

# Responses to the Inspector

Matter 9b: Respecting Environmental Limits

Core Strategy with a focus on North Kensington

Examination in Public

July 2010

## Public Examination of Royal Borough of Kensington and Chelsea's Core Strategy with a focus on North Kensington DPD

### Royal Borough of Kensington and Chelsea's Statement

#### Matter 9b – Respecting Environmental Limits

##### Question 1

*The Council's policy on Climate Change, CE1, sets specific CfSH/BREEAM standards to be met by new development and conversions and refurbishments. **The Policy, as drafted, is ambitious but is it too prescriptive and possibly undeliverable? Is it necessary to incorporate a 'subject to viability' requirement?***

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- 1.0 *No. The requirements to meet the specific Code for Sustainable Homes (CfSH) and British Research Establishment Environment Assessment Method (BREEAM) standards are neither unduly prescriptive nor undeliverable as these:*
- a) reflect national and regional planning policy requirements;*
  - b) are based on a credible evidence base relating to feasibility and viability;*
  - c) have been included in the Core Strategy since the 'Interim Issues and Options' Feb 2008,*
  - d) are deliverable, flexible, enforceable and able to be monitored through the existing development management system; and*
  - e) reflect viability being a material planning consideration to be considered on a case by case basis, which is implicit throughout the Core Strategy.*

- 1.1 Point (a) is explored further under Inspector's Matter 9b, Question 3. Points (b) to (e) are explored further below

##### **Credible evidence base**

- 1.2 The evidence in support of the Council's policy approach to mitigating climate change is set out in detail in Chapters 36.3.1 to 36.3.14 of the Core Strategy. However, the following evidence particularly supports the CfSH and BREEAM standards in Policy CE1(a) to CE1(c) to assess environmental performance.
- 1.3 In October 2009, the Council commissioned consultants, Pitman Tozer and Eight Associates (CD79), to explore the potential for existing buildings to meet the sustainable building targets set out in a previous draft of the Core Strategy, having particular regard to cost and townscape implications. On the advice of the consultants, the Council amended Policy CE1(b) and CE1(c) to use EcoHomes standards, which are better suited to refurbishments and conversions to existing buildings, whereas the Code for Sustainable Homes is designed for new development. The consultants actually found that, in accordance with Policy CE1(b) as amended, it is feasible to retrofit one existing dwelling to meet the required standards, which would better reflect the Council's aspirations for an ambitious approach to mitigate climate change. However, the Council believes that it is

reasonable to implement and test the policy for conversions and refurbishments for larger scale development before considering the extent to which the policy might consider individual buildings.

- 1.4 Given the nature of development in the Royal Borough, where planning applications of fewer units of larger floor areas are regularly submitted, the Council has developed local thresholds for determining affordable housing requirements. If the Inspector is minded to allow, the Council proposes to also use these floor area thresholds in Policy CE1 to better reflect local development in this Borough. The Council proposes the following revision to Policy CE1(a) “require an assessment to demonstrate that all new buildings and extensions of 800m<sup>2</sup> or more residential development or 1,000m<sup>2</sup> more non-residential defined as major development achieve ...” and Policy CE1(b) “require an assessment to demonstrate that conversions and refurbishments of 800m<sup>2</sup> or more residential development or 1,000m<sup>2</sup> more non-residential defined as major development achieve ...”.
- 1.5 The Council’s Affordable Housing Viability Study, prepared by Fordham Research in September 2009 (CD58), takes into account the cost of achieving the Council’s CfSH and BREEAM standards for sustainable buildings up to 2013. This study suggests an affordable housing target of 40%, taking into account the property prices in this Borough and other policy requirements, including Policy CE1. An update to the Affordable Housing Viability Study in June 2010 indicates that a target closer to 46% is now viable due to changes in the housing market over the year since preparing the 2009 Affordable Housing Viability Study. The Council is therefore requiring the maximum reasonable affordable housing with a presumption of 50% because there is evidence within the SHMA that 50% of future additional housing should be provided as affordable housing based on ‘need’. The Council’s Viability Study also acknowledges that environmental sustainability measures will get cheaper over time.
- 1.6 The Council has been receiving increasing numbers of planning applications for subterranean development. The Subterranean Development Scoping Study, prepared by Arup in June 2008 (CD45), identifies the following environmental and sustainability issues of this type of development:
- Disposal of excavated spoil in landfill if comprising of “made ground”,
  - Deliveries to and from the construction site, including transportation of spoil,
  - Concrete has a relatively high carbon dioxide (CO<sub>2</sub>) emission rating, and
  - Loss of permeable ground for sustainable urban drainage.
- Basement developments also generate additional CO<sub>2</sub> emissions through their construction, in terms of material and working practices, and occupation, in terms of lighting and ventilation.
- 1.7 This evidence is currently being complemented by exploring the carbon dioxide emissions of a typical subterranean development compared to a typical rear extension. The ‘Life Cycle Carbon Analysis of Extensions and Subterranean Development in RBK&C’ study (Eight Associates, July 2010), shows that the Council’s Policy CE1( c) on subterranean development is reasonable as the emissions of a typical subterranean development is significantly greater than those of a typical rear

extension over the life cycle of the building. The embodied carbon of a subterranean development is approximately 828kg CO<sub>2</sub> per m<sup>2</sup> floor area compared with approximately 279kg CO<sub>2</sub> per m<sup>2</sup> for a rear extension, which equates to about a third the amount of embodied carbon per m<sup>2</sup> floor area provided. The life cycle analysis shows that there is high level of embodied CO<sub>2</sub> in the building materials relative to the operational CO<sub>2</sub> emissions of subterranean developments, when considered over a typical 30-year building life. The structural elements such as the concrete and steel piles used in subterranean development accounts for nearly half of the embodied carbon in the materials for this type of development. This study finds that Policy CE1(c) on subterranean development is reasonable as this type of development has a greater carbon footprint and therefore a greater environmental impact than standard above ground extensions.

### **Previous iterations of the Core Strategy**

- 1.8 The Council proposed several policy approaches to mitigating climate change in past iterations of the Core Strategy, although the delivery of ambitious targets was always a common theme. This, together with the use of the Code for Sustainable Homes and EcoHomes were always well supported, subject to viability and impacts on townscapes. This is already considered in the RBKC Policy Formulation Report, November 2009.
- 1.9 The Core Strategy Interim Issues and Options (Feb 2008) proposed two options on the extent to which the Council should set ambitious targets on environmental sustainability. One option was whether the Borough should become the most sustainable Borough in London and the other was merely using the legal requirements imposed through the Building Regulations. The first option received the most support during the consultation, although it was acknowledged that it would be difficult to become the most sustainable borough in London. That document also proposed several approaches to mitigate, and adapt to, climate change, which included a requirement that development meets Code for Sustainable Homes Level 4.

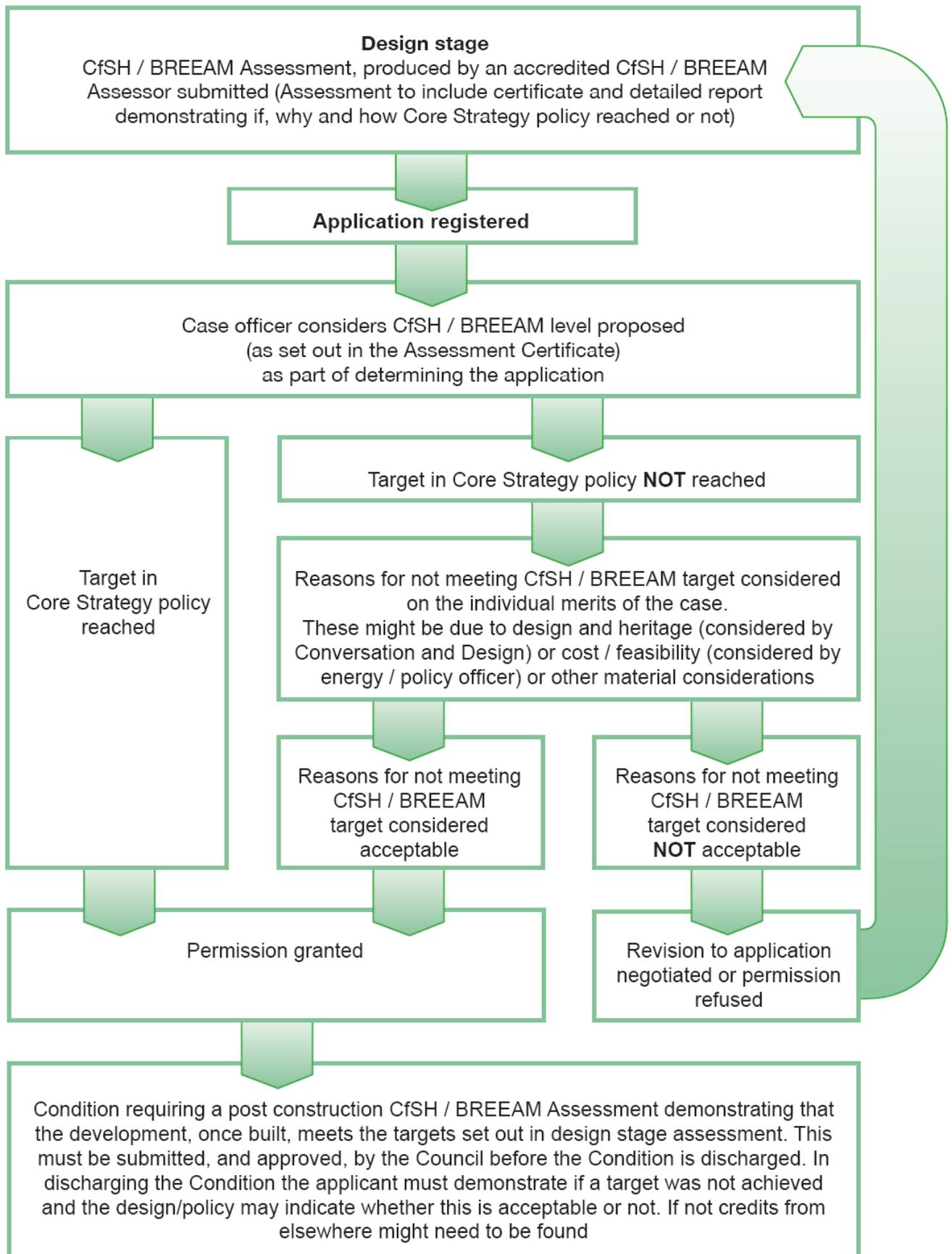
### **Deliverable, flexible, enforceable and able to be monitored**

- 1.10 The evidence base, addressed above, identifies the policy approach in Policies CE1(a) to (c) as being deliverable, particularly considering viability, townscape and subterranean development that are considered important within the context of Kensington and Chelsea.
- 1.11 Policies CE1(a) to (c) will be implemented through existing development management processes, which also provides some flexibility in so far as viability and impacts on townscapes are material planning considerations.
- 1.12 The Council will require a certified Code for Sustainable Homes / BREEAM Design Stage Certificate before a qualifying planning application is registered. Each planning application is then considered on its individual merits. The various policy requirements, such as environmental standards proposed and impact on townscape, and material planning considerations, such as viability, will need to be balanced on

the merits of the site and proposal. Appendix A, showing the process of determining the acceptability of the environmental standards, provides sufficient flexibility for a scheme to achieve the highest environmental rating, having regard to viability and impact on townscape. However, it is important that this is considered on a case by case basis, determined through negotiation with the case officer, design officer and environmental officer. This does not need to be explicit within the policy, as viability is a material consideration and impact on townscape is another Core Strategy policy.

- 1.13 Policies CE1(a) to (c) will be enforced through condition, requiring that the development is built to meet the standards proposed in the design stage certificate. If the design stage certificate fails to meet the relevant standards, material planning considerations will be taken into account in determining any application for the discharge of conditions, as would be expected with any application.
- 1.14 Chapter 38 of the Core Strategy sets out the targets and indicators for monitoring the Core Strategy Policies. The impact of the Council's policy approach to climate change will be judged by monitoring the borough wide Carbon Dioxide emissions, already monitored under the National Indicators. Policy CE1(a) to CE2(c) will be specifically monitored by considering the number of planning applications refused, yet granted at appeal.
- 1.15 Given the above, the environmental standards set out in Core Strategy CE1 are not considered unduly prescriptive or undeliverable, as these are in accordance with national and regional planning policy, reflect a credible evidence base, have been included in the core strategy since 'Interim Issues and Options' and deliverable through the existing development management process. The Council considers that viability is a material planning consideration in most planning applications, and therefore does not need to be explicit in the Core Strategy.

## Appendix A: Implementation of Policy CE1



# Public Examination of Royal Borough of Kensington and Chelsea's Core Strategy with a focus on North Kensington DPD

## Royal Borough of Kensington and Chelsea's Statement

### Matter 9b – Respecting Environmental Limits

#### Question 2

*Policy CE2 seeks to require development to mitigate the effects of and adapt to surface water and sewer flooding. However, a large number of properties are likely to remain at risk. The Council has adopted Subterranean Development SPD. Is there a need for a specific policy to ensure all proposals for basement developments in areas at risk incorporate measures to reduce vulnerability?*

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2.0 *No, as development in areas defined as having a medium and high probability of river and sea flooding (Flood Risk Zones 2 and 3 as defined in PPS25<sup>1</sup>) are required to include a Flood Risk Assessment (FRA) which includes mitigation measures. Flooding Policy CE2 also resists vulnerable development, including self-contained basement dwellings in Flood Risk Zone 3. Furthermore, Policy CE2 and practice set out in the Subterranean Development Supplementary Planning Document puts sufficient safeguards in place to prevent the potential for new basements to suffer from flooding and/or exacerbate the risk of flooding. However, it is difficult on current evidence to identify accurately areas at risk of surface and sewer water flooding. More research (already being undertaken) along with the results from the monitoring indicators, will give the Council a stronger basis for assessing future modifications of its current policy.*

Note: the following paragraphs will point out the evidence available to the Council in relation to flooding in the Borough. It will also explain the complex problem that flooding represents in the Borough and the need for further research.

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<sup>1</sup> PPS 25 explains (p.23-25) that Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences.

Flood Zone 2: Medium Probability: this zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% – 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% – 0.1%) in any year.

Flood Zone 3a: High Probability: this zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.

Flood Zone 3b: the Functional Floodplain. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. But land which would flood with an annual probability of 1 in 20 (5%) or greater in any year, or is designed to flood in an extreme (0.1%) flood, should provide a starting point for consideration and discussions to identify the functional floodplain.

- 2.1 The impacts of flooding on subterranean development and the impacts of subterranean development on ground water flows, drainage and water levels are all considerations when determining planning applications for subterranean development. In particular, planning is concerned with making sure that subterranean development is safe during periods of flooding.
- 2.2 The Council has taken into account the construction of basements and the risk of flooding in its Core Strategy Policies. Policy CE2 requires development to adapt to fluvial flooding and mitigate the effects of, and adapt to, surface water and sewer flooding. In particular, self-contained basement dwellings in Flood Risk Zone (FRZ) 3 will be resisted and a site-specific Flood Risk Assessment (FRA) will be required for all developments in FRZ2 and in FRZ3. Development at risk of flooding in FRZ2 and FRZ3 must incorporate suitable flood defence or flood mitigation measures following the recommendations of the FRA. Sustainable Urban Drainage (SUD) or other measures will be required from developments in all parts of the Borough and impermeable surfaces in front gardens will be resisted. (It is recommended that changes are made to the reasoned justification for Policy C1 'Infrastructure Delivery and Planning Obligations' –set out in the Submission draft- in the light of Thames Water's comments to mention utility infrastructure requirements including water, foul drainage and sewage treatment).
- 2.3 The Sequential test explains that the FRA should consider both the effects of modelled surface water flooding on the development and the potential to increase flooding elsewhere along with the effects of climate change. The FRA should also focus on the vulnerability to flooding from surface and sewer water flooding as well as from river and sea flooding, the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off. Finally, the FRA should consider mitigation of surface water flooding and prevention of existing flooding problems through the use of appropriate SUDs techniques depending on the ground conditions and constraints of the site and the prevention of on-site and off-site surface water flooding by achieving greenfield run off rates or better as required by the London Plan.
- 2.4 The Council has produced a Subterranean Development Supplementary Planning Document (SPD) in response to the rise in the number of planning application involving subterranean developments. The SPD explains that the impacts of flooding on subterranean development and the impacts of subterranean development on ground water flows, drainage and levels and safety during periods of flooding are considerations when determining planning applications for subterranean development. The SPD includes the following policies and informatives related to flooding:
- applications for self contained basement dwellings within Flood Risk Zone 3 will not be permitted.
  - Self contained basement dwellings in Zone 2 and any other basement uses in Zone 3 are only appropriate if they pass the Exception Test.
  - All planning applications for subterranean development in Flood Zones 2 and 3 and for sites greater than 1 ha in Flood Risk Zone 1 must be submitted with

a FRA detailing the potential for the various types of flooding and demonstrating how the development will be made safe.

- the Council will require the following for all basement proposals under gardens:
  - 1m of permeable soil above the top cover of the basement;
  - No more than 85% coverage of the garden space (between the boundary walls and existing building), with the remainder of the space used for drainage, planting and ‘tree pits’;
  - the provision of drainage technology to facilitate the movement of water over and around the basement, to ensure it does not collect on the top of the basement and facilitate sustainable urban drainage systems.
  - Where 1m of soil above a subterranean development is not required and the garden area is larger than 5m<sup>2</sup> (measured from the side of the dwelling to the appropriate boundary walls) the Council will require a soak away or other type of sustainable urban drainage system.
- The Council will resist development under garden squares.
- The Council will discourage the use of space below public footways for subterranean developments, such as for vaults and storage space. This will protect the planting location and rooting area of existing street trees, the existing services (including their access for maintenance by statutory undertakers) and will also allow water to drain naturally.
- Informatives I164, I165 and I166 can be included as part of a planning permission to make the applicant aware that:
  - surface and sewer water flooding occurs within the borough;
  - the need for an FRA and mitigation measures;
  - any risk of this type of flooding must be mitigated against and it is the responsibility of the owner and/or occupier, and
  - the applicant is advised to sign up to the free Flood Warning Direct service.

2.5 The Subterranean Development SPD also explains that the Environment Agency does not comment on planning applications unless they are in FRZ 2 or 3, or sites greater than 1 ha. The Council will therefore not require site specific flood risk assessment where the Environment Agency does not provide comments.

2.6 The Council considers that Policy CE2 and the Subterranean Development SPD put in place enough safeguards to ensure that proposals for basements development in areas at risk incorporate measures to reduce vulnerability and to prevent the risk of flooding.

2.7 The Council’s policy regarding flooding and subterranean development has been informed by the findings of the Arup Report, the Strategic Flood Risk Assessment, the Sequential Test, the Counters Creek Sewer Flooding Alleviation studies and the Sustainability Appraisal of both the Core Strategy and the Subterranean Development SPD. The main findings of these reports are explained in the following paragraphs.

### **Arup Report (Scoping Study – Phase 1, June 2008)**

- 2.8 This study was prepared to inform the development of the Subterranean Development Supplementary Planning Document (adopted in May 2009).
- 2.9 The conclusions of the study with most relevance for flooding and subterranean development are:
- Subterranean development in the Borough cannot be viewed in isolation from other planning issues (...)
  - In general, where the sub-surface conditions are not unusually adverse, flowing groundwater will usually simply find an alternative route when it meets an underground obstruction and static groundwater will re-distribute itself. It is therefore likely that, in general, the effect of a new basement on groundwater levels will be relatively small, and may be less significant than natural seasonal or other variations in the groundwater table.
- 2.10 It can be concluded from the above paragraph that subterranean development does not have a significant impact on groundwater.

### **Strategic Flood Risk Assessment (SFRA)**

- 2.11 The SFRA was finalised in October 2009 and aimed to inform the development of the Core Strategy policies. It considered river, sea and surface water flooding.
- 2.12 Surface water was modelled in the SFRA (map 17) to indicate areas within the Borough which are susceptible to surface water flow path and ponding. The SFRA states in its summary that the locations of the properties flooded in July 2007 correlated reasonably well with the outputs of the surface water modelling, but there were some discrepancies. Therefore the localised areas of ponding shown by the modelling are indicative of areas which may be more susceptible to flooding problems such as impassable roads or risk of flooding to ground floors and basements. The explanation that the SFRA gives to the properties which did not correlate, was that flooding on the 20<sup>th</sup> July 2007 was a mixture of surface water and sewer flooding, whereas the modelling results only showed indicative areas of surface water flooding. The report also explained that there was not enough detailed data to provide a similar indicative map for sewer flooding.
- 2.13 The SFRA recommended the Council to take an active role in future strategic surface water management plans for London, plan for future emergencies and provide some guidance to residents on how they can mitigate against the impacts of this type of flooding as sewer and surface water flooding was significant. Following these recommendations, the Sequential Test was produced by the Council in May 2009.
- 2.14 The findings of the SFRA reflect the difficulty in mapping accurately flooding events in the Borough, particularly flooding events which relate to the Counters Creek being overwhelmed during heavy rainfall events.

### **Sequential Test**

- 2.15 The Sequential Test is a decision-making tool designed to ensure that sites at little or no risk of flooding are developed in preference to areas at higher risk. Within each Flood Zone, new development should be directed first to sites at the lowest probability of flooding.
- 2.16 The Sequential Test was undertaken for those sites identified as potential development sites. Due to the importance of surface and sewer water flooding for the Borough, both sources of flooding were thoroughly analysed taking into account all the available information.
- 2.17 The Sequential Test took into account the different sources of flooding for each site, the availability of other potential sites in areas at lower risk of flooding and the site acceptability in accordance with PPS25. For each site analysed the report gave information about what should be considered in the FRA including mitigation measures, the use of SUDs and the findings of the Subterranean Development SPD.
- 2.18 This document concluded that surface and sewer water flooding are very complicated to model and predict and that further work needs to be undertaken to assess properly the potential risk of surface and sewer water flooding in the Borough.

### **Sustainability Appraisal (SA)**

- 2.19 The different iterations of SA explained that although the overall effect of the policies in the Core Strategy was positive, there was a need to monitor flood risk closely.
- 2.20 The SA for the Subterranean Development SPD asked for the future impacts of this type of development to be monitored, especially with regards to the impacts on ground water, flooding, structural stability of existing buildings and trees. This is in hand through the Annual Monitoring Report.

### **Thames Water: Counters Creek Strategic Sewer Flooding Alleviation. Our plans to protect your property.**

- 2.21 This study was produced by Thames Water. It explains the reasons for the widespread local sewer flooding during particularly heavy rainfall in July 2007 and September 2005, as well as other localised incidents as follows:
- The sewer network is combined, meaning that foul sewage and rainwater enter the same system.
  - The local area has a very high proportion of basement properties.
  - There has been a loss of green space, which would otherwise help soak up rainfall.
- 2.22 The study concluded that the best way to protect individual properties was to install FLIPs (or Flooding Local Improvement Projects). Ofwat agreed that FLIPs were the right technology to use and set Thames Water the target of installing approximately

600 devices. In order to assess in which properties to install the FLIP devices, Thames Water undertook extensive hydraulic modelling.

- 2.23 The study points out that that many residents have experienced sewer flooding but have chosen not to report the incident to Thames Water possibly due to lack of knowledge of who to contact, or due to concerns that it could affect their ability to obtain home insurance or sell their property.
- 2.24 This report also explains that the installation of FLIP devices should be seen as a temporary measure whilst a long-term sustainable solution to the risk of flooding in the area is developed and constructed (which would start by 2015 at the earliest).

### **Thames Water: Counters Creek Strategic Sewer Flooding Alleviation (Study findings and proposals for our 2009 Final Business Plan Improvements Timetable)**

- 2.25 This report by Thames Water expanded the information related to the long-term solution to increase the capacity of Counters Creek. It also explained further the mechanism of flooding in the Counters Creek catchment as follows:
- flooding is not caused solely by local surface water inundating the local sewerage network;
  - levels in the deeper storm relief sewers rise following rainfall in the wider catchment, removing the capacity to relieve the trunk sewer network (the Counters Creek) and placing the high density of basement properties at risk;
  - flooding in the area is not caused by overland flow through surcharged manholes; sewage levels have not risen this high to date.
- 2.26 To understand the apparent disparity between the number of properties that reported flooding and those deemed to be at risk from a preliminary hydraulic modelling, Thames Water refined the hydraulic model and achieved a better understanding of the impact of historic development, population growth and increase in the impermeable area within the catchment. Thames Water also commissioned an independent project to identify and quantify the increased surface run-off over the last 4 decades. The results indicate that the impermeable land in the wider catchment area supplying Counters Creek increased by about 17% since 1971. These results were included in the redefined model. No assumptions for climate change were incorporated in the model. The outputs of the model gave an indication of the probability of a basement flooding. Over 7,000 properties in the Counters Creek catchment would be at risk of internal flooding from a 1 in 10 or more frequent event by 2020. The model also showed that average sewage level increased by about 10% since 1971.
- 2.27 The report concludes that the best cost-benefit long-term solution to the problem would be the improving the supply capability of the network by constructing a New Strategic Relief Sewer (NSRS) in three phases:
- Phase 1: NSRS from Kensington to Acton;
  - Phase 2: NSRS in Fulham to a new Combined Sewer Overflow;
  - Phase 3: NSRS in South Fulham to Lots Road.

- 2.28 The timetable for the NSRS will be the following:
- final determination: November 2009;
  - commence detailed development: 2010;
  - complete ground investigations and surveys: 2012;
  - agree tunnel and local solution costs with Ofwat and submit planning application: 2013;
  - final determination: November 2014;
  - start construction: after 2015. Construction is likely to last until 2018.
- 2.29 Thames Water also concluded that they needed to work closely with the boroughs to minimise any further increases to the impermeable area, by ensuring that Sustainable Urban Drainage Systems (addressed in Policy CE2 (e)) were incorporated into all new developments and that any further drop-kerb applications and basement planning applications in the catchment were rigorously appraised.
- 2.30 These two reports explain the risk of flooding for basement and other properties along the Counters Creek catchment area. They identify the high proportion of basement properties and the loss of green space as reasons for the widespread local sewer flooding. Both these issues have been addressed in the Subterranean Development SPD and Policy CE2.

### **Partnership Working**

- 2.31 We are working in partnership with Thames Water and the Environment Agency to identify areas with critical drainage problems. Furthermore, as part of the Drain London Forum, we are working in partnership with other London boroughs and the GLA to prepare a Surface Water Management Plan (SWMP) by March 2011. This SWMP will, along with other outputs from the Drain London Forum, such as the Critical Drainage Board and the findings from the Annual Monitoring Report, inform future changes to existing policy. Once the critical drainage areas are identified accurately, further measures to reduce vulnerability in specific basements developments could be included.

### **Moratorium on subterranean developments**

- 2.32 Matter 9a Question 5 asks if the risk from surface water and sewer flooding is such that there should be a moratorium until Thames Water improvements have been implemented.
- 2.33 The evidence available (thoroughly explained in this document) draws the Council to the conclusion that a moratorium on subterranean development is not justified. The evidence shows that subterranean development does not have a significant impact on groundwater. There is no evidence to show that the flooding of Counters Creek is caused or exacerbated by subterranean development to a degree which could justify a moratorium. The reports that Thames Water have prepared explain the risk of flooding for basement and other properties along the Counters Creek catchment

area. However, they do not link the increase in subterranean development to the increase in flood risk from the Counters Creek.

- 2.34 The area affected by surface and sewer water flooding which could be directly related to Counters Creek is relatively small (it mainly runs along the boundary with the London Borough of Hammersmith and Fulham). However, despite extensive research to understand surface and sewer flooding in the Borough, at present we are still not in a position to predict accurately which development will be at risk of sewer flooding. Map 17 of the SFRA shows other areas at risk of surface water flooding that are not located in close proximity to Counters Creek (the South-east of the Borough). Although the Council expects the Counter's Creek Project to substantially reduce flooding events, there may be other triggers to surface water flooding that are not related to Counters Creek (i.e. proximity to the Thames, blockage of sewers, etc.). Further research is needed in this area and the Council considers that a moratorium on subterranean development is not the way forward at this moment.

### **Conclusions**

- 2.35 The Royal Borough of Kensington and Chelsea as a Planning Authority has a duty to assess each application on its merits and does so. National policy (PPS1, PPS25 and other relevant PPSs), policies in the London Plan and policies in the adopted UDP and emerging Core Strategy are regarded as material considerations when assessing applications. The precautionary approach which was emphasised in PPS25 is present in our policies.
- 2.36 The Environment Agency does not comment on planning applications unless they are in flood risk 2 or 3, or sites greater than 1 ha. The Council will therefore not require site specific flood risk assessment where the Environment Agency does not provide comments. However, the Council will lobby the Government for the policy and resources for the Environment Agency to require and consider site-specific FRAs.
- 2.37 The impacts of basement development on neighbours have been reported by the Ladbroke Association in their report in December 2009. Flooding concerns were not raised in the responses provided to their survey (on which the report is based). However, they stated that 'the Association remains concerned that this is a serious potential risk that needs to be seriously addressed' (p.10). The Council acknowledges the public concern related to the nuisance caused to the neighbours by the increase in the number of basements being built in the Borough. The Council produced the Subterranean Development SPD to try to address all those concerns not just flooding (noise, construction and safety amongst others).
- 2.38 There are temporary measures in place to protect existing basements from flooding such as FLIPs. The Council expects the Counters Creek Alleviation Scheme to provide a successful long-term solution to the problem. The Council will continue to support Thames Water in the delivery of short-term mitigation against sewer flooding and in the planning and development of a long-term solution to reduce the risk of sewer flooding.

- 2.39 The Council acknowledges the importance of sewer flooding, its devastating effects and the need to ensure that basements are neither vulnerable, nor they increase vulnerability to flooding to adjacent properties. However, despite extensive research to understand surface and sewer flooding in the Borough, we are still not at the moment in a position to model and predict accurately which development will be at risk of sewer flooding. Map 17 of the SFRA shows only areas at risk of surface water flooding but not at risk of sewer flooding. Furthermore, there may be other triggers to surface water flooding that are not related to problems of capacity of the Counters Creek (i.e. proximity to the Thames, blockage of sewers, etc.). More research is needed in this area. Therefore, the Kensington Society's proposal to deal more fully with the issue of flood risk from surface water flooding by including further areas of "indicative flood risk zones" for areas which are affected by surface water and sewage flooding cannot be addressed currently in an accurate way.
- 2.40 As a result of partnership working with Thames Water, the Environment Agency and other local authorities a new evidence base will be available shortly. It is possible that the SWMP being prepared by the Drain London Forum combined with the hydraulic modelling being undertaken by Thames Water (as part of the installation of FLIP devices) will provide further evidence that will justify a review of either the Subterranean Development SPD or the relevant parts of the Core Strategy which could lead to a restriction of subterranean development in areas of critical drainage in due course.
- 2.41 The Council considers that Policy CE2 and the Subterranean Development SPD protect basement developments, their impact on flooding and their vulnerability to flooding. Moreover, mitigation measures will be included in the recommendations of the FRA and monitoring will assess annually the performance of this policy and its implementation progress. If basements vulnerability is not properly addressed in our policies, changes will be introduced.

## Public Examination of Royal Borough of Kensington and Chelsea's Core Strategy with a focus on North Kensington DPD

### Royal Borough of Kensington and Chelsea's Statement

#### Matter 9b – Respecting Environmental Limits

##### Question 3

*Tackling climate change is a key Government planning priority for the planning system and the ambitions and policies in PPS1 should be fully reflected in the preparation of DPDs.*

**Generally, are the policies which cover sustainability sufficient to meet the requirements of PPS1 and associated documents?**

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- 3.0 *Yes. The Council considers that the approach to tackling climate change, as set out in Core Strategy Policy CE1, is consistent with Planning Policy Statement 1 and associated documents as set out below.*
- 3.1 Planning Policy Statement 1 (2005) (Para 13(ii)) requires “*development plans and decisions taken on planning applications to contribute to the delivery of sustainable development by [among others] ... through policies which reduce energy use, reduce emissions..., promote the development of renewable energy resources, and take climate change impacts into account in the location and design of development*”. Furthermore, at para 20, it requires development plan policies to take account of environmental issues such as [among others] the mitigation of the effects of, and adaptation to, climate change through the reduction of greenhouse gas emissions and the use of renewable energy.
- 3.2 **The Council considers that many of the Strategic Objectives within the Core Strategy contribute to the delivery of sustainable development, particularly ‘Keeping Life Local’ protects local uses within easy walking distance; ‘Better Travel Choices’ promotes investment in alternative sources of travel to the car; and ‘Respecting Environmental Limits’ reduces the impact of development on the environment. Core Strategy Policy CE1(a) to CE1(i) uses a range of measures to ensure new development contributes to reducing carbon dioxide emissions by 26% against 1990 levels by 2020 in accordance with the Climate Change Act 2008. These measures include the use of the Code for Sustainable Homes and British Research Environmental Assessment Method (BREEAM) to assess a buildings environmental performance (Policies CE1(a) to (c)); requiring development to minimise energy consultation in accordance with the energy hierarchy of i) energy efficiency, ii) decentralised energy, and iii) on-site renewable energy.**
- 3.3 The Consultation on Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate (Mar 2010) (LCF9.1) states that “*any requirement for a building’s sustainability should be set out in a DPD and:*

- *relate to a development area or specific site and not be applicable across a whole local authority area unless the justification for the requirements can be clearly shown to apply across the whole area; **The Council does not accept that environmental standards should differ between development areas or specific sites, but should be commensurate to reflect the scale of development. It is assumed that it is less feasible and viable for smaller development to achieve certain environmental standards, and the Council has therefore introduced Policy CE1 having regard to the ‘economies of scale’. However, the Council’s evidence shows that it is feasible and viable for one building to the environmental standards proposed in Policy CE1, and therefore Policy CE1(i) will enable the Council to consider extending or raising the CfSH or BREEAM standards for development not already contained under Policy CE1. The Council has justified that the environmental requirements are not unduly prescriptive or undeliverable under Matter 9b, Question 1. This is also acceptable in accordance with Policy LCF8.1 from Planning for a Low Carbon Future in a Changing Climate (Mar 2010) in para 3.4 below.***
- *not require local standards for a building’s performance on matters relating to construction techniques, building fabrics, products, fittings or finishes, or for measuring a building’s performance; **The Council does not prescribe these standards in Policy CE1, as it is up to the applicant how they achieve the required CfSH / BREEAM standard.***
- *be specific in terms of achievement of nationally described sustainable buildings standards. In the case of housing, this means a specific level of the Code for Sustainable Homes. Where local circumstances do not support specifying compliance with an entire Code level (because of the range of environmental categories covered) – or envisaged development could not attain the relevant Code level on all environmental categories – a local requirement can be stipulated solely in relation to the energy/Co2 emissions standard and/or water standard in an identified level of the Code.” **Core Strategy Policy CE1(a) to (c) uses the government’s CfSH / BREEAM to assess the environmental performance of proposed development. The use of the standards in these Policies are based on sound evidence, as set out in Matter 9b, Question 1, where the Council’s evidence supports a specific requirement for 40% of credits achieved under the energy, water and materials sections.***

3.4 The Consultation on Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate (Mar 2010) (LCF8.1) states that *“the progressively demanding standards for CO2 emissions set through Building Regulations, together with the assessment of local opportunities for renewable and low carbon energy, will help drive greater use of decentralised energy. Targets for application across a whole local authority area which are designed to secure a minimum level of decentralised energy use in new development will be unnecessary when the proposed 2013 revisions to Part L of the Building Regulations (for both domestic and non-domestic buildings) are implemented. As an interim measure until the coming into force of the 2013 revisions, the Secretary of State will support the application of authority-wide targets where these are included in the development plan. At the local level, any target should be in a DPD and have met the tests in LCF11.” **Policy CE1 supports the***

delivery of the national timetable for reducing carbon dioxide emissions by introducing a requirement that development meets carbon reduction targets of 44% in advance of the Building Regulations but in accordance with the timetable set out in the draft London Plan. Para 3.3 (above) and Para 3.6 (below) shows how the Council's targets satisfy the tests for local standards in the Supplement to PPS1 and the consultation draft on Planning for a Low Carbon Future. Matter 9b, Question 1, shows that these targets are not unduly prescriptive or undeliverable. Policy CE1 and the proposed amendments to the Building Regulations introduce requirements to achieve zero carbon development at the same time. However, the Code for Sustainable Homes and BREEAM consider more than just energy efficiency, unlike the Building Regulations.

- 3.5 Consultation on a Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate (Mar 2010) requires local requirements for decentralised energy to be set out in a Development Plan Document (Policy LCF7.1). Policy LCF7.3 of this draft PPS also states that local planning authorities can expect proposed development to connect to an identified system, or be designed to be able to connect in the future. Policy LCF4.2 of this draft PPS also indicates that local planning authorities should assess their area for opportunities for decentralised energy and strategic sites which are central to delivering the local planning approach for decentralised energy should be allocated in the core strategy. **The Council's policy for decentralised energy (Policy CE1(d) to (g)) and sustainable buildings (Policy CE1(a) to (c)) is set out in the Core Strategy with a focus on North Kensington, as submitted to the Inspector. The Council also considers that given the scale of development likely to occur at the Strategic Sites, these are opportunities to create district heat and energy networks. Using funding from the LDA, the Council has recently received the final Heat Mapping Study, May 2010. This study identified the heat demand for the Borough and considered the extent to which the sites identified in the Core Strategy Policy CE1(e) can deliver decentralised energy through several district heat and energy networks in the Borough. This Study concluded that the sites identified in the Core Strategy have the potential to form district or localised heat and energy networks, but the consideration of more detailed feasibility is required. This would need to consider cost, heat and energy supply, phasing, using Multi-Utility Services Companies (MUSCOs) and supporting infrastructure requirements, which will be set out in each of the planning briefs being prepared for each Strategic Site.**
- 3.6 The Supplement to Planning Policy Statement 1 (Dec 2007) and the consultation on PPS: Planning for a Low Carbon Future in a Changing Climate (Mar 2010) supports local decentralised and sustainable building requirements, setting out several tests which these requirements must meet. These documents state that *"any policy relating to local requirements for decentralised energy supply to new development or for sustainable buildings should be set out in a DPD, not a supplementary planning document, so as to ensure examination by an independent Inspector. In doing so, planning authorities should:*
- 1 *Ensure what is proposed is evidence-based and viable, having regard to the overall costs of bringing sites to the market (including the costs of any necessary*

supporting infrastructure) and the need to avoid any adverse impact on the development needs of communities; **This is considered under Matter 9b, Question 1 (para 1.2 – 1.7).**

- 2 *In the case of housing development and when setting development area or site specific expectations, demonstrate that the proposed approach is consistent with securing the expected supply and pace of housing development shown in the housing trajectory required by PPS3 and does not inhibit the provision of affordable housing; **This is considered under Matter 9b, Question 1 (para 1.5).***  
and
- 3 *Set out how they intend to advise potential development on the implementation of the local requirements and how these will be monitored and enforced”. **This is considered under Matter 9b, Question 1 (para 1.10 – 1.15).***

3.7 The Supplement to Planning Policy Statement 1 (Dec 2007) states that “*The planning system needs to support the delivery of the timetable for reducing carbon emissions from domestic and non-domestic buildings (para 8)*” as set out in Building a Greener Future: Policy Statement (2007) and “*planning authorities should help to achieve the national timetable for reducing carbon emissions from domestic and non-domestic buildings (para 30).*” Building a Greener Future: Policy Statement (July 2007) indicates that the Supplement to PPS1 - Planning and Climate Change will help support the achievement of zero carbon homes through the planning system. **The Mayor of London has submitted a certificate demonstrating that the Council’s Core Strategy is in general conformity with the London Plan, February 2008. The Council’s timescales for implementing the CfSH / BREEAM targets in Policy CE1 are in accordance with the timescales for reducing carbon dioxide emissions set out in Policy 5.2 of the draft London Plan and the timetable for tightening the Building Regulations, as set out in Building a Greener Future: Policy Statement (July 2007).**

Improvement in energy / carbon performance on 2006 requirements (Part L)	Code for Sustainable Homes level:	Building Regulations timescales:	Draft London Plan	RBKC Core Strategy timescales:
25%	Code Level 3	Oct 2010		
44%	Code Level 4	2013	2010	2010
55%	n/a	n/a	2013	
100%	Code Level 5	n/a	n/a	2015
Zero Carbon Housing	Code Level 6	2016	2016	2016

3.8 The above shows that the Council’s Policy approaches to mitigating climate change is prepared in accordance with National and Regional Planning Policy.