including a 24 hour telephone number for emergencies.
- Display the site's working hours.
- Ensure all contractors and staff are fully briefed on the requirements of the planning permission documents, traffic management plans and measures to minimise disturbance to neighbours.
- Ensure site is regularly supervised by a chartered structural engineer.

- Ensure compliance with approved drawings and planning conditions.
- Liaise closely with neighbours throughout construction and notify them in advance of forthcoming noisy works and any changes in programme.
- Where Party Walls are involved, ensure a Party Wall Surveyor experienced in basements is engaged.

Residents' Checklist

Before a planning application is submitted

- Ask your neighbour to consult you at an early stage and keep you involved throughout the project.
- Take advantage of any offers by your neighbours to let you see and discuss plans.
- Keep a note of the information requested and supplied.
- Sign up to MyRBKC (www.rbkc.gov.uk/myrbkc) to receive email alerts about planning applications in your area.
- Gather as much information as possible from the owner/applicant/site manager about the programme and likely duration of works.
- Consider how temporary impacts like construction traffic, noise, vibration and dust might affect you and discuss with your neighbour or their consultants how they can be reduced.
- Consider how permanent visual or other impacts such as lightwells, roof lights, air conditioning units etc might affect you and discuss with your neighbour or their consultants how they can be reduced.
- Discuss any particular issues with your neighbour, such as if you work from home on certain days.

At the planning application stage (before works begin)

- Comment on planning applications using the online form on the Council's website. Remember that the Council can only take into account issues related to planning as set out in the Involving People in Planning (IPIP) document <https://www.rbkc.gov.uk/planning-and-building-control/planning-policy/involving-people-planning-ipip>.

- Appoint a Party Wall surveyor (normally paid for by applicants) experienced in basement developments to represent you in party wall negotiations.

During construction

- Contact planning enforcement if you believe the development is in breach of the approved drawings, the traffic management plan or any attached planning conditions.
- Contact the Council's Noise and Nuisance team in the Environmental Health department to report any issues related to construction noise, vibration and dust.
- During construction keep in touch with the site manager and let them know about any particular problems. It is usually better to try and sort things out before complaining to the Council.

Council's Role

Before a planning application is submitted

- Encourage applicants to engage with neighbours both while preparing their schemes and during construction.

At the planning application stage (before works begin)

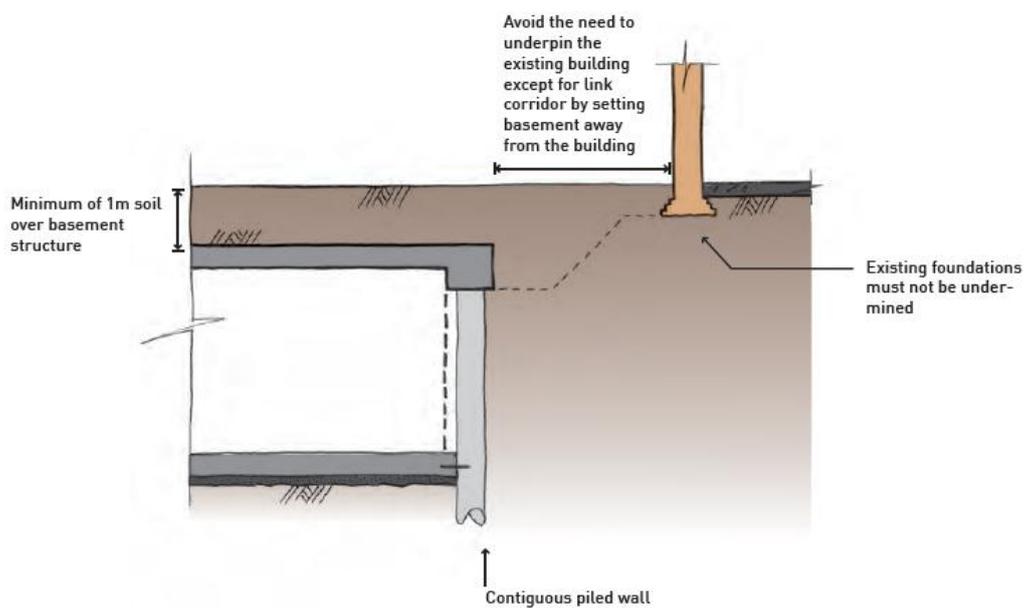
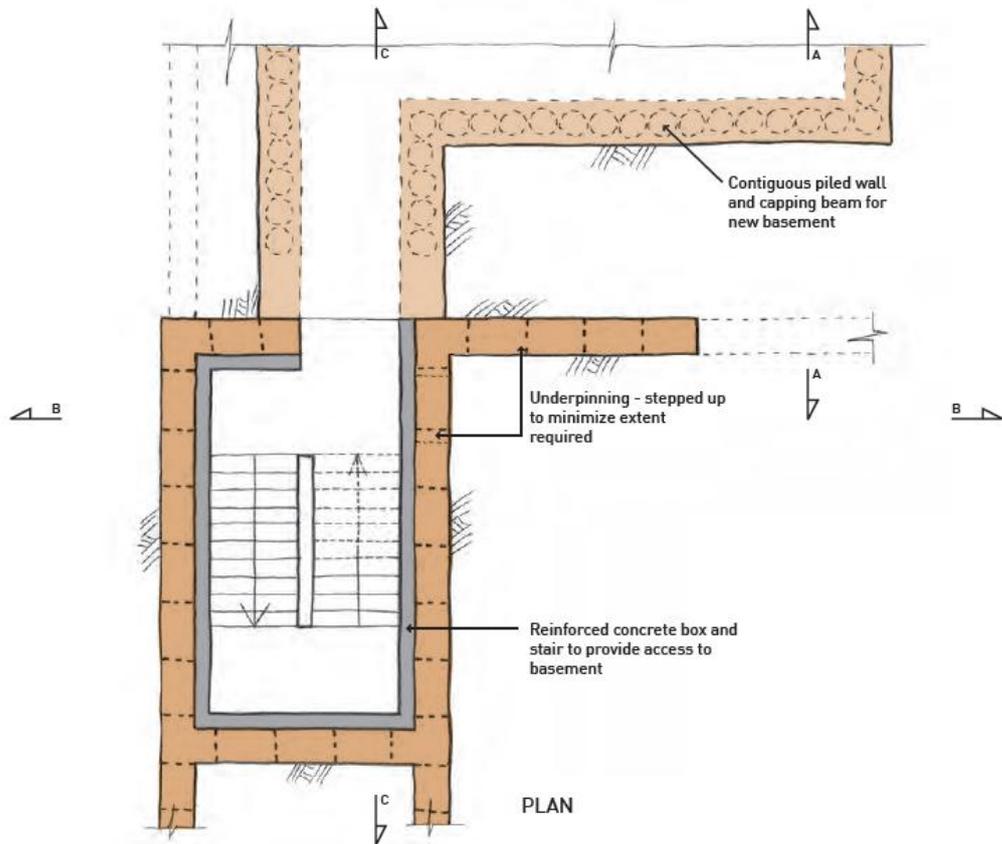
- Notify adjoining neighbours and alert those signed up to MyRBKC (www.rbkc.gov.uk/myrbkc) when planning applications are received.
- Make information submitted with the planning applications and applications for traffic management plans available on the Council's website, along with an online form for neighbours to submit comments.

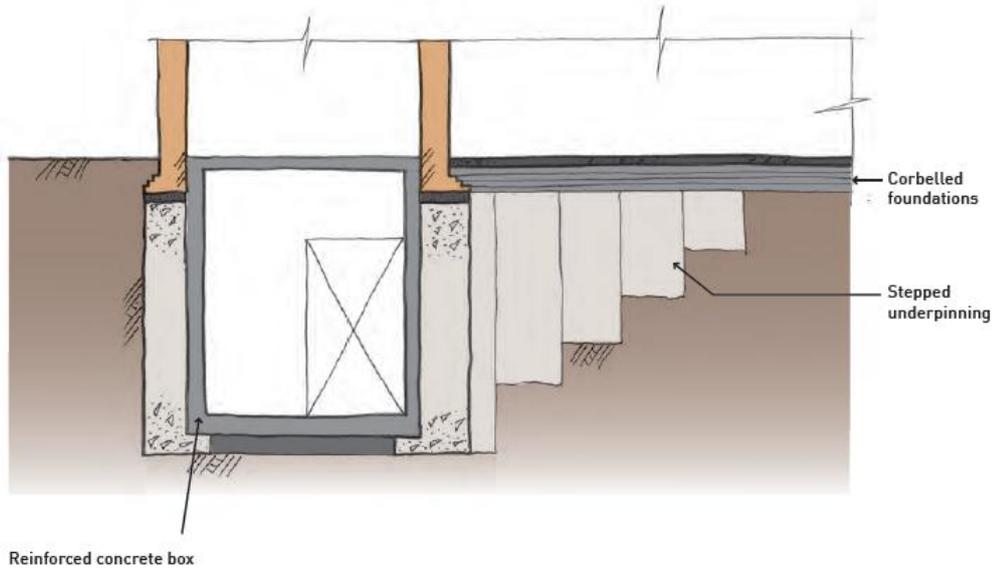
During construction

- During implementation of a planning permission investigate any complaints about the construction process, including noise and traffic management plan breaches and take action where expedient.

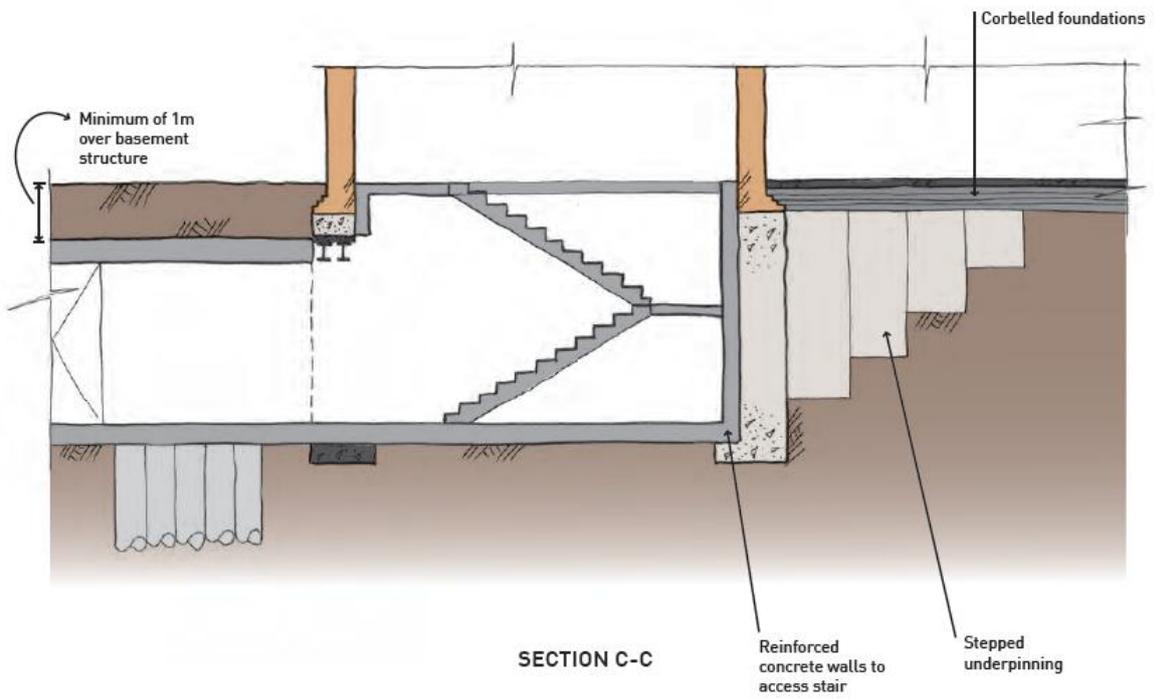
Appendix 3: Sketches related to Structural Considerations for Listed Buildings

Source: *Basements in Gardens of Listed Buildings*, Alan Baxter and Associates, February 2014





SECTION B-B



SECTION C-C

Appendix 4: CTMP Template

- Q1. Please confirm that you have read and understood the Council's guidance notes included at the end of the document and within the Transport and Streets SPD.

Yes		No	
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Plan Identification

- Q2. Provide a date of issue for this document and, if relevant, a revision number

- Q3. What is the full postal address of the site?

- Q4. Please provide the planning permission reference number for the development. Otherwise please confirm this is a Draft CTMP to accompany a planning application.

Q5. Please give a very brief description of the work.

Q6. Please provide contact details for the person responsible for completing this form.

Your Name	
Address	
Company/Organisation	
Telephone No.	
Email:	

Pre Submission Neighbour Consultation

- Q7. Please detail how neighbours have been involved in the development of this plan. Please confirm you have contacted the Residents' Association for the street (if there is one). Please identify whom you liaised with and where they reside.

Local people understand the local context and can provide constructive and valuable advice on how best to carry out a development given the context. Any consultation responses submitted to the Council in respect of a Draft CTMP must be responded to in the Final CTMP. Details of the Borough's Residents' Associations can be found [here](#).

Routeing of Demolition, Excavation and Construction Vehicles

- Q8. Please describe the construction traffic route to be used to and from the site, showing details of links to the strategic road network (A and B roads) and highlighting any nearby cycling facilities (including roads with contraflow cycling) that would be affected. Provide a plan (numbered and dated with a revision number if necessary) illustrating these details. Construction traffic on other routes is not permitted. The route described must be adhered to.

The route should avoid residential side streets wherever possible and vehicles should, in most circumstances, approach the site from the left hand side of the road in two-way streets. It is useful to have a plan of the route to send to visitors and delivery companies. The route should be able to accommodate all vehicles visiting the site in terms of capacity, geometry, width and height. If necessary use 'Autotrack' to demonstrate the suitability of the proposed route. Consider any sensitive sites or major trip generators (e.g. schools, offices, public buildings, museums, etc) on the route or nearby, and other planned developments and developments under construction - can they be avoided? Vehicles must not drive on footways other than at dedicated access points.

- Q9. Please confirm that all contractors, sub-contractors, delivery companies and visitors will be advised of and required to adhere to the specified route and all the other terms of this plan.

Yes		No	
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Construction Traffic Hours

- Q10. Deliveries and collections must be restricted to between 9.30am and 4.30pm, Monday to Friday. Where there is a school on route, then deliveries and collections must be restricted to between 9.30am and 3pm, Monday to Friday, during term time. In some particularly sensitive locations, for example where there is a street market nearby, further restrictions will be necessary. We will not agree to construction traffic using Portobello Road or Golborne Road on Fridays. We will not agree to deliveries or collections on Saturdays that would be in conflict with the Council's [Code of Construction Practice](#).

Please identify schools, nurseries, markets, tourist attractions or other sensitive uses near the construction site or the construction traffic route which have informed the construction traffic hours, specified below.

Acknowledging the restricted hours given above and considering nearby uses, please specify the hours during which construction traffic to and from the site is planned. Please enter a start time and an end time in the box below.

Please specify the days of the week when there will be no construction traffic to or from the site. For example Saturday and Sunday.	
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Any exceptions to the above must be specified here (for example where the delivery of abnormal loads is planned).

Vehicle Call up Procedure

Q11. Please confirm you accept the requirements below:

- All deliveries shall be pre booked and allocated set arrival times.
- Delivery instructions shall be sent to all suppliers and contractors including the maximum dwell times specified above.
- Suppliers shall call the site a minimum of 20mins before their vehicle arrives at site to confirm that the loading area is available.
- If the loading area is unavailable construction vehicles shall not proceed to the site.
- Vehicles shall not wait or stack on any road within the Royal Borough.
- The loading/collection area shall be clear of vehicles and materials before the next lorry arrives.
- Contractors' vehicles shall not park in any suspended parking bays or on suspended waiting and loading restrictions.
- The engines of contractors' vehicles shall not be kept idling.

Yes		No	
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Scheduling

- Q12. Please confirm that no more than a single delivery vehicle associated with the development will be positioned on the highway in the vicinity of the site at any given time.

For basement extensions to residential properties we will not agree to there being more than a single vehicle on the highway servicing the site at any given time (save for when a concrete pump is being used in conjunction with a concrete wagon).

Yes		No	
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For some large development schemes, and solely at the discretion of the Council, it might be appropriate for more than a single construction vehicle to be on the highway in the vicinity of the site at a given time. The maximum number of such vehicles simultaneously on the highway in the vicinity of the site must be specified and justified here.

Q13. In order to devise a robust scheduling strategy, the approximate number of construction vehicle movements necessary to complete the proposed development must be established. Please provide a robust estimate of the maximum number of vehicles visiting the site (daily or weekly) per vehicle type **during each major phase of the work**. For each vehicle type specify the vehicles' respective capacities and maximum dimensions (with and without wing mirrors). Please specify the maximum dwell time for each construction vehicle type.

The Council understands the exact number of construction vehicle movements cannot be known from the outset. However, the scheduling strategy must be sufficiently robust to satisfactorily deal with the construction traffic volumes that do arise. Accordingly maximum vehicle sizes and maximum dwell times for each construction vehicle type must be set to ensure conflicting deliveries never arise and to maintain highway operation.

(e.g. Grab Lorry 8.5m (L) 2.5m (W) 2.4m (H); 2 visits per day; 20 minutes maximum dwell time).

Site Access

Q14. Please supply an accurate (to scale) numbered and dated site plan annotated with dimensions showing;

- all points of site access (vehicular and pedestrian);
- where materials, skips and plant will be stored;
- position of hoarding;
- position of nearby trees;
- where construction vehicles would wait to load/unload;
- surrounding properties and their accesses;
- parking bay suspensions;
- a minimum of 1.2m clear footway width to be retained at all times and;
- a minimum of 3m clear carriageway width to ensure that development activity does not block the road.

Please provide the relevant drawing number(s).

The placing of skips, plant and material should be on the site itself wherever possible. Their placement on the highway in front of adjoining properties will be unacceptable.

The placing of skips, plant or material on the highway in a position that would hinder access to surrounding properties will be unacceptable.

A minimum of 1.2m clear footway width is required to allow wheelchair users and push chairs to pass.

A minimum of 3m clear roadway width must be maintained to prevent the road becoming blocked. We will require the use of narrow body construction vehicles where 3m clear width cannot be achieved with larger construction vehicles. Account must be taken of the potential for third party servicing occurring on the opposite side of the street.

In circumstances where 3m clear roadway width could be achieved by parking suspensions or the use of narrow body vehicles, we will require the latter.

Where the maintenance of 3m clear roadway width is impossible, temporary blockages will only be permitted subject to stringent controls (cf. Q19).

Q15. Will vehicles enter and leave the site?

Yes		No	
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If the answer to the above question is 'Yes', please detail how vehicles will enter and leave the site?

If vehicular access is provided vehicles should be able to turn within the site and exit in a forward direction. Alternatively, vehicles may reverse in and drive out in forward gear. Suitably (LANTRA or similar) qualified banksmen MUST be provided at all times when vehicles are manoeuvring. The swept path of the chosen manoeuvre must be shown on the site plan. Trained site staff must assist when delivery vehicles are accessing the site, or parking on the highway adjacent to the site. Banksmen must ensure the safe passage of pedestrians and vehicular traffic in the street when vehicles are being loaded or unloaded.

Q16. What is your proposed method of spoil removal (wait & load, conveyor, grab, skip swap, etc.)?

We will not agree to the placing of skips on streets that experience saturated parking conditions overnight (90% occupancy on residents' parking bays) and where alternative methods of spoil removal could reasonably be carried out. Details of recorded parking occupancy levels are available from the Council's Transport team. We will only agree to a methodology that maintains 3m of clear roadway width. Where the maintenance of 3m clear roadway width is impossible, temporary blockages will only be permitted subject to stringent controls (cf. Q19). The use of the wait and load methodology means that the kerbside is available for parking at times when any parking suspensions do not apply. The chosen method of spoil removal must avoid damaging any nearby trees, historic mews arches or street furniture.

- Q17. How will concrete be supplied to the site, where will the delivery lorries be located and for how long? Where will concrete pumps be positioned? How will concrete be transferred across the footway? Please illustrate with a numbered and dated drawing annotated with dimensions.

We will only agree to the use of concrete wagons where a minimum of 3m of clear roadway width can be maintained. Otherwise concrete must be hand mixed on site. At all times safe pedestrian passage across the front of the site must be maintained. Appropriate ramping must be used if hoses are run across the footway in order to maintain pedestrian passage. Alternatively a gantry should be used to secure the hose safely (a minimum of 2.3m) overhead.

- Q18. How will scaffolding be delivered to and collected from the site, where will the scaffolding lorries be located and for how long? If this question is not applicable please explain why. Please illustrate with a numbered and dated drawing annotated with dimensions.

We will only agree to arrangements where a minimum of 3m of clear roadway width can be maintained during scaffolding deliveries and collections. If necessary parking bays must be suspended to achieve this. Where the maintenance of 3m clear roadway width is impossible, temporary blockages will only be permitted subject to stringent controls (cf. Q19).

Q19. On narrow streets, where there is no alternative to the street becoming blocked during scheduled deliveries, please detail the management measures to be followed to ensure:

- Pedestrian passage is maintained at all times.
- Vehicular access to adjacent properties is maintained at all times.
- Emergency Access is maintained at all times.
- Motorists are adequately forewarned of the blockage.
- Trees do not become damaged.
- Vehicles will not drive on the footway other than at dedicated access points.

We will only agree to road closures in exceptional circumstances. In most cases good traffic management should ensure that the frequency and duration of blockages is managed so that vehicular traffic can pass the site. We will only agree to blockages occurring between 9.30am and 3pm. The driver must stay with the vehicle at all times and be ready to move on request if vehicular access to a neighbouring property is required and no alternative is available or in the event of an emergency. Banksmen must be positioned on all approaches to the site to forewarn highway users and advise of alternative routes.

Q20. Please confirm that appropriate measures will be taken to protect the public highway (including street trees, historic mews arches and street furniture) from damage arising from construction related activity and to prevent concrete and other detritus from being washed into the public highway drainage system. In addition, please confirm that the Council will be informed promptly should any such damage to the highway occur and will be duly reimbursed for the cost of the repairs.

The Council will require reimbursement for any damage caused to the highway or drainage system. Under no circumstances should concrete residue or other detritus be washed into the drainage system. Consideration must also be given to protecting the road and pavement surfaces from HGV movements, skips, outriggers and other related plant, materials and equipment etc.

Yes		No	
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Q21. Please confirm you accept the below requirements:

- The depositing of mud/detritus on the highway originating from the site or from any construction vehicle associated with the development is unacceptable.
- A wheel wash facility shall be provided at all vehicular access gates to the development site to ensure that mud/detritus originating from the site is not deposited on the public highway.
- Where the deposition of some dirt on the highway is unavoidable, any mud/detritus shall be expeditiously cleared using street cleansing vehicles or similar. No development dirt shall be evident on the highway at the end of any working day

Yes		No	
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Impact on Other Highway Users

Q22. How will you protect pedestrians from the construction works, particularly vulnerable users?

Vulnerable footway users include wheelchair users, the elderly, people with walking difficulties, young children, people with prams, blind and partially sighted people, etc. A secure hoarding will be required to the site boundary with a lockable access. Any work above ground floor level may require a covered walkway adjacent to the site. A licence must be obtained for scaffolding and gantries. The adjoining public highway must be kept clean and free from obstructions. Lighting and signage must be used on temporary structures/ skips/ hoardings, etc. Appropriate ramping must be used if cables, hoses, etc. are run across the footway. A banksman must be in position on the footway during the transfer of materials across the footway to ensure that safe pedestrian passage is maintained.

Q23. Confirm that you have assessed the risks to cyclists and pedestrians of the proposed construction traffic arrangements and understand the importance of using safety bars, additional mirrors and advisory signage as required by Transport for London's [Safer Lorry Scheme](#).

Information on how to implement these measures is included within the Transport and Streets SPD and on Transport for London's [website](#).

Parking Suspensions and Highways Licences

- Q24. The number of parking bay suspensions and the duration and frequency of those suspensions shall be the minimum necessary to carry out the development while maintaining at least 3m of clear roadway for vehicular passage.

Please specify any waiting/loading restrictions or parking bays that you will apply to have suspended and identify them on the site access plan. Please specify the frequency and duration of the suspensions and identify what they are for e.g. loading, access, storage. Please provide justification for all intended parking bay suspensions.

Consider existing waiting, loading and parking arrangements in the street. Parking bay suspensions are normally only permitted outside the property being redeveloped. Parking bay suspensions do not apply outside hours of parking control, except where an associated skip or hoarding licence has been issued. Once the CTMP is agreed you will need to apply to the Council's Parking Section to implement the waiting and loading restriction suspensions outlined in the CTMP.

Q25. Do you intend to apply for a licence to use the public highway for construction activity or for the storage of materials and will this include the diversion of an existing footpath?

Use of highway for storage or welfare facilities is at the discretion of the Council and is generally not permitted. If you propose such use you must supply full justification, setting out why it is impossible to allocate space on-site. Permission will not be given to close footways unless this is unavoidable. Where a footway closure is proposed please submit a scaled plan of the proposed diversion route showing key dimensions. Please provide details of all safety signage, barriers and accessibility measures such as ramps and lighting etc. Details on how to apply for Highways Licences are available [here](#).

Q26. Do you propose to install a traffic diversion during the construction period? The Council will only agree to traffic diversion (vehicular or pedestrian) that the Council considers essential and only for the minimum necessary duration.

If a traffic diversion is proposed, you should submit detailed dated and numbered plans showing the impact on the surrounding highway network including the extent of the closure; the proposed diversion route for vehicular traffic and pedestrians; traffic management; the affected waiting/loading restrictions; affected parking facilities; emergency services access; public transport; refuse collection; deliveries; local businesses; etc. Temporary Traffic Management Orders and consultation will require an 8 week lead-in time. Road closures will require Councillor involvement and may need public consultation.

- Q27. Please confirm whether a temporary crossover licence is required to enable construction vehicles to enter the site?

The Borough's footways are not engineered to take heavy loading from construction vehicles. A temporary crossover licence must be obtained where either a new crossover is required for a temporary period for construction access or where construction vehicles are to cross the footway using an existing crossover. Under such a licence a suitable crossover can be provided for a temporary period after which the footway will be reinstated in traditional paving material by the Council at the expense of the licence holder. Details on how to apply for Highways Licences are available [here](#).

- Q28. Do you intend to erect scaffolding on, over or adjacent to the public highway?

If so we will require full details and you will need to apply for a licence if it is on or over the public highway.

All obstructions and diversions on the public highway must be provided with temporary signage complying with Chapter 8 of the Traffic Signs Manual and/or the Code of Practice for Safety at Streetworks and Roadworks. Signage must be regularly inspected and maintained. TfL issues scaffold licences for developments adjacent to the TLRN.

General Management Issues

- Q29. Please confirm that you will make all reasonable efforts and always when specifically directed by the Council to coordinate the scheduling of construction traffic movement with other nearby developments and those on the construction traffic routes specified above. Please identify relevant development sites with which you will coordinate.

When more than one development is occurring on a narrow street or on cul de sacs where access is constrained, deliveries to development sites must be coordinated so as to maintain access at all times and minimise disruption.

- Q30. Please confirm that you will ensure domestic and commercial waste collections are not disrupted.

You will need to establish the days and times of collections and ensure that there is no conflict. These can be viewed [here](#).

Yes		No	
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Q31. Please identify who is responsible for the day to day implementation of this CTMP and provide their contact details. This person must be responsible for the supervising, controlling and monitoring vehicle movements to/from the site and coordinating and allocating time slots.

Notwithstanding the details given hereunder the developer/ owner will necessarily, as a condition of their planning permission, be responsible for ensuring this plan is adhered to in full.

Your Name	
Position	
Address	
Telephone No.	
Email:	

Programme/ Key Dates (For Information)

- Q32. Please supply a broad-brush programme and total timescale for the project, giving the duration of each major phase of the construction and the anticipated start date if known.

The Council understands the exact duration of the development works cannot be known from the outset. Nevertheless, an approximate programme is required to properly inform residents and to assist in the management of cumulative development impacts.

Guidance Notes

The CTMP template is a tool to assist applicants in the drafting of CTMPs. The use of the template greatly increases the likelihood that precise enforceable CTMPs, compliant with Council Policy CT7 (k), will be produced. The wording of CTMPs created using the template is a combination of the text contained within the questions and the answers given by the applicant. The wording must necessarily be precise and must read as a set of restrictions. Ambiguous phrases such as “generally”, “normally”, “roughly”, “anticipated”, “intended”, “approximate” or “likely to be” must be avoided. Otherwise the CTMP will be rejected for being imprecise. Where exact details are not known at the time of drafting the CTMP a robust worst case should be stated.

As well as being a useful tool, the CTMP template provides guidance for applicants as to what is expected of CTMPs. Thus if applicants choose, against our strong advice, not to fill in the template, they should still read the template (in conjunction with the Draft Basements SPD and the Draft Transport and Streets SPD) for the guidance it contains.

A Draft Construction Traffic Management Plan (CTMP) must be submitted with all planning applications for basement development or other developments, including major schemes, likely to generate significant volumes of construction traffic.

The Council’s Planning Advice Service can be used to inform the preparation of a Draft CTMP. Details of the service are available [here](#). Other than through the Planning Advice Service, it is not possible to meet contractors or review drafts of CTMPs before a formal application is submitted.

Liaison with neighbours is also vital when developing a Draft CTMP in order to address potential traffic and access issues at an early stage.

The Draft CTMP will be subject to public scrutiny through the planning application process. All comments received in respect of the Draft CTMP must be duly considered and addressed within the text of the Full CTMP to be prepared **by the lead contractor** pursuant to a planning condition prior to implementation.

To implement the planning permission without discharging this condition could result in enforcement action being taken by the Council. The application form to discharge the condition can be found [here](#). The application is made to the Department of Planning and Borough Development who consult the Council’s Transport team.

The condition will need to be formally discharged by the Department of Planning and Borough Development before any licences for temporary structures on the highway and parking suspensions will be granted.

You should be aware that developments that are on or adjacent to the Transport for London Road Network (red route), or in close proximity to London Underground infrastructure, will require separate approval from Transport for London (TfL) and some licences (such as scaffold licences) will be issued through TfL.

This form sets out the information required to process your CTMP. Please provide a response to all questions in the box provided. Questions or statements that you feel do not apply to your development should be marked 'not applicable' (N/A). [Guidance notes are shown in blue.](#)

Appendix 5: Noise, Vibration and Dust Mitigation Checklist

Guidance on filling in this checklist

Please use the boxes below each question to provide a response. Please feel free to provide further information in an appendix where necessary. With some questions the Council expects further detailed information to be provided in an appendix and is made clear in the question.

1. What is the full postal address of the site?

2. Please give a very brief description of the work and include a site layout plan.

3. Please provide contact details for the person responsible for completing this form.

Your Name	
Address	
Company/Organisation	
Telephone No.	
Email:	

4. Please confirm that you have read and understood the Council's [Code of Construction Practice](#) and the GLA's Supplementary Planning Guidance on the [Control of Dust and Emissions During Construction and Demolition](#).

Yes		No	
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5. Please provide contact details of the main contractor and contact names on site of the person responsible for managing the project. If these details are not known at the time of the planning application, please provide details of the Owner/Applicant as the person ultimately responsible for ensuring noise, vibration and dust are mitigated.

Please note details of the contractor and the person responsible for managing the site should be provided to the Council prior to starting works.

Your Name	
Address	
Company/Organisation	
Telephone No.	
Email:	

6. Pre-submission Neighbour Consultation

Please detail how neighbours have been consulted with regard to liaison during the development and minimising the impact of construction work. Please confirm you have contacted the Residents' Association for the street (if there is one). Please identify whom you liaised with and where they live. Similar information is requested for the Draft CTMP and the consultation can be co-ordinated.

Local people understand the local context and can provide constructive and valuable advice on how best to carry out a development given the context. Details of the Borough's Residents' Associations can be found [here](#)

7. Site Categorisation

Please specify if the basement works are Category 1 or Category 2, using the guidance in Section 8.0 and Table 3 of the Royal Borough's [Code of Construction Practice \(CoCP\)](#).

Most basement excavation is classed as Category 1 in the CoCP unless it is less than 50 cu m in which case it is Category 2.

8. Programme

An overview of the programme should be outlined below specifying the time Period for Proposed Works (from and to) and further detail for each construction phase and the predicted dates should be **provided in an Appendix.**

The programme should be co-ordinated with the programme submitted for CTMP in terms of the overall timescales and for different stages. If possible it should include periods where particular heavy machinery like piling rigs, demolition and breaking plant, concreting equipment, cranes etc would be needed bearing in mind site constraints and the guidance in the CTMP template together with on-site works.

9. Construction methods to be used in each stage of development and predicted noise levels

*This section should include the following information, **the detail of which should be submitted in an appendix.***

Please note, the appendix should explain the construction methods and methodology to be used including an estimate of the length of the programme. The following table provides an example. For each activity/phase, a prediction of the airborne construction noise level (as a 10-hour daily estimated LAeq value) at the nearest sensitive facade(s), should be provided. The section should be completed with the assistance of a competent acoustician who should be a member of the Institute of Acoustics.

Activity	Start date	End date	Predicted Daily Airborne Noise Level, dB $L_{Aeq,10h}$ (at the nearest sensitive facade)
Site preparation and enabling works			
Internal soft strip			
Above ground demolition			
Slab breakout			
Piling/underpinning			
Pile reduction			
Bulk excavation			
Steelwork installation			
Structural concrete pours			
Remaining first fix works			
Second fix works			

10. High Impact Works

Detail those works that fall within the definition of ‘High Impact’ works provided within Section 9.0 of the [Code of Construction Practice](#).

For example the CoCP includes demolition, piling, party wall works, bulk excavation using mechanical excavators as potentially high impact works.

High impact works have restricted working hours of Monday – Friday 9am to noon and 2pm to 5.30pm

Normal permitted hours for noisy work in the Borough are Monday to Friday 8am to 6pm. Noisy works are not permitted on Saturdays, Sundays or Public Holidays or outside the periods above if they will be audible at the site boundary.

11. Proposed steps to minimise noise and vibration

*Please provide a summary of the proposed mitigation to minimise noise and vibration during construction including general measures as well as specific measures linked to the construction methods outlined in the response to previous questions. This should be done using the guidance provided in Section 10. of the [Code of Construction Practice](#) and with reference to BS 5228. **Please append this information.***

12. Proposed steps to minimise dust

*Please provide a summary of the proposed mitigation to minimise dust during construction using the guidance provided in Section 12 of the [Code of Construction Practice](#) and with reference to GLA's Supplementary Planning Guidance – [The Control of Dust and Emissions during Construction and Demolition](#). **Please append this information.***

13. Monitoring Regime

For Category 1 sites, and where agreed with the Environmental Health Noise and Nuisance Team, it is expected that noise levels will be measured and continuously monitored at locations to be agreed with the department of Environmental Health and in line with the guidance and limits specified in Section 10.0 of the [Code of Construction Practice](#). Also during demolition, piling and excavation, vibration should be monitored in terms of peak article velocity (ppv). Vibration monitoring may be required at other times as reasonably requested by the Environmental Health Noise and Nuisance Team.

Guidance in Noise Monitoring is provided in Section 11 of the Code of Construction Practice.

Please append this information.

14. Please provide a list of appendices attached

15. We confirm that the information provided within this form, in respect of works to be carried out on the site, specified above is accurate to the best of our knowledge.

Your Name (if different from that provided in Q3)	
Address (if different from that provided in Q3)	
Company/Organisation (if different from that provided in Q3)	
Telephone No. (if different from that provided in Q3)	
Email: (if different from that provided in Q3)	
Signature	
Date	