
Local Development Framework
London Borough of Hammersmith and Fulham

Flood Risk Sequential Test for the Proposed Submission Core Strategy

October 2010

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1. Introduction

Document Summary

- 1.1 This document reports on the flood risk Sequential Test for the proposed submission Core Strategy for Hammersmith and Fulham. The Core Strategy identifies five Regeneration Areas in which the majority of the borough's new residential accommodation and jobs will be provided over the next 20 years. A Sequential Test, in line with PPS 25, has been applied to each Regeneration Area in sections 5-9, and when necessary an Exception Test has also been undertaken. The findings of this assessment demonstrate that there are no alternative sites in the borough available for development with a lower flood risk; that those sites located in flood zones 2 and 3 are considered to satisfy parts a) and b) of the Exception Test; and that subject to satisfactory Flood Risk Assessment and through suitable mitigation measures, development in these areas will not be compromised by flood risk

Planning Policy Statement 25

- 1.2 Planning Policy Statement (PPS) 25 Development and Flood Risk requires that Core Strategies are informed by a Strategic Flood Risk Assessment (SFRA). The SFRA is an important element of the Local Development Framework (LDF) Evidence Base.
- 1.3 The purpose of the SFRA is to assess appropriate locations for development. All developments have to undergo a Sequential Test to ensure that location is appropriate to development and vice versa in terms of flood risk and in line with the Environment Agency's (EA) flood zones. The Sequential Test and Exception Test outlined in this document have been carried out in accordance with Tables D.1, D.2 and D.3 of Annex D of PPS25.

The Core Strategy

- 1.4 The Core Strategy is the primary document in the borough's Local Development Framework. It identifies the council's overarching strategy and sets out how different places will contribute to delivering the vision, by providing the spatial framework for managing growth and change in the borough to 2032.
- 1.5 The Core Strategy identifies five Regeneration Areas in which the majority of development will be delivered over the next twenty years. Within these broad locations, key sites have been identified where the majority of development within these areas is likely to occur. For the purposes of this document, each Regeneration Area and every key site has been assessed.

The Sequential Test

- 1.6 The Sequential Test is a process that seeks to apply a sequential approach to the identification of land for development in an area. The Sequential Test process is outlined in Annex D and Tables D.1, D.2 and D.3 of PPS25 and essentially tries to allocate development to areas with the smallest risk of flooding. In areas at risk of river or sea flooding, preference should be given to locating new development in Flood Zone 1 which is the area least likely to be affected by such flooding. If there is no reasonably available site in Flood Zone 1, the flood vulnerability of the proposed development can be taken into account in locating the development in Flood Zone 2 and then, if necessary, Flood Zone 3. Within each Flood Zone new development should be directed to sites at the lowest probability of flooding from all sources as indicated by the SFRA. Where it is not possible to locate development in an area of lower flood risk, the Exception Test must be applied, which is set out in Paras. 18-21, D9-D14 and Table D.3 of PPS25.

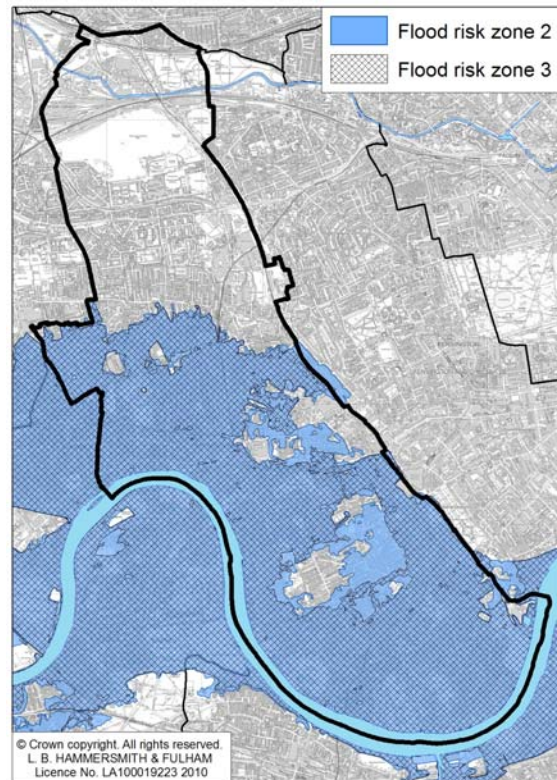
The Exception Test

- 1.7 The purpose of the Exception Test is to ensure that new development is only permitted in medium and high flood risk areas where flood risk is clearly outweighed by other sustainability factors and where the development will be safe during its lifetime, taking into account climate change. The Exception Test comprises three criteria which must be passed:
- a) it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by an SFRA where one has been prepared. If a development plan document (DPD) has reached the 'submission' stage of PPS12: *Local Development Frameworks* the benefits of the development should have been identified in the Core Strategy's Sustainability Appraisal;
 - b) the development should be on developable previously-developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously-developed land; and
 - c) a Flood Risk Assessment must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.
- 1.8 Within this borough, part b) of the Exception Test is satisfied by each identified Regeneration Area and site because all land is considered to be previously developed land. Therefore in sections 5-9 it is necessary to only look at criteria a) in detail.

2. Overview of the SFRA

2.1 The borough's SFRA shows that there is no fluvial flood risk within LBHF. However, Environment Agency Flood Zone Maps reveal that there is tidal flood risk and that the borough can be divided into four flood zones :

- Zone 1: Low Probability. This zone comprises land assessed as having a less than 1 in 1000 annual probability of flooding in any year (<0.1%) – 39% of the borough.
- Zone 2: Medium Probability. This zone comprises land assessed as having between a 1 in 200 and 1 in 1000 annual probability of flooding (0.5% - 0.1%) in any year – 7% of the borough.
- Zone 3a: High Probability. This zone comprises land assessed as having a 1 in 200 or greater annual probability of flooding (>0.5%) in any year - 54% of the borough.
- Zone 3b: The Functional Floodplain. This zone comprises land where water has to flow or be stored in times of flood. The SFRA has identified a negligible area of Zone 3b at Chiswick Mall near the border of LBHF with Hounslow.



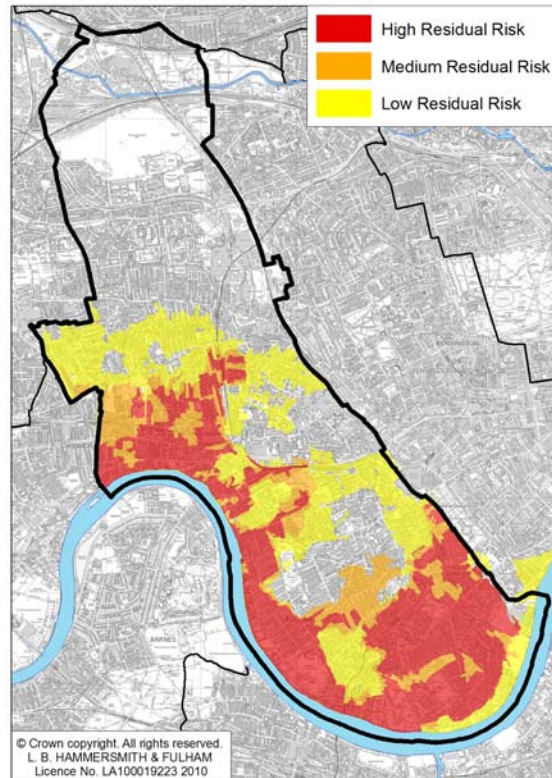
Residual Tidal Flood Risk

2.2 Tidal flood risk is extensive, but at present Hammersmith and Fulham is fully defended against the 0.1% annual probability extreme tide level. Nevertheless, the areas benefiting from these tidal defences have the potential to experience high hazard from a breach or overtopping. The SFRA undertook a detailed investigation into the effect of defences on flood risk, and the risk that remains behind these defences, by failure or overtopping within each borough. The assessment of residual risk was undertaken by modelling a series of breaches using a 2-D inundation model. A series of breach locations were chosen to provide complete coverage of the borough. The assessment revealed that the defences could be breached during a 1 in 200 year event (0.5% probability of occurring each year), which is in line with Flood Zone 3 (the extent of Flood Zone 3a assumes there are no defences present). Once the breaches had been modelled the flood extents were classified to provide a further delineation of the

Flood Zones to be utilised during the sequential and exception testing of future development sites, and to inform future Flood Risk Assessments. The classification was split into three classes: High Residual Risk, Medium Residual Risk, and Low Residual Risk.

Surface Water and Sewer Flood Risk

- 2.3 Sewer and surface water flooding is particularly problematic, with LBHF experiencing significant problems historically and during heavy rainfall events, for example on 20th July 2007. Surface water modelling has been undertaken to indicate areas within the borough which are susceptible to surface water flow paths and ponding. The locations of the properties flooded during the 20th July 2007 event, and other historic incidents correlate reasonably well with the outputs of the surface water modelling, specifically the ponded areas. Therefore the localised areas of ponding shown by the modelling are indicative of areas which may be more susceptible to problems such as impassable roads or risk of flooding to ground floors and basements. Some properties did not correlate, but it should be noted that the properties flooded on the 20th July 2007 suffered a mixture of surface water and sewer flooding, whereas the modelling results only show indicative areas of surface water flooding.



- 2.4 Thames Water have provided details of sewer flooding on a postal area basis. They have stated that the areas which have in the past been affected by such flooding should not be seen as areas to avoid future development and that the reverse is also true, that areas with no known flooding incidents should not always be viewed as the best place to accommodate new development. However, what is essential is that all development locations are assessed to ensure discharge capacity exists and that flood risk is not increased.

Implications for Development

- 2.5 The SFRA is the basis upon which initial planning decisions with regard to flooding should be made. However, as required by PPS 25, the council has undertaken a Sequential Test to support the allocation of land for development in Flood Risk Zones 1 to 3. In accordance with PPS 25, only when there is a lack of suitable developable land in Zone 1 should it become necessary to consider

development allocations in higher risk zones. Where development is allocated within medium flood risk zone (Zone 2) or high flood risk zone (Zone 3) PPS25 requires the council to demonstrate through the Sequential Test that there are no reasonable alternative development sites in lower flood risk zones. Once the Sequential Test has been satisfied it may also be necessary to apply the Exception Test. The situations where it is necessary and appropriate to apply the Exception Test are outlined in Table D3 in PPS25. The table below indicates where developments could be allowed, rejected or subject to the Exception Test.

What does that mean for Sites within Zone 1?

- 2.6 Within Flood Zone 1, flood risk is not considered to be a significant constraint to development and all land uses listed below are appropriate in this zone:
- Essential infrastructure
 - Highly vulnerable
 - More vulnerable
 - Less vulnerable
 - Water compatible development¹.
- 2.7 However, due to their potential impact on the local flood risk, a Flood Risk Assessment is required for all developments greater than 1 ha in size. This assessment needs to include further consideration of surface water drainage, the recommendation of approach to control surface water discharge, and onsite mitigation measures that may be required, particularly where the capacity of the surface water sewer or receiving watercourse is limited.
- 2.8 A Flood Risk Assessment is not usually be required for development less than 1 ha in size in this zone unless there are, for example, historical records of localised flooding or site-specific considerations such as surface water issues that necessitate further investigation and identification of onsite mitigation measures.

What does that mean for Sites within Zone 2?

- 2.9 In Zone 2, subject to the application of the Sequential Flood Risk Test, PPS25 specifies suitable types of development as:
- Essential infrastructure
 - More vulnerable
 - Less vulnerable
 - Water compatible development.

Highly vulnerable development is subject to the Exception Test.

- 2.10 A Flood Risk Assessment is required for all development in this zone. The Flood Risk Assessment needs to assess the current level of flood risk as well as the

¹ PPS25: Development and Flood Risk, Table D.2

level of flood risk following development. Development proposals for sites need to demonstrate that flood risk can be effectively and safely managed without increasing flood risk elsewhere.

- 2.11 Proposals should also demonstrate that safe access and egress to any development can be maintained during an extreme flood event and that the development is set at an appropriate level so that the residual risks are managed to acceptable levels.
- 2.12 A further level of analysis of the affects of a breach in, or overtopping of, the defences in an extreme event (usually the 0.5% plus climate change) may be required if the site falls within an area which is classified as being at High or Medium Residual Risk in order to test the sustainability and robustness of the mitigation measures. Other flood risk constraints, such as incidents of localised flooding and other site specific considerations also need to be addressed.

What does that mean for Sites within Zone 3a?

- 2.13 Subject to the application of the Sequential Test, PPS25 specifies suitable types of development in Zone 3a as:
- Less vulnerable
 - Water compatible development.
- 2.14 Proposals for essential infrastructure and more vulnerable development need to subject to the Exception Test. Highly vulnerable development should not be permitted in this zone. Any proposals for development within Flood Zone 3 will require developers to undertake a detailed site specific Flood Risk Assessment. The Flood Risk Assessment will need to assess the current level of flood risk as well as the level of flood risk following development. Any proposals for a site will also need to demonstrate that flood risk can be effectively and safely managed without increasing flood risk elsewhere.
- 2.15 Proposals should also demonstrate that safe access and egress to the development can be maintained during an extreme flood event and that development is set at an appropriate level so that the residual risks are managed to acceptable levels.
- 2.16 Where the site falls within an area which is classified as being at High or Medium Residual Risk, the detailed FRA should include a detailed assessment of the residual risks posed by the existing defences being breached or overtopped in an extreme event (usually the 0.5% plus climate change). It should be noted that constraints to development may be significant and developers should seek advice from the Environment Agency as to the specific requirements for assessment.

3. Sources of Flooding and Mitigation Measures in Hammersmith and Fulham

The Thames

- 3.1 In London, the River Thames is primarily a tide dominated river and the most severe flood risks come from tidal surges. Teddington is the normal tidal limit although high fluvial flows can affect parts of west London and extreme surges can affect upstream of Teddington. The Tidal Thames floodplain is currently defended through a combination of raised banks and barriers, the most important being the Thames Barrier at Woolwich though there are also eight other major barriers, 36 major industrial floodgates, 400 minor moveable structures and 337 km of tidal walls and embankments². These defences provide protection against tidal flooding to an estimated 1 in 1000 year standard for 2030 (as estimated when the defences were designed), which equals a less than 0.1% chance of flooding each year. So far the rate of sea level rise has not exceeded that expected and the defences are thus currently providing a greater level of protection than 1 in 1000 years.

The Grand Union Canal

- 3.2 The Grand Union Canal travels across the north of the borough. Along the length of the canal there are a few embanked parts; most of the canal follows the land contour and thus there are very few places where failure of the canal bank is a risk to the borough. It is more likely that the canal will act as a conveyor of flow in an extreme event, and it is likely to convey flow out of the boroughs due to the topography.

Surface Water Flooding

- 3.3 Given the urban nature of the borough, surface water flooding is a more likely risk than tidal or fluvial flooding in the borough. Risk of surface water flooding is often intrinsically linked to sewer flooding. There are some hotspots for surface water flooding which are illustrated in the SFRA; however, these hotspots are geographically disperse.

Sewer Flooding

- 3.4 Thames Water's Counters Creek sewer runs down the eastern boundary of the borough. There are plans to increase the capacity of this sewer in the medium term but currently the sewer is running close to capacity. Further information on the sewer is provided within the council's Infrastructure Study. The supporting sewerage network would need to be improved as part of any major development.

Ground water

- 3.5 No records of historical groundwater flooding in this area have been found. The bedrock geology of the area consists of London Clay overlying a chalk aquifer; this impermeable cap to the aquifer should prevent incidents of deep groundwater flooding. However issues may arise in the future as a result of the rising water table following a reduction in abstraction from the chalk aquifer. This situation is being monitored by the Environment Agency as outlined in their "Groundwater Levels in the Chalk-Basal Sands Aquifer of the London Basin" annual reports.

Flood risk from outside the borough

- 3.6 Due to the topography of the borough there is a risk of receiving surface runoff from the neighbouring boroughs of Kensington and Chelsea, Ealing, Brent and Hounslow. Flooding as a result of the failure of the defences along the Thames in Kensington and Chelsea and Hounslow are unlikely to cause flooding in H&F.

4. The need for development in Hammersmith and Fulham

Regional and Local Growth Demands

- 4.1 After several decades of decline, since the late 1980s the population of London has been growing. At mid-2007 it was estimated that London's population was 7.56 million and GLA DMAG projections show that the population is likely to continue rising up to 2031, reaching almost 9 million.
- 4.2 A large proportion of this growth is likely to be delivered in East London in the Thames Gateway. However there are many development opportunities across London that are likely to come forward within the next twenty or so years. The Draft Replacement London Plan identifies 33 Opportunity Areas and 10 Areas of Intensification in which the largest quantities of housing and jobs across London are likely to be delivered. Three of these opportunity areas fall either wholly or partially within the London Borough of Hammersmith and Fulham.
- 4.3 Given the borough's excellent location in Inner London, with good transport links to the West End and the City, as well as to Heathrow and out to the West Country, there is a strong demand for property in the borough. This has not always been the case. The trend for country living that inspired the counter-urbanisation movement post World War 2 up until the mid-1980s, led to a dramatic drop in the borough's population. In the past two decades, a demand for inner city living has led to significant gentrification of parts of the borough which has pushed up property prices in the area. In 2010, Hammersmith and Fulham had the fourth highest property prices of any local authority in the country and the neighbouring Royal Borough of Kensington and Chelsea had the highest property prices of any local authority. This substantial rise in property prices has created development opportunities that were previously considered unfeasible.

The Borough's Regeneration Areas

- 4.4 The proposed submission Core Strategy identifies five areas in which the majority of large scale development will occur in the borough over the next twenty years. These are:
- **Wider White City Opportunity Area;**
 - **North Fulham Regeneration Area;**
 - **South Fulham Riverside;**
 - **Hammersmith Town Centre and Riverside; and**
 - **Old Oak Common and Hythe Road Area (part of the Park Royal Opportunity Area).**
- 4.5 The draft Replacement London Plan sets a housing target of a minimum of 615 additional dwellings per annum in the next 10 years, up to 2021/22. The council identifies in its Core Strategy a target to deliver a minimum of 615 additional

dwellings per annum. The council's Strategic Housing Land Availability Assessment demonstrates how the delivery of this quantum of housing is likely to be achieved.

- 4.6 The following table shows the amount of residential dwellings and jobs that could potentially be delivered within each of these areas over the next 20 years.

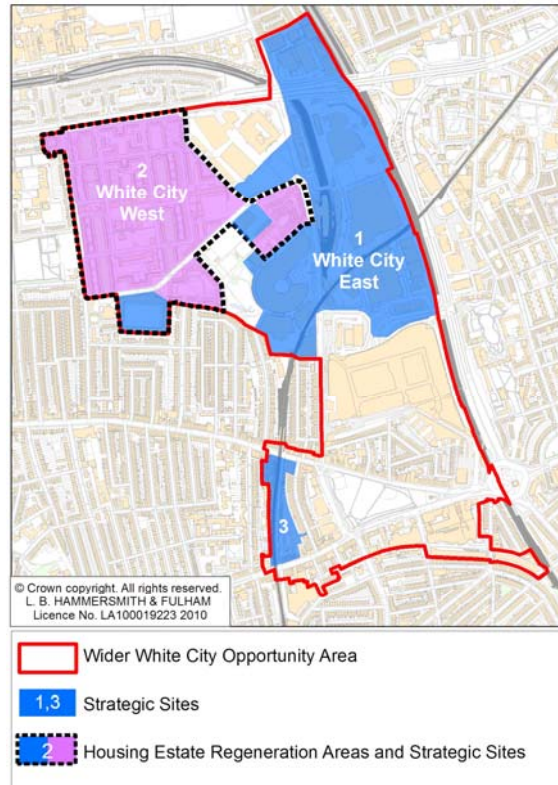
Regeneration Area	Residential dwellings	Jobs
Wider White City Opportunity Area	5,000	10,000
Earls Court and North Fulham	2,000	5,000-6,000
South Fulham Riverside	2,200	300-500
Hammersmith Town Centre	1,000	5,000
Old Oak and Hythe Road Area	1,600	5,000
Rest of borough	1,200	-
TOTAL	13,000	25,300-26,500

- 4.7 The following five sections look at each regeneration area in turn against the Sequential Test and parts a) and b) of the Exception Test. Any strategic sites or housing estate regeneration areas within these regeneration areas are also individually assessed.

5. Wider White City Opportunity Area

Context

- 5.1 The Wider White City Opportunity Area stretches from Shinfield Street in the north to Bloemfontein Road in the west, the West Cross Route in the east and the southern boundary of Shepherd's Bush Town Centre in the south. The boundary incorporates the whole of Shepherd's Bush Town Centre as well as the BBC land in the centre, the Territorial Army Centre, three of the council's housing estates, Loftus Road football ground and the land covered by the previous White City Opportunity Area to the east.
- 5.2 Historically, the area to the north of Shepherd's Bush Town Centre was the location for the London 1908 Olympics. The majority of the Olympics site was redeveloped in the 1930s to create the White City Housing Estate. The rest of the Olympics site was developed after the war to create the BBC Television complex and the land to the east of Wood Lane was developed for warehousing. The use of the land since the early 1960s has remained largely unchanged, with the exception of the development of the Westfield Shopping complex to the south of the White City East land on what was previously railway sidings.
- 5.3 The Wider White City Opportunity Area has been identified as a Regeneration Area for a number of reasons:
- Rising land prices have made the landowners of the White City East land interested in redevelopment opportunities;
 - The stock of the council's housing estates has aged and the regeneration opportunities on the White City East land offer a once in a lifetime opportunity for estate regeneration;
 - There are several opportunities for regeneration within Shepherd's Bush Town Centre, principally the Shepherd's Bush Market; and
 - The opening of Westfield has changed the dynamic of the area. This has been recognised in the draft replacement London Plan, which has upgraded Shepherd's Bush from a district centre to a metropolitan centre.



Flood Risk

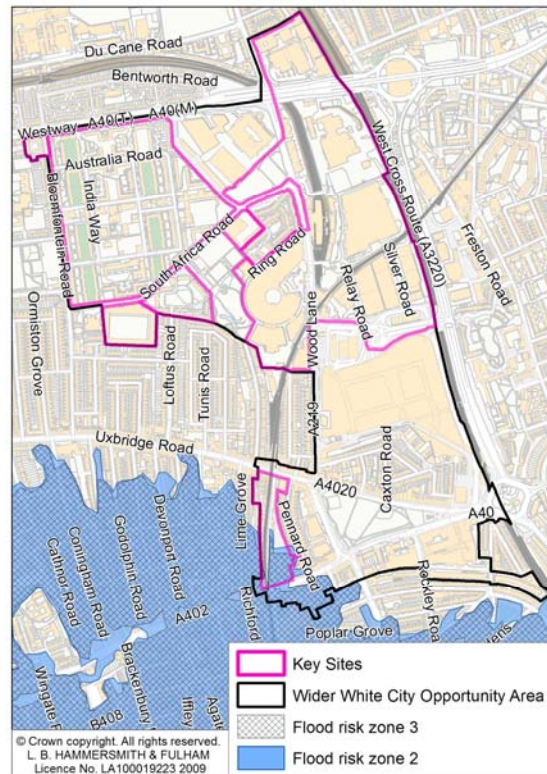
- 5.4 As can be seen from the adjacent map, the Wider White City Opportunity Area largely sits within Flood Risk Zone 1. Parts of the very south of the Opportunity Area are however within Flood Risk Zones 2 and 3, including the southern parts of Shepherd's Bush Market.

Proposed Uses

- 5.5 The regeneration of the area will primarily be residential led. A mixture of uses (retail, offices, transport infrastructure, leisure and residential) is proposed on the White City East land and the regeneration of Shepherd's Bush Market would be for primarily retail uses but with opportunities for offices and residential above.

The Sequential Test

- 5.6 The Flood Risk Vulnerability Classification table in PPS25 classifies retail, offices and leisure as less vulnerable uses. These uses are considered to be acceptable in all Flood Risk Zones, with the exception of Flood Risk Zone 3B, which does not cover any of LBHF.
- 5.7 Transport infrastructure is considered to be essential infrastructure and should only be permitted in Flood Risk Zones 3 if the Exception Test is passed. This is also true for residential, which is classed as 'more vulnerable', except if it is a self contained basement dwelling, in which case it is classed as 'highly vulnerable'.
- 5.8 No new transport infrastructure is being proposed within the parts of the Opportunity Area that are at risk from Flood Risk. Residential is proposed on Shepherd's Bush Market, on the upper floors. This is in order to make any redevelopment scheme on the site viable and without this the scheme would not be able to proceed. The delivery of this housing contributes towards the borough's Strategic Housing Land Availability Assessment (SHLAA) and in turn the borough's housing target. The London Borough of Hammersmith and Fulham is highly urbanised and there are few opportunities for development outside of the five Regeneration Areas identified in the Core Strategy. Those sites that are available for development have been included in the borough's SHLAA. This document shows that the Shepherd's Bush Market site is an important contributor



to the borough's housing target, and is estimated to contribute 250 dwellings over 2017-22. Given that the delivery of residential on this site is in order to make any redevelopment viable and that there is a lack of available sites not already identified for residential, it is considered that in terms of the Sequential Test, there are no other alternatives than for this site to be used for residential. Because the site is in Zones 2 and 3, the Exception Test needs to be applied to Shepherd's Bush Market and the southern part of the White City Opportunity Area.

The Exception Test

- 5.9 Criterion a) of the Exception Test requires the sustainability benefits of sites identified in Zones 2 and 3 to be assessed against the Core Strategy's Sustainability Appraisal. As part of the Sustainability Appraisal, LBHF has prepared 12 sustainability objectives, which are listed in the Appendix to this document.
- 5.10 The assessment of the Wider White City Opportunity Area and Shepherds Bush Market site against the sustainability objectives is shown in the table below. A '✓' signifies that the proposals would have a positive impact on a particular indicator; a '0' signifies that either there are no likely effects on the indicator or that the positives and negatives are evenly balanced, and a 'X' signifies that the proposals would have a negative effect on a particular indicator.

Sustainability Indicator	White City Opportunity Area	Shepherds Bush Market
1. Increase equity and social justice	✓	✓
2. Improve the health of the overall population	✓	0
3. Improve the education and skills of young people and adults	✓	0
4. Provide decent and affordable homes	✓	✓
5. Improve local residents' sense of community and social cohesion	✓	0
6. Increase the opportunities for satisfying and well paid work	✓	✓
7. Improve the local environmental heritage	✓	✓
8. Reduce the level of pollution	0	X
9. Reduce the effect of transport on the environment	X	X
10. Ensure the responsible consumption of resources in the borough	✓	✓
11. Reduce climate change and its impact on the borough	0	X
12. Improve the sustainability of the local economy	✓	✓

- 5.11 The regeneration of the Wider White City Opportunity Area is generally considered to be positive. The area as a whole is one of the most deprived in the borough, yet at the same time, the area has a strong economic base, with the

BBC and Westfield both included in the Opportunity Area, and the area has good public transport accessibility, with Goldhawk Road, Shepherd's Bush Market, Shepherd's Bush and White City tube stations within the Opportunity Area. As a result, there are opportunities to increase the intensity of uses in the area. Any development in the area is likely to be residential and office led, which will have positive impacts in relation to objectives 4, 6 and 12. The urban environment of the area is currently relatively poor, suffering from a poor urban grain as a result of past urban planning practices, overground rail barriers and large industrial premises. Any regeneration would be expected to improve the urban environment, which will have positive impacts in relation to objectives 1, 5 and 7. The proposals may also involve some estate regeneration which would lead to improvement in the energy efficiency of the stock, which would have a positive impact in relation to objectives 8, 10 and 11; however, given the increase in intensity of uses on the site, it is considered on balance that objectives 8 and 11 would be evenly balanced in terms of positive and negative effects. Any development of the area would be expected to be supported by appropriate infrastructure such as schools and health centres and would therefore have positive impacts in relation to objectives 2 and 3. The only negative impact is considered to be in relation to transport, but this will largely be dependent on implementation and any proposed transport improvements to cope with the intensification of uses.

- 5.12 The Shepherds Bush Market proposals would involve the reprovision of the market along with residential and office uses. The proposals are therefore considered to have a positive impact in relation to objectives 4, 6 and 12. The proposals would be expected to enhance the market whilst at the same time improving the environment of the market and would therefore have positive impacts on objectives 1 and 7. The proposals are considered to have negative impacts in relation to objectives 8, 9 and 11. This is because of the intensification of uses proposed on the site. The efficiency of any development will depend on implementation, but given the current open nature of the market and the minimal on-site resource use, it is considered that any development here will likely lead to an increase in relation to pollution, CO2 generation and journeys to and from the market and other uses.

Mitigation Measures

- 5.13 The proposed redevelopment of Shepherd's Bush Market would create a new market with stalls and shops at ground floor level. Any residential would be at first floor level and therefore inundation would not pose a risk to the properties. Regardless of this, any proposed development of the site would have to take account of flood risk and the applicants would need to submit an FRA which would set out the particular risks to that site and any mitigation measures that will be undertaken to minimise flood risk.

- 5.14 Any development proposed in any Flood Risk Zone should also take account of the requirements of the Flood and Water Management Act 2010.

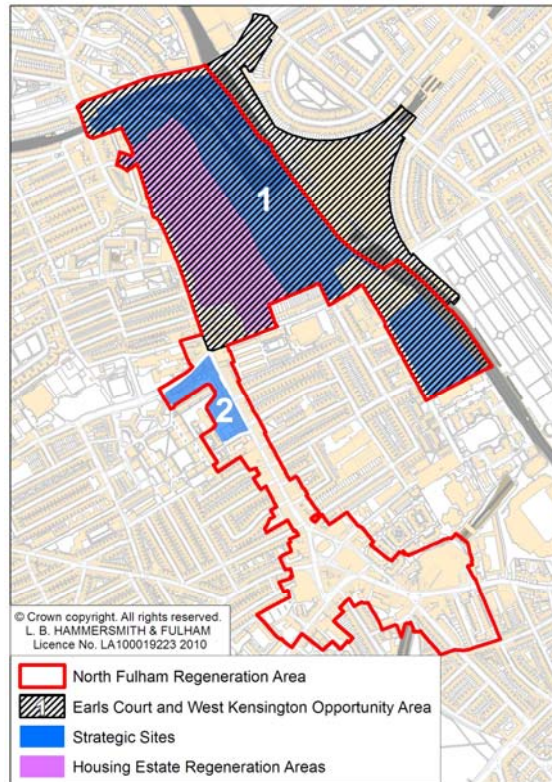
Summary

- 5.15 The regeneration area is predominantly in Flood Zone 1, however, parts of the area to the south east do lie in Flood Zones 2 and 3, particularly the Shepherds Bush Market strategic site. Both the opportunity area as a whole and the Shepherds Bush Market site are considered to give rise to more positive impacts than negative in relation to the sustainability objectives in the council's Sustainability Appraisal. Despite this, suitable mitigation measures will be expected as part of any development proposals within areas of flood risk along with an acceptable Flood Risk Assessment.

6. North Fulham Regeneration Area

6.1 The Regeneration Area stretches from Talgarth Road in the north to the edge of the Clem Atlee Estate in the west and then incorporating Fulham Town Centre to the south and east. The Regeneration Area covers Earls Court and West Kensington Opportunity Area, which includes the Earls Court 2 building, which will be demolished after the 2012 Olympics, TFL railway tracks and depot to the north, the Gibbs Green and West Kensington housing estates on North End Road and Seagrave Road Car Park. Seagrave Road Car Park is used in association with the Earls Court 2 Exhibition Centre.

6.2 After the 2012 Olympics, the owners of Earls Court plan to demolish the exhibition centre, which straddles the borough boundary with Kensington and Chelsea. It is recognised that there is a once in a lifetime opportunity to progress with estate regeneration alongside any proposed redevelopment of the Earls Court site. Transport for London are also interested in using this opportunity to develop some obsolete depot buildings and railway sidings and exploring the potential to deck over the District Line and West London Line tracks. Obviously any proposed redevelopment of the Earls Court site would make the associated car park redundant and presents an opportunity for redevelopment. A number of properties to the south-west of the junction of North End Road with Lillie Road have also been identified as a key site within the Regeneration Area (North End Road/Lillie Road/Chuter Ede House/Coomer Place car park). There are opportunities to repair the Lillie Road and North End Road frontages and better integrate the estate within the surrounding urban fabric.



Flood Risk

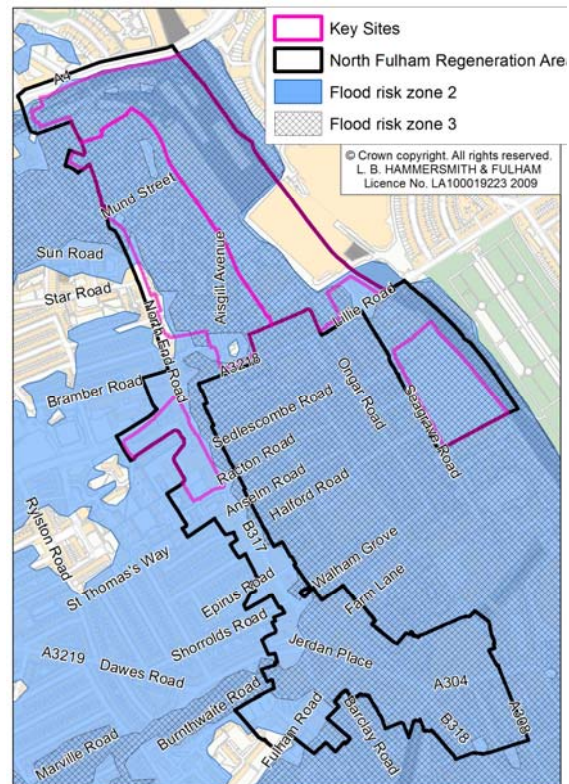
6.3 The majority of the Regeneration Area sits within Flood Risk Zone 3. The North End Road/Lillie Road/Chuter Ede House/Coomer Place car park site is located in Flood Risk Zone 2 and the Earls Court and West Kensington Opportunity Area is mostly within Flood Risk Zone 3, but Earls Court 2 has been artificially raised and sits within Flood Risk Zone 1.

Proposed Uses

- 6.4 Regeneration in the area will also be residential led. The proposed regeneration of the North End Road/Lillie Road/Chuter Ede House/Coomer Place car park site would be for residential with opportunities for retail along the Lillie Road and North End Road frontages. Proposed uses in Fulham Town Centre are likely to consist of retail, offices, residential and leisure. At the Earls Court and West Kensington Opportunity Area, a mixture of uses are proposed including residential, retail, offices, hotels, leisure, open space and transport infrastructure.

The Sequential Test

- 6.5 Retail, offices, hotels and leisure are all classified as less vulnerable uses and are therefore considered acceptable anywhere within the North Fulham Regeneration Area.
- 6.6 Transport infrastructure is considered to be essential infrastructure and should only be permitted in Flood Risk Zones 3 if the Exception Test is passed. This is also true for residential, which is classed as 'more vulnerable', except if it is a self contained basement dwelling, in which case it is classed as 'highly vulnerable'.
- 6.7 Any proposed transport infrastructure would be in association with the redevelopment of the Earls Court 2 and TFL land and would probably be within Flood Risk Zone 3 and would therefore be subject to the exception test.
- 6.8 Residential is proposed within both key sites. North End Road/Lillie Road/Chuter Ede House/Coomer Place car park site is entirely within Zone 2 and residential uses are therefore considered acceptable in these locations, as long as they are not self contained basement properties. Earls Court and West Kensington Opportunity Area is within Flood Risk Zone 3.
- 6.9 The proposed regeneration of the West Kensington and Gibbs Green Estates in the Earls Court and West Kensington Opportunity Area involves the re-provision of existing social rented housing, along with intermediate and market housing, in order to make the estate regeneration viable and to create more mixed communities in line with Planning Policy Statement 1. The current stock is in



need of regeneration and the opportunity provided by the adjacent redevelopment proposals at Earls Court 2 offers an opportunity to improve the two estates residential stock. The use of an alternative site to re-provide this housing is not an option, given that the existing tenants wish to remain in the area and the viability of the development would be affected if all existing housing on the site would need to be reprovided elsewhere. The Core Strategy proposes that Seagrave Road is used for phasing the estate regeneration at West Kensington and Gibbs Green. For estate regeneration to occur, it is therefore imperative that the site is redeveloped for residential. The site is a significant contributor to housing capacity in the borough's SHLAA and the delivery of residential on this site is therefore imperative in order for the borough to meet its housing target. The Earls Court 2 and TFL land site will also be required for a phased regeneration of the West Kensington and Gibbs Green Estates. The site is also a significant contributor towards the borough's housing target. Without this site, the borough would be providing an estimated 150 less units per annum. The delivery of this site is therefore imperative in order to meet the borough's housing target.

- 6.10 The Earls Court and West Kensington Opportunity Area must therefore be subject to the Exception Test.

The Exception Test

- 6.11 Criterion a) of the Exception Test requires the sustainability benefits of sites identified in Zones 2 and 3 in the council's Core Strategy to be assessed against the Core Strategy's Sustainability Appraisal. As part of the Sustainability Appraisal, LBHF has prepared 12 sustainability objectives, which are listed in the Appendix to this document.
- 6.12 Following the sequential test, the Wider North Fulham Regeneration Area and Earls Court and West Kensington Opportunity Area need to be considered against these objectives. The assessment of these two areas is shown in the table below. A '✓' signifies that the proposals would have a positive impact on a particular indicator; a '0' signifies that either there are no likely effects on the indicator or that the positives and negatives are evenly balanced, and a 'X' signifies that the proposals would have a negative effect on a particular indicator.

Sustainability Indicator	North Fulham Regeneration Area	Earls Court and West Kensington Opportunity Area
1. Increase equity and social justice	✓	✓
2. Improve the health of the overall population	✓	✓
3. Improve the education and skills of young people and adults	✓	✓
4. Provide decent and affordable homes	✓	✓
5. Improve local residents' sense of community and social cohesion	✓	✓

6. Increase the opportunities for satisfying and well paid work	✓	✓
7. Improve the local environmental heritage	✓	✓
8. Reduce the level of pollution	X	0
9. Reduce the effect of transport on the environment	X	X
10. Ensure the responsible consumption of resources in the borough	✓	✓
11. Reduce climate change and its impact on the borough	X	0
12. Improve the sustainability of the local economy	✓	✓

6.13 The proposals for North Fulham Regeneration Area involve estate regeneration alongside redevelopment of currently underused sites and renewal of the northern part of Fulham Town Centre. The proposals would deliver a variety of different uses, with an increase to the areas retail offer as well as new housing and office space. The proposals are therefore considered to have positive impacts in relation to objectives 4, 6 and 12. Any development would be expected to achieve the highest standard of design whilst at the same time being sympathetic to existing context. The proposals would be expected to have positive impacts in relation to objectives 1, 5, 7 and 11 as a result. Given the amount of development expected in the area, a co-ordinated response to infrastructure provision will be necessary. This will lead to positive impacts in relation to objectives 2 and 3. Any development in the area would lead to an increased intensity of uses. Any proposals would likely result in an increase in pollution and transport movements and, as a consequence, impact on the environment. However, this will be largely dependent on implementation and the council has policies in its Core Strategy which aim to minimise these issues.

6.14 With regard to Earls Court and West Kensington Opportunity Area, the impacts on the objectives are considered largely similar to that for North Fulham Regeneration Area. The only differences are in relation to objectives 8 and 11 on pollution and climate change respectively. This is as a result of the proposed regeneration of the estates. The current stock was built in the 1970s and any proposed regeneration would replace this stock with a more efficient build quality. Therefore, despite the proposed intensification of uses in the area, it is considered that the benefits and disbenefits in relation to these two objectives would be evenly balanced.

Mitigation Measures

6.15 Applications proposing self contained basement accommodation in Flood Risk Zones 2 and 3 would be refused planning permission. Any proposed developments in Zone 3 would need to take account of flood risk and the applicants would need to submit an FRA which would set out the particular risks to that site and any mitigation measures that will be undertaken to minimise flood risk.

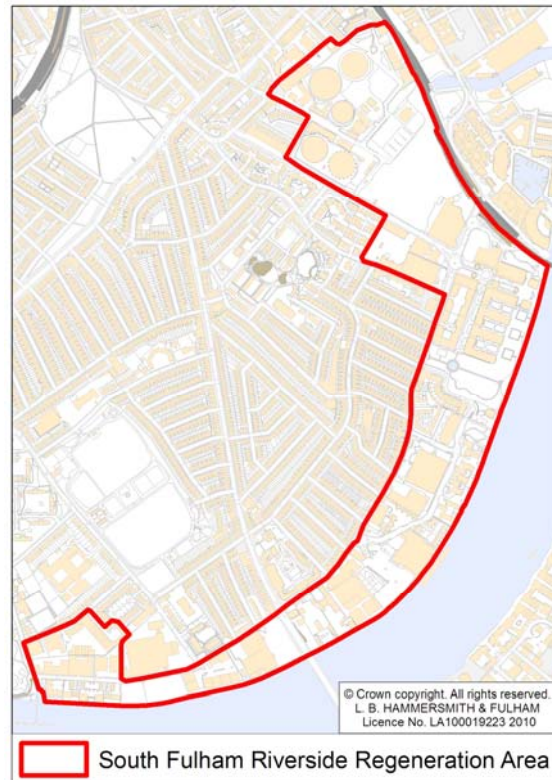
6.16 Any development proposed in any Flood Risk Zone should also take account of the requirements of the Flood and Water Management Act 2010.

Summary

6.17 The majority of the regeneration area is located in zones 2 or 3. The North End Road/Lillie Road/Chuter Ede House/Coomer Place car park site is entirely within Zone 2 and is considered to not need a Sequential Test. The regeneration area as a whole and the Earls Court and West Kensington Opportunity Area require assessment against the sequential test. No alternative sites are considered appropriate as both are providing a significant quantity of housing in order to meet the borough's housing target. Both sites are however, considered to meet parts a) and b) of the exception test. Any applicant will need to submit a satisfactory FRA in order to fully satisfy the exception test.

7. South Fulham Riverside

- 7.1 The South Fulham Riverside Regeneration Area stretches from Hurlingham Park in the west to the borough's eastern boundary and is bounded by the River Thames to the south and by Carnwath Road, Townmead Road and Imperial Road to the north. The area incorporates a number of wharves – Fulham, Hurlingham, Whiffin, Swedish, Comley's, Albert, Petrofina and Imperial Wharf. Imperial Wharf and Petrofina Wharf have been redeveloped for housing and other supporting uses, Albert Wharf is current used for car auctions, Comley's Wharf is currently occupied by a cement company, Swedish Wharf is occupied by an oil storage company and Whiffin, Hurlingham and Fulham wharves are currently vacant. The Regeneration Area also includes Baltic Sawmills to the north of Carnwath Road and Imperial Gasworks on Imperial Road.



- 7.2 Historically the area has been dominated by heavy industry, principally a brewery, paper factory, lumber docks, food factory and disinfecting factory, as well as a number of wharves. As a result of changing employment patterns, these uses started to cease through from the 1960s. Given the sites prime riverside location the area has attracted a lot interest in recent years from residential developers. The Imperial Wharf development, which is still under construction, dominates the west of the site and when completed will consist of over 1,500 residential units.

Flood Risk

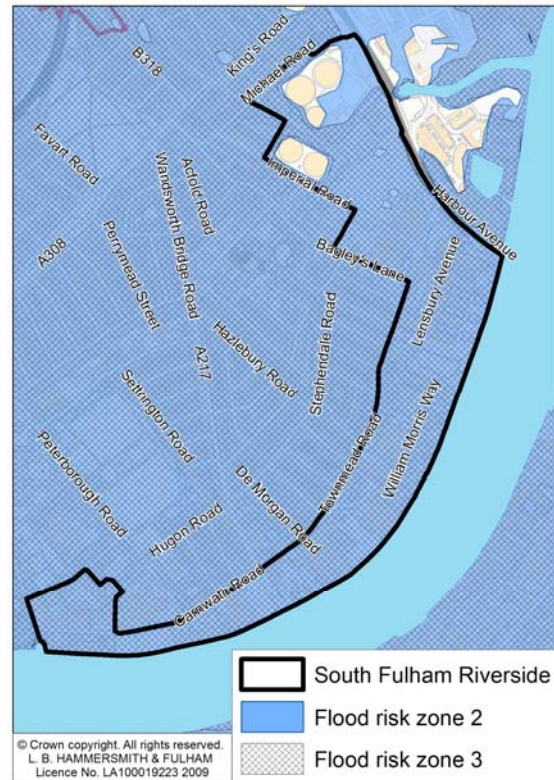
- 7.3 South Fulham Riverside Regeneration Area sits almost entirely within Flood Risk Zone 3. The areas of land along Carnwath Road to the south and Townmead Road in the centre are entirely within Flood Risk Zone 3, but parts of the Imperial Gasworks site on Imperial Road to the north are within Flood Risk Zones 1 and 2. The part of the site fronting onto the Thames is not within an area of high residual flood risk as the embankment has been raised along this stretch. However, there is a sluice gate on Chelsea Creek to the north of the regeneration area, which if breached could lead to severe flooding in Fulham.

Proposed Uses

- 7.4 Regeneration of the area is anticipated to be residential led, with opportunities for other uses at ground floor level, such as offices, leisure and retail. Transport infrastructure would also need to be improved in the area.

The Sequential Test

- 7.5 There are no key sites identified within the South Fulham Riverside. This is largely because there are no sites considered significant enough to have their own individual policy direction. The council's SHLAA does however set out those sites which it anticipates might be subject to development over the next 20 years. In total, there are 15 sites which are anticipated to provide up to 3,750 additional residential units and a minimum of 2,200 residential units.
- 7.6 In terms of the sequential approach there are no other sites that would be able to deliver this quantity of housing that have not already been identified as potential housing sites. The Old Oak Regeneration Area is not considered in the council's SHLAA to have any potential housing capacity in its current state. This is because any potential residential in the area is dependent upon a significant amount of transport infrastructure improvements, consisting of, at a minimum a Crossrail station and also, the possibility of a High Speed 2 railway station. Even if these transport improvements were committed to, construction of any significant quantum of residential dwellings at Old Oak would not be able to commence until at least 2020, with the first units unlikely to come forward until the early/mid 2020s.
- 7.7 The council's SHLAA shows that two thirds of development likely to be delivered at South Fulham Riverside will come forward in the 2012-22 period. Without this development, the borough's five year supply would be affected throughout that ten year period. It is therefore considered that in order to regenerate the area and achieve the borough's housing target, residential accommodation of this scale could not be provided elsewhere and the South Fulham Riverside area should therefore be subject to the Exception Test.



The Exception Test

- 7.8 Criterion a) of the Exception Test requires the sustainability benefits of sites identified in Zones 2 and 3 to be assessed against the Core Strategy's Sustainability Appraisal. As part of the Sustainability Appraisal, LBHF has prepared 12 sustainability objectives, which are listed in the Appendix to this document.
- 7.9 Following the sequential test, the South Fulham Riverside Regeneration Area needs to be considered against these objectives. The assessment of area is shown in the table below. A '✓' signifies that the proposals would have a positive impact on a particular indicator; a '0' signifies that either there are no likely effects on the indicator or that the positives and negatives are evenly balanced, and a 'X' signifies that the proposals would have a negative effect on a particular indicator.

Sustainability Indicator	South Fulham Riverside
1. Increase equity and social justice	✓
2. Improve the health of the overall population	✓
3. Improve the education and skills of young people and adults	0
4. Provide decent and affordable homes	✓
5. Improve local residents' sense of community and social cohesion	0
6. Increase the opportunities for satisfying and well paid work	✓
7. Improve the local environmental heritage	✓
8. Reduce the level of pollution	X
9. Reduce the effect of transport on the environment	X
10. Ensure the responsible consumption of resources in the borough	✓
11. Reduce climate change and its impact on the borough	X
12. Improve the sustainability of the local economy	✓

- 7.10 The council's SHLAA identifies that the area could provide a minimum of 2,200 residential uses, along with supporting uses, including leisure and retail, with the opportunity for some office space. The provision of increased housing and the job opportunities created resulting from any supporting uses will have a positive relation to objectives 4, 6 and 12. Any proposals fronting onto the river Thames would be expected to incorporate a riverside walkway which would form part of the wider Thames Path network. Currently, the Thames Path's route is rather disjointed in this part of the borough. Any proposals that would realign the Thames Path to the river is likely to help to encourage its use as a place for recreation, which will in turn have benefits in relation to objectives 2 and 7. Any development in the area would be expected to attain the highest standards of design and therefore have positive impacts in relation to objectives 1,7 and 10. The developable land in the area is currently underutilised, consisting largely of vacant wharfs, warehousing, and regional infrastructure. As a result, any development in the area will undoubtedly lead to an intensification of uses and would therefore likely have negative impacts in relation to objectives 8, 9 and 11.

This would however, depend on any schemes implementation and the council is preparing a Supplementary Planning Document for the area that will hope to mitigate any negative externalities.

Mitigation Measures

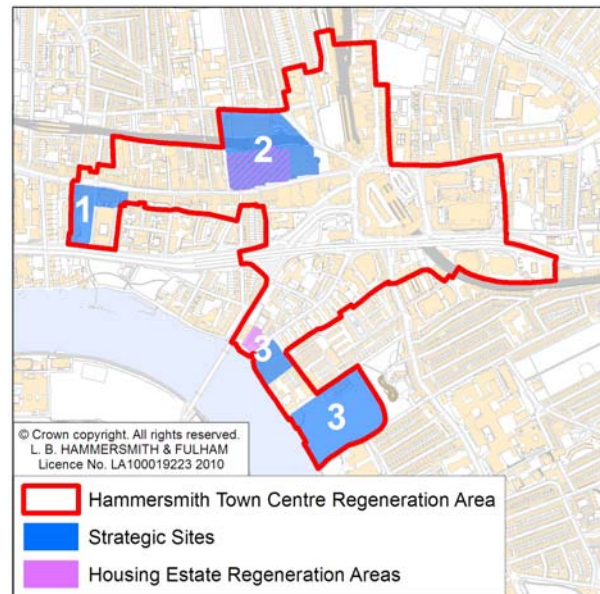
- 7.11 Any proposed development on the land adjoining the Chelsea Creek lock gate off Imperial Road will need to consider improvements to the flood defences in that area – given that the location would be one of the main breach points from any fluvial upsurge. Plan A.1.11 of the Council's Strategic Flood Risk Assessment demonstrates the impact that a breach would have in this location. Within a period of 6 hours a breach would flood an area stretching from Seagrave Road Car Park and Fulham High Street in the north, to Parson's Green and the Hurlingham Club in the south. It is therefore imperative that flood mitigation is appropriately dealt with in this location.
- 7.12 The dock area that forms part of the site is currently blocked off by a lock gate on the Lots Road side of the railway line. This lock gate stands 5.57m AOD, which is above the statutory Flood Defence Level for the site, which has been set by the Environment Agency at 5.41m AOD. The flood defence wall that sits in front of St George House on the western side of the railway bridge stands at 5.41m AOD, also meeting the Environment Agency's statutory flood defence level. However, this wall is currently discontinuous. There are also concerns about the reliability of the existing lock gates.
- 7.13 The council will consult the Environment Agency on flood issues, in particular regarding development within 16 metres of the Thames river bank. The 16 metre buffer is an adopted byelaw in the Thames Water Authority Land Drainage Byelaws 1981. The byelaw is enforced by the Environment Agency by virtue of the Water Resources Act 1991 and the Environment Act 1995 and states that '*No person shall, without the previous consent of the Authority (The Environment Agency), erect or construct, or cause or permit to be erected or constructed, any fence, post, pylon, wall, or any other building or structure... between a line drawn at a distance of 16 metres from the foot of any sea wall measured horizontally on the landward side and low water mark of mean spring tides.*'
- 7.14 Applications proposing self contained basement accommodation in Flood Risk Zones 2 and 3 will be refused planning permission. Any proposed developments in Zone 3 would need to take account of flood risk and the applicants would need to submit an FRA which would set out the particular risks to that site and any mitigation measures that will be undertaken to minimise flood risk.
- 7.15 Any development proposed in any Flood Risk Zone should also take account of the requirements of the Flood and Water Management Act 2010.

Summary

- 7.16 Given that the regeneration area abuts the river, it is unsurprising that the area is considered to be at risk to flooding. Almost all of the regeneration area sits in flood zone 3, with only parts of the National Grid having areas lying in flood zones 1 and 2. It is considered that the proposed amount of housing in the area could not be provided on any alternative sites, not just because of the quantity but also because of the timing of delivery. There is no estate regeneration proposed in this area and as a result, there are less potential constraints to development than in other parts of the borough and most development expected in the area will be delivered in the first ten years of the plan period. With regard to the exception test, the regeneration area is considered to meet parts a) and b). Any applicant will need to submit a satisfactory FRA in order to fully satisfy the exception test.

8. Hammersmith Town Centre and Riverside

- 8.1 The Regeneration Area covers Hammersmith Town Centre as well as land along the river to the south, including the Queen Caroline Estate, Queens Wharf, Riverside Studios and Hammersmith Embankment. There are three key sites within Hammersmith Town Centre Regeneration Area. The Town Hall extension and adjacent land are located to the far west of the Regeneration Area. The Town Hall extension was built in the 1970s and is in need of redevelopment and a neighbouring sites offer an opportunity for comprehensive redevelopment. In the centre of Hammersmith Town Centre is Kings Mall and Ashcroft Square; a 1970s built shopping centre with a housing estate above. There are opportunities here to reinvigorate the shopping centre, potentially through a redevelopment scheme. To the south is Hammersmith Riverside, which incorporates the southern section of the Queen Caroline Estate, Queens Wharf, Riverside Studios and Hammersmith Embankment. Queens Wharf and Hammersmith Embankment are currently vacant and Riverside Studios is currently used as a cinema/theatre venue.



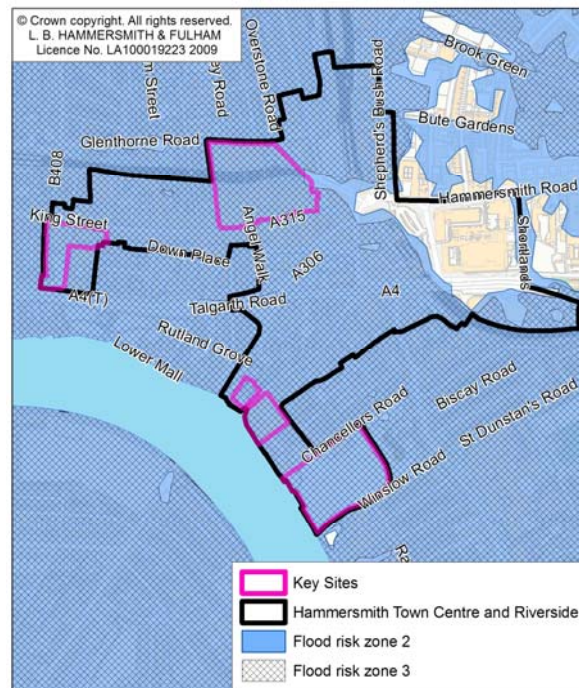
- 8.2 In recent years Hammersmith has developed into a major employment hub, due in large part to its location between Heathrow and Central London. In recent years there have been a number of large-scale developments in the centre, principally the Hammersmith Island redevelopment and the L'Oréal building. The Core Strategy identifies Hammersmith as a strategic office location in which the council will seek to concentrate future large office developments. It is also anticipated that given the dense nature of the centre, there will continue to be interest in high density residential schemes.

Flood Risk

- 8.3 The majority of the Hammersmith Town Centre and Riverside Regeneration Area lies within Flood Risk Zone 3. However, the Hammersmith Island site to the east is within Flood Risk Zone 1. Of the key sites, the Hammersmith Town Hall and adjacent land site lies entirely within Zone 3, as does Hammersmith Riverside (Queen's Wharf, Riverside Studios, Queen Caroline Estate and Hammersmith Embankment). The Kings Mall and Ashcroft Square Estate site is mostly within Flood Risk Zone 3 but a small portion to the east lies within Zone 2.

Proposed Uses

- 8.4 The site follows the boundary of the Town Centre with the exception of a segment of land to the south which stretches down Queen Caroline Street, covering the Queen Caroline Estate, Queens Wharf Riverside Studios and Hammersmith Embankment. Given that the Regeneration Area is largely covered by a Town Centre, a mix of proposed uses can be expected, including residential, offices, retail, leisure, hotels and community facility uses. There are not likely to be any significant increases in transport infrastructure as the area is already relatively well served by public transport.



The Sequential Test

- 8.5 Retail, offices, hotels, leisure and community facility uses are all classified as less vulnerable uses and are therefore considered acceptable anywhere within Hammersmith Town Centre. Residential is proposed within each of the three key sites. With regard to the Hammersmith Town Hall and adjacent land site, the scheme would not be viable without the residential provision. With regard to Kings Mall and Ashcroft Square, there is an existing housing estate on the site. It is currently unclear whether any redevelopment proposals would increase the proportion of housing on the site, but the existing residential units would need to be reprovided. In their current layout, the units are located at first floor level and it is envisaged that any reprovizion of the units would also result in all residential units being provided at first floor level or above. With regard to Hammersmith Riverside, Queen Caroline Estate is already in residential use and any proposals there would look to re-provide the existing residential units, along with intermediate units and market units in order to make the estate regeneration viable and to create more mixed communities in line with Planning Policy Statement 1. With regard to Hammersmith Embankment, Queens Wharf and Riverside Studios, the sites all contribute towards achieving the borough's housing target. No alternative sites could provide the quantity of housing that these three sites could potentially accommodate. All these sites will therefore need to be subjected to the Exception Test.

The Exception Test

- 8.6 Criterion a) of the Exception Test requires the sustainability benefits of sites identified in Zones 2 and 3 to be assessed against the Core Strategy's Sustainability Appraisal. As part of the Sustainability Appraisal, LBHF has prepared 12 sustainability objectives, which are listed in the Appendix to this document.
- 8.7 Following the sequential test, the Hammersmith Town Centre and Riverside Regeneration Area and all three key sites need to be considered against these objectives. The assessment of area is shown in the table below. A '✓' signifies that the proposals would have a positive impact on a particular indicator; a '0' signifies that either there are no likely effects on the indicator or that the positives and negatives are evenly balanced, and a 'X' signifies that the proposals would have a negative effect on a particular indicator.

Sustainability Indicator	Hammersmith Town Centre and Riverside	Town hall and adjacent land	Kings Mall and Ashcroft Square Estate	Hammersmith Riverside
1. Increase equity and social justice	✓	✓	✓	✓
2. Improve the health of the overall population	✓	✓	0	✓
3. Improve the education and skills of young people and adults	0	0	0	0
4. Provide decent and affordable homes	✓	✓	✓	✓
5. Improve local residents' sense of community and social cohesion	✓	✓	✓	✓
6. Increase the opportunities for satisfying and well paid work	✓	✓	✓	0
7. Improve the local environmental heritage	✓	✓	✓	✓
8. Reduce the level of pollution	X	✓	✓	X
9. Reduce the effect of transport on the environment	X	X	0	X
10. Ensure the responsible consumption of resources in the borough	✓	✓	✓	✓
11. Reduce climate change and its impact on the borough	X	0	0	X
12. Improve the sustainability of the local economy	✓	✓	✓	0

- 8.8 Regeneration in Hammersmith Town Centre and Riverside is likely to be of a largely mixed use nature, consisting primarily of residential, office and retail uses, but also with opportunities for hotels, leisure and other community uses. As a result, any proposals I would have positive impacts in relation to objectives 4, 6 and 12. A number of the proposals would involve the improvement of access to the river and to existing buildings in the area. This would ensure better opportunities for recreation along the riverfront and greater equity in terms of access to premises and will as a result, have positive impacts in relation to objectives 1 and 2. Any development proposals would be expected to attain the highest design standards, creating benefits in relation to objectives 5, 7 and 10. Any development in the area is likely to lead to an intensification of uses and would therefore likely have negative impacts in relation to objectives 8, 9 and 11. This would however, depend on any schemes implementation
- 8.9 With regard to the town hall and adjacent land, the outcomes are considered to be largely similar to that of the regeneration area as a whole. The exceptions are in relation to objectives 8 and 11. It is considered that the proposals will have positive impacts in relation to pollution and no discernable positive or negative impacts in relation to climate change. This is because the proposals for the site involve the demolition of the existing town hall extension building, which, given its time of construction in the early 70's, is considered a wholly inefficient and unsustainable building by modern standards. Although any proposals would lead to an intensification of uses on the site, it is considered that the replacement buildings are likely to be more energy efficient than the existing buildings.
- 8.10 The proposals relating to Kings Mall and Ashcroft Square are considered to have largely similar benefits and disbenefits in relation to the sustainability objectives as the town hall and adjacent sites. The only differences are in relation to objectives 2 and 9. The difference in relation to indicator 2 is a result of the proposals at the town hall site to provide a bridge over the A4 improving access to the river. In relation to Kings Mall and Ashcroft Square, there are no proposals that are considered to have direct benefits in relation to health; although it is considered that any regeneration proposals would be likely to lead to an improvement in the healthiness of any buildings. In relation to indicator 9, any proposed regeneration of the site would involve redevelopment of the car park site to the rear and would likely reduce reliance on use of the private vehicle in order to visit the centre. Given that there may be an increase in the intensity in the use of the development, it is considered that the benefits and disbenefits in relation to this indicator are balanced out.
- 8.11 With regard to Hammersmith Riverside, again, the benefits and disbenefits in relation to the sustainability objectives are considered to largely mirror those for the overall regeneration area. The exceptions to this are in relation to objectives 6 and 12. This is because any development in the area is anticipated to be

residential led. There will be opportunities for supporting uses in any development proposals but this will depend largely in implementation.

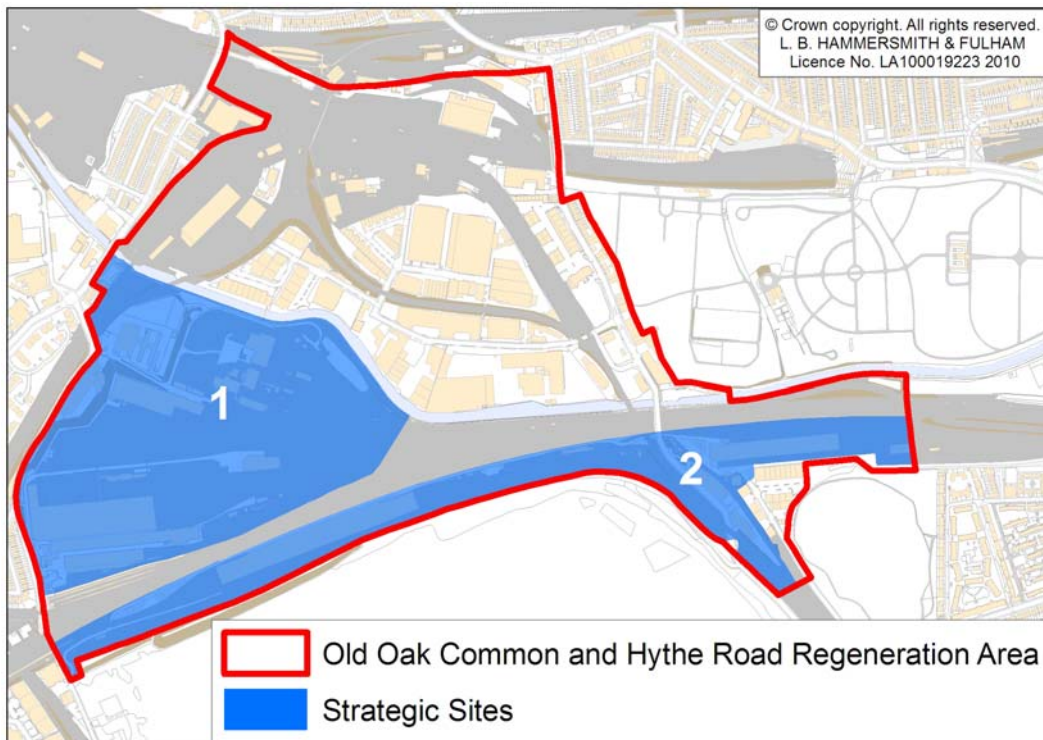
Mitigation Measures

- 8.12 Applications proposing self contained basement accommodation in Flood Risk Zones 2 and 3 would be refused planning permission. Any proposed developments in Zone 3 would need to take account of flood risk and the applicants would need to submit an FRA which would set out the particular risks to that site and any mitigation measures that will be undertaken to minimise flood risk.
- 8.13 Any development proposed in any Flood Risk Zone should also take account of the requirements of the Flood and Water Management Act 2010.

Summary

- 8.14 The majority of the Hammersmith Town Centre and Riverside Regeneration Area sits within flood risk zone 3. All sites therefore need to be assessed against the Sequential Test. It is considered that none of the developments could be provided elsewhere in the borough given that they are either helping to realise regeneration benefits and sustain the town centre or consist of developable and deliverable sites which form an important element of the borough's housing delivery target. The regeneration area as a whole and the three sites within in have therefore been assessed against the exception test. In each case, they are considered to meet parts a) and b) of the exception test. Any applicant will need to submit a satisfactory FRA in order to fully satisfy the exception test.

9. Old Oak Common and Hythe Road Area



- 9.1 The Regeneration Area is bounded to the west and north by the borough boundary, to the east by St. Mary's RC Cemetery and to the south by Wormwood Scrubs. The Regeneration Area sits within the Park Royal Opportunity Area, which stretches north-westwards to Alperton. The area is occupied by the borough's two waste sites to the north, with the Hythe Road industrial area in the centre and National Rail land to the south. There are two key sites in the Regeneration Area. The northernmost of the two is Old Oak Common Sidings. The sidings are currently vacant but are safeguarded for Crossrail during construction. The Council has longer term ambitions to redevelop this land for a Crossrail station with an interchange with the new High Speed 2 railway line, which was endorsed by Central Government in March 2010. The southernmost key site is North Pole Depot. The site was previously used by Eurostar, but since its vacation, the future of the depot has been uncertain. The council proposes that the depot be used to assist in the provision of enhanced local passenger rail services and as a location for the possible relocation of rail operations from other areas, including Old Oak Common Sidings.

Flood Risk

- 9.2 The Old Oak Common and Hythe Road area sits entirely within Flood Risk Zone 1. There is therefore no need to undertake the sequential approach to site selection.

10. Conclusions

The Sequential Test

- 10.1 More than half of the borough lies within Flood Risk Zone 3 and it is therefore inevitable that some of the identified Regeneration Areas and Key Sites will be affected by flood risk. In the production of the council's SHLAA, all developable sites capable of providing ten or more units have been considered and the development of the council's housing target is based on these findings. If all sites within Flood Risk Zone 3 were to be discarded, the council's housing target would be half that identified within the Draft Replacement London Plan which would therefore be contrary to regional policy. Whilst the council's SHLAA does identify the Old Oak Common and Hythe Road area as a location that could potentially provide a significant quantity of housing, development there is dependent upon a substantial investment in infrastructure – principally a Crossrail station and High Speed 2 station. The likelihood of development at Old Oak has therefore been allocated a low probability and the site cannot therefore be considered a viable site to deliver the majority of the council's housing target.
- 10.2 In addition, a number of the Regeneration Area and Key Site proposals are tied into town centre regeneration and estate regeneration. Any development proposals are therefore tied geographically to particular estates, which in some circumstances happen to be located within Flood Risk Zone 3.
- 10.3 in view of the above, it is considered that it is not practical for any of the development schemes proposed for Regeneration Areas or Key Sites within areas of flood risk to be located in areas with less of a flood risk. Therefore, any site lying within such locations will need to satisfy the Exception Test.

The Exception Test

- 10.4 Balancing the benefits that development brings both economically and socially, against the disbenefits that development brings environmentally, it is concluded that for each identified Regeneration Area and Key Site, the economic and social benefits outweigh the environmental disbenefits.
- 10.5 Generally speaking, any sort of 'development' is likely to have some negative externalities in terms of pollution, impacts on the transport network and more globally, effects on climate change. However, despite these negative impacts that development can have on the local and global environment, it is possible to seek some positive elements, such as decentralised energy schemes and enhanced biodiversity measure. Also, of course, 'development' by its very nature, provides opportunities, both socially and economically.
- 10.6 In particular in LBHF, a significant proportion of the identified Regeneration Areas and Key Sites propose some form of estate regeneration – often facilitated

through a 'once in a lifetime' opportunity, afforded by a neighbouring development site. The potential benefits that this affords, both socially and economically, are considered to far outweigh any negative environmental impacts – it should be noted however that attempts will be made to minimise any potentially negative impacts through the planning application process, through the application of S106 agreements, through policy and through ongoing discussion with applicants.

Appendix: Sustainability Objectives and Indicators

Indicator	Indicator Source	Data Source	Comments	Frequency of data availability	Geographic level
SA Objective 1: Increase equity and social justice					
NI 116 proportion of children in poverty	Dept for Communities and Local Government	Childrens services		Annual	Borough
NI 140 Fair treatment by local services (check what this is measuring)	Dept for Communities and Local Government	Finance and Corporate services		Annual	Borough
SA Objective 2: Improve health of population overall					
NI 120 All age, all cause mortality rate	Dept for Communities and Local Government	Community services (via H&F PCT)		Annual	Borough
NI 56 Obesity among primary school age children in Year 6	Dept for Communities and Local Government	Community services (via H&F PCT)		Annual	Borough
NI 57 Children and Young peoples participation in high quality PE and sport	Dept for Communities and Local Government	Childrens services		Annual	Borough
NI 8 Adult participation in sport	Dept for Communities and Local Government	Resident services		Annual	Borough
SA Objective 3: Improve the education and skills of young people and adults					
NI 75 Achievement of 5 or more A*-C grades at GCSE or equivalent including English and Maths	Dept for Communities and Local Government	Childrens services		Annual	Borough
SA Objective 4: provide decent and affordable homes					

Indicator	Indicator Source	Data Source	Comments	Frequency of data availability	Geographic level
NI 154 Net additional homes provided	Dept for Communities and Local Government	Community services		Quarterly	Borough
NI 155 Number of affordable homes delivered	Dept for Communities and Local Government	Community services		Annual	Borough
NI 158 % decent council homes	Dept for Communities and Local Government	Community services		Quarterly	Borough
%age of homes built to wheelchair standards and % built to lifetime homes standards.	London Development Database	Environment services department.		Annual	Borough
%age homes meeting the Code for Sustainable Homes	Dept Communities and Local Government	Environment services department.		Annual	Borough
Objective 5: Increase local residents' sense of community and social cohesion					
NI 2 % of people who feel they belong to their neighbourhood	LBHF	Finance and Corporate services		Annual	Borough
NI 5 Overall/general satisfaction with local area	Dept for Communities and Local Government	Finance and Corporate services		Annual	Borough
NI 16 Serious acquisitive crime rate	Dept for Communities and Local Government	Community services (via Police)		Monthly	Borough
NI 17 perceptions of anti-social behaviour	Dept for Communities and	Community services		Annual	Borough

Indicator	Indicator Source	Data Source	Comments	Frequency of data availability	Geographic level
	Local Government				
SA Objective 6: Increase the opportunities for satisfying and well paid work					
NI 151 Overall employment rate	Dept for Communities and Local Government	Community services		Quarterly	Borough
NI 152 Working age people on out of work benefits	Dept for Communities and Local Government	Community services		Quarterly	Borough
NI 153 Working age people claiming out of work benefits in the worst performing neighbourhoods	Dept for Communities and Local Government	Community services		Quarterly	Borough
SA Objective 7: Improve the local environmental heritage					
NI 197 Improved local biodiversity- active management of local sites	Dept for Communities and Local Government	Environment services department		Annual	Borough
SA Objective 8: Reduce the level of pollution					
NI 196 Improved street and environmental cleanliness- fly tipping	Dept for Communities and Local Government	Environment services department		Annual	Borough
Number of times the level of pollution exceeds the guide limits for PM10 and NO2	Dept for Communities and Local Government	Environment Services Department	This is a contextual indicator in LBHF's Annual Monitoring Report	Annual	Borough
SA Objective 9: Reduce the effect of transport on the environment					

Indicator	Indicator Source	Data Source	Comments	Frequency of data availability	Geographic level
Percentage amount of new residential development within 30 minutes public transport time of a GP hospital, primary and secondary school, employment and a major retail centre.	Dept for Communities and Local Government	Environment Services Department	This is a core indicator in LBHF's Annual Monitoring Report	Annual	Borough
NI 198 methods of children travelling to school (5-16 year olds)	Dept for Communities and Local Government	Environment Services Department		Annual	Borough
Modes of transport using annual traffic count data.	Environment services Dept	Environment Services Department		Annual	Borough
SA Objective 10: Responsible consumption of resources in the borough					
NI 192 Household waste recycled and composted	Dept for Communities and Local Government	Environment services department		Quarterly	Borough
SA Objective 11: Reduce climate change and its impact on the borough					
NI 186 per capita CO2 emissions in the LA area	Dept for Communities and Local Government	Environment services department		Annual	Borough
Renewable Energy Capacity Installed by type	Dept for Communities and Local Government	Environment services Dept	This is a core indicator which is included in the Annual Monitoring report	Annual	Borough
Number of planning applications	Environment	Environment		Annual	Borough

Indicator	Indicator Source	Data Source	Comments	Frequency of data availability	Geographic level
that include sustainable drainage	services Dept	services Dept			
SA Objective 12:Improve the sustainability of the local economy					
NI 172 VAT registration rate	Dept for Communities and Local Government	Community services		Annual	Borough
NI 174 Skills gap in the current workforce reported by employers	Dept for Communities and Local Government	Community services		Annual	Borough

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Albanian

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Amharic

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Arabic

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Bengali

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Croatian

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Farsi

لطفاً اگر مایل هستید هر بخشی از این نوشتار به زبان شما ترجمه گردد، با شماره تلفن 0208 753 3317 تماس حاصل فرمایید.

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Somali

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Spanish

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Urdu

اگر اس دستاویز کے کسی بھی حصہ کا ترجمہ آپ اپنی زبان میں حاصل کرنا چاہتے ہیں تو برائے مہربانی 0208 753 3317 پر فون کریں۔