

**Representation by Basement Force (Force Foundations Ltd) in support of
submitted Response Form**

Section 1. Introduction

1. Although we do not consider it necessary for RBKC to have a specific policy within the Core Strategy governing proposals for development underground, we do not object to the existence of an appropriate policy. However, the proposed policy is profoundly flawed for a number of interrelating reasons.
2. The criteria are, in the main,
 - a. demonstrably arbitrary, conflicting with good evidence provided to the Council at earlier stages of consultation; and/or
 - b. unsupported by the Council's own evidence; and/or
 - c. imposed in defiance of logic; and/or
 - d. impose greater burdens on developers of basements than would be imposed on developers above ground without good reason.
3. Our arguments are set out in the this representation which makes clear which policy criterion and paragraph is being referred to (as requested by the response form) and makes reference to the following evidence, submitted with this representation :-
 - a. Information provided to RBKC Basement Working Group on trees and planting.
 - b. Review of RBKC Basements Visual Evidence July 2013.
 - c. Above ground extension and subterranean development - life cycle carbon review and analysis - August 2013 - Ashmount Consulting Engineers.
 - d. Examples of the extent of glazing allowed in above ground extensions.
 - e. Underpinning under listed buildings - examples of foundation repairs to listed buildings by underpinning.
 - f. Example of contractor not following existing traffic management plan.
 - g. Council e mail to Ashmount Consulting regarding source of construction carbon factor.
 - h. Review of RBKC Planning Policy CE1 Climate Change.
 - i. Letter from Abba Energy relating to classification and treatment of excavated inert ground under BREEAM.
 - j. RBKC publication planning policy arboricultural input - Landmark Trees - 28 Aug 2013.
 - k. Hydrologic review of second draft policy for public consultation - 29 April 2013. Ove Arup & Partners Ltd.

4. The following initial points are made
- a. The Core Strategy was considered sound in 2010 without a specific criteria based policy and that continues to be the case. The Policy Formulation Report of the Council states specifically that the NPPF has not rendered the approach taken within the existing Core Strategy out of date.
 - b. The SPD includes some arbitrary criteria and appears not to be considered satisfactory by the Council. We recognise therefore that the policy context within which basement development proposals are considered could be improved, while contending that it is not strictly necessary to alter the Core Strategy. In other words it should not be assumed that we support the status quo as expressed in the SPD and that policy should not be assumed to be sound.
 - c. By the same token we do not object in principle to the inclusion of a criteria based policy which draws together the particular considerations relevant to basement development within the Core Strategy.
 - d. That policy should be consistent with the rest of the Development Plan: the rest of the Core Strategy and the London Plan. The proposed policy by the Council is assessed within its own evidence to be anti-growth. It is no answer that other parts of the plan are pro-growth (a point made repeatedly by the Council in its response to consultation). The plan is read as a whole and should pull in the same direction unless there are very clear reasons why basement development per se should be discouraged. There are none, and the Council has repeatedly claimed not to be seeking to reduce basement development in itself but to prevent harmful development. It is our view that the proposed policy will deter beneficial development and not prevent harmful development. It will not be effective at delivering the stated aim.

Section 2. Proposed changes to the policy

5. The dispute appears to be over how to promote good development while preventing harmful development. There appears to be no fundamental dispute over what is good basement development: it is development
- a. With an acceptable¹ impact on the street scene;
 - b. With an acceptable impact on any heritage assets including, where relevant, the building itself;
 - c. With an acceptable impact on the amenity of neighbours and those using the public spaces around the building including the street;
 - d. Which promotes, in a proportionate way, sustainable development – in relation to UK carbon emissions;

¹ This may be not significantly harmful, neutral, or beneficial.

- e. Which does not cause an unsympathetic alteration to the leafy and well-treed character of the Borough's gardens;
 - f. Which incorporates SUDS and deals acceptably with other hydrological matters;
 - g. Which is well designed (including protection from flooding and other technical matters);
 - h. Which does not cause an adverse impact on the structural stability of any building. It must be recognised that planning policy cannot itself prevent a proposal being implemented in a way which causes an adverse impact on the structural stability of neighbouring buildings, just as it cannot prevent a proposal being implemented in a way which causes a nuisance (in both cases it is the quality of the workmanship and professionalism of the organisation implementing the permission which is the only sure safeguard against harm). However, planning policy can reduce the risk by encouraging the sector to innovate and develop.
6. Basement Force recommends the adoption of a simple criteria based policy based on the above
 7. We consider the Council's draft policy is not sound because it is not Positively Prepared, it is not Justified by the Council's own evidence, and/or the evidence we have obtained, and it is not Effective. When we say the Council's policy will not be Effective, we mean that it will not effectively distinguish "good" basement development from bad basement development. It will not be effective if, for example, it would prevent development taking place which has an acceptable impact on each of the above considerations, while providing the benefits of an expanded living space within the existing urban area.
 8. We also consider the policy should recognise the comparative benefits of subterranean development on the carbon emissions of a building over its lifetime, whereas the Council's proposed policy is based upon the opposite approach.

Section 3. Legal compliance

9. The planning policy document is not considered to be legally compliant as:
 - a. The plan does not conform generally to the London Plan.
 - b. The sustainability appraisal process is flawed.

General conformity with the London Plan

10. It is a legal requirement that the Core Strategy be in general conformity with the London Plan: section 24(1) of the Planning and Compulsory Purchase Act 2004. The Mayor's opinion must be sought under Regulation 21, and given by about the 20 August 2013. Basement Force will read it with interest when it is made available.

11. Our concern is that a policy which will have a negative effect on growth and development (construction being a key economic driver), deter innovation and investment, and particularly affect the high end residential market (key to maintaining and developing London's global role) will do considerable damage to the objectives particularly of Policy 2.1 which lies at the heart of the London Plan. There may well be other policies which this would conflict with and, if so, we reserve the right to refer to them in due course.
12. It is also possible that the policy would affect the ability of the Opportunity Area designated in the London Plan at Earls Court [see 2.13] to achieve its objectives.
13. The Council appears not to have recognised
 - a. that its own documentation states that the policy is likely to have an adverse economic impact;
 - b. that their attempts to diminish the likely significance of this adverse economic impact are unsupported by any evidence;
 - c. that the policy will impact adversely on the ability of this part of London to plan for and to accommodate beneficial growth through basement development; and
 - d. that this impact is highly significant and could take the Core Strategy out of general conformity with the London Plan.
14. At the same time the Council appears to have misinterpreted policy 3.5 of the London Plan and for no sound reason has relied upon the London Plan's recognition of the valuable role played by back gardens. As explained elsewhere in this representation, basement development need have no adverse impact on that role, or on the character of a garden.
15. Please see in this connection the Policy Formulation Report July 2013 which
 - a. simply does not consider the pro-growth aspect of the London Plan at all, suggesting that the Council has ignored the implications for conformity with the London Plan of the admitted negative impact on economic activity, and of innovation within the high end residential development market;
 - b. instead refers (at 2.16) to the London Plan Policy 3.5, saying that LDFs may include a presumption against development on back gardens, but the quote is not taken from the policy. The London Plan text does enable local authorities to do this (paragraph 3.34) but the Council's reliance on this makes their judgement legally questionable. The benefit of a basement is precisely (in part) that the back garden can be preserved. This policy therefore only lends support for basement development of all sizes.
 - c. claims the final SA/SEA concluded that "there is unlikely to be any negative impact on the economy as a result of the policy." [4.10]. This is factually incorrect – see paragraphs 4.7, 4.33 and table 4.4. See also for comparison with the current policy approach table 4.5 of the April 2013 Report which places a ?- against the impact of the option on economic growth.

16. The role of basement development (a) within the local economy; (b) in supporting the growth of London's population in a sustainable way; and (c) in the maintenance of London's global profile have all been grossly under-appreciated by the Council.
17. In short, the relationship of the Core Strategy to the London Plan has not yet been considered adequately if at all, and yet the new Basement Policy may cause the Core Strategy to be out of general conformity with the London Plan.

Sustainability Appraisal including Strategic Environmental Assessment

18. The legal requirement is that a plan such as the Core Strategy is subject to Sustainability Appraisal (SA) including Strategic Environmental Assessment (SEA). It is governed, in the UK by the SEA Regulations 2004 [SI 2004/1633]. The Council may not adopt the plan until it has taken into account an environmental report (which meets the requirements of the Regulations) and responses to consultation thereon [Regulation 8].
19. By Schedule 2, the report needs to include *An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken ...* [paragraph 8 of Schedule 2].
20. We are concerned that the SA/SEA process is fundamentally flawed by the failure to assess obvious reasonable alternatives to the options preferred by the Council (including the simple approach proposed in our representation, namely the use of criteria based on the quality and impact of development rather than the imposition of prescriptive prohibitions; and including, in relation to the cap of 75% proposed in December 2012, the option of no cap).
21. Further to this we are concerned that nowhere is there an outline of the reasons for selecting the alternatives dealt with so as to satisfy paragraph 8 of Schedule 2 to the Regulations.
22. We are concerned that the SA/SEA process is also flawed by a failure to recognise that there are negative impacts associated with the proposed policy, and the lack of any positive environmental effect when the preferred option is compared with the current policy approach. Elaborating on this point, we are concerned that the reasons for rejecting the Core Strategy status quo and any alternatives to the proposed policy are inadequate and confused. If the true reason for doing is that set out at 5.3 of the Policy Formulation Report *two further years of basement construction across the Borough have highlighted that the policies (and associated procedures) have not always have been as effective as intended....* it is not backed up or explained.
23. Overall we find the three SA/SEA reports to be insubstantial, self serving, and confusing. They do not fulfil the role required by the Regulations.
24. Further, paragraph 4.59 of the July 2013 Policy Formulation Report leaves the reader with a significant question: It states *Any conflicts with the SA objectives are only slight and are outweighed by the considerable benefits associated with the policy.* What are these benefits in SA/SEA terms? There is no sign of them in the analysis. A lack of outline reasons for rejecting policy options underpinned the successful challenge to the

Joint Core Strategy in ***Heard v Broadland District Council and others*** [2012] Env LR 23. Also relevant to these issues is ***Save Historic Newmarket v Forest Heath DC*** [2011] EWHC 606 (Admin) per Collins J at 17 and 40.

Section 4. General points on the evidence and the Council's approach to the evidence

25. In this section we make six general points which provide general context to the more detailed sections which follow it. These take each of the planning issues listed under paragraph 5 above and explain why the Council's approach to that issue is not sound.

(1) The apparent underlying reason for the policy is flawed.

26. It would seem that there are perceived to have been simply too many basement developments causing a generally negative impact on the amenity of neighbours, residents and others (34.3.49 and 34.3.50 of the supporting text refer). These state

- a. *34.3.49 In the Royal Borough, the construction impact of basements is a significant material consideration in planning. This is because the Borough is very densely developed and populated. Tight knit streets of terraced and semi-detached houses can have several basement developments under way at any one time. The duration of construction is longer than for above ground extensions, the excavation process has a high impact on neighbours and the removal of spoil requires many more vehicle movements*
- b. *34.3.50 A basement development next door has an immediacy which can have a serious impact on the quality of life, whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions*

27. The Council has provided:

- a. No evidence that the impact from the basement construction phase of a project is worse than the construction impact from above ground building projects. The comparable project would be above ground work involving major internal structural alterations
- b. No evidence that basement construction continues for longer than for above ground extensions. Major above ground refurbishment projects can take more than 18 months. Basement construction of similar floor area can take less than six months.
- c. No evidence that the excavation process has a high impact on neighbours - the responses to the residents' surveys do not distinguish between the basement and the above ground building works; the respondents will probably have considered all building work where a basement was or has been built as being due to the basement construction.

28. Construction impact can only be reliably assessed on a case by case basis. Neighbours move and their patterns of life change. Residents who go to work during the day will experience little impact from noise, vibration, dust and increased road traffic. The impact on neighbours' amenity does not necessarily march in step with the number of applications or even the number of developments actually carried out. Equally it is wrong to adopt a policy across the Borough in response to a perceived problem which is local to parts of the Borough (those parts where basement developments are perceived to have been carried out in high numbers).
29. That the Council appears to be seeking to control construction impact indirectly by restricted the scale of basement developments, policies CL7 (a) 50% of gardens and (b) not comprise more than one storey, is one reason the proposed policy is so awkward and at times perverse. An example of this sort of perverse outcome is that the proposed policy would allow a large single storey basement under a large house with a large garden but would limit the basement under a small property with a small garden to 50% of that garden even if there was no other design or technical reason for doing so. If the proposed planning policy were based on quality and impact rather than size it would be more appropriate, justifiable and effective.

(2) The Council's concern about the impact of basement development on the character of gardens is flawed.

30. The Council uses a perceived negative impact on gardens as a justification for limiting the size of basements under gardens, see supporting text paragraphs 34.3.50, 51, and 54 which state
- a. *34.3.50 There are also concerns over the structural stability of adjacent property, character of rear gardens, sustainable drainage and the impact on carbon emissions. For all these reasons the Council considers that careful control is required over the scale, form and extent of basements.*
 - b. *34.3.51 The policy therefore restricts the extent of basement excavation under gardens to no more than half the garden....*
 - c. *34.3.54 Whilst basements can preserve the remaining openness of the townscape compared with other development forms, it can also introduce a degree of artificiality into the garden area and restrict the range of planting. Retaining at least half of each garden will enable natural landscape and character to be maintained, give flexibility in future planting (including major trees)....*
31. The supporting text in 34.3.54 does not state what is meant by *character* of rear gardens. It has taken the conditional 'can' and uses it as a definite to *justify* a restriction.
32. Any garden can be placed on top of a garden basement which has one metre of soil above it. That is, any and every species of tree, plant or shrub that lives in the UK can be planted, grow to maturity and live for a full life span on a garden basement that

complies with the current (2009) SPD . There is no restriction in planting - the supporting text is simply wrong.

33. We have demonstrated by expert report and visual evidence that rear gardens of excellent character can, in every case, be placed on top of garden basements that comply with the current (2009) SPD on basement development including:

- a. Information given to RBKC Basement Working Group and that is on the RBKC planning website²:
 - i. Input from arboriculturalist stating that any tree, shrub or bush can live on a garden basement roof with one metre of soil
 - ii. Examples of basements in London with mature trees grow on top of the basements (Bloomsbury Square car park, Hyde Park car park, Cavendish Square car park)
- b. Submission by arboriculturalist Adam Hollis MSc Arb FABroA MICFor HND Hort to second draft policy.
- c. Adam Hollis' submission is clear in its four summary points:
 - i. The undulation of a garden over a basement is not restricted in any way. A garden over a basement can be as undulating as desired now and at any time into the future.
 - ii. Ground of one metre depth over a concrete basement roof does not restrict the range of planting in any way, including major trees.
 - iii. Any major tree grown in the UK can reach maturity and live for a normal life span in 600mm of fertile soil. One metre is more than adequate.
 - iv. One metre of soil is more than adequate to structurally support any major tree grown in the UK.

34. The diagram below was included in Adam Hollis' submission but was not included in the council's published response to comments.

² Supporting evidence - Information provided to RBKC Basement Working Group on trees and planting

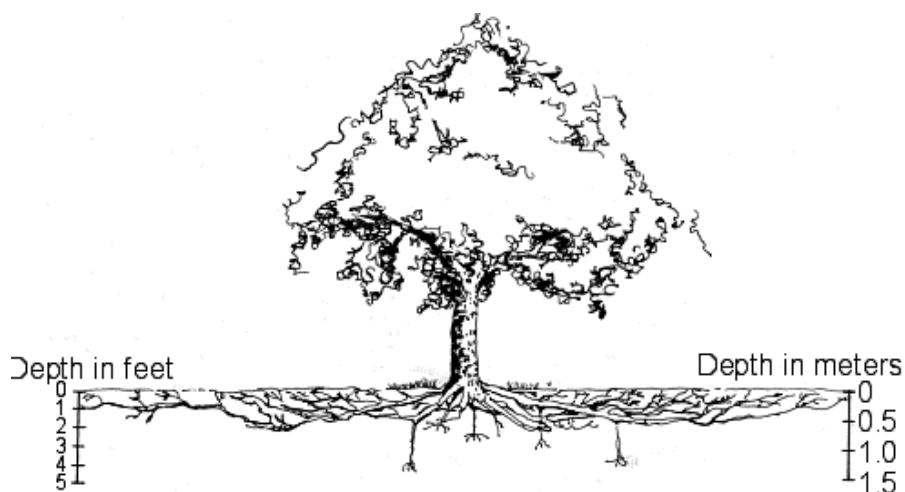


Fig.1: in mature trees the tap root is either lost or reduced in size. The vast majority of the root system is composed of horizontally oriented lateral roots

Fig 1 is from Harris RW et al 2004; Arboriculture Fourth Edition, Prentice Hall, NJ, America

35. We have suggested ways in which planning policy could be used to maintain and enhance the character of rear gardens by requiring a garden landscaping plan be part of the planning application - Basement Working Group meeting 18 Feb 2013 followed by 7 March additional points note, currently on RBKC planning website.

"RBKC basement planning policy could include conditions about garden planting that would positively improve the greenification, biodiversity and mature tree planting of the borough."

36. In this way the council's justification in 34.3.54 "informal picturesque and tranquil ambience" and "natural landscape and character to be maintained, give flexibility in future planting (including major trees), support biodiversity" can all be achieved by condition without the need for restricting garden basement size.
37. This suggestion has been ignored.
38. We have provided an example where a rear garden basement will improve the character of a rear garden. The example was provided to the RBKC Basement Working Group and is currently on the RBKC planning website - Bedford Gardens renders, planting and pictures (existing)³. The rear garden was originally a 100% paved yard with no planting and all surface water draining into the combined sewer system. The new garden is currently under construction and will have a naturally planted tree on top of the garden basement roof, this tree will grow to full size for the species, approximately five metres height, and live a full life span. In addition there will be borders and large potted plants. The main point is that a full size tree will be on the basement roof. Also the surface water will now drain into the new one metre of soil and be transpired by the tree rather

³ Supporting evidence - Information provided to RBKC Basement Working Group on trees and planting

than be directed into the combined sewer system. Both the garden and the surface water drainage have been improved by the garden basement development.

39. The council has dismissed or ignored or all of this evidence. Instead the council continues to state, wrongly, that a garden basement size limitation is required to improve or maintain garden character.
40. To this end the council has gathered visual evidence on 25 example properties to support the idea that gardens on top of basements harm the character of rear gardens. They present these in a report called Basements Visual Evidence (July 2013) which purports to show pictures of rear gardens before and after basement construction in order to demonstrate harm to rear garden character.
41. The report contains multiple errors⁴:
 - a. Of the basements shown almost all, at least 23 of the 25 examples, received planning permission before the 2009 basement policy. Prior to 2009 garden basements were not required to have one metre of soil on the basement roof and so most would not have been built to allow garden planting. Those granted planning permission after 2009 should all have one metre of soil on the garden basement roof, in line with the RBKC 2009 SPD, and so full planting should always be possible.
 - b. The same flaw seems to apply to the roof lights shown in the report. Planning dates are not given and the full addresses have not been given so the planning dates cannot be confirmed. The two examples that are, by chance, known both received planning before the introduction of the May 2009 SPD. The remaining roof lights and light wells would not appear to comply with the May 2009 SPD and so are not valid examples for inclusion. The report is therefore flawed and misleading.
 - c. The highlighted gardens at 44 to 50 Drayton Gardens are, in fact, the six gardens of numbers 42 to 52 Drayton Gardens.
 - d. The report has at least three examples where the current garden shown does not have a garden basement underneath it. There are no significant garden basements under 48, 50 or 52 Drayton Gardens. 48 and 50 Drayton Gardens have small cellar extensions of less than 20% of the garden area. 52 Drayton Gardens has not got a garden basement. The gardens are fully paved and have garages at the rear but there are no basements under the main part of the garden or under the garages.
 - e. 31 Brompton Square - this project should not be used to demonstrate why the 2009 policy needs to be changed. This project gained planning permission prior to the 2009 basement policy. The owner then built beyond the permission he was given in plan area and depth, and removed a protected tree. This is patently

⁴ Our Supporting evidence - Review of RBKC Basements Visual Evidence July 2013 provides additional detail.

not a correct example to use to demonstrate a requirement to alter the 2009 basement policy.

- f. Four of the examples show pictures of the basements while still under construction uses these pictures of construction sites as demonstrating negative garden appearance.

42. The wording of 34.3.50 suggests that existing protected trees are at risk - this is not the case, existing trees are protected by TPOs or under conservation area rules.

(3) Structural stability issues.

43. No evidence has been given that garden basements have caused structural stability problems with adjacent property.

44. The RBKC Alan Baxter report does not link structural stability problems with garden basement size in any way.

45. There is no link between the size of garden basements and structural stability of adjoining buildings. The additional size of garden basements is nearly always at the rear of the garden and away from other buildings.

46. Structural stability concerns can and should be addressed by other means.

47. A chartered engineer is currently required to oversee works. In some cases the correct level of supervision is not taking place. In short, existing policy is adequate but it is not being enforced effectively. The suggestion of improving enforcement of the existing policy through the use of Building Control officers who already visit site routinely was made in the RBKC Basement Working Group. This suggestion was dismissed.

48. Other suggestions for allaying structural stability concerns is to require:

- a. Contractors undertaking basement construction work to be members of a reputable trade body such as the Association of Specialist Underpinning Contractors (ASUC). This could be an effective means of reducing the concern about structural stability. Currently the Grosvenor Estate require that contractors undertaking basement construction work on the estate must be ASUC members.
- b. Property owners have first person indemnity latent defects insurance in place. This would be in addition to the contractor's standard public liability and professional indemnity insurance.
- c. Non-negligent insurance to be in place.

49. Measures like these could be taken into account in the context of a simple criteria based policy along the lines we suggest.

(4) The Council's view that the carbon emission of basements are greater than those of above ground developments per square metre over the building's lifetime is wrong.

50. The supporting text states:

34.3.53 The carbon emissions of basements are greater than those of above ground developments per square metre over the building's life cycle....

51. This statement is wrong.

52. Basements do not produce more carbon emissions on a full life basis. On the contrary when considered on a correct full life basis basements produce less carbon emissions than above ground extensions provided that the basement structure lasts for more than 44 years⁵.

53. Further to this, when the likely longer building life of a reinforced concrete basement is considered against the almost certainly shorter life of an above ground extension the carbon performance of the basement is significantly better than for the above ground extension. Our analysis shows that basements have 25% better carbon performance on a like-for-like basis using the reasonable expected life spans for 120 years for a basement structure and 40 years for the above ground extension.

54. The better carbon performance of basements has two drivers:

- a. Basements have better occupied carbon emissions performance - their roofs are better insulated and the temperature difference between the internal space and the immediate external surrounds are always more favourable for the basement than the above ground extension where the external winter temperature is lower than that of the relatively warm ground below the surface. For example the ground below the surface never freezes.
- b. The reinforced concrete basement structure has a longer expected lifespan than the equivalent above ground extension.
 - i. Property owners frequently demolish and replace extensions because of a desire to change and modernise. This is not the case for a reinforced concrete basement structure.
 - ii. Above ground buildings have a demonstrated average life in the United Kingdom of 59 years. Reinforced concrete structures have a general minimum design life of 100 years and a likely practical life span significantly longer than this.

55. The Council's evidence consists of a Report by Eight Associates dated July 2013. It is flawed in several ways. It contains multiple input mistakes, omissions, mathematical errors, flawed logic and poor methodology. An example of a basic error is that the

⁵ Supporting evidence - Above ground extension and subterranean development - life cycle carbon review and analysis - August 2013 - Ashmount Consulting Engineers

amount of spoil produced in excavating a single storey basement with an area of 75m² is given as 1,200m³. This is clearly wrong.

56. The incorrect results of the Eight Associates' analysis lead directly to the false conclusion that basements are more carbon negative than above ground extensions. The statement "*Limiting the size of basements will therefore limit carbon emissions and contribute to mitigating climate change.*" should therefore be changed to a statement *supporting basement development as a more carbon friendly sustainable alternative to above ground development.*
57. It follows from the above that any additional environmental requirements for basements should be removed from the proposed policy.
58. Further, any parts of the policy justified by the false assumption that basements have poor carbon performance should be removed.

(5) The reliance on Policy 3.5 of the London Plan is flawed.

59. In its responses to comments on the second draft policy the Council has attempted to use the London Plan Policy to justify limiting the size of rear garden basements. The following section is taken from the Council's Consultation Responses on Second Draft Basements Policy, July 2013, page 81; response to Rob Withers, ASUC. The same response is given several times to different people.

Reasoned justification to Policy 3.5 states that "*back gardens play important roles in addressing many of these policy concerns, as well as being a much cherished part of the London townscape contributing to communities' sense of place and quality of life.*"

The London Plan Housing SPG (para 1.2.18) further amplifies the roles that gardens play including

- "*defining local context and character including local social, physical, cultural, historical, environmental and economic characteristics,*
- *Providing safe, secure and sustainable environments and play spaces,*
- *Supporting biodiversity, protecting London's trees, 'green corridors and networks', abating flood risk and mitigating the effects of climate change including the 'heat island' effect, and*
- *Enhancing the distinct character of suburban London.*"

Para 1.2.22 of the London Plan Housing SPG further states "*Gardens can clearly be very much part of form, function and structure which warrants respect and protection.*"

Development both above or below ground can alter the character of gardens and adversely impact on the roles defined in the London Plan Housing SPG. It is reasonable to expect a significant proportion of gardens to be kept free of any development to allow their natural character to be maintained.

Para 53 of the NPPF also states *“Local planning authorities should consider the case for setting out policies to resist inappropriate development of residential gardens, for example where development would cause harm to the local area.”*

60. Basements under gardens with one metre of soil do not conflict with any of the extracts from the London Plan Policy or NPPF that have been quoted above by the council. Therefore the wording from the London Plan and the NPPF does not justify the limitation in size proposed in the policy.
61. No evidence has been provided that a basement under a garden that allows full, flexible future planting of all trees and plants, maintains groundwater drainage, meets SUDs, maintains the full and flexible use of the garden space for usual garden activities, mitigates the heat island effect, and further could be landscaped to meet the council's requirements does not meet any of the requirements of the London Plan and the Mayor of London's Housing SPG9 (justification 34.3.54).
62. The Council appears to be misrepresenting and misusing the London Plan Policy out of context in order to justify the policy.

(6) The imposition of prescriptive prohibitions is flawed.

63. Quality and impact not size should be the measures by which the development is judged.
64. Quality should be assessed based against the following sound criteria:
 - a. Having an acceptable impact on the street scene;
 - b. Having an acceptable impact on any heritage assets including, where relevant, the building itself;
 - c. Having an acceptable impact on the amenity of neighbours and those using the public spaces around the building including the street;
 - d. Promoting, in a proportionate way, sustainable development – in relation to UK carbon emissions;
 - e. Not causing an unsympathetic alteration to the leafy and well-treed character of the Borough's gardens;
 - f. Incorporating SUDS and dealing acceptably with other hydrological matters;
 - g. Being well designed (including protection from flooding and other technical matters);
 - h. Not causing an adverse impact on the structural stability of any building.

Section 5. Impact of proposed development on the street scene

65. The Council proposes the following policies and supporting justification.

CL7 d. not cause loss, damage or long term threat to trees of townscape or amenity value;

CL7 g. not introduce light wells and railings to the front or side of the property unless they are already 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;

34.3.64 In conservation areas, development should preserve or enhance the character or appearance of the conservation area. Basements by themselves with no external manifestations are not considered to affect the character or appearance of conservation areas. It is the other aspects such as the externally visible elements that can affect their character or appearance.

34.3.67 It is very important to minimise the visual impact of light wells, roof lights, railings, steps, emergency accesses, plant and other externally visible elements. Care should be taken to avoid disturbance to neighbours from light pollution through roof lights and other forms of lighting. Introducing light wells where they are not an established and positive feature of the streetscape can harm the character or appearance of an area. Where external visible elements are allowed they need to be located near the building, and sensitively designed reflecting the existing character and appearance of the building, streetscape and gardens in the vicinity.

The Council's evidence

66. Elsewhere in supporting text is stated:

34.3.47 Basements are a useful way to add extra accommodation to homes and commercial buildings. Whilst roof extensions and rear extensions add visibly to the amount of built development, basements can be built with much less long term visual impact – provided appropriate rules are followed.

67. Little or no weight appears to have been given to the Council's own statement that basements can be built with much less long term visual impact than other forms of development. The proposed policy is more stringent than for general above ground planning policy by not allowing visible changes such as railings or light wells unless they are already an established and positive feature of the local streetscape.

68. Given the statement in 34.3.47 the policy should, all other things being equal and being pro-growth in line with the London Plan and sustainable development, be supportive of basement development rather than be seeking to add more onerous restrictions than are required for above ground development.

69. The Council has not shown that basement developments have a negative impact on the street scene. The RBKC Basements Visual Evidence July 2013 gives one example of a front garden in Drayton Gardens. If this is considered harmful it could be prevented with a simple criteria based policy such as we propose.

Our evidence / analysis and how this has been responded to by the Council to date

70. We made the following comments in response to the relevant supporting text in the second draft policy.

There are existing planning policies for above ground work. The externally visible elements are standard above ground building work and should be judged in line with other existing/standard general policies. There is no justification for a more restrictive approach to basements.

It is excessive to require that a light well is already part of the existing street scene as officers can judge whether a new light well does any harm in the particular case. There can be a general criterion covering the externally visible elements of a basement development and that they should not harm the character or appearance of the local street scene.

71. The Council responded:

The Core Strategy should be read as a whole. As stated the Council does have extensive policies for above ground development. If no distinction was made between above and below ground development, basements would be precluded to a large extent. Basement development has become increasingly popular as policies do not allow above ground development to the same extent. Addition of new light wells where there are no existing ones will change the character or appearance of the street.

72. There are several points to be made about this response:

- a. It does not answer the comment made. Our comment clearly states that the above ground element of basement developments should be judged in line with other existing / standard general policies. To reply "*If no distinction was made between above and below ground development, basements would be precluded to a large extent.*" simply does not make sense.
- b. There should be no need for a specific policy on light wells and the existing general planning policy should suffice. Alternatively, a criterion addressing the potential for adverse impact on the character and appearance of the street would cover the point.
- c. The Council states that "*Addition of new light wells where there are no existing ones will change the character or appearance of the street.*" This is true. However change to the character or appearance of a street is not necessarily harmful, even if in a conservation area. The Council's response demonstrates

that the proposed policy is based on the assumption that development should be restricted even if not harmful.

- d. The policy should, in line with the NPPF and the London Plan, be pro-growth in line with sustainable development. The policy should support development unless it causes unacceptable harm. The proposed policy steps beyond this and seeks to limit development even when no harm would be caused.
- e. The Council states '*Basement development has become increasingly popular as policies do not allow above ground development to the same extent.*' This is correct. In line with sustainable development the Council should be welcoming the opportunity for development that can achieve an increase in accommodation with minimal external impact.

73. We made the following comments in response to the draft policy on this issue in the second draft policy consultation.

Should be redrafted to reflect the policy comments above in relation to 37.3.70.

It is quite possible the light well or railings (existing or proposed) are not visible from the street which renders this criterion meaningless. What matters is whether the proposed basement will cause any harm to the character or appearance of the area or street scene. That is a criterion I could support and which planning officers are very used to applying properly to the individual circumstances of the site and the proposal in question.

74. The council responded:

Noted. The planning test relates to character or appearance. Light wells are an external manifestation of basements and where they are not present but are introduced they would harm the character if not the appearance.

75. We would make the following further points :

- a. The Council has not responded to the comment that light wells could quite possibly not be visible from the street . Features that cannot be seen from the street clearly do not harm the street scene and should probably be treated in a similar manner to features in rear gardens that can be seen by neighbours but not by others.
- b. The council's response states that light wells '*would harm the character if not the appearance*'. This is clearly incorrect. Light wells *may* harm the character or appearance. Whether a light well will or will not cause harm to character or appearance can only be judged on a case by case basis. It is not true that the introduction of a light well will cause harm to character or appearance on every occasion. A well designed light well could maintain or enhance the street scene even if there were none previously present.

Soundness of the Council's approach

76. The Council's approach is not sound because it is not positively prepared, justified or effective.
77. The policy does not objectively assess development rather it seeks to limit development on a blanket basis that if a feature does not exist in the street scene then it cannot be introduced.
78. A further example is the Council's requirement in 34.3.67 '*Where external visible elements are allowed they need to be located near the building.*' The requirement for the location of light wells to be near the building does not allow objective assessment of a development. An external visible element away from the building could be designed to cause no harm and should therefore be allowed. No evidence has been given to support the requirement that external visible elements be located near the building.
79. The proposed policy does not allow innovative solutions to be developed in order for the design to respond positively to its particular context.
80. For example the requirement to avoid light pollution could be achieved by:
- a. Use of blackout blinds / light shutters that close automatically when internal lights are switched on.
 - b. Use of electronically operated opaque / transparent glass. This technology is not at the point to provide 100% darkness but given a market, like basements in London, innovation of this sort of product would be incentivised.
81. The policy will reduce the number of basement developments as basements without light wells are less useful or attractive as living space. This will result in reduced economic growth even when no other negative impact has been demonstrated. This is not consistent with achieving sustainable development.
82. The policy is not supported by a proportional evidence base. No clear evidence has been provided that light wells always cause harm to the street scene. One picture of an unattractive roof light in an unspecified front garden in Drayton Gardens is not considered sufficient .
83. The policy is not proportionate as above ground extensions are not required to avoid light pollution in the same way.⁶ We note too that the concern in the text about light pollution is one of neighbouring amenity not the character and appearance of the street. In either event, provided a source of light avoids harm to these two material issues it is surely acceptable.
84. The policy is not the most appropriate strategy when considered against the alternatives. We have proposed a more appropriate strategy, namely to allow development that has an acceptable impact on the street scene.

⁶ Supporting evidence - Examples of the extent of glazing allowed in above ground extensions.

85. The policy will not be effective and will have some perverse consequences. We know of one real example that will happen within the next year. In this real example there are currently no light wells in the specific part of the street, so light wells are not allowed. However planning permission was given for one development some time ago that will be built shortly. From that point on light wells will be a feature of the street scene and will be allowed by the policy even if the first light well detracts from the street scene. This is a perverse situation.
86. The policy will not effectively deliver the legitimate aim of the policy, namely to deter only those basement developments which would cause material harm.
87. In contrast, our suggested approach would allow development that has an acceptable impact on the street scene and it would be appropriate to include a criterion to that effect. In addition, there would be no objection to criterion d.

Section 6. Impact of proposed development on any heritage assets

88. The Council proposes the following policies and supporting justification.

CL7 e. not cause harm to the significance of heritage assets;

CL7 f. not involve excavation underneath a listed building (including pavement vaults) or any garden of a listed building, except for gardens on large sites where the basement would not involve extensive modification to the foundation of the listed building by being substantially separate from the listed building;

34.3.61 The significance of heritage assets needs to be identified so that it is not harmed.

34.3.62 The special architectural or historic interest of listed buildings goes beyond appearance. It includes the location and hierarchy of rooms and historic floor levels, foundations, the original purpose of the building, its historic integrity, scale, plan form and fabric among other things. Consequently, the addition of a new floor level underneath the original lowest floor level of a listed building, or any extension of an original basement, cellar or vault, will affect the hierarchy of the historic floor levels, and hence the original building's historic integrity. Basements under listed buildings are therefore resisted by the policy.

34.3.63 Foundations are part of the historic integrity of a listed building. Basements in the gardens of listed buildings can result in extensive modifications to the building's foundations. This can harm the historic integrity and pose risks of structural damage to the building. Basements under the gardens of listed buildings are therefore also normally resisted. However, they may be acceptable in a large garden where the basement can be built without extensive modifications to the foundations by being substantially away from the listed building so that it does not harm the significance of the listed building and the link between the listed building and the basement is discreet and of an appropriate design.

34.3.66 The impact of basements on non-designated heritage assets must be assessed on their merits to avoid harm to their significance.

The Council's evidence

89. The Council's own March 2013 report by Alan Baxter Associates states on Page 85

Question 10

Are there particular risks associated to listed buildings, many of which are properties which have shallow foundations? If there is a greater risk to such buildings should this be mitigated by "exclusion zones" of basement development from listed structures?

Answer

From a structural engineering viewpoint there is little difference in risk between a listed and unlisted building. However one difference is that some listed buildings may be more likely to have delicate or special finishes which might be more susceptible to cracking as a result of ground movements and be more difficult to repair. Structurally older buildings tend to be more able to accommodate ground movements than more modern brittle structures. The objection to basements under listed buildings primarily relates to how a building is used rather than any particular structural risk.

90. Therefore the Council's own engineering report does not support the justification in 34.3.63 that work underneath the foundations of listed buildings '*.. pose risks of structural damage to the building.*' and any justification or policy using this justification should be removed.

91. The council stated in its 2nd Draft Policy, reasoned justification 34.3.65 that:

Consequently, the addition of a new floor level underneath the original lowest floor level of a listed building, or any extension of an original basement, cellar or vault, will in the great majority of cases affect the hierarchy of the historic floor levels, and hence the original building's historic integrity.

92. By the above statement the Council recognised that at least in a minority of cases a new floor level underneath the original lowest floor level of a listed building will not affect the hierarchy of the historic floor levels, and hence not affect the original building's historic integrity. In these minority of cases the Council should not oppose development.

93. The Council has removed this section from the proposed policy justification but that does not diminish the fact that the Council has made a statement in a draft policy that acknowledges that in some cases development beneath a listed building will not affect the building's historic integrity.

Our evidence / analysis and how this has been responded to by the Council to date

94. We made the following comments in response to the supporting text on this issue in the second draft policy.

Building a basement under a listed building strengthens the foundations and will often increase the structural longevity of the listed building – underpinning is frequently carried out to old/ancient buildings as a foundation repair solution. So building a basement under a listed building will often preserve and improve the stability of a heritage asset.

The introduction of a new floor underneath a listed building need not have an adverse impact on the significance of the heritage asset. This will depend on the nature of that significance in the particular case. There is no sound basis for preventing new basements in all old or historic buildings. In any building for which it does constitute harm, criterion d would cover the point. [Note: criterion d in the second draft policy was *'The scheme must not cause substantial harm to heritage assets'*]

The Alan Baxter report recognises that there are no particular risks to a listed building from construction underneath or within its garden. Paragraph 34.3.66 implies the contrary and is therefore not justified by evidence.

95. The council responded:

Noted. The Council's existing policy precludes basements underneath listed buildings. This part is not a new policy that is being introduced.

There is no structural risk from building in the garden as long as it can be done without causing extensive modifications to the foundations of the listed building. The reasoned justification recognises this and includes an exception.

96. There are several points to be made:

- a. The Council appears to assume that elements of the new policy that are covered under the existing policy (expressed in SPD) should not be assessed as part of the process for introducing the new policy. This assumption is not correct. All parts of the new policy should be assessed equally for legal compliance and soundness.
- b. The Council's response does not address the following comments:
 - i. That underpinning the foundations of a listed building is potentially beneficial as it will extend the life of the listed building, especially if the building has shallow foundations which is the case for many of the Victorian, Georgian and older buildings.
 - ii. That introducing a new floor underneath a listed building need not have an adverse impact on the significance of the heritage asset.
 - iii. That each case should be addressed individually with regard to the nature of the significance in that case.

- iv. That criterion d⁷ would cover the requirement to avoid harm to heritage assets.

97. We made the following comments in response to the policy on this area in the second draft policy.

This criterion is unnecessary because criterion d protects the special interest of a listed building.

Since the text itself recognises that there are some cases where development will not affect the hierarchy of the historic floor levels, the criterion is not justified by the text

98. The council responded:

Noted. The Council's existing policy precludes basements underneath listed buildings. This has been upheld on appeal. Core Strategy policy Policy (sic) CL2 (g) (i) should be referred to.

The policy explains that the exception for sites with a large garden is linked to the fact that basements should not result in extensive modifications to the foundations of listed buildings. This can harm both the historic and architectural significance of the listed building and pose a risk to the structure of the building itself.

Text will be amended as addition of a new floor underneath a listed building will alter the plan-form and harm the historic and architectural significance of the building.

99. There are several points to be made:

- a. Again the Council mistakenly assume that parts of the policy that are the same or similar to existing policy do not need to be assessed for legal compliance or planning soundness.
- b. The Council seems to assume that because an individual case or cases have been upheld on appeal that this demonstrates that the policy is sound. This is not true. An individual case being upheld on appeal demonstrates that that case should not be granted planning permission and no more.
- c. The reference to structural risk to foundations as justification for policy should be removed given that the Council's own engineering report states that *"From a structural engineering viewpoint there is little difference in risk between a listed and unlisted building."*

Soundness of the Council's approach

100. The Council's approach to policy e is considered sound.

101. Policy e is considered sufficient on its own as it protects the significance of listed buildings and any other heritage assets.

⁷ Criterion d in the second draft policy was - *"The scheme must not cause substantial harm to heritage assets"*

102. The Council's approach, other than to policy e, is not sound because it is not positively prepared, justified or effective. It duplicates criterion e.
103. The Council's approach, other than to policy e, is not positively prepared as it seeks to impose a blanket ban on all development under and near listed buildings even when this development would meet all other objectively assessed criteria and would not cause any harm to the special interest of the heritage asset.
104. The proposed policy, other than to policy e, does not have objectively assessed criteria rather it will impose a blanket ban.
105. The proposed policy, other than to policy e, is not aligned with the central tenet of sustainable development - "meeting the needs of the present without compromising the ability of future generations to meet their own needs". The policy does not seek to support growth where it is possible rather the policy seeks to curtail all development underneath listed buildings even if all other objectively assessed criteria are met and either:
- a. No harm is caused to the significance of the heritage asset, or
 - b. The public benefit of any less than substantial harm is demonstrated to outweigh any harm to the significance of the heritage asset.
106. Underpinning is used to extend the life of listed buildings by strengthening their foundations⁸. Building a basement under a listed building by underpinning will have the same effect and if done correctly will extend the structural life of the listed building. This work would be aligned with English Heritage's intention of preserving heritage, the policy's aim of preserving heritage assets and sustainable development's intention to enable future generations to meet their own needs. As such underpinning to listed buildings should, all other things being equal, be positively encouraged by the policy.
107. The proposed policy, other than policy e, has not been justified. The Council states several absolutes without providing any supporting evidence as to why this is the case. In each case the wording should include or be replaced by the conditional 'may'. The following sentences have been identified - the relevant word(s) in each sentence have been underlined:
- a. The special architectural or historic interest of listed buildings goes beyond appearance. (34.3.62)
 - b. It includes the location and hierarchy of rooms and historic floor levels, foundations, the original purpose of the building, its historic integrity, scale, plan form and fabric among other things. (34.3.62)
 - c. Consequently, the addition of a new floor level underneath the original lowest floor level of a listed building, or any extension of an original basement, cellar or

⁸ Supporting evidence - Underpinning under listed buildings: examples of foundation repairs to listed buildings by underpinning

vault, will affect the hierarchy of the historic floor levels, and hence the original building's historic integrity. (34.3.62)

d. " Foundations are part of the historic integrity of a listed building" (34.3.63)

108. The statement of the above sentences as absolutes gives the justification unwarranted authority.
109. English Heritage commented on the first draft policy. Their comment made it clear that they would see no reason to oppose a policy that allowed development underneath listed buildings provided that either no harm was caused to heritage assets or that any less than substantial harm caused had demonstrable public benefits that outweighed the harm to the significance of the heritage assets.
110. First Consultation Response draft policy March 2013, page 100, English Heritage (Richard Parish) comment:
- CL7d Policy CL7d states that "The scheme must not cause substantial harm to heritage assets".
- The phrase "substantial harm" reflects the Government's published National Planning Policy Framework which sets out the considerations which must be taken into account when a development proposal causes "substantial" or "less than substantial harm" to heritage assets. As the proposed policy refers only to substantial harm clarification should be provided in respect of proposals which are considered to cause "less than substantial harm". We would recommend that this Policy is amended as follows. "The scheme must not cause substantial harm to heritage assets. Where proposals are considered to cause harm that is less than substantial the scheme must demonstrate that the public benefits outweigh any harm to the significance of the heritage asset."
111. English Heritage's comments demonstrate that the proposed policy is not justified.
112. English Heritage's comments propose a more appropriate strategy, except for policy e which is accepted, of assessing the harm that will be caused to heritage assets for a development on a case by case basis.
113. The Council's proposed policy, except policy e, is likely to be overruled at appeal given its lack of justification and English Heritage's comments that support the consideration of each development proposal on a case by case basis giving regard to the harm caused to heritage assets. To this end the proposed policy, except policy e, will probably not be effective.
114. Neither will it effectively deliver the legitimate aim of the policy, namely to deter only those basement developments which would cause material harm.
115. In contrast, our suggested approach would only allow development that has an acceptable impact on any heritage assets including, where relevant, the building itself.

116. It would also be capable of supporting the longevity of listed buildings by allowing their foundations to be underpinned as part of a basement development. The Council would preclude this foundation strengthening until signs of structural damage were evident and foundation repair work was required.

Section 7. Impact of proposed development on the amenity of neighbours and those using the public spaces around the building including the street

117. The Council proposes the following policies and supporting justification.

CL7 k. ensure that traffic and construction activity does not harm pedestrian, cycle, vehicular and road safety, 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;

CL7 l. ensure that construction impacts such as noise, vibration and dust are kept to acceptable levels for the duration of the works;

34.3.49 In the Royal Borough, the construction impact of basements is a significant material consideration in planning. This is because the Borough is very densely developed and populated. Tight knit streets of terraced and semi-detached houses can have several basement developments under way at any one time. The duration of construction is longer than for above ground extensions, the excavation process has a high impact on neighbours and the removal of spoil requires many more vehicle movements.

34.3.50 A basement development next door has an immediacy which can have a serious impact on the quality of life, whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions. There are also concerns over the structural stability of adjacent property, character of rear gardens, sustainable drainage and the impact on carbon emissions. For all these reasons the Council considers that careful control is required over the scale, form and extent of basements.

34.3.51 The policy therefore restricts the extent of basement excavation under gardens to no more than half the garden and limits the depth of excavation to a single storey in most cases. The extent of basements will be measured as gross external area (GEA).

34.3.52 Restricting the size of basements will help protect residential living conditions in the Borough by limiting the extent and duration of construction and by reducing the volume of soil to be excavated. Large basement construction in residential neighbourhoods can affect the health and well-being of residents with issues such as dust, noise and vibration experienced for a prolonged period. A limit on the size of basements will reduce this impact.

34.3.56 As well as causing greater construction impacts and carbon emissions, deeper basements have greater structural risks and complexities. In order to minimise these risks to the high quality built environment of the Royal Borough the policy takes a precautionary approach by limiting basements to a single storey.

34.3.70 Basement construction can cause nuisance and disturbance for neighbours and others in the vicinity, through construction traffic, parking suspensions and the noise, dust and vibration of construction itself. The applicant must demonstrate that these impacts are kept to acceptable levels under the relevant acts and guidance, taking the cumulative impacts of other development proposals into account. The building compound and the skip location should be accommodated on site or in exceptional circumstances in the highway immediately outside the application site.

118. In addition the Council seek to address this issue through arbitrary controls on the scale of development (a point addressed above). In this section we look at the justification for criterion K. Criterion L is not unduly onerous and no objection is made to it save that it is difficult to enforce in the form in which it is written.

The Council's own evidence

119. The results from the Council's Basement Developments - Neighbours survey - November 2012 on construction impact are summarised below.

120. The following four subparagraphs give the responses to the tick box section of the questionnaire.

a. Traffic associated with the development caused minimal disruption:

- i. **8.8%** of all questioned disagree / strongly disagree (53% of those who responded)
- ii. **91.2%** of all questioned agree/strongly agree/neither agree nor disagree / no response(47% of those who responded)

b. The level of noise from the development was kept within acceptable limits:

- i. **10.1%** of all questioned disagree / strongly disagree (60% of those who responded)
- ii. **89.9%** of all questioned agree/strongly agree/neither agree nor disagree / no response (40% of those who responded)

c. The level of vibration from the development was kept within acceptable limits:

- i. **8.4%** of all questioned disagree / strongly disagree (50% of those who responded)
- ii. **91.6%** of all questioned agree/strongly agree/neither agree nor disagree / no response(50% of those who responded)

- d. Any dust from the site was kept within acceptable limits:
- i. **9.1%** of all questioned disagree / strongly disagree (54% of those who responded)
 - ii. **90.9%** of all questioned agree/strongly agree/neither agree nor disagree / no response (46% of those who responded)
121. 8,000 residents were sent questionnaires.
122. **Less than one in ten residents (9.1%)** questioned were sufficiently motivated to respond by completing a tick box form stating that construction impact caused more than minimal traffic disruption or that levels of noise, vibration or dust were not acceptable.
123. The following three subparagraphs give summary data on the number of respondents who were sufficiently motivated by their level of unhappiness with the construction impact of basement developments to submit a written comment.
- a. Traffic - **1.6%** of all questioned. (124 written comments).
 - b. Noise and dust - **4.2%** of all questioned. (339 written comments).
 - c. Dirt and debris - **3.1%** of all questioned. (251 written comments).
124. The Council's data does not appear to demonstrate that the concerns of residents over construction impact are as broadly based as asserted. An alternative view is that it is more likely that a minority of residents have been negatively impacted possibly by inconsiderate or poorly performing contractors whose actions on site have not been sufficiently overseen or enforced.
125. The evidence base is further undermined when it is considered:
- a. The questionnaires were sent to residents who live in the vicinity of properties where planning permission has been sought for a basement development - Council Response to Second Draft Responses, page 36 *"The surveys were specifically targeted at those who had real experience of living close to a basement construction"*. These residents are likely to have lived in close proximity to basement developments. There is nothing wrong with selecting a sample to question in this way but it should be remembered that the sample is skewed and does not represent the overall RBKC population.
 - b. It would be reasonable to assume that, given the weight in the proposed policy that the Council has placed on the significant negative construction impact of basement development, the residents in this skewed sample would be strongly motivated to respond in high numbers and to express in a significant majority of cases that basement development had a severe negative construction impact. Any other outcome than this could reasonably be taken to demonstrate that the Council's assumption that basement development causes broad severe negative

construction impact is over stated. A response rate of less than 10% is not a significant majority.

- c. Respondents who had strong feelings about negative experiences could reasonably be expected to have completed a written comment in addition to ticking the questionnaire boxes. The level of written response was between 1 in 60 and 1 in 24 of all those questioned for the different types of construction impact. This level of response could reasonably support a view that the Council's assumption that basement development causes severe negative construction impact is over stated.
- d. There is a reasonable likelihood that those who have had negative experiences will be motivated to respond while those who have had neutral or positive experiences are less likely to be motivated to respond.
- e. The first question on traffic is poorly wording asking if the traffic associated with the development caused 'minimal disruption' rather than the probably more correct in planning terms, 'acceptable disruption.'

126. It should be remembered that:

- a. The Council has not demonstrated that the construction impact that the respondents thought was due to basement construction was in reality due to basement construction. It could have been, in reality, due to other above ground structural work at the same address.
- b. The Council has not demonstrated that the impact from the basement construction phase of a project is worse than the construction impact from above ground building projects. No distinction was made in the questionnaires and it is unlikely that respondents would be able to tell the difference.
- c. There is a reasonable possibility that some of the developments that have caused negative construction impact have been run by poor quality inconsiderate contractors.
- d. There will be a Construction Traffic Management Plan in the usual case, but inconsiderate contractors may not be working to this plan. No evidence has been given to demonstrate that this is not the case.
- e. The Council's report by Alan Baxter Associates supports this possibility. See RBKC Alan Baxter Associates, Residential Basement Study Report, March 2013, page 85. I have underlined the relevant sections.

Question 8

Does the method of construction have implications on risk, be this concerning structural stability or upon noise and vibration?

Answer

The method and sequence of construction is probably the most important aspect of basement construction. When problems such as movements of adjacent properties arise, it is nearly always because either design or the method of construction is flawed, or there is a lack of adequate temporary works. There is a close relationship between the design of a basement and the method of construction. This is sometimes not adequately understood or reflected in the way basement projects are procured.

It is essential that both the design team and the contractors are carefully selected, that they work closely together and that they can demonstrate a track record of design and construction of basements.

- f. A further section in the Alan Baxter Associates report, page 86, referring to Construction Management Statements further supports the importance of only using competent contractors.

"Similarly the Contractors should also be able to demonstrate a track record of successful projects."

127. We would support the Council in publicising the benefits of using only quality contractors at all stages of the project. This would be a more proportionate and ultimately successful means of controlling the impact of construction than through changes to Core Strategy policy and these arbitrary controls on the scale of development.

128. Comments in the Council's Basement Developments - Neighbours survey - November 2012 support the hypothesis that poor contractors are the cause of at least some of the problems:

- a. "Contractors totally oblivious to neighbours needs." - page 82
- b. " swearing, shouting, traffic, building rubble in street" - page 83
- c. "Constant illegal parking in resident spaces" - page 83
- d. "blocked access because of builders vans" - page 84
- e. "Particularly traffic blocking the road at crucial times" - page 84. This should not be the case if the delivery and collection times given in the Construction Traffic Management Plan are followed.
- f. "very unhelpful developer" - page 84
- g. "lorries being parked across the drive" - page 84
- h. "builders closing the road without permission" - page 84
- i. "illegal parking in residents' bays" - page 85

- j. "Once my car covered in dust builder would not accept responsibility" - page 87
 - k. "vibration from pile driving" - page 88. Pile driving or pneumatic trench sheet piling should not be used in an urban area.
 - l. "Obligated to walk in the street as footpath was consistently in use by builders" - page 89. The footpath should not be block by contractors.
 - m. "with obstruction of pavement with overhead conveyor." - page 89. The conveyor should not obstruct the pavement.
 - n. "Skips, trucks etc all should be arranged outside peak rush hours!!! (Address removed) is causing absolute mayhem!!!" - page 89. Deliveries and collections are not allowed in peak hours according to approved Construction Traffic Management Plans. (CTMP)
 - o. "The builders did not adhere to the traffic plan and blocked the road very often." - page 90
 - p. "Traffic, parking problems, dirt on roads, noise, unhelpful builders." - page 90
 - q. "access issues due to illegal double parking by the builders" - page 90
 - r. "Workers parking up to 11 vans and trucks" - page 91. This cannot be in line with the CTMP.
129. Currently there is no requirement for contractors to demonstrate competence in order to undertake basement construction work within RBKC.
130. There is a requirement for Chartered Civil Engineer or Structural Engineer to oversee the development.
131. Grosvenor Estates require that all basement construction contractors are members of the Association of Specialist Underpinning Contractors. This is a trade body open for membership to any contractor in the underpinning or basement construction sector. Contractors applying for membership need to demonstrate high health and safety standards, technical competence, appropriate insurances and financial strength.
132. There is a reasonable possibility that a significant cause of construction impact problems are due to a lack of enforcement of existing controls on development (eg the requirement to provide and follow a traffic management plan) rather than matters that require more restrictive policy⁹.
133. **Health** - reasoned justification 34.3.52 states - "*Large basement construction in residential neighbourhoods can affect the health and well-being of residents*"
134. The Council's Basement Developments - Neighbours survey - November 2012 collected comments on health matters. The summary of this data is:

⁹ Supporting evidence - Example of contractor not following existing traffic management plan.

- a. 3 written comments from 8,000 questionnaires (0.04%)
135. It is questionable if a response rate of 0.04% can be viewed as a proportionate evidence base for including a matter as part of the reasoned justification in the proposed planning policy.
136. **Safety** - policy CL7 k. states "ensure that traffic and construction activity does not harm pedestrian, cycle, vehicular and road safety"
137. The Council's Basement Developments - Neighbours survey - November 2012 had a general section for 'Others' comments. Comments on road safety could have been put into this section. The summary of comments on road safety is given below :
- a. 0 written comments from 8,000 questionnaires (0.0%)
138. It seems reasonable to conclude that road safety problems caused by basement developments are not a major concern for residents.

Our evidence / analysis and how this has been responded to by the Council to date

139. We made the following comments in response to the supporting text on this issue in the second draft policy.

While it is recognised that the impact of construction, whether above or below ground, on the amenities of the locality is a material consideration it is generally controlled successfully by condition or (occasionally) by planning obligation under s.106.

Highways issues and the convenience of road users: developers work with the highway authority who ensure their proposals for traffic management are reasonable. If agreed measures are not adhered to, it becomes a matter for enforcement. Meanwhile any obstruction to the highway which is not legitimately sanctioned is a public nuisance. In short, highways issues will almost never be a basis for refusing planning permission as they can and should be controlled.

The siting of the skip and building compound should not be set in stone within the policy but should be determined in response to the applicant's proposals by those who know the area and can judge its suitability in the individual case.

Other amenity issues arising from the noise dust and vibration of construction are generally controlled by condition and the common law of nuisance.

This paragraph should therefore be redrafted in a way which recognises the role of conditions and other agencies in regulating the impact of construction both on highways users and neighbours.

140. The council responded:

Noted.

Planning applications are assessed on the basis that development should take place in accordance with the development plan unless material considerations indicate otherwise.

Amendments will be made to the text to draw attention to the range of acts and guidance that should be followed. However, given the scale and proportion of basement development and major excavation involved in their construction the requirement to be able to assess the impacts at an early stage are reasonable.

141. There are several points to be made:
- a. The second paragraph, starting '*Planning applications are assessed on....*' does not answer our original comment.
 - b. The question on the use of planning conditions and occasionally by planning obligation by the use of s106 has not been answered.
 - c. Our comment on highways issues almost never being the basis for refusing planning permission has not been answered.
 - d. Our comment on the siting of skips and building compounds has not been answered.
 - e. Our comment on the use of conditions and the common law of nuisance to control amenity issues arising from noise, dust and vibration has not been answered.
 - f. The Council states '*However, given the scale and proportion of basement development and major excavation involved in their construction.*' This seems to imply that all basement developments are significant construction projects. This is not the case. A small cellar extension, say deepening a 10m² cellar by one metre with one 2m² light well will be counted as a basement development and will have to fulfil all of the planning criteria within this policy. This is not a proportionate requirement.
142. We made the following comments in response to the policy on this issue in the second draft policy.

The formulation of the policy criterion is also confusing and unhelpful: the criterion is applied when assessing the suitability of proposals for development at application stage. It should be drafted with that in mind, as follows

Permission will be granted where....

- j. the impact of traffic and construction activity on road safety, and the amenity of those living and working nearby, is acceptable having regard to any proposals for traffic management and other conditions which may be imposed.

143. The council responded:

Noted. Text will be amended to improve clarity where appropriate.

144. The only point to be made is that the text that has been amended has not improved clarity.

Soundness of the Council's approach

145. The Council's approach to this issue is not sound because it is not positively prepared, justified or effective.

146. The policy uses excessively onerous tests which cannot be satisfied. For example:

- a. It is not possible to 'ensure that traffic and construction activity does not harm pedestrian, cycle, vehicular and road safety.' [my underlining for emphasis]. It is only possible to take measures aimed at achieving an acceptable impact. The only way of ensuring no harm is not to drive any vehicle on any street at any time, which is clearly unreasonable and cannot be assessed objectively.
- b. It is not possible to ensure that traffic and construction activity does not '*affect bus or other transport operations*' unless no vehicles are put on the road. This is clearly unreasonable and cannot be assessed objectively.
- c. It is not possible to ensure that development does not '*significantly increase traffic congestion*' which varies in London from day to day in any event. This is an issue for the contractor.
- d. '*nor place unreasonable inconvenience on the day to day life of those living, working and visiting nearby.*' - again this wording does not allow objective assessment with regard to development.

147. The proposed policy does not seek to support sustainable development in that it is imposing an unduly high barrier to development based upon a criterion which is impossible to meet. In so doing it limits growth and compromises the ability of future generations to meet their own needs.

148. The proposed policy has not been justified by the Council's research that shows that less than one in ten of those questioned responded to say that they found the perceived construction impact caused by basements unacceptable.

149. The Council's research has not demonstrated to a reasonable extent that the construction impact reported by respondents was in fact due to basement development and was not due to some other above ground development.

150. The Council has not demonstrated to a reasonable extent that that the perceived problems of construction impact due to basement development has not been due to a lack of enforcement rather than a need for more restrictive policy.

151. The Council makes several assumptions and statements of absolutes in its reasoned justification that have not been supported by evidence. The relevant words are underlined. These include:

- a. 'The duration of construction is longer than for above ground extensions.' (34.3.49)
- b. 'whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions' (34.3.50)
- c. Large basement construction in residential neighbourhoods can affect the health and well-being of residents with issues such as dust, noise and vibration experienced for a prolonged period. (34.3.52)

152. In support of the contention that the impact of construction on the amenity of the locality would be better mitigated by effective enforcement rather than more restrictive policy are the following points:

- a. Grosvenor Estates requires all contractors undertaking basement development to be members of an approved trade body
- b. The Council's Alan Baxter Report states that contractors should be carefully selected and have a track record of successful projects.
- c. The system for reporting problems with sites in RBKC does not work well. I have tried to report two sites in Chelsea for poor site set-up and traffic management. I telephoned RBKC Highways and RBKC Building Control and was told by both that this was not their responsibility and to call the other. I was unable to make an effective complaint or to get a confirmation of action by anyone within the Council.
- d. The number and type of comment about inconsiderate contractors made by respondents to the Council's Basement Developments - Neighbours survey - November 2012, outlined previously.
- e. Our finding from one twenty minute drive through the borough in the rush hour of a contractor on a site with a basement receiving deliveries and controlling the traffic on a road in direct contravention of the traffic management plan which states that deliveries and collections will be between the hours of 9.30am and 3.00pm only¹⁰.

153. The inclusion of health problems as a reasoned justification for any policy has not been founded on any disclosed evidence.

154. The inclusion of road safety as a specific planning policy has not been supported in the proposed planning policy by any reasoned justification in the policy document and has not been supported by any disclosed evidence.

¹⁰ Supporting evidence - Example of contractor not following existing traffic management plan

155. The proposed policy is not the most appropriate when considered against the reasonable alternatives. As previously stated more appropriate strategies would be:
- a. To control local amenity by planning condition or (occasionally) by planning obligation under s. 106.
 - b. For developers to work with the highway authority who should ensure their proposals for traffic management are reasonable. If agreed measures are not adhered to, it becomes a matter for enforcement. Meanwhile any obstruction to the highway which is not legitimately sanctioned is a public nuisance and is better controlled by other existing regulation.
 - c. That the siting of the skip and building compound should not be set in stone within the policy but should be determined in response to the applicant's proposals by those who know the area and can judge its suitability in the individual case.
 - d. That other amenity issues arising from the noise dust and vibration of construction are generally more appropriately controlled by condition and the common law of nuisance.
 - e. That enforcement of the planning conditions and obligations should be the priority rather than the introduction of additional policy.
156. In contrast, our approach would allow development which is judged at the time of the application as being likely to have an acceptable impact on the amenity of neighbours and those using the public spaces around the building including the street. In judging this impact the measures put in place to encourage consideration for those living working and visiting the immediate locality should be assumed to be followed – and they should be enforced where they are not followed.

Section 8. Sustainable design in relation to carbon emissions

157. The Council proposes the following policies and supporting justification.

CL7 j. ensure that any new building which includes a basement, and any existing dwelling or commercial property related to a new basement, is adapted to a high level of performance in respect of energy, waste and water to be verified at pre-assessment stage and after construction has been completed;

34.3.50 A basement development next door has an immediacy which can have a serious impact on the quality of life, whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions. There are also concerns over the structural stability of adjacent property, character of rear gardens, sustainable drainage and the impact on carbon emissions. For all these reasons the Council considers that careful control is required over the scale, form and extent of basements.

34.3.51 The policy therefore restricts the extent of basement excavation under gardens to no more than half the garden and limits the depth of excavation to a single storey in most cases. The extent of basements will be measured as gross external area (GEA).

34.3.53 The carbon emissions of basements are greater than those of above ground developments per square metre over the building's life cycle. The embodied carbon in basements is almost three times the amount of embodied carbon in an above ground development per square metre. This is because of the extensive use of concrete and particularly steel both of which have high embodied carbon. Climate change mitigation is a key policy in the London Plan which promotes sustainable design and construction (including avoiding materials with a high embodied energy) and reducing carbon dioxide. Limiting the size of basements will therefore limit carbon emissions and contribute to mitigating climate change.

34.3.56 As well as causing greater construction impacts and carbon emissions, deeper basements have greater structural risks and complexities. In order to minimise these risks to the high quality built environment of the Royal Borough the policy takes a precautionary approach by limiting basements to a single storey.

34.3.69 The carbon emissions of basements are greater than the equivalent above ground development and the policy contains a provision to mitigate this impact. A BREEAM methodology is used as a proxy to achieve energy savings across a whole dwelling or commercial property to which the basement relates. For residential development (including listed buildings), the standard is BREEAM Domestic Refurbishment "very good" including a minimum standard of "excellent" in the energy section and a minimum of 80% of credits in the waste category. For non-residential development, the standard is BREEAM "very good".

The Council's evidence

158. The Council's Alan Baxter Associates report page 37, paragraph 11.5, states:

“basements tend to perform much better in environmental terms than above ground construction”

159. The Council's supporting text ignores the Alan Baxter Associates report on this matter.

Our evidence / analysis and how this has been responded to by the Council to date

160. We made the following comments in response to the reasoned justification on this area in the second draft policy.

Carbon emissions should be considered on a full life time basis not on an immediate one off and a full lifetime study should be completed before a policy like this is introduced. Doing so would provide a clearer picture of the merits of the proposals in environmental terms, particularly as “basements tend to perform much better in environmental terms than above ground construction” [Alan Baxter at paragraph 11.5 page 37].

Requiring what would be an arbitrary environmental offset to the carbon emissions involved in construction (using current methods) by an improvement to the rest of the house, is unwarranted and disproportionate. It does not reflect properly the presumption in favour of sustainable development.

161. The council responded:

This requirement is in recognition of the fact that basements have a higher carbon embodiment compared to an equivalent above ground development. This requirement is to offset the additional carbon generated by constructing basements.

This is an existing policy and its supporting evidence will be published in due course.

Policy 5.4: Retrofitting of the London Plan should be referred to.

162. There are several points to be made:

- a. The comment that carbon emissions should be considered on a full life time basis has not been answered.
- b. The Council has not responded to the section from the Alan Baxter Associates report that basements tend to perform much better in environmental terms than above ground construction.
- c. The council states that 'This is an existing policy.' This is not correct.

- i. The existing control is made by the July 2009 Subterranean Development SPD and is not described at planning policy level.
 - ii. The existing policy requires compliance with Level 4 of the Code for Sustainable Homes (Eco-homes) for residential developments. The proposed policy requires compliance with BREEAM. They are not the same. BREEAM is more restrictive.
- d. The Council seems to hold that because they view the policy requirement as existing it should not be reviewed under the consultation process. That a policy is existing does not mean that it should not be assessed for legal compliance and planning soundness.
- e. Our comment on the presumption in favour of sustainable development has not been answered.
- f. The Council states that its supporting evidence will be published in due course. The supporting evidence is the Eight Associates report dated July 2010 that, as will be outlined shortly, is wrong in its primary conclusion that basements have greater carbon emissions over their full life cycle than above ground extensions.

163. We made the following comments in response to the policy on this area in the second draft policy.

There is no objection to the requirement that any new building associated with new basement development is constructed to a high level of performance in respect of energy, waste and water and no objection to the verification requirement proposed – although this is a matter properly dealt with by condition and referred to elsewhere within the Core Strategy. Here, as elsewhere therefore there is a degree of duplication.

Given the long term sustainability benefits of basement development there is no reasonable basis for requiring extraneous benefits in the environmental performance of a building where the project involves the construction of a basement only. This would also be onerous from a practical point of view, and could increase significantly the impact of the works on the surrounding area.

164. The council responded:

Basements have a much higher carbon embodiment compared to above ground development. This requirement is to offset the additional carbon generated in constructing the basement by upgrading the existing building to BREEAM domestic refurbishment 'very good' standard.

Basements in particular have high embodied carbon therefore it makes more sense to have this requirement as part of the basement policy.

Core Strategy policy CE1: Climate Change has targets for all new development and also for large extensions.

165. There are several points to be made:
- a. The Council appears to state that its policy on upgrading the existing building to BREEAM domestic refurbishment 'very good' standard is based on the higher embodied carbon of basements compared to above ground development. It ignores the fact that carbon emissions and environmental performance should be based on a building's full life cycle.
 - b. London Plan Policy 5.3 Sustainable Design and Construction states that carbon emissions and environmental performance should be based on a development's full life cycle. Two paragraphs from the London Plan are given below, relevant sections underlined.

Strategic. A. The highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime.

Planning decisions. B. Development proposals should demonstrate that sustainable design standards are integral to the proposal, including its construction and operation, and ensure that they are considered at the beginning of the design process.

- c. The London Plan is clear that sustainable development should be considered over the development's lifetime and should include its construction and operation. The London Plan does not emphasise or add more weight to embodied carbon compared to carbon emissions generated during the development's operating life. The Council should deal with a development's carbon emissions over its full lifetime and not place emphasis on embodied carbon.

Soundness of the Council's approach

166. The council's approach is unsound as it is based on incorrect evidence, the Eight Associates Life Cycle Carbon Analysis of Extensions and Subterranean Development in RBK&C dated 9 July 2010. No further evidence is provided and as such the supporting text and policy are not justified by the evidence.
167. We have completed a review of the Eight Associates analysis¹¹ which shows that the Eight Associates report is flawed and contains multiple errors and unsound methodology. The main flaws are that the Eight Associates report:
- a. Contains mathematical errors that increase the carbon emissions for basements and reduce the carbon emissions for above ground extensions.
 - b. Does not use a typical basement as its example but instead uses an atypical example which uses a greater amount of steel than is normal, increasing the embodied carbon of the basement example.

¹¹ Above ground extension and subterranean development - life cycle carbon review and analysis - August 2013 - Ashmount Consulting Engineers

- c. Omits significant amounts of building materials from the above ground extension example, thus reducing the embodied carbon from the above ground extension example.
- d. Uses a flawed methodology lacking logic and rigour.
- e. Incorrectly calculates that the operational performance for above ground extensions is more efficient than for basements. This is in direct opposition to the Council's Alan Baxter Associates report and all other energy reports and reviews.
- f. Is not based on the full lifetime of the basement and the above ground extension but instead uses an arbitrarily chosen lifetime of 30 years.
- g. Ignores the need for ongoing repair and maintenance to both above ground developments and to basements, which favours above ground extensions over basements in terms of carbon emissions as above ground extensions need greater and more frequent maintenance and repair work than do the structural elements of reinforced concrete basements.
- h. Bases its analysis on a basement development and an above ground development whose floor areas are too dissimilar to be relevant.
- i. Makes use of figures in the calculation of carbon emissions during construction working time that the Council and Eight Associates are unable to explain¹².
- j. Ignores the likelihood that a reinforced concrete structure underground has a longer expected life than an above ground extension.

168. We instructed an independent environmental consultancy, Ashmount Consulting Engineers Ltd, to complete a full cycle analysis of a typical reinforced concrete basement and an above ground extension of the same floor area.

169. The results of this analysis show that:

- a. In all cases basements have lower carbon emissions over their lifetime than above ground extensions provided that the concrete basement's structural lifetime is at least 44 years¹³.
- b. Reinforced concrete basements generally have a minimum design life of 100 years. At this time, even if the above ground extension has lasted 100 years without rebuild, the basement has 13% lower carbon emissions than the above ground development.
- c. Basements have significantly better carbon emissions performance when the likely longer life of the concrete basement over that of the above ground extension is considered. Basements are likely to have longer life spans than above ground extensions because:

¹² Supporting evidence - Council e mail to Ashmount Consulting regarding source of construction carbon factor.

¹³ Graph on page 13 of Above ground extension and subterranean development - life cycle carbon review and analysis - August 2013 - Ashmount Consulting Engineers

- i. The general design life of reinforced concrete structures is 100 years.
 - ii. Further to this the life span of below ground structures would be expected to be greater than the design life because:
 1. Structure is not subject to freeze / thaw.
 2. Lack of exposure to air decreases the carbonisation of the concrete.
 - iii. Demonstrated average life of above ground houses in England is 60 years¹⁴.
 - iv. Empirical occurrence of above ground extensions being demolished and replaced for aesthetic reasons particularly in high end residential market further lowering the expected life.
- d. A reasonable case was considered with a basement life of 120 years and an above ground extension life of 40 years. It was assumed that each would be rebuilt at the end of its building life period.
- e. In this case basements have 25% lower carbon emissions than above ground extensions.
170. The review of the Eight Associates' report and the results of the Ashmount Consulting Engineers' analysis are that basements have better carbon performance than above ground extensions in all practical cases. Reasoned justification 34.3.53 is not correct.
171. Therefore the evidence does not show that carbon emissions are worse than other types of development and the Council should not use this incorrect assertion as the basis for any part of the planning policy.
172. Basement developments should not be required to comply with environmental controls that are stricter than for above ground development or extensions.
173. Further to this, given basements have superior carbon performance, they should be a preferred form of development.
174. The council has adopted the BREEAM Domestic Refurbishment scheme. In order to assess the suitability of the scheme for basement development we instructed a review by Ashmount Consulting Engineers¹⁵.
175. The conclusions of this report are that:
- a. BREEAM Domestic Refurbishment **is suitable** for whole house refurbishment projects

¹⁴ English Housing Survey, Housing stock report 2008, Department for Communities and Local Government, ISBN 978-1-4098-2601-9

¹⁵ Supporting evidence - Review of RBKC Planning Policy CE1 Climate Change

- b. BREEAM Domestic Refurbishment **is not suitable** for basement extension projects where no improvements are being made to the existing dwelling as a whole.
 - c. Achieving BREEAM Domestic Refurbishment is not viable for many existing RBKC properties.
 - d. Achieving BREEAM Domestic Refurbishment 'Very Good' **is disproportionate** for some basement projects for example where a cellar is being made habitable by the addition of a single, small light well.
176. The report proposes that when there are no works being carried out to the existing house that rather than require a whole house assessment methodology, like BREEAM, a more practical assessment would be a stepped improvement of the Energy Efficiency Rating. This would encourage people with currently poor ratings to make practical improvements such as boiler replacements rather than see them make no improvements due to the impracticality of the proposed requirements and resultant termination of any planned works.
177. A separate matter with BREEAM Domestic Refurbishment is the treatment of excavated ground.
178. A possible conflict was identified whereby inert excavated ground may need to be transported significant distances to land redevelopment sites (quarries and golf courses) solely in order to meet BREEAM criteria. Inert spoil transportation over long distances for no other reason than to meet a BREEAM criterion would run contrary to the environmental intention of BREEAM.
179. We instructed Abba Energy Ltd, an environmental consultancy, to investigate this matter and they have confirmed the unresolved issue with the Council¹⁶
180. This unresolved issue of the treatment of inert ground under BREEAM demonstrates that the policy may not be consistent with achieving sustainable development and is unlikely to be the most appropriate strategy when considered against the reasonable alternatives.
181. In contrast our approach is proportionate and would encourage sustainable development in accordance with the London Plan, while being capable of preventing development which does not meet appropriate standards.
182. The issue identified in section 2 above on proposed changes to the policy is "Promoting, in a proportionate way, sustainable development – in relation to UK carbon emissions". The policy as ultimately drafted needs to be sufficiently flexible to enable the Council to take advantage of technological innovation as and when it is available. It is the objective of the policy which should be identified in the Core Strategy.

¹⁶ Letter from Abba Energy to Council relating to classification and treatment of excavated inert ground under BREEAM.

Section 9. Impact of proposed development on the leafy and well-treed character of the Borough's gardens

183. The Council proposes the following policies and supporting justification.

CL7 a. not exceed a maximum of 50% of each garden. 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 comprehensively planned sites;

CL7 d. not cause loss, damage or long term threat to trees of townscape or amenity value;

CL7 i. include a sustainable urban drainage scheme (SUDs), including a minimum of one metre of permeable soil above any part of the basement beneath a garden. Where the character of the gardens within an urban block is small paved courtyards SUDs may be provided in other ways;

34.3.50 A basement development next door has an immediacy which can have a serious impact on the quality of life, whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions. There are also concerns over the structural stability of adjacent property, character of rear gardens, sustainable drainage and the impact on carbon emissions. For all these reasons the Council considers that careful control is required over the scale, form and extent of basements.

34.3.51 The policy therefore restricts the extent of basement excavation under gardens to no more than half the garden and limits the depth of excavation to a single storey in most cases. The extent of basements will be measured as gross external area (GEA).

34.3.54 The townscape of the Borough is urban and tightly developed in character. However, rear gardens are often a contrast, with an informal picturesque and tranquil ambience, regardless of their size. Whilst basements can preserve the remaining openness of the townscape compared with other development forms, it can also introduce a degree of artificiality into the garden area and restrict the range of planting. Retaining at least half of each garden will enable natural landscape and character to be maintained, give flexibility in future planting (including major trees), support biodiversity and allow water to drain through to the 'Upper Aquifer'. 'Garden' is the private open area to the front, rear or side of the property, each assessed separately, and includes unpaved or paved areas such as yards. This policy takes into account the London Plan and the Mayor of London's Housing SPG both of which emphasise the important role of gardens. The National Planning Policy Framework (NPPF) also supports local policies to resist inappropriate development of residential gardens and excludes private gardens from the definition of previously developed land.

34.3.55 Keeping the unexcavated area of a garden in a single area and adjacent to similar areas in other plots allows better drainage, and continuity of larger planting supporting biodiversity. In back gardens this area will usually be the end of the garden furthest from the building.

34.3.60 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. All applications for basements likely to affect trees either on-site or nearby must be accompanied by a full tree survey and tree protection proposal for the construction phase. Core Strategy Policy CR6 Trees and Landscape will also apply.

34.3.68 Policy CE 2 of the Core Strategy requires surface water run-off to be managed as close to its source as possible. A minimum of one metre of suitably drained permeable soil above any part of a basement within a garden provides for both reducing the amount and speed of water runoff to the drainage system and the long term future of shrub and other garden planting. Other SUDs measures may also be required.

The Council's evidence

184. The supporting text states

34.3.54 basements can preserve the remaining openness of the townscape compared with other development forms.....

185. The Council does not appear to have given weight to their own statement above that recognises that basement development under gardens is attractive in urban areas as it allows development without negative impact on the openness of the townscape.

186. The results from the Council's Basement Developments - Neighbours survey - November 2012 on the appearance of gardens are summarised below.

187. Responses to the tick box section of the questionnaire.

a. Question - Would you say that basement development has had any impact on the way the property and its garden looks?

i. **4.1%** of all questioned said slightly worse / much worse (24% of those who responded)

ii. **95.9%** or all questioned said much better / slightly better / no change / cannot say / no response (76% of those who responded)

188. Of the 8,000 residents questioned 15 (**0.2%**) were sufficiently motivated to make comments about the loss of trees and planting.

189. The responses to the Council's own questionnaire do not appear to support the Council's stance that garden basements generally have a negative impact on the character of gardens.

Our evidence / analysis and how this has been responded to by the Council to date

190. Simon Haslam of Basement Force was a member of the RBKC Basements Working Group and attended meetings with the Planners, representatives of some of the

residents' associations and others. The following information was given to the Basement Working Group¹⁷:

- a. Technical expert's opinion that trees and all other forms of planting can be accommodated on top of a garden basement in the one metre of permeable soil.
- b. Photographs of trees in London living on top of basement structures (Hyde Park car park, Cavendish Square Gardens and Bloomsbury Square Gardens)
- c. Evidence to show improvement of a rear garden in Notting Hill by a garden basement development,
 - i. Photograph of existing rear garden showing fully paved yard with no planting of any kind.
 - ii. Garden plan and images of the proposed rear garden showing a mature tree to be planted in the one metre of soil on top of the rear garden basement.

191. This was raised in our general comments to the responses to the second draft policy:

Factual evidence and expert opinion supporting basement development that runs counter to the first draft policy has been ignored or superficially dismissed

As a member of the Basements Working Group I have given Council officers information to show that trees can be grown on garden basement roofs (report from our arboriculturalist to say that trees will grow on basement roofs; pictures of big trees growing on garden basement roof [Cavendish Square car park, Bloomsbury Square Gardens car park; Hyde Park car park]). Second draft policy then written and issued that does not take account of this. The impression given is that the Council is drafting policy which is not justified by the evidence available to them.

192. The Council responded:

Evidence has not been disregarded by the Council. The proposals with car parks underneath are from a different policy era. The policy objective is to retain a significant proportion of natural gardens and the reasons relate to planting but also to character of gardens and natural drainage.

193. The Council's response that "*car parks underneath are from a different policy era*" has no bearing on the evidence presented that mature trees can be grown on the roofs of garden basements.

194. The Council has not responded to the modern basement example referred to above that is currently being built in RBKC based on recent planning permission where the garden and planting has been improved by the basement development.

¹⁷ Supporting evidence - Information provided to RBKC Basement Working Group on trees and planting

195. We made the following comments in response to the supporting text on this issue in the second draft policy.

The 50% cap is arbitrary, over-prescriptive and not justified by the evidence.

The claimed rationale for the policy within this text is threefold

- a. The ability to provide appropriate landscaping and planting within gardens including the ability for flexibility in future mature tree planting.
- b. The impact on drainage especially into the sewer system.
- c. Construction impact on amenity

The policy should include criteria relating to these concerns rather than impose an unjustified cap on size. The applicant can be required to provide appropriate technical reports and, to the extent necessary, permission can be controlled by conditions and section 106 obligations.

The text also mis-applies the London Plan policy 3.5 A which states

Housing developments should be of the highest quality internally, externally and in relation to their context and to the wider environment, taking account of strategic policies in this Plan to protect and enhance London's residential environment and attractiveness as a place to live. Boroughs may in their LDFs introduce a resumption against development on back gardens or other private residential gardens where this can be locally justified.

It addresses very different planning issues which are not engaged by building under gardens.

On the question of landscaping, I have already provided arboricultural evidence to the Council which demonstrates that substantial trees can be planted over garden basement roofs.

On the question of drainage, the 50% figure is not supported even by the evidence claimed to be relied on by the Council, Alan Baxter's report. Standard engineering techniques can achieve the objectives of the policy for drainage to the Upper Aquifer and for avoiding an increase in surface water flow into the sewer system. We have taken expert advice that supports this view.

On the question of construction impact, it fails to recognise that while some vocal individuals have been affected by basement development, there are many parts of the Borough capable of being developed in this way without undue impact on the surrounding environment.

196. The council responded:

Noted. The policy objective is to retain a significant proportion of gardens in their natural state so they can perform the range of roles set out in the London Plan Housing SPG. Basements also have a high carbon embodiment and limiting their extent will help reduce carbon emissions. This will be made clear at the next stage.

When applying policy, the policy objectives should be considered. While seeking to stop infill development the reasons to stop such developments apply equally to basement development.

Reasoned justification to Policy 3.5 states that “back gardens play important roles in addressing many of these policy concerns, as well as being a much cherished part of the London townscape contributing to communities’ sense of place and quality of life.” The London Plan Housing SPG (para 1.2.18) further amplifies the roles that gardens play including

- “defining local context and character including local social, physical, cultural, historical, environmental and economic characteristics,
- Providing safe, secure and sustainable environments and play spaces,
- Supporting biodiversity, protecting London’s trees, ‘green corridors and networks’, abating flood risk and mitigating the effects of climate change including the ‘heat island’ effect, and
- Enhancing the distinct character of suburban London.”

Para 1.2.22 of the London Plan Housing SPG further states “*Gardens can clearly be very much part of form, function and structure which warrants respect and protection.*”

Development both above or below ground can alter the character of gardens and adversely impact on the roles defined in the London Plan Housing SPG. It is reasonable to expect a significant proportion of gardens to be kept free of any development to allow their natural character to be maintained.

Para 53 of the NPPF also states “Local planning authorities should consider the case for setting out policies to resist inappropriate development of residential gardens, for example where development would cause harm to the local area.”

Private residential gardens are not considered brownfield sites by national planning guidance. The National Planning Policy Framework (NPPF) categorically excludes them from the definition of previously developed land.

The policy makes an exception for larger comprehensively planned sites in recognition of the fact that on some large sites large development is possible without adversely impacting on residential amenity.

Noted. The policy objective is to retain a significant proportion of gardens in their natural state so they can perform the range of roles set out in the London Plan Housing SPG. Basements also have a high carbon embodiment and limiting their extent will help reduce carbon emissions. This will be made clear at the next stage.

197. We made the following comments in response to the policy on this area in the second draft policy.

The 50% cap is arbitrary, over-prescriptive and not justified by the evidence.

Please see further representations on the text supporting the policy above.

In addition:

The arbitrary cap of 50% is a further 25% lower than was proposed in the first round of consultation and both are without sound justification. This lower figure is not even supported by Alan Baxter's report.

Three reasons for it are given in the response to consultation on the first draft policy and none of them justifies the lower figure. Together they suggest that the Council is taking an emotional anti-basement stance which is entirely contrary to the principles of the NPPF.

The commercial opportunities of larger basements will attract the more innovative, skilled, more expensive and ultimately higher quality developers. This is a highly competitive sector and the demand for basements will not go away. This policy could have a profoundly damaging effect on investment at the top end and, ultimately, the objective of the Council which must be to foster sustainable development – in the case of basements this means basements of the highest quality on appropriate sites.

198. The council responded:

The objective is to retain a significant proportion of gardens in their natural form to allow the continuation of the different roles that gardens play but at the same time allow development to take place. The second draft policy states that 50% is a maximum figure so the policy objective is to retain at least 50% natural gardens.

The London Plan Housing SPG (para 1.2.18) further amplifies the roles that gardens play including

- “defining local context and character including local social, physical, cultural, historical, environmental and economic characteristics,

- Providing safe, secure and sustainable environments and play spaces,
- Supporting biodiversity, protecting London's trees, 'green corridors and networks', abating flood risk and mitigating the effects of climate change including the 'heat island' effect, and
- Enhancing the distinct character of suburban London."

Para 1.2.22 of the London Plan Housing SPG further states "Gardens can clearly be very much part of form, function and structure which warrants respect and protection."

Basements can impact on the natural character of garden, and create issues relating to drainage which are linked to flood risk, restrict flexibility in planting and have an impact on biodiversity. Therefore it is reasonable to expect a significant proportion to be retained in its natural form.

199. Our position on the supporting text and the proposed policy has been given previously in Section 4. We repeat briefly:

- a. The Council take the word 'can impact on the natural character of gardens' and then applies this as if the meaning were 'will impact on the natural character of gardens'. The character of any garden is largely down to the preference of the owner.
- b. Any tree, bush, plant or shrub that is natural to the UK can grow to full size and live a full life span in the one metre of soil on top of a garden basements. We have given this evidence to the council several times.
- c. Basements under gardens with one metre of soil do not conflict with any of the extracts from the London Plan Policy that have been quoted above by the council. The wording from the London Plan does not justify the limitation in size proposed in the policy.
- d. The council appears to be misrepresenting and misusing the London Plan Policy out of context in order to justify the policy.
- e. The Council seems to imply that basement development is allowed to harm protected trees. This is not the case.
- f. The council's Basements Visual Evidence is flawed¹⁸ as:
 - i. The example basements shown almost all gained planning permission before the 2009 basement policy that requires one metre of soil to allow planting. Therefore the report does not demonstrate a failing in the current policy but in the previous pre-2009 policy.

¹⁸ Supporting evidence - Review of RBKC Basements Visual Evidence July 2013

- ii. There are several examples (48, 50 and 52 Drayton Gardens) where the gardens shown as examples of gardens with poor character due to having rear garden basements do, in fact, not have garden basements underneath.
- iii. The garden (31 Brompton Square) of a person who illegally removed a protected tree and built beyond the permission of his planning permission has been used as part of the evidence.

Soundness of the Council's approach

200. Policy CL7 d. not cause loss, damage or long term threat to trees of townscape or amenity value, is sound, as is supporting justification 34.3.60. These are entirely consistent with the approach we have proposed.
201. However the council's policy CL7 a. and supporting reasoned justifications 34.3.50, 34.3.51, 34.3.54 and 34.3.55 are unsound as they have not been positively prepared, have not been justified and will not be effective.
202. In terms of the evidence
- a. The Basements Visual Evidence is incorrect or flawed and cannot be considered as credible evidence - there is no proven causation between the character of a garden and the existence or absence of a basement underneath it, with a metre of soil between it and the surface. The character of a person's garden reflects their lifestyle and design preferences, not the development of a basement.
 - b. The council's own Neighbour's Survey shows that, contrary to the reasoned justification and policy, changes in the appearance or character of gardens is not of significant concern.
203. In contrast considerable evidence has been presented that garden basements do not need to cause harm to the character of rear gardens:
- a. Information provided to the Basement Working Group from a technical expert, and evidence of mature tree planting on basement roofs and evidence to show improvement in the garden's character with a basement development.
 - b. Evidence from tree expert, Adam Hollis, that gardens of any sort can be planted on top of garden basements. An updated report from Adam Hollis is included with this representation¹⁹.
204. The policy and reasoned justification concerning CL7 a. "The unaffected garden must be in a single area and where relevant should form a continuous area with other neighbouring gardens" are not sound with regard to the character of gardens as:
- a. No evidence has been given to support the policy or justification.

¹⁹ Supporting evidence - RBKC publication planning policy arboricultural input - Landmark Trees - 28 Aug 2013

- b. The garden being in a single area and adjacent to similar areas does not, all other things being equal, allow better drainage, support continuity of larger planting or support biodiversity.
 - c. Larger planting is not restricted in any way by garden basements with one metre of soil on top.
 - d. Biodiversity is not restricted in any way by garden basements.
205. The use of planning conditions was proposed to allow the enhancement of rear gardens where garden basements are developed. This suggestion, which would have resulted in an appropriate and sustainable strategy, was ignored.
206. The policy does not seek to objectively assess development requirements. Rather it uses a broad brush and course restriction as a proxy for protecting or enhancing the character of gardens.
207. The logic behind the 50% restriction as a proxy for preserving the character of gardens is flawed. There is no proven causal relationship between constructing a basement and making a modern garden: people may use the fact that they are constructing a basement to alter their garden, but there is no reason to think they would not do so anyway if prevented from constructing a basement. Since a naturalistic garden is perfectly possible over a basement, it is obviously for reasons of preference, taste and ease of maintenance that people have chosen to modernise their garden design.
208. That the proposed policy CL7 a has such a poor evidence base, is not the most appropriate strategy and does not use objectively assessed criteria make it susceptible to successful appeal.
209. The proposed policy will not effectively deliver the legitimate aim of the policy, namely to deter only those basement developments which would cause material harm.
210. In contrast with the Council's arbitrary set of prescriptive limitations on scale, we have suggested a criteria-based policy coupled with the use of planning conditions which would avoid harm and could be used to maintain the leafy, bio diverse and well-treed character of the Borough's gardens, assuming that to remain a policy objective of the Council.
211. This suggested approach would effectively prevent an unsympathetic alteration to the leafy and well-treed character of the Borough's gardens in appropriate cases.

Section 10. Incorporation of SUDS and other hydrological matters

212. The Council proposes the following policies and supporting justification.

CL7 a. not exceed a maximum of 50% of each garden. 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 comprehensively planned sites;

CL7 i. include a sustainable urban drainage scheme (SUDs), including a minimum of one metre of permeable soil above any part of the basement beneath a garden. Where the character of the gardens within an urban block is small paved courtyards SUDs may be provided in other ways;

34.3.50 A basement development next door has an immediacy which can have a serious impact on the quality of life, whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions. There are also concerns over the structural stability of adjacent property, character of rear gardens, sustainable drainage and the impact on carbon emissions. For all these reasons the Council considers that careful control is required over the scale, form and extent of basements.

34.3.51 The policy therefore restricts the extent of basement excavation under gardens to no more than half the garden and limits the depth of excavation to a single storey in most cases. The extent of basements will be measured as gross external area (GEA).

34.3.54 The townscape of the Borough is urban and tightly developed in character. However, rear gardens are often a contrast, with an informal picturesque and tranquil ambience, regardless of their size. Whilst basements can preserve the remaining openness of the townscape compared with other development forms, it can also introduce a degree of artificiality into the garden area and restrict the range of planting. Retaining at least half of each garden will enable natural landscape and character to be maintained, give flexibility in future planting (including major trees), support biodiversity and allow water to drain through to the 'Upper Aquifer'. 'Garden' is the private open area to the front, rear or side of the property, each assessed separately, and includes unpaved or paved areas such as yards. This policy takes into account the London Plan and the Mayor of London's Housing SPG both of which emphasise the important role of gardens. The National Planning Policy Framework (NPPF) also supports local policies to resist inappropriate development of residential gardens and excludes private gardens from the definition of previously developed land.

34.3.55 Keeping the unexcavated area of a garden in a single area and adjacent to similar areas in other plots allows better drainage, and continuity of larger planting supporting biodiversity. In back gardens this area will usually be the end of the garden furthest from the building.

34.3.68 Policy CE 2 of the Core Strategy requires surface water run-off to be managed as close to its source as possible. A minimum of one metre of suitably drained permeable soil above any part of a basement within a garden provides for both reducing the amount and speed of water runoff to the drainage system and the long term future of shrub and other garden planting. Other SUDs measures may also be required.

The Council's evidence

213. The council is using the incorporation of SUDS and drainage as a justification for limiting the size of garden basements to 50%.

214. The Alan Baxter report states:

Page 32. 9.8.3 Where the near surface subsoil is gravel... ...As a rule of thumb, 25% of the garden area is likely to be sufficient to enable this to happen. On this basis a new basement should not occupy more than 75% of the area of a garden.

Page 32. 9.8.3 Where the near surface subsoil is clay....There is no simple rule of thumb that can be applied here, but in situations where the garden and adjoining gardens are level, all water falling on the garden and basement footprint of the development property, should be retained on that property (or drained away using an attenuated system). To enable the clay subsoil to absorb some of the rainwater, a proportion of the garden should not be built under and on clay sites this might be between 25% and 50%. On this basis a new basement should not occupy more than between 50% and 75% of the area of a garden on clay sites.

215. In summary The Alan Baxter report states that in areas of gravel 25% of the garden should be retained for drainage and between 25% and 50% in clay areas.

216. The Council has used the drainage argument, based on the Alan Baxter report, as support for the 50% garden limitation. When questioned on this the Council has given responses such as:

The figure is not based only on the drainage issues set out in Alan Baxter and Associates report. (Second Draft Response page 182)

217. In response to this we commissioned a review of the proposed policy and supporting documents with respect to hydrological matters by the Infrastructure London Group at the engineers Ove Arup & Partners Ltd²⁰.

218. Arup's summary recommendation was that with respect to drainage and hydrological matters:

We recommend that the policy be revised such that applications which are demonstrably not worse than current conditions (regardless of project size) and satisfy all other planning constraints (including demonstration that current conditions are satisfactory) be considered for approval.

²⁰ Supporting evidence - Hydrologic review of second draft policy for public consultation - 29 April 2013. Ove Arup & Partners Ltd

219. The Arup report was prepared by hydrologists and hydrogeologists. The Alan Baxter Associates is not believed to have been prepared by qualified hydrologists and hydrogeologists.

Our evidence / analysis and how this has been responded to by the Council to date

220. We made the following comments in response to the reasoned justification on this area in the second draft policy.

You need only SUDS – saying that you need one metre of permeable soil is telling you how to achieve SUDS.

The justification for SUDS is to avoid additional surface water causing flooding of the sewer system. It doesn't need any more than this.

221. The council responded:

Noted. The 1m of soil has two purposes; for SUDs as well as for planting. Para 34.3.71 states that where the character within an urban block is small paved courtyard SUDs can be provided in other ways.

Noted. The text is brief and is considered necessary.

222. There is one point to be made:

- a. The Council's response does not justify why the policy within criterion "i" persists in directing the developer how to achieve SUDS . The point is that SUDS can be achieved in multiple ways and does not require one metre of soil. Planting requires soil. The one metre of soil needs only to be part of the planting requirement. Linking SUDS to having one metre of soil is not necessary and adds complication to the policy.

223. We made no additional comments on the proposed policy.

Soundness of the Council's approach

224. The intention of policy CL7 i - the inclusion of SUDS - is considered sound. However, linking the one metre of permeable soil to the SUDS requirement is not sound because:

- a. It limits the options open to designers and therefore stifles innovation, an aim of sustainable development.
- b. No evidence for the link between SUDS and the one metre of soil has been provided.
- c. It is not the most appropriate strategy. The most appropriate strategy being to require SUDS and then leave the designer to achieve the objectively set criteria.
- d. It adds unnecessary complexity which reduces the effectiveness of the policy.

225. With regard to policy CL7 a and reasoned justifications 34.3.51 and 34.3.54 being used to limit the size of garden basements they are all unsound because the proposed approach:

- a. Uses arbitrary criteria, not even supported by the council's own technical report, rather than using objectively assessed criteria.
- b. Limits development without good reason and is therefore not consistent with achieving sustainable development.
- c. Is not based on the evidence - in gravel areas the policy requirement is demonstrably more limiting than recommended by the council's technical report and in areas of clay runs counter to the council's technical report which states that "There is no simple rule of thumb that can be applied here".
- d. Is not the most appropriate strategy when viewed against the reasonable alternatives, namely that proposed by the hydrologists and geohydrologists of the Infrastructure London Group at Ove Arup Ltd who state that project size should not be a criteria when considering drainage matters.
- e. Given all of the above decisions are likely to be subjected to unnecessary appeals .

226. With regard to the supporting text 34.3.55 using drainage as part the justification for keeping the unexcavated area of a garden in a single area and adjacent to similar areas in other plots this is not viewed as sound because:

- a. No evidence has been provided to support the restriction which is arbitrary.
- b. Limits design options without good reason and therefore is not consistent with sustainable development.
- c. Decisions are likely to be subject to unnecessary appeals with the expense and delay this causes.

227. In contrast, our suggested approach is to require proposals to incorporate SUDS and to deal acceptably with other hydrological matters, in that applications which are demonstrably not worse than current conditions (regardless of project size) and satisfy all other planning constraints (including demonstration that current conditions are satisfactory) be considered for approval.

Section 11. Well designed including protection from sewer flooding

228. The Council proposes the following policies and supporting justification.

CL7 n. be protected from sewer flooding through the installation of a suitable pumped device.

34.3.72 Given their nature, basements are more susceptible to flooding, both from surface water and sewage, than conventional extensions, and applicants are advised to see Policy CE2. Fitting basements with a 'positive pumped device' (or equivalent reflecting technological advances) will ensure that they are protected from sewer flooding. Fitting only a 'non return valve' is not acceptable as this is not effective in directing the flow of sewage away from the building.

The Council's evidence

229. The Alan Baxter report states:

Page 29. 9.5.5.2 Basements planned in these areas will need to be designed to take account of these increased flood risks. To do this, those designing and building new basements need a thorough understanding of the flood risks and conditions.

230. The report does not state how the basements should be protected from flooding.

Our evidence / analysis and how this has been responded to by the Council to date

231. We made the following comments in response to the reasoned justification on this area in the second draft policy.

This is a proper concern of Building Control and an obvious statement both as to the risks and as to the importance of safeguarding against them, but the planning policy seeks to overreach itself and is over prescriptive both within the text and the policy.

The correct way to protect a dwelling from sewer flooding is given in British Standards, the highly readable *BS EN 12056-4 - Gravity drainage systems inside building - Part 4: Wastewater lifting plants – Layout and calculation*. No doubt this will change and be updated over the years.

232. The council responded:

The Borough has experienced flooding incidents in the past 20 years. Many related to the inability of the Counters Creek, the Victorian sewer system to cope with the amount of surface and foul water entering the system during significant rainfall event.

This issue was raised by Thames Water in the representation to the last consultation. The intention is to ensure that basements are designed so that they are protected from sewer flooding. Thames Water's regulator Ofwat agree this is the most suitable technology.

The text gives the flexibility to respond to changes in technology.

233. We made the following comments in response to the policy on this area in the second draft policy.

It is a statement of the obvious that all basement development should be protected from sewer flooding. The criterion

- a. Is unnecessary and
- b. should not prescribe how the protection should be provided

234. The council responded:

Noted. This issue was raised by Thames Water in the representation to the last consultation. The intention is to ensure that basements are designed so that they are protected from sewer flooding. Thames Water's regulator Ofwat agree this is the most suitable technology.

As noted in the text, other devices (in-line with technical advances) can be used.

235. The only point to be made is one of drafting. Basements should be protected from flooding. However there is a correct British Standard in place, BS EN 12056-4. The policy could be better worded than proposed to make it simpler and to have more ability to cope with future technology developments.

Soundness of the Council's approach

236. The intention of policy CL7 n is sound.

237. However the policy wording could be simplified and made more generic in order to increase simplicity and improve the ability to cope with future technical developments.

238. In contrast, our suggested approach is that basements should be well designed (including protection from flooding and other technical matters);

Section 12. Impact on the structural stability of any building or structure

239. The Council proposes the following policies and supporting justification.

CL7 b. not comprise more than one storey. Exceptions may be made on large comprehensively planned sites;

CL7 m. be designed to minimise damage to and safeguard the structural stability of the application building, nearby buildings and other infrastructure including London Underground tunnels and the highway;

34.3.50 A basement development next door has an immediacy which can have a serious impact on the quality of life, whilst the effect of multiple excavations in many streets can be the equivalent of having a permanent inappropriate use in a residential area with long term harm to residents' living conditions. There are also concerns over the structural stability of adjacent property, character of rear gardens, sustainable drainage and the impact on carbon emissions. For all these reasons the Council considers that careful control is required over the scale, form and extent of basements.

34.3.56 As well as causing greater construction impacts and carbon emissions, deeper basements have greater structural risks and complexities. In order to minimise these risks to the high quality built environment of the Royal Borough the policy takes a precautionary approach by limiting basements to a single storey.

34.3.59 Building additional basements underneath existing ones will result in deep excavations which have greater structural risks. Basements will therefore be restricted to single, one-off schemes and, once a basement is built, a further basement underneath or in the garden will not be acceptable at the same site.

34.3.71 Basement development can affect the structure of existing buildings. The applicant must thoroughly investigate the ground and hydrological conditions of the site and demonstrate how the excavation, demolition, and construction work (including temporary propping and other temporary works) can be carried out whilst safeguarding structural stability. Minimising damage means limiting damage to an adjoining building to Category 1 (Very Slight - typically up to 1mm). These are fine cracks which can be treated easily using normal decoration. The structural stability of the development itself is not controlled through the planning system but through Building Regulations and the Party Wall Act is more suited to dealing with damage related issues.

The Council's evidence

240. First Consultation Response draft policy March 2013, page 120,

Alan Baxter and Associates response: Geotechnical consultants can advise re ground movements regarding changes in load. However it is likely that the majority of movements are as a result of the method and sequence of construction, the temporary works and the care and diligence of the contractor.

241. The critical points to take from the council's technical expert are:
- a. While the method, sequence of construction and temporary works can be proposed in outline at planning stage they cannot be set as absolute requirements at that point. This means that a planning requirement for highly detailed method statements and construction sequences as part of the planning process is somewhat pointless as they will often be changed at a later time, possibly up to three years later when the develop commences.
 - b. Detailed construction statements and methods can give a false sense of security over the management of the construction risk.
 - c. More important is the quality of the contractor undertaking the works.
 - d. Some form of contractor quality control or site enforcement would probably be a more effective and appropriate approach to reducing the risk to structural stability of basement developments rather than overly emphasising the need for more and greater detailed information at the planning stage.

242. First Consultation Response draft policy March 2013, page 96, Edward Barker

We do not feel that it should be as simplistic as allowing only one basement level. We feel that each scheme should be decided on its merits, for instance a two storey basement may well be appropriate on a more spacious and less restricted site.

Alan Baxter and Associates response: Each scheme needs to be considered on its merits.

Alan Baxter's report does not suggest restricting basements to one level only, only requesting 'special care' is taken in their design

Alan Baxter and Associates response: Agreed.

There are several aspects of a basement more important to its impact than the depth of the excavation (such as its

proposed construction method, careful selection of the right contractors to carry out the work etc.)

Alan Baxter and Associates response: Agreed.

243. Alan Baxter and Associates, the council's technical expert, do not " suggest restricting basements to one level only, only requesting 'special care' is taken in their design"

Our evidence / analysis and how this has been responded to by the Council to date

244. We made several comments to the reasoned justification and policy on this area in the second draft policy.

245. Second draft responses page 69 para 34.3.58

The Baxter Report itself recognises the importance of good design and workmanship for all basement projects, not only the deeper or larger proposals. The response by Alan Baxter & Associates to Edward Barker in the Consultation Responses to Draft Basements Policy March 2013, page 96, recognises that there are several more important factors than basement depth causing construction impact.

246. The council responded:

Noted.

247. Second draft responses page 97 para 34.3.61 - 62

Construction risk is regulated by other regimes and the planning system should not use it to justify constraints on development: the same argument could be used to prevent all technically complex or risky development projects and thereby stifle innovation.

248. The council responded:

The policy is seeking to protect the high quality built environment of the Borough. Constructing a basement underneath or in close proximity to existing buildings can cause structural damage to neighbouring buildings. These risks are greater for multi-storey basements and are highlighted in the Alan Baxter and Associates report. Similar issues are not seen to occur in above ground development.

249. Second draft responses page 192 CL7 b

This criterion is arbitrary and not justified by reliable evidence. It is legitimate to seek to ensure high quality design and workmanship in all development projects, particularly given the construction risks associated with all basement development, but this is not achieved by blanket bans on second storeys.

250. The council responded:

Noted.

251. The main point to note is that the Council has not followed the advice of its technical expert who expressly states that they do not suggest restricting basement development to one level only.

Soundness of the Council's approach

252. The council's approach is not sound as it is not positively prepared, not justified and is unlikely to be effective.

253. The council has not provided evidence that basements of more than one level have caused structural problems despite being asked to do so, including:
- a. Second draft responses, page 92; 34.3.61; Panorama Property Services (James Agace); *"Have there been more problems with multi-level basements than single level basements?"*
 - b. Council response *"The evidence that multi-storey basements are more complex and challenging than single storey basements is in the Alan Baxter and Associates report."*
254. The Council's proposed approach is not the most appropriate strategy from a structural stability point of view - the Council's own technical expert states that *"Each scheme needs to be considered on its merits."* In the face of this opinion from its own expert the Council has decided that its own opinion of taking "a precautionary approach by limiting basements to a single storey" is more valid.
255. The criteria of limiting basements to a single storey is arbitrary and does not seek to objectively assess development requirements. There are single level basements that will have greater risk than some double level basements. As Alan Baxter Associates state each scheme should be considered on its own merits.
256. The policy is unlikely to be effective considering that the Council has not followed the advice of its own engineers and not provided any evidence to support the view that multiple level basements have resulted in more damage than single level basements.
257. In contrast, our suggested approach is to require consideration whether an adverse impact on the structural stability of any building is likely. This is positively prepared and aligned with the Council's technical expert.