Appendix 1

Planning Guidance Supplementary Planning Document

July 2013

Hammersmith & Fulham Council

Contents

Housing Policies

Contents

Design Policies

Amenity Policies

Contents

Sustainability Policies

Transport Policies

Contents

Contents

1 Explanatory Note

1.1 This Supplementary Planning Document (SPD) has been prepared under the terms of the Planning and Compulsory Purchase Act 2004 and the accompanying Town and Country Planning (Local Planning) (England) Regulations 2012.

1.2 The SPD was subject to informal consultation with key stakeholders in early 2012 when it was being prepared by the council. Formal consultation followed from June to September 2012 and a summary of the main issues raised and how those issues were addressed by the council are included in a statement of consultation. The SPD is supported by an equality impact assessment carried out under the Equality Act 2010. It was not necessary to prepare a sustainability appraisal as there is no requirement to do so under the Planning and Compulsory Purchase Act 2004 (Section 19(5) of the Planning Act 2008 removed the requirement for a sustainability appraisal report to be prepared for all SPDs). The council considered the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 and specifically Schedule 1 (the criteria for determining the likely significance of the effects on the environment) and came to the conclusion that an SEA was not required.

1.3 The SPD provides supplementary detail to policies concerned with a variety of topics within LBHF's Core Strategy 2011 and Development Management Local Plan (DM LP). The SPD also complements the Regeneration Area SPDs that the council has adopted. It may also provide supplementary detail to any neighbourhood plans that may come into effect in the borough.

1.4 The SPD is divided into sections relating to specific topics, and within these sections are sub-sections that are concerned with particular policy areas.

1 Explanatory Note

2 Purpose of the Document

2.1 This document was prepared under the terms of the Planning and Compulsory Purchase Act 2004 and the accompanying Town and Country Planning (Local Planning) (England) Regulations 2012.

2.2 The overall objectives of the SPD are to:

- establish more detailed guidance on the application of policies within the Core Strategy and Development Management Local Plan (DM LP) as well as any neighbourhood plans that come into effect that are concerned with managing development proposals within the borough; and

- help applicants make successful applications and to aid infrastructure delivery.

2.3 The document provides policy guidance covering a number of different topics. Each topic area includes a brief identification of the overarching policy context, namely national, London and local policy. This information includes reference to the National Planning Policy Framework and to relevant London Plan, Core Strategy and Development Management Local Plan (DM LP) policies, but does not include detail for these policies.Additionally, for each topic area there is a short description of the local context, for example the section of the SPD on archaeology provides detail of existing archaeological assets in the borough.

2.4 The key elements of the SPD, however, are the policies that the council will apply when considering development proposals. The policies have been developed to provide more detail on the application of the strategic and borough wide policies in the Core Strategy and DM LP and should be read alongside these documents, as well as relevant Regeneration Area Supplementary Planning Documents (SPDs) where these exist, to get a full understanding of the council's position on particular issues. The policies should also be considered alongside any neighbourhood plans that are prepared.

2.5 The SPD will be a material consideration in planning decisions although it is not part of the development plan.

2.6 The SPD complements the council's Regeneration Area planning frameworks, such as the Earls Court and West Kensington Opportunity Area SPD. Where the approach might be different between the policies in this SPD and those in the regeneration area SPDs regarding a particular topic, further guidance on interpretation will be available from the council.

2 Purpose of the Document

3 Housing

Housing Quality

Purpose

3.1 This SPD provides guidance to ensure that new residential development provides high quality housing that meets local needs. The London Plan and accompanying SPG on Housing provide guidance on the quality and design of homes and of the surrounding area to help create good, liveable neighbourhoods.

3.2 The council considers that much of the guidance in the Mayor of London's Housing SPG is relevant to the local circumstances in Hammersmith & Fulham and supports the policies in the H&F Core Strategy and the Development Management Local Plan. Therefore the council will rely on the Mayor of London's Housing SPG when assessing relevant planning applications, except where other or more detailed guidance is specified below.

Policy Guidance

3.3 The following national, regional and local plan policies provide the policy context for this SPD relating to housing quality.

National policy

3.4 The National Planning Policy Framework (NPPF) published in March 2012 has as one of its twelve policies to:

- "always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;"

London Plan

- London Plan Policy 3.5: Quality and Design of Housing Developments states that, amongst other things, "the design of al new housing developments should enhance the quality of local places, taking into account ... local character, density.... the needs of children and older people". It is supported by Housing SPG, adopted November 2012..

- London Plan Policy 7.6: Architecture states that architecture "should incorporate the highest quality materials and design appropriate to its context".

Local Plan

3.5 The Core Strategy Borough Wide Strategic Policy – H3: Housing quality and density and Borough Wide Strategic Policy – BE1: Built Environment are particularly relevant to housing quality. These policies are supported and expanded upon in the Development Management Local Plan. In particular Policy DM A2: Housing quality and density states that all new housing must be of high quality design and take account of the amenity of neighbours... and must be designed to have adequate internal space..". Other policies include Policy DM A8 which provides detail on basement accommodation and lightwells, and Policy DM A9 which sets out criteria which will be taken into account when

- Policy DM A9: Detailed residential standards

- Policy DM E2: Playspace for children and young people

3 Housing

Local Context

3.6 A key element of the council's vision for the borough is to achieve decent neighbourhoods which includes the quality of the housing and how development impacts on the surrounding area. In a high density borough where developments are often juxtaposed with their neighbours, new development and changes to existing properties, including extensions and roof terraces, can impact on neighbours through overlooking, visual intrusion, increased flood risk and loss of biodiversity in the local area.

Amenity and Children's Playspace

3.7 In relation to the provision of private gardens and amenity space the council will expect to see a more generous provision of outdoor amenity space than the minimum provision standards 4.10.1/2/3 in the Housing SPG accompanying the London Plan. The council will also aim to ensure that in residential conversions that housing appropriate for families has access to any garden or amenity space.

SPD Housing Policy 1

Amenity space in new dwellings

All new dwellings should have access to an area of amenity space, appropriate to the type of housing being provided.

Every new family dwelling should have access to amenity or garden space of not less than 36 square metres. Dwellings with accommodation at ground floor level should have at least one area of private open space with direct access to it from the dwelling. For family dwellings on upper floors this space may be provided either as a balcony or terrace and/or communally within the building's curtilage.

Where communal open space is provided, development proposals should demonstrate that the space:

- **has a well designed area for children's play adequate to meet the needs of the development;**
- **is overlooked by surrounding development;**
- **is accessible to wheelchair users and other disabled people;**
- **is designed to take advantage of direct sunlight;**
- **has suitable management arrangements in place.**

3.8 Access to high quality and adequate amounts of private open space significantly adds to the quality of life of occupants. The space standards for private amenity space in this SPD have been established by considering the space needs for furniture, access and activities and in relation to the number of occupants.

3.9 Balconies, terraces and gardens are multifunctional allowing occupants to engage in a range of passive and active recreational activities such as gardening and play. This is especially important in a heavily built up inner borough like Hammersmith and Fulham. Children in particular will benefit from having access to adequate areas of private open space for play activities. Where communal open space is provided it is important that it is well designed and safe and can be used by all residents. It is also important that there are arrangements in place to ensure that the open space is well managed, not just in the short term but over the life of the development.

SPD Housing Policy 2

Amenity space and conversions

Where a property proposed for conversion includes a rear garden or amenity space then it should be used by a family-sized unit with direct access to it from that dwelling unit.

3.10 Where family dwellings are proposed in a residential conversion scheme, they should be located at a level which gives direct and normally exclusive access to the garden. Conversion schemes often require ground floor extensions to provide the necessary accommodation, but such extensions should meet other guidance in this SPD. If the property is of sufficient size to allow family dwellings at upper levels then these should be provided with open amenity space. Such space may be in the form of a roof terrace but its provision will have to ensure that the amenities of neighbouring properties are adequately protected.

SPD Housing Policy 3

Amenity space and balconies

Where balconies and or terraces are provided they must be designed to respect the amenity of neighbours and be designed so as not to detract from the character of the surroundings. Balconies provided to meet amenity space requirements should have a minimum depth and width of 1500mm.

3.11 Balconies and terraces can provide dwellings with valued private open space. However, it is important that these are designed so as not to overlook surrounding properties as this can potentially adversely impact both upon the privacy and amenity of neighbours and the character of the area. It is important that any balconies and terraces that are to be provided, are large enough to permit a range of functional uses such as accommodating seating and dining furniture.

Conversions and Extensions

SPD Housing Policy 4

Minimum Sizes

Converted flats to provide for full self containment should have an internal area of at least 32.5 square metres where a separate bedroom is provided. Where a self-contained bedsitting room is provided there should be at least 25 square metres with a minimum living/sleeping area of 14 square metres. Mezzanine floors/beds decks will not be included when calculating total floorspace. Separate kitchen areas should be provided.

SPD Housing Policy 5

Internal Space Provision in Residential Conversions

The minimum net floor area of individual rooms within all converted self-contained residential units should be in accordance with the table below.

Internal Space Provision in Residential Conversions		
	Family unit	Non-family unit
Living room	15	12.5
Dining/Living room	16	14
Working kitchen	7.5	5.5
Kitchen/Diner	9	7.5
Main bedroom	12	12
Other double bedrooms	10.2	-
Single bedroom	6.5	6.5
Bathroom	3.7	3.7
All areas are given in square metres		

3.12 In determining whether an existing building is suitable for conversion, the council will consider whether the proposed development will provide rooms adequate in size for their intended use and occupancy. Unlike new residential developments, the conversion of existing dwellings requires the adaptation of existing layouts and rooms originally designed for different purposes. The size and shape of rooms should allow for a satisfactory layout and adequate range of furniture and equipment, taking account where possible of Lifetime Homes standards and of BS 9266 for design of accessible and adaptable homes when published.

SPD Housing Policy 6

Rear Extensions

The council will have regard to the existing established rear building lines of adjoining properties in determining applications for rear extensions which project beyond the rear building line of the property as originally built.

However, planning permission will not normally be granted for any extension if:

(i) The proposed extension is more than 3.5 metres in length or, where the original property has already been extended, if the combined length of the existing and the proposed extensions would project more than 3.5 metres beyond the rear building line of the back addition as it was originally built; or

(ii) The proposed extension would extend to within 4 metres of the rear boundary of the application property; or

(iii) The proposed extension would cover more than 50% of the open area at the rear of the property as originally built or, where the original property has already been extended, if the cumulative area of the existing and proposed extensions would cover more than 50% of the open area at the rear of the property as originally built.

3.13 The borough already has a high density of development, with little space between buildings, particularly in the south of the borough. In addition to being important as an amenity for residents, back gardens and the open spaces at the rear of buildings can also be an important element in defining the character and appearance of an area. In some cases erecting a rear extension to a single dwelling house, may not require planning permission because it is identified as permitted development (The Town and Country Planning (General Permitted Development) Order (1995) (as amended)). However, in cases where planning permission is required, the council considers it necessary to limit the size of rear extensions to ensure that they do not result in an unacceptable loss of existing amenity space or adversely affect the existing sense of openness between buildings to a degree which could be considered unneighbourly or harmful to the existing established character of the area. Where the existing level of amenity space is already limited and/or the existing space between buildings is confined, it may not be appropriate to permit any rear extension.

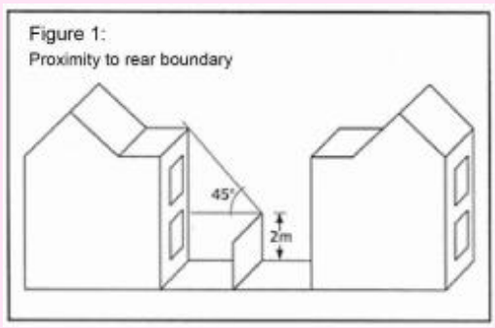
3 Housing

SPD Housing Policy 7

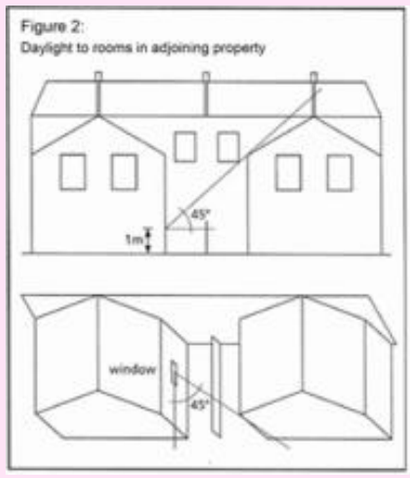
Rear Extensions - Standards

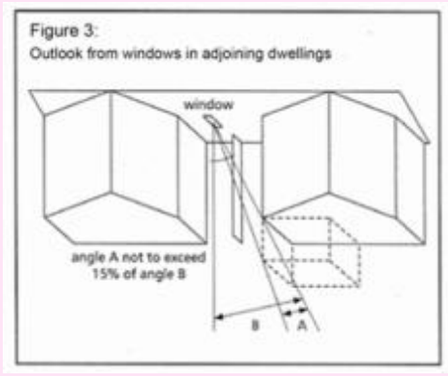
Rear extensions to residential terraced properties should accord with the following guidance:

(i) Extensions (including an external staircase or similar structure) should not result in infringing an angle of 45 degrees to the rear boundary at a height of 2 metres. (See Figure 1).

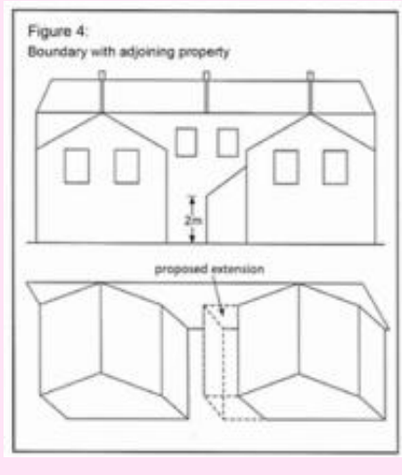


(ii) Any extension of either the roof of the back addition or to the rear of the back addition should enable an unobstructed angle of 45 degrees to be achieved to any window to a room (other than to a bathroom or toilet) on the ground floor of the opposing back addition if that forms the sole window to that room. This requirement needs to be satisfied by measuring either over or around the back addition as extended (see Figure 2).





(iii) The outlook from any rear window of a habitable room in the main part of the building should not be significantly worsened as a result of any proposed extension built at a level higher than the level of the floor containing the affected window, for example, a window at first floor level which is affected by an extension at second floor level. The angle of unobstructed visibility for this purpose should not be reduced by more than 15% (see Figure 3). Where no rear addition currently exists at the level of the extension then on-site judgement will be a determining factor in assessing the effect which the extension will have on the existing amenities of the neighbouring properties.



(iv) Any extension at the side of the back addition (being the back addition of the property as originally built) shall not extend above a height of 2 metres on the boundary with the adjoining property as measured from the ground level of the adjoining property. The roof of the extension shall have a maximum angle of slope not exceeding 45 degrees (see Figure 4)

3.14 The common form of layout of the majority of residential dwellings in the borough (mainly late Victorian/Edwardian properties) is of a narrow single fronted main structure forming part of a terrace and comprising either two or three floors with or without a semi-basement, together with a narrower projecting part at the rear (i.e. the back addition) which is usually of a lesser height and/or number of storeys. The ability to extend these residential properties is limited given their proximity to neighbouring properties if the amenities currently enjoyed by adjoining occupiers are to be respected. The options, other than to extend the rear roof slope of the main part of the building, are generally limited to extending the back addition. The above guidance aims to protect the amenities of neighbouring residents when rear extensions are proposed

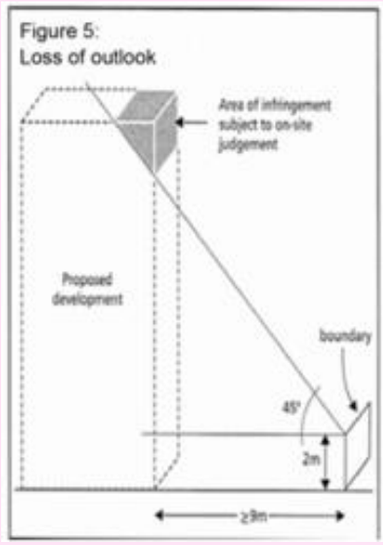
3.15 In some circumstances, the narrow width of the area between back additions, together with their existing length and height produce conditions which are already at the margins of acceptability in terms of the aspect and prospect afforded to those rooms whose windows face into this area. Any further extension to these back additions particularly above ground level could create unacceptable conditions for adjoining occupiers and will generally be resisted. In order to assess the acceptability of each proposal the policies above should be used together with on-site judgement.

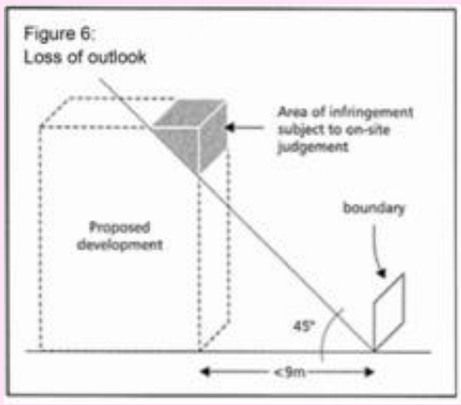
SPD Housing Policy 8

Protection of amenities

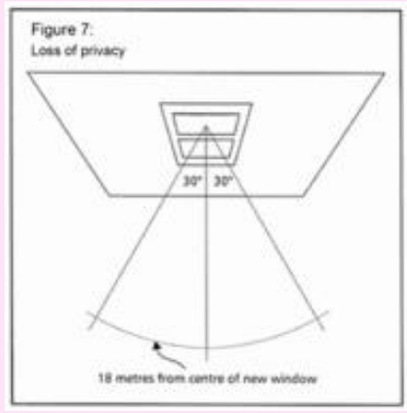
In order to protect the amenity of neighbouring occupiers new development and extensions to existing buildings should accord with the following guidance:

(i) The proximity of a new building or an extension to an existing building can have an overbearing and dominating effect detrimental to the enjoyment by adjoining residential occupiers of their properties. Although it is dependent upon the proximity and scale of the proposed development a general standard can be adopted by reference to a line produced at an angle of 45 degrees from a point 2 metres above the adjoining ground level of the boundaries of the site where it adjoins residential properties. On sites that adjoin residential properties that have rear gardens of less than 9 metres in length this line should be produced at 45 degrees from a point at ground level on the boundary of the site where it adjoins residential properties. If any part of the proposed building extends beyond these lines then on-site judgement will be a determining factor in assessing the effect which the extension will have on the existing amenities of neighbouring properties (figures 5 and 6).





(ii) New windows should normally be positioned so that the distance to any residential windows is not less than 18 metres as measured by an arc of 60 degrees taken from the centre of the proposed new window. If this standard cannot be met then windows should be designed to ensure that no loss of privacy will occur (see Figure 7). Generally a roof terrace/balcony is unacceptable if it would result in an additional opportunity for overlooking or result in a significantly greater degree of overlooking and consequent loss of privacy than from the access point onto the proposed roof terrace/balcony.



(iii) Planning permission will not be granted for roof terraces or balconies if the use of the terraces or balcony is likely to cause harm to the existing amenities of neighbouring occupiers by reason of noise and disturbance.

(iv) North facing (i.e. where the orientation is less than 50 degrees either side of north) should be avoided wherever possible.

3.16 Because the borough has a high density of development it is necessary to ensure that in the siting and design of all new buildings and extensions, the amenities of existing residential occupiers are not unduly affected and that there are safeguards against loss of outlook and loss of privacy. The main objections to new development in this borough relate to loss of sunlight, daylight, outlook and privacy.

3.17 In addition to issues of privacy, the use of roof terraces and/or balconies may also cause harm to the amenities of neighbouring occupiers as a result of noise and disturbance.

3.18 In respect of aspect, the reception of sunlight is important to the quality of life and therefore in designing new buildings the ability for at least one habitable room to receive sunlight should be a priority.

SPD Housing Policy 9

Basements

New or additional residential accommodation in basements should meet the following criteria. The accommodation should:

(i) not increase the risk of flooding from any source and in areas that are at medium to high risk of fluvial flooding, there must be a satisfactory means of escape in the event of a flood (see SPD on Flood Risk and Sustainable Drainage (SUDs);

(ii) meet the policies and guidance for new lightwells (see SPD on Guidelines for Lightwells);

(iii) meet the guidance set out in the Building Research Establishment's (BRE) report 'site layout planning for daylight and sunlight – a guide to good practice' and the provision of daylight and sunlight to rooms is adequate;

(iv) meet the minimum requirements for the net floor area of the flat and net floor area of individual rooms set out in this SPD; and

(v) be in accordance with on or off-street parking requirements set out in the Transport SPD, if an additional residential unit is being created; and

(vi) include a Subterranean Construction Method Statement (carried out by a qualified structural surveyor or civil engineer) and submitted with the planning application and made available to neighbouring owners

(vii) provide active drainage devices to minimise the risk of sewer flooding

3.19 There are a number of properties in the borough with existing basements, including semi-basements which are partially at ground level. The creation of additional accommodation at basement level can provide additional residential space and in some cases additional dwellings. However, the council has to ensure that new or extended basements do not have an adverse effect on the amenity of neighbouring properties or on the residential environment.

Reason for (i)

3.20 Basement accommodation and/or any accommodation below street level may be at risk of flooding and could increase the risk of flooding to neighbouring properties. It is therefore important that a Flood risk Assessment is carried out and any new development is designed to be flood resilient.

Reason for (ii)

3.21 Lightwells may need to be created to achieve adequate daylight and sunlight where existing basements are being converted or basements are being created or extended. The creation of a lightwell can have a detrimental effect on the character and amenity value of the streetscape with a

resultant loss of front gardens and features that can damage the uniform appearance of terraces and groups of houses. Appendix 1 of the section of the SPD on Lightwells also provides guidance on fire safety and means of escape in case of fire.

Reason for (iii)

3.22 New accommodation should be designed to provide adequate daylight and sunlight penetration. This is particularly important where living accommodation is proposed. The provision of lightwells is therefore likely to be critical and where lightwells cannot accord with the council's policy then the creation of a basement accommodation will not be acceptable.

Reason for (iv)

3.23 12.37 The internal space available in basements can often be limited, especially where existing rooms and layouts require adaptation. It is therefore important that converted and new basement accommodation provide rooms adequate in size for their intended use and occupancy in accordance with this SPD.

Reason for (v)

3.24 The conversion of existing basements or the creation of new basements should not to increase the demand for on-street car parking in streets where on-street parking is already under severe stress.

Reason for (vi)

3.25 Basement excavation often raises concerns about the structural stability of adjacent properties because of works to party walls and foundations. These issues may be properly dealt with by means of a party wall agreement under the Party Wall Act 1996. However, the council requires applicants to submit a Subterranean Construction Method Statement (carried out by a qualified structural or civil engineer) with the planning application and to make the statement available at the same time to neighbouring owners.

4 Design

Accessible and Inclusive Design

Purpose

4.1 The overall objective of the SPD is to provide more detailed guidance on the application of policies within the Core Strategy and DM Local Plan that are concerned with ensuring that new development and buildings are accessible and inclusive. This is a theme that runs through the Core Strategy but is particularly relevant to Core Strategy borough wide strategic policy BE1 Built Environment and DM Local Plan policy G1 Design of New Build.

Policy Guidance

National policy

4.2 The Equality Act 2010, which replaced the Disability Discrimination Act (DDA), protects disabled people from discrimination and seeks to ensure that they are not restricted in their access to and use of the physical environment.

4.3 The Equality Act 2010 also requires service providers to plan to remove barriers that disabled people face in their access and use of their existing buildings and the external spaces people use. Internal fittings and facilities may have to be updated too.

4.4 Where the opportunity to viably remove barriers is not taken, legal action can be started by customers or visitors that may result in businesses and other service providers having to compensate disabled people and to be ordered by the courts to carry out improvements.

4.5 The National Planning Policy Framework (NPPF 2012) recognises the need for an accessible and inclusive environment, including accessible adaptable general purpose housing and specialised housing as being among the ways that Local Plans can aim to meet the housing needs of older people.

4.6 Paragraph 35 of the NPPF states that where practical, the location and design of development should create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, and consider the needs of disabled people to arrive by any modes of transport.

London Plan

4.7 London Plan policy 7.2: An Inclusive Environment seeks to ensure that future development requiring planning permission is accessible and inclusive. This policy also outlines the information that should be included with design and access statements submitted with development proposals, including whether relevant best practice standards such as British Standard 8300:2009 have been complied with.

4.8 Other relevant London Plan policies include:

- London Plan Policy 3.1 for ensuring equal life chances for all;
- London Plan 3.8: Housing Choice which seeks all housing to be built to Lifetime Homes Standards and 10% of new housing to be designed to be wheelchair accessible;
- London Plan Policy 4.5: London's Visitor Infrastructure which seeks inclusive and accessible visitor accommodation, including 10% of hotel bedrooms to be wheelchair accessible; and
- London Plan Policy 2.15: Town Centres which promotes measures to improve accessibility, including Shopmobility schemes in town centres.

4 Design

Local Plan

4.9 Hammersmith and Fulham Council in discharge of its planning function, must engage with public body duties in the Equality Act 2010. One of these duties requires it to take active steps to generally advance equality of opportunity for groups protected by the Equality Act 2010 and to ensure that disabled people in particular are not more disadvantaged than groups who are not disabled, where this might be a consequence of the council's decision or policy applied to a particular development.

4.10 The H&F Core Strategy seeks accessible and inclusive development and policy BE1 specifically states that "development throughout the borough should be attractive, durable, adaptable and accessible in order to achieve good sustainable and inclusive design." The Development Management Local Plan policies include more specific policies on the need for inclusive and accessible development in relation to different types of development.

Local Context

4.11 Hammersmith and Fulham is a generally flat borough with few steep inclines. However, many buildings are of older construction and some multi-storey buildings were built without lift access. It is therefore important to improve accessibility in the built environment when development, including new building, alterations or extensions and changes of use, takes place.

4.12 The council considers that much of the guidance in the London Plan and the additional guidance in the Housing and Accessible London SPGs is relevant to the local circumstances in H&F and supports the policies in the H&F Core Strategy and the Development Management Local Plan relating to accessible and inclusive development. Therefore where the London Plan policies and accompanying SPG provides more detailed guidance, H&F will use it in assessing relevant planning applications. For some types of development some more detailed supplementary policy guidance is considered necessary.

SPD Design Policy 1

Inclusive design

Applications for new buildings, changes of use, extensions and other building work should ensure that the building is designed to be accessible and inclusive to all who may use or visit the building.

Drawings submitted for planning approval should show external access features for detailed approval and how in general, internal facilities (including those requiring detailed building regulations approval) will cater inclusively for all categories of user.

Key inclusive design issues

- **how any innovative feature is expected to achieve a particular building design objective**
- **potential barriers to accessibility and the means to overcome these barriers for all members of the community and for specific groups of disabled people such as wheelchair users and other mobility impaired people, blind and partially sighted people, hearing impaired people, and people with learning difficulties**
- **plans that show how the proposal integrates into the urban fabric and circulation routes**
- **sources of inclusive design advice and guidance used**
- **how accessibility will be managed when the development has come into use**

4.13 The Design and Access statement should be appropriate for the type and scale of the planning application. For example Design and Access statement for:

- a new shop front should explain how level access to the building will be achieved
- a change of use application from a shop to a café should show how an accessible toilet will be designed in
- a school extension will explain how it will assist in improving accessibility for pupils and other users of the building.

4.14 When considering potential barriers to inclusive access developers should consider:

- getting to and from a development
- moving around a development
- signage and information
- surfacing materials
- open space
- entering a development
- getting use of facilities
- accessible housing for disabled people
- historic buildings and historic areas

4.15 It is recognised that for some conversions and changes of use it may not be possible to incorporate fully accessible and inclusive facilities. In these cases applicants should demonstrate in the design and access statement how they have sought to achieve as high a level of accessibility as possible. Planning applications for developments required with some urgency for the use of a home or other building by an occupier or employer can be given priority on request.

4.16 National advice is that it is not necessary for a planning application, or the Design and Access Statement attached to a planning application, to state that Building Regulations requirements under Building Acts will be met. Nor need they show detail that would fall to be approved under Building Regulations requirements, or submit information about service access arrangements that might satisfy an Equality Act 2010 requirement on service providers to remove physical barriers confronting disabled people (see paragraph 4.51).

4 Design

SPD Design Policy 2

Entry into a building

Entrances to a building and to residential block entrances which are above or below street level or positioned to be level should be level or the slope should not exceed a gradient of 1 in 20 from the street, and any doorway threshold chamfer should be less than 50mm. Where this cannot be achieved there should be:

- **adjustment of the internal floor level, or**
- **a ramped access cut into the floor slab to meet building regulations requirements, or**
- **a short ramp access, or**
- **a handrailed stair with a ramp or with an open air platform lift at least 1000mm wide x 1250mm and a 900mm wide gate, all of which should be to building regulations guidance**
    - **Where there is a stair up to the entrance of a building, and there is the space, there should always be standard warning texture on the landing above the topmost stair to warn a blind person of the descending stair ahead, or, failing this, handrailing that leads around the landing.**
    - **At least one of the main doorways into a service use building should have a level threshold and a door (or one door in a pair when in use on its own) that when fully open, has a clear opening width of 800mm, is lightly sprung or power-assisted, and is readily identifiable as an accessible entrance from the street.**

4.17 Planning guidance aims to ensure that all the entrances to buildings are practically accessible from the public realm, usually the street.

4.18 The guidance will normally apply to non-residential and mixed use sites, new shopfronts and to new and altered public or visitor entrances.

4.19 However in LBHF there are also some residential sites entered above or below street level. For example there are some that are on back land sites below street level; other sites may be over railway tracks. In these cases, the guidance above should apply outside the entrances to residential sites and buildings, on any sites where there are not to be unstepped street entrances with level access to internal lifts that meet London Plan Supplementary Planning Guidance for circulation in residential buildings.

4.20 In neighbourhoods where flooding is a concern, the March 2012 National Planning Framework Technical Guidance on flood risk states that where the lowest floor level of a new development or a conversion to create a new dwelling is raised above predicted flood level, consideration must be given to providing access for those with restricted mobility.

4.21 For existing non-residential development, the guidance reflects the reality that many business and service premises in LB Hammersmith and Fulham have been built with floor slabs slightly above street level. This is the case even with modern blocks constructed before Building Regulation level access requirements first came into force.

4.22 This guidance aims to help businesses and other service providers of all sizes to consider how to remove access barriers from existing premises as required by the Equality Act 2010. For further information about Equality Act 2010 and Building Regulations access requirements see Appendix 1 below

SPD Design Policy 3

Access to facilities inside a building

Facilities that are essential to disabled people enjoying full access to a building in its planned use should normally be designed to be all-purpose. Plans submitted for new development or change of use should indicate generally how facilities and circulation will be available to each main area of general public or business visitor use, or to the main area, such as an entrance level, where fully accessible services are to be provided. Guidance on ensuring that sufficient space has been allowed for lifts, toilets, and interview rooms is given below:

- **Lifts to main general public use areas should have an 1100mm wide door and lift cars that are 2000mm x 1400mm inside in accordance with BS 8300:2009. Otherwise lifts in or at the entrances to public use areas should meet building regulation Part M Approved Document requirements. They should have space at each end clear of gates and door swings for wheelchair users to approach, and 1500mm turning squares outside the doors.**
- **In larger buildings, plans should identify which enclosed car passengers lifts (other than fire-fighting lifts) are to have a secondary or backup power supply and are equipped to function as Evacuation Lifts for disabled people.**
- **Accessible unisex toilets in main general public use areas should be 2.0m x 2.2m in size, and meet the recommendations for internal fittings and layout set out in Fig 51b of BS 8300:2009. Such toilets can be regarded as meeting all user needs, as an alternative to building regulations compliant separate sex toilets with 800mm and 1200mm wide cubicles and at least one unisex wheelchair user facility.**
- **In a main general public or business visitor use area, the minimum size of an accessible interview room, quiet room, or one-to one support teaching room, should be 2.1m x 2.3m, as recommended in BS 8300:2009 [Fig. 30].**
- **New buildings or major building extensions on smaller school campuses can be designed to provide small group tutorial rooms and all-user or assisted user toilet facilities, as an element in school accessibility plan enhancements that provide ramp entrances and enhance acoustics in other existing school buildings on the campus.**

4.23 The guidance above does not take the place of Building Regulations that require new construction to provide accessibility to disabled people and the features in new buildings and extensions that will prevent anyone being excluded from using them.

4.24 In LBHF there are many older buildings, so existing buildings can be made more sustainable for future use by being updated with the accessibility features, and facilities that are recommended in BS 8300:2009 and the other best practice codes that the London Plan considers should be applied when planning applications are submitted.

4.25 An accessible and inclusive local environment enables disabled and older people in particular, with family or neighbourhood support, to remain mobile and to live fully independent everyday lives.

4.26 In practice the most efficient arrangements for inclusive access are usually those where rooms, acoustics, facilities and entrances are designed for all people to use: options that separate people with different needs can be far more costly to manage and maintain.

4.27 For further information about Equality Act 2010 and Building Regulations access requirements see paragraph 4.51 below.

4 Design

SPD Design Policy 4

Additional facilities in larger buildings

Larger buildings may require the following additional facilities:

In major conference and education centres, and in large leisure, shopping centres, health and education buildings, there should be:

- **A 3m x 4m changing room facility in the building with shower, changing table and other BS 8300:2009 recommended fittings, that is identified for exclusive use by disabled people needing care by one or two assistants. The equivalent facility in a large primary or secondary school setting is a 12m2 hygiene room fitted out for either staff assistance or independent use.**
- **Rooms, halls and atria in the main general public or business visitor use areas of a building where people gather to learn, train, meet, dine, socialise or be entertained, should have an acoustic suitable for the use of microphone systems. Microphones in turn can amplify speech through soundfield or auditorium loudspeakers, and through the induction loop or other hearing enhancement transmitters that BS 8300:2009 recommends are in place for hearing impaired building users to tune their hearing aids into.**
- **Sign systems that guide people around buildings or complexes. BS 8300:2009 gives advice on how pictogram information on signs should have text to explain them, and where notches should be cut into signs so that blind users can feel where Braille text is positioned.**

4.28 The guidance above does not take the place of Building Regulations that require new construction to provide accessibility to disabled people, and key features in new buildings and extensions that will prevent anyone being excluded from using them.

4.29 Larger buildings when first built or converted to new use can provide important new facilities for people to use, if comprehensively re-designed for inclusion.

4.30 In LBHF itself, larger public buildings make an essential contribution to the social infrastructure of the Borough. These range from older church buildings converted or extended for learning and public use, to new complexes that bring new business and entertainment or leisure opportunity into town centres, or that create hubs of new activity in neighbourhoods.

4.31 For further information about Equality Act 2010 and Building Regulations access requirements see paragraph 4.51 below.

SPD Design Policy 5

Automatic Teller Machines (ATMs)

ATMs should be located where outside ground or internal floor levels allow access to controls at the all-user recommended height.

4.32 The all user recommended height is for angled keypads, screens and slots altering elevations where this requires planning permission should be more than 900mm, but no more than 1200mm above the ground/floor where the user stands.

4.33 Where the screen or keypad is at or near horizontal, and the user has to look down to operate the ATM, no part of the screen or keypad viewed from above should be higher than 900mm. The host business should position the ATM, as advised in national guidance, on level ground, and where it can be read without excessive solar glare.

4.34 ATM's are a form of access to a service, often from a public street or pavement. They are not covered by building regulations when there is no structural opening or alteration to a regulated means of access formed in a building to install the facility, but good practice guidance (Access to ATM's: UK design guidelines, Centre For Accessible Environments, 2002) has been prepared to cover product design issues that in turn facilitates access to controls, software and services for disabled people.

4.35 For further information about Equality Act 2010 and Building Regulations access requirements see paragraph 4.51 below.

SPD Design Policy 6

Changes of level in public spaces

Where level changes cannot be levelled off or sloped away across larger sites, the public space affected should be made accessible by handrailed steps and short ramps starting and finishing at the same point, or by signposted alternative route options. Signposted alternative route options should include steps and lifts where long ramps and steeper slopes would be too tiring or steps too high even with rest landings for all people to use without discomfort.

The BS 8300:2009 Code Of Practice recommends the provision of lifts in urban contexts where changes of level exceed 2m.

Gradients in excess of 1:12 will be resisted unless alternative and acceptable step-free routes are provided.

4.36 Changes of level pose problems for people with mobility impairment, and for care givers who may be parents, partners or children of disabled public space users. If insufficient attention is given to making designs for routes and level change options work for everyone, disabled users, and older people who are frail, are likely to be those most affected.

SPD Design Policy 7

Design of ramps and steps

Ramps and steps in public gardens, parks and other public places should be fitted with handrails and rest landings to suit designs and to integrate with adjoining features such as companion stairs, balustrades, parapets, or landscaping to guard open edges, and barriers installed for crowd safety reasons.

4.37 In open public spaces the principles for inclusive access design are how stairs can be designed to be safe for users with limited sight, and useable by people who need to grip a handrail going up or down, and the way that ramps are designed for wheelchair users both when propelling themselves or being helped by people who are themselves of limited strength.

4.38 Accepted best practice for ramps and companion stairs is as follows:

- ramps should be at least 1.5m wide, and have level rest landings without tactile warning surfacing at least 1.5m by 1.5m across where ramp legs join.
- On long ramps and on ramps that are busy enough for people to have to need to pass each other in both directions, ramps should be 1.8m wide.
- Where ramp legs are longer e.g. than about 3m, or where there is not a more direct companion stairway across the route for walking people to use, there should be handrails each side of ramps and around top and intermediate landings.
- Stairways should have handrails each side with extenders that run on beyond the top and lowest steps;
- Stair nosings and kerbs should visibly contrast with tread and riser surfaces in brightness and hue or stand out in other ways under natural and artificial light.

SPD Design Policy 8

Public and Open spaces

Where new public and open spaces/areas are created or enhanced planning applications should indicate how the interests of disabled people are to be protected:

- **How access to public space and walking routes will be enhanced.**
- **Where pavement or open air dining is proposed, loose or movable furniture and tables should be confined to areas around which there is a rail, planter or other form of visual guarding whose lower part is rigid enough to be detectable with a long cane up to height of between 150mm and 300mm above ground.**
- **Bollards in a public space should be a minimum of 1000mm high, and be in a contrasting colour or texture to paving or a have a high visibility collar.**
- **Where public seating is provided in public space, it should have:**
  - **A seating surface 450 - 470mm high, heel space underneath and central or end of seat arms to help people to rise, and**
  - **at one end, a hard surfaced draw back space for a wheelchair user or a buggy to stand on.**

4.39 Local organisations of disabled people and their caregivers can assist designers. An example of two community groups in Hammersmith and Fulham who have come together to do this, are the Parents Active group of parents with young disabled children, and the Borough Mencap organisation. Their local guidance entitled “We want to play too” (2012) is written to help ensure that the needs of children with impairments who often need to spend longer in play or may need more choices in public play settings than do their peers, are fully catered for.

4.40 “We want to play too” guidance comments on the need for carer seating and fencing to allow social play in free-play parts of a playground, what to consider when choosing from playground equipment products when each have a strong visual appeal, and the positive message sent by signs that welcome all users.

SPD Design Policy 9

Consulting with disabled people on shared space plans

Public space when shared with cyclists and vehicles, should be designed to ensure the safety and comfort of all users of the space, including older and disabled people.

Where shared space is planned, developers should carry out consultation with communities of disabled people, in particular communities of people with little useful and with limited sight

4.41 The Department of Transport has issued research-based recommendations in Local Transport Note 1/11 "Shared Space" October 2011, for shared space design that there should be "comfort space" safe zones provided in any space shared with traffic or parked vehicles.

4.42 Disabled people can use a safe zone to make their way around a public space that is shared with vehicles, if it has a detectable kerb upstand or corduroy surface edge paving that blind people can readily identify. This can operate in conjunction with the de-cluttering, lighting and streetscape enhancement objectives for streets that are sought in the London Plan 2011.

4.43 There is a nationally standardised raised white line with tactile paving markings at each end and at intervals along it, that can be laid along tarmac surfaces to stream cyclists away from pedestrians, where routes are shared with cyclists. This should be provided wherever the flow of pedestrians or speed of approach of cyclists justifies "a safe zone" approach, and where signage has been shown to be ineffective in preventing aggressive or inconsiderate cycling.

SPD Design Policy 10

Major regeneration projects

Where there are major regeneration projects involving public spaces and large facilities with public access disabled people should be enabled to engage in the design processes.

4.44 A way that has been used successfully to engage disabled people in such design processes, and where public space extends into and around large new shopping and sports complexes such as in the 2012 Olympics legacy developments, is for the developers, or the lead developer to set up a Consultative Access Group. The Consultative Access Group or CAG is drawn from national and local organisations of disabled people, to consider and review outline and more detailed plans prior to the construction of large new public spaces.

4.45 The developer is responsible for the reasonable costs of establishing the CAG, convening regular meetings, making accessible accommodation and media available at meetings, and covering administration costs. Public and private bodies who manage new public space can find it helpful for a CAG who has been involved in the planning process, to be engaged in any monitoring of new public space in use, e.g. as at Exhibition Road in Kensington, where a CAG will help to review the design assumptions.

4.46 For further information about Equality Act 2010 and Building Regulations access requirements see Appendix 1 below.

Accessible new homes

SPD Design Policy 11

Tenure wheelchair user homes

Where wheelchair accessible homes are included in a development the application should clearly identify the location and tenure of the units. Wheelchair accessible homes for market sale should be first marketed to households who require such a home.

4.47 The Mayor of London's Housing SPG includes Best Practice Guidance for Wheelchair Accessible Housing that includes the key design considerations that need to be met and an illustrative layout of "Key Features of a Home for a Wheelchair User" (see page 196 of the Mayor's Housing SPG).

4.48 Development Management policy A4 expects wheelchair accessible homes to be provided in proportion to the tenure mix of the development and therefore the planning application must make clear which of the new dwellings will meet wheelchair accessible standards.

4.49 Developers providing wheelchair accessible housing should demonstrate in their access statement how these design considerations have been addressed. The Council will normally seek a S106 agreement with the developer to ensure that the wheelchair accessible homes are targeted at older and disabled people for a period of at least 6 months before any of the homes, if still unsold, are released onto the open market after notification to the Council.

4.50 These wheelchair accessible homes should be marketed both in media targeted at older and disabled people including using an accessible property websites, as well as in mainstream media.

Appendix 1: Equality Act and Relevance to the Local Planning Authority and Building Control

4.51 All businesses, and every charity and religious or other organisation that provides services to customers, shoppers or which at sometime offers the public access to their building or in their premises, have disability access duties. The duties affect the buildings they operate services in or develop, as well as the way they do business.

4.52 The duties are imposed under the Equality Act 2010. They are often called “DDA“ duties, but the “DDA” is shorthand for Disability Discrimination Act 1995, and the duties in this Act are now fully embedded in the Equality Act 2010. It should also be noted that in addition to wheelchair users, disabled people protected by the Equality Act 2010 include, but are not limited to, people with ambulatory difficulties, blindness, learning difficulties, autism and mental health needs and any other disabled people whose impairment is likely to affect their independent access and use of buildings.

4.53 Equality Act 2010 duties are of relevance to local plan policies and guidance because since 2004 they have required barriers to access and use of existing buildings to be planned out. Building designs have to be barrier-free.

4.54 The Building Regulations have been rewritten to help with this, but the Local Planning Authority also has a general Equality Act 2010 duty to consider disabled people’s potentially different needs when arriving at decisions on planning applications.

4.55 National Building Regulations have taken on board recommended standards from the BS 8300:2009 Code of Practice for the design of buildings and their approaches to meet the needs of disabled people, and other British Standard recommendations for the built environment such as the design of steps and stairs. These now appear as general guidance in Approved Document Part M for all new building work to non-residential buildings, irrespective of size and intended use.

4.56 This means that in its local planning policies and procedures, the council should help guide businesses and other organisations to understand the planning and replanning duties, and ensure that accessibility is allowed for in the developments for which they grant planning permission.

4.57 Providing an access arrangement such as an entrance ramp, a light door spring or the standard fittings inside a toilet in the way laid out in Building Regulations Approved Document M will demonstrate that the Equality Act DDA obligation for the feature concerned has been met for disabled people in general.

4.58 However government guidance is that compliance with current building regulations does not on its own mean that a service and business organisations has fully met its “DDA” obligations. The same applies with the council’s general planning guidance. This is because the extent of physical provision may depend on the layout of a building, the use of the building, the way the business is run, and the number of people likely to be visiting the building in its authorised planning use. Some features inside or outside an existing building, or an existing building in a Conservation Area that is Listed may have to be designed in a non-standard way.

4.59 Building Regulations are kept up to date and are based on the latest building industry standards. The specifications for features such as doors and door springs take account of the needs of older and disabled people and, in public user buildings, of carers pushing double buggies.

4.60 Since 2007, in both non-residential and apartment buildings, Building Regulations have allowed designs to provide an evacuation lift that disabled people can use in fire or other emergencies, with backup power and other safety features. A well maintained evacuation lift gives people the choice of not to have to wait in their homes or in upper floor refuges until help or rescue is available, nor face the hazard of having to use stairs unaided.

4.61 The way an organisation or business is planning to provide access for disabled people in all parts of their premises, can be provided as information, when a planning application is submitted.

Local factors guidance

4.62 The following guidance explains when it may help a developer to indicate in a planning application how the service and visitor access duties for disabled people in the Equality Act 2010 " are going to be met

4.63 This may happen where smaller buildings or places are developed, updated or converted for public or visitor access. Some development may have to be carefully blended into listed or protected environments or into a street frontage where pavement levels change. Other developments may be creating new public facilities or open space, but to designs that disabled people will need to fully access.

4.64 Altering buildings and places later to meet the Equality Act access duties may be more expensive than incorporating updating into alterations being planned for other reasons. The Equality Act 2010 clarifies formally that different physical provision may be required for disabled people to have access and use of buildings and places, compared to the provision that is adequate for everybody else.

4.65 For example, a step up to shop doorway, is manageable by most people without effort, but not by every disabled person even with assistance. Nor is the toilet facility in a new or converted building that is not quite large enough for a walking disabled person, or a conference room where there is too much road noise with windows shut for everybody to follow what is said.

4.66 The guidance below recommends those all-purpose provisions that will work for everybody but that at the same time allow both for a care-giver to help with access, e.g. through an entrance lobby, or inside a toilet, or for an independent disabled or older person to have access without help.

Access alterations to buildings for the use of an individual disabled person

4.67 The guidance below does not extend to the conversion of buildings when customized to meet the specific needs of an individual employee or resident who is or who has become disabled.

4.68 There are government grants available ("Access To Work" grants) from the Employment Services Agency. These cover up to 100% of the building adaptations that a disabled employee may need in the workplace, and can meet continuing job support costs. Residents may apply for adaptation grants and the local authority is obliged to consider applications from residents.

4.69 However the general Equality Act duty on the Local Planning Authority in these instances is not to refuse or restrict an application of this type for alterations to a building, say, where the result of a restriction imposed on the scheme would be an undue impact on a particular disabled person's choice to remain in their job or their home.

Planning and building consent fees

4.70 Alterations that update or improve access solely for the benefit of disabled persons, whether disabled people in general or an individual living or working in a building, are fully exempt from payment of planning application fees or Building Regulations consent fees. Applicants still have to follow the same applications and consents procedures as those for which fees have to be paid.

4.71 Disabled residents needing adaptations to their homes should indicate this in their planning application but without disclosing personal details, so that priority can be given to the application if it is urgent, without private details being revealed on the public planning applications register.

Audits of buildings

4.72 Businesses in Hammersmith and Fulham of all sizes may find it of help to have an audit carried out of public and service parts of a building or facility carried out by a nationally registered access consultant. A formal audit will demonstrate that business has met the duty to consider alterations.

4.73 In addition, a professional audit will reveal the way that when changes or building alterations are made, these can designed to meet all categories of access need, and so anticipate and resolve the problems that particular disabled customers may otherwise come to experience.

4.74 The UK, has a national register of access consultants (NRAC) that lists accredited auditors and consultants. Access consultants are trained to identify the barriers in existing buildings that will restrict use by disabled people and to advise on improvement strategies.

4.75 In addition to national standards and regulations, auditors will refer to national Codes of Practice issued by national organisations. Of particular relevance to planning developments is guidance issued by Sport England (which recommend specifications for sports facilities), the Football Licensing Authority's 'Accessible Stadia' (for football stadia); and by the government Department for Children Schools and Families (for mainstream and special schools) to guide accessibility audits and redesign of existing buildings.

4.76 All of these building use standards are based on research carried out for BS 8300:2009, but also on input from disabled users and on the quality of access that has been shown to be readily achievable in practice in building projects ranging from 2012 Olympics Legacy buildings and all-seater football stadium to school rebuilding schemes. [See Best Practice Guidance list in Appendix].

4.77 The Equality Act 2010 requirements are policed through the court actions that disabled people themselves are able to bring, and which when proved as breaches of the law, can result in considerable sums in damages being awarded or agreed in settlements, or by the courts ordering improvements to be made to service buildings.

Other guidance on DDA access duties

4.78 There is some formal national guidance issued to service providers. This indicates the issues that, since 2004, businesses and other organisations that provide services have had to start to consider. It gives some examples of the decisions and actions that the Equality Act 2010 may require individual service providers to take to alter individual buildings for disabled people's access.

4.79 National organisations of disabled people can refer enquiries to their local branches, or they can be commissioned to provide advice to larger organisations on a consultancy basis.

Guidelines for Lightwells

Purpose

4.80 The development plan (the London Plan and the Hammersmith & Fulham Local Development Framework) sets down the policy context for the protection and enhancement of the boroughs townscape. This SPD provides a sound basis for an approach to developing proposals for lightwells and basement excavation which retain the character and quality of both the property and the general street scene.

Policy Guidance

National policy

4.81 The NPPF encourages good design. It warns that design which is inappropriate in its context, or which fails to take the opportunities available for improving the character and quality of an area and the way it functions should not be accepted. It states that high quality and inclusive design should be the aim of all those involved in the development process.

4.82 Planning authorities are encouraged to prepare robust policies on design and access. A key objective of these policies is to ensure that developments respond to their local context and create or reinforce local distinctiveness.

London Plan

4.83 The London Plan promotes good design, for example see policy 7.7 Architecture and others concerned with London's Living Places and Spaces. It acknowledges that the quality and function of neighbourhoods and places, and local character, contribute to making London a special place and improve the quality of life.

Local Plan

4.84 The council's policies for the control of development and the improvement of the environment are set out in its Local Development Framework – Core Strategy and Development Management Local Plan.

4.85 The council's Development Management Local Plan includes policy DM G3: Alterations and Extensions. This states, amongst other things, that the council will require a high standard of design in all alterations and extensions to existing buildings. These should be compatible with the scale and character of existing development, their neighbours and their setting. In addition, policy DM A8 of the DM LP provides guidance on basement accommodation and lightwells. This is expanded upon in Policy 9 of the section in the SPD on Housing Quality and includes detailed guidance on the provision of residential units in the basements of residential properties

4.86 The council's Conservation Area Character Profiles generally discourage the excavation of front gardens. The Guidelines state :

"The creation of lightwells by the excavation of all or part of the front garden of a residential property to provide windows to basements to increase the light to basement rooms requires planning permission, as does the enlargement of an existing lightwell. Where there is no tradition of a lightwell in a particular property or street the introduction of an over-large, visible and inappropriately designed lightwell could be harmful to the appearance of an area. This has a negative impact and will not normally be permitted where the lightwell would take up more than 50% of the front garden or would result in the loss of a substantial part of any planted area of the front gardens that forms an integral part of the design of the street or terrace."

Local Context

4.87 In London, many of the larger Georgian terrace houses had separate front access to the basement to allow for coal, waste and service matters to be dealt with separately from the main entrance to the house. In smaller houses basement access would be to the coal cellars which were to be found under the pavements. However, later medium sized and smaller London houses had no separate access and coal and bins were moved through the same main entrance. Towards the end of the 19th Century (after 1870) all medium sized houses and many smaller houses were built with a front garden (even those with basements). Gardens were regarded as adding status and, if kept in good order, improving privacy and the appearance of the house. Iron railings (most removed during the Second World War), sometimes on a low brick wall, often enclosed the gardens. By the end of the 19th Century, almost all new houses had a front garden, or at least a forecourt, [a paved stretch of ground of the depth of a bay window].

4.88 These front gardens now form the character of most of the Borough's streets and terraces, and when planted, provide a welcome greening of an otherwise hard urban environment. Rear landscaped gardens can also contribute to the street scene, particularly where there are important gaps between terraces and a general open aspect in which trees and large shrubs in rear gardens are visible. The street scene can be enhanced by borrowing from the landscape in these private rear spaces. The value of these spaces for their planting and potential tree planting is great, not only for aesthetic reasons but also for biodiversity and habitats and dealing with surface water run-off.

Policies

SPD Design Policy 12

Assessment of Proposals for Lightwells and Basement Excavation

The creation of lightwells by the excavation of all or part of the front garden of a residential property will require planning permission. Where lightwells already exist, and are to be enlarged, planning permission will also be required for that enlargement. Some schemes for excavation and lightwells at the side and rear of properties may not require planning permission. You are advised to discuss proposals for such work at an early stage with the Council's Planning Division.

4.89 The introduction of an overly large, visible and inappropriately designed lightwell could be harmful to the appearance and architectural integrity of the property, the street scene, and the area generally. For example, the scale of a property can be increased, and the relationship of the property to its front garden threshold space and the street can be eroded, or the softness given by a planted front garden can be lost with consequent damage to the street scene. The addition of further protective railings can add unnecessary clutter to the appearance of the street scene.

4.90 In addition, there are parts of the Borough that are designated as Archaeological Priority areas. Where excavation is required in these areas the council will take into account the Heritage Conservation policies in the Local Development Framework. The requirement to fully understand any impact on archaeology is normally expressed as a condition to any planning permission.

SPD Design Policy 13

Proposals for basements

The creation of basement accommodation in existing dwellings beyond the footprint of the property will generally be resisted.

4.91 Excavation under front and rear gardens is likely to involve the removal of soft landscaping and importantly tree planting. Excavation would also result in the loss of potential for tree planting and soft landscaping where none currently exists. The planted area of a front garden space will often be the dominant element along the frontage of traditional Victorian and Edwardian terraces. They should remain dominant, helping to minimise the visual intrusion of the lightwell and retaining the traditional appearance of the street. For proposed excavation at either the front or rear of properties and any approved extension, consideration will need to be given to any impact on trees and their roots in neighbouring gardens or on the street. A tree survey assessing the likely impact on surrounding trees may be required as part of the planning submission. The removal of significant landscape assets is likely to be detrimental to the street scene and general character of the townscape and should be resisted.

SPD Design Policy 14

Model Lightwells

Any application for a lightwell will be treated on its individual planning merits, taking into account local circumstances, impact and the proposed size of the excavated area. Appendix 2 provides examples of model lightwell designs for different types of property. Where lightwells exist already in a particular street or terrace, such as on the Peterborough Estate in the Studdridge Street Conservation Area, and where a different model has already become established, further lightwells which match the predominant design may be considered acceptable.

4.92 There will be instances where excavation and the construction of a lightwell could be detrimental to the character of a building or the street scene and could be refused permission. Examples of such cases would be where front gardens or forecourts (both residential and commercial) are particularly small and excavation and the creation of a lightwell would result in the loss of the entire garden, or where a large lightwell would be clearly visible from public areas. A proposal for excavation and a lightwell where the whole of the front or rear garden would be lost would normally be refused permission.

4.93 Rear lightwells should not be excessive in size and should not result in the loss of more than 50% of the original rear garden area. Rear gardens are important for providing the space and environment within which flora and fauna have the opportunity to thrive and, therefore, sufficient space should be left for trees and shrubs to grow. The presence of trees and shrubs in rear gardens provides a green foil to the surrounding development and can enhance the sense of privacy, especially in densely built up areas.

SPD Design Policy 15

Inserting stairs

Where they are not part of the original design, proposals to insert stairs into the front lightwell would normally be resisted.

4.94 Providing access to the basement via the front lightwell increases the size of the lightwell and erodes the remaining area available for planting. Stairs and railings would also give a cluttered appearance to the front garden area which often provides a soft landscaped .setting for the property and the street. Such proposals would detract from the appearance of the front elevation of the house and the character of the street scene.

SPD Design Policy 16

Listed buildings and Conservation Areas

In the case of a listed building whose special character would be harmed by the construction of a lightwell, such a development would almost always be unacceptable. In some parts of some conservation areas, even the recommended forms of lightwells enclosed in this guidance may be harmful, for example where the front garden is clearly visible from the street, or where there is no front boundary enclosure.

4.95 Some heritage assets will be extremely sensitive to changes in level at the threshold of a building especially where the forecourt or front garden space provides the setting for the building or terrace and contributes to the significance of the heritage asset.

SPD Design Policy 17

Model Design

Ideally, where a basement is being excavated to form additional living space, lightwells should be formed in the rear and/or side garden, where one exists.

4.96 Such a location would almost always be more appropriate. There would be scope at the rear for the provision of light and air to any new basement room, and there would also be the opportunity to create links with any rear garden.

SPD Design Policy 18

Front lightwells

Where a new front lightwell is acceptable in policy, it should be as discreet as possible, and allow the scale, character and appearance of the property, street or terrace to remain largely unchanged.

4.97 The design of any basement elevation, in its form and fenestration [and in particular the material, opening style and subdivision of any fenestration], should relate to the design of the ground floor elevation. The excavation should retain a significant amount of accessible and usable planting area at ground level. Fences, glazed screens or vertical railings to surround the lightwell should be avoided, as they draw attention to the change, and would look cluttered especially if there are differing styles. It would be acceptable however, to put a railing from the front to back adjacent to the garden path in order to give protection. The Council is not seeking to prevent the use of fences and railings on the front property boundary, or along the path leading to the front door.

4.98 Many houses in Hammersmith and Fulham have a splayed bay window on the front elevation (a result of the late Victorian love of fresh air and extra space); others have a square bay, while fewer have a flat elevation. The majority of terraced houses have small front gardens where the formation of a lightwell would have the greatest impact. These guidelines are predominantly aimed at these small gardens. The guidelines may only be relaxed where the proposals relate to larger front gardens (i.e. more than 6 metres when measured from the main front wall).

4.99 In the case of splay bay and square bay windows, the lightwell should follow the shape of the bay window on the ground floor. In the case of a flat fronted property the excavation should be no wider than the outer edge of the window or windows in the ground floor elevation. All excavations should not exceed 800mm from front to back, except on the Peterborough Estate where a more generous model design incorporating a secondary planter in the lightwell has become established. The Building Regulations require that in order to prevent any one falling into a lightwell where it is deeper than 600mm, the opening should be protected by a guard. In order to avoid a cluttered appearance in the front of a property a horizontal metal grille flush with the surface of the garden should be used to achieve such protection over the excavation. The need for a grille can be avoided if a vertical railing is erected from the front entrance gate to the front door.

SPD Design Policy 19

Means of escape

Where the lightwell is used as a means of escape the grille must be capable of being opened by one hand, as someone holds onto the ladder with the other.

4.100 If the lightwell is not used as a means of escape, or required for ventilation, other traditional measures such as glass blocks could be used. Where a lightwell is used as a means of escape, a ladder will also need to be provided to affect the escape arrangements from the basement. These features should be included in any planning application. (Guidance Notes incorporating Building Regulations Technical requirements are found in paragraph 4.102). Any proposal should have sufficient space left in the front garden to provide the opportunity for planting, and in the case of small gardens, there should be at least sufficient space left for a hedge.

4.101 Any planning permission will have conditions attached relating to the grilles, materials, windows, tree protection measures for any adjacent trees and a requirement to build the proposals in their entirety. The removal of permitted development rights for railings may also be conditioned.

Appendix 1: Building Regulations Requirements

4.102 The following are regulations relating to Fire Safety and Means of Escape from Basements. There are two options available for achieving means of escape in case of fire.

4.103 Firstly, if the only means of escape in case of fire is by using the front lightwell area, then there are a number of rules which need to be met.

4.104 A lightwell with 800 mm wide and 1250 mm long (inside measurements) will be large enough to form a reasonable escape route.

4.105 A non-combustible ladder should be provided to allow anyone to step out of the lightwell to ground level. It should have a rake of 70 degrees and be positioned in such a way that 450 mm of the window or door remains clear. A handhold should be provided above ground level.

4.106 Some form of protection is needed to prevent anyone from falling into the lightwell. If this protection is provided by the use of a horizontal grille, a section of it must be capable of being opened by one hand (as someone holds onto the ladder with the other).This could be done by providing spring loading or a counterbalance. The hatch size should be the plan area of the ladder or a minimum of 800 mm x 600 mm, whichever is the greater. Bars to the grille should be spaced at no greater than 50 mm apart. The grille should be fitted only with simple fastenings clearly visible and readily openable without the use of a key.

4.107 Any new basement window should have an unobstructed opening area of no less than 0.33 m2 amounting to at least 450 mm by 750 mm clear opening. The bottom of the opening area should be not more than 1100 mm above the floor.

4.108 In order to make the escape route safe from any fire breakout from any existing ground floor window, if that window is within 1.8m of the lightwell, you will need to ensure that the ground floor window sill is at least 1100 mm above ground level, or if the sill is lower than 1100 mm above ground level then glazing to the windows should be made fire resisting and fixed shut. If the latter is not practicable you should install a smoke detector in the ground floor front room which contains, or is linked to, an alarm which will provide early warning to occupants in the basement.

4.109 Secondly, where the means of escape in case of fire is by using the internal staircase, the following rules need to be met.

4.110 All doors to habitable rooms (including the kitchen), entered from the stairway of the dwelling, should be fire resisting and self closing to ensure that a protected route is provided, or

4.111 Where the existing doors to the stairway are not fire-resisting, the dwelling should be provided with a mains operated system of automatic fire detection. A detector should be provided in each habitable room (heat detector in the kitchen). Such a system should accord with the recommendations of BS 5839 Part 6.

4.112 In all the above options, the following additional recommendations (from Approved Document “B” attached to the Building Regulations) should be complied with: -

- The basement room should be separated from the stairway by fire-resisting construction, and
- Smoke detection should be provided within the stairway enclosure, at each landing level.

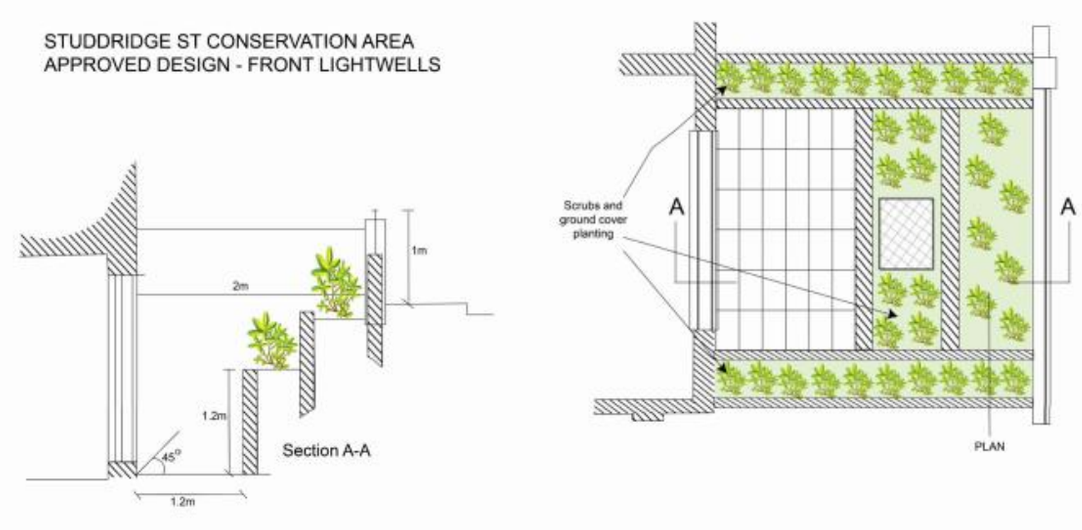
4.113 Finally, it is the responsibility of owners, builders and their professional advisers to ensure that all temporary works are carried out in accordance with health and safety (construction) regulations and good building practice. Health and safety (construction) regulations are enforced by the Health and Safety Executive.

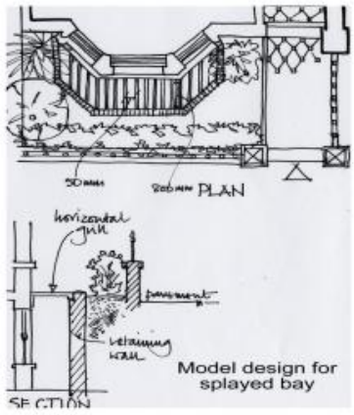
4.114 Also, before any work commences planning permission, building regulations approval, and any necessary highways consent must be obtained where excavations are proposed adjacent to public highways (i.e. the edge of the pavement). In addition any necessary party wall notices should be served and agreement reached with the adjoining owners where the proposed works affect the party wall. If this is not done before the work begins, the adjoining owners may take legal proceedings and halt work until such time the works affecting the party walls are agreed with them.

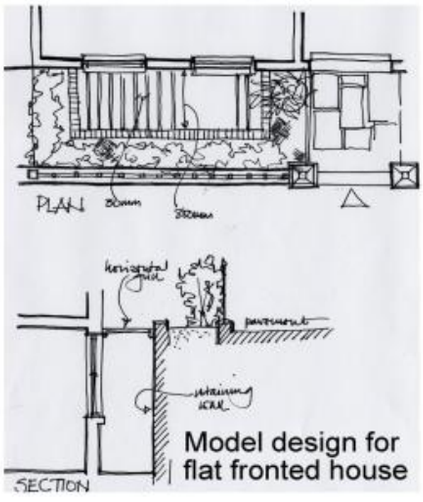
4.115 NB. All calculations and details relating to retaining walls and underpinning works, etc. must comply with the Building Regulations to the satisfaction of the Building Control Officer.

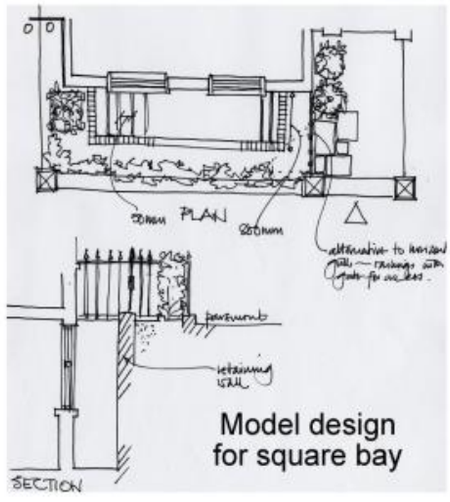
Appendix 2. Model lightwells

4.116 Recommended lightwells are shown in the drawings on the next page, these show a plan and section from front to back, for each type of property, together with dimensions. The examples have been designed to comply with building regulations requirements for means of escape in case of fire, if the only possible means of escape is through the front lightwell area.


STUDDRIDGE ST CONSERVATION AREA
APPROVED DESIGN - FRONT LIGHTWELLS
2m
1m
1.2m
45°
1.2m
Section A-A
Scrubs and ground cover planting
A
A
PLAN


PLAN
Model design for splayed bay


PLAN
SECTION
Model design for flat fronted house


PLAN
SECTION
Model design for square bay

Buildings of Merit

Purpose

4.117 This document has been prepared under the terms of the Planning and Compulsory Purchase Act 2004 and the accompanying Town and Country Planning (Local Planning) (England) Regulations 2012.

4.118 The overall objectives of the SPD are to:

- Establish more detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with the borough's buildings and artefacts of local imprtance, namely Core Strategy borough wide strategic policy BE1 Built Environment and DM LP policy DM G7 Heritage and Conservation; and
- Provide more detail on the borough's buildings and artefacts.

4.119 The document provides policies that the council will apply when considering development proposals.

POLICY GUIDANCE

National Policy

4.120 The Government's overarching aim regarding the historic environment and its heritage assets is that these should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations. Section 12 of the NPPF is entitled 'Conserving and enhancing the historic environment' and condenses the former PPS5. However, it maintains the spirit of the PPS in upholding the general policy that heritage assets should be "sustained" and "enhanced" for the benefits they bring to the community. There is a clear direction to local authorities in paragraph 126 that these general aspirations should be linked into a positive strategy for conservation within local plans.

London Plan

4.121 The London Plan recognises that London's built and landscape heritage provides a depth of character that has immeasurable benefit to the city's economy, culture and quality of life. Crucial to the preservation of this character is the careful protection and adaptive re-use of heritage buildings and their settings. The Plan contains a policy on heritage assets (see Policy 7.8).

Local policy

4.122 Core Strategy borough-wide strategic policy BE1 on the Built Environment states that all development within the borough, including in the regeneration areas should create a high quality urban environment that respects and enhances its townscape context and heritage assets.

4.123 The Council's Development Management Local Plan includes policy DM G7 Heritage and Conservation. This states amongst other things that: "The council will aim to protect, restore or enhance the quality, and character, appearance and setting of the borough's conservation areas and its historic environment, including listed buildings, historic parks and gardens, buildings and artefacts of local importance and interest, archaeological priority areas and the scheduled ancient monument".

Local context

4.124 The borough has a long-standing local register of Buildings of Merit which has been drawn up and maintained in close collaboration with local amenity groups (see list published separately on the council's website). The list gives a clear indication of those buildings which are valued by the local

authority and local community, and a better understanding of the locally important heritage assets and their contribution to the character and distinctiveness of each local area. The buildings on the list are now widely recognised as local heritage assets in the planning process.

4.125 The borough's Buildings of Merit are important for the contribution they make to the local area, reinforcing local historic and architectural distinctiveness. They are therefore also important in the preservation and enhancement of local character and appearance of areas.

SPD Design Policy 20

Designation of Buildings of Merit

Given the importance of non-designated heritage assets to the local townscape of the Borough, it is considered that the opportunity to add to, or in exceptional cases remove buildings from the Local Register, is available, and such additions may be put forward from time to time, in consultation with the relevant amenity societies. Furthermore the council may recommend that particular buildings on the Local Register should be added to the Statutory National List of Buildings of Special Architectural or Historic Interest by the Secretary of State. A regular review and update of the local register will be carried out to ensure it remains relevant as a record of the boroughs locally important historic environment.

4.126 English Heritage suggest that similar selection criteria to that currently used for national designation would be appropriate for local listing. The criteria for adding new buildings to the list would include:

- Age – where the age of a building may be important in the local context
- Rarity – maybe rare in the borough but not nationally so not fulfilling national criteria
- Aesthetic value – where the design is important in the local context
- Group value – where the grouping has a clear design or historic relationship
- Evidential value – where the significance of the asset is supported by written record
- Historic association – would include association with important local persons and events
- Archaeological interest – where the asset is locally significant
- Designed landscape – locally important designed landscapes and gardens
- Landmark status – an asset with strong historical associations or particularly striking design value
- Social and communal value – relating to places perceived as a source of local identity

SPD Design Policy 21

Proposals affecting buildings of merit

Development will not be permitted if it would result in the demolition, loss or harmful alteration to buildings, structures and artifacts that are of local townscape, architectural or historic interest, including all buildings identified on the council's Register of Buildings of Merit unless:

1. (a) The building or structure is no longer capable of beneficial use, and its fabric is beyond repair; or

(b) The proposed replacement would bring substantial benefits to the community and which would decisively outweigh the loss; and

(c) The proposed development cannot practicably be adapted to retain any historic interest that the building or structure possesses; and

(d) The existing building or structure has been fully recorded; and

2. In the case of artifacts, they cannot practicably be retained in situ or, failing that, retained for re-use elsewhere within the site.

4.127 All applications relating to Buildings of Merit or their setting should include a description of the significance of the heritage asset. The level of detail in the description should be proportionate to the importance of the heritage asset. An assessment of the effect of any proposal on the setting and significance of the Building of Merit should be included with the application. The council will be keen to ensure that any proposals preserve those elements that make a positive contribution to, or better reveal the significance of the Building of Merit.

4.128 The council wishes to encourage the retention of the architectural, townscape and historic character of the borough. There are many buildings in the borough on the Local Register of Buildings of Merit which are of merit and which contribute to the character of the locality because of their townscape value, architectural quality, or historic associations. Most buildings on the register have been selected through external inspection on the basis of their architectural character and/or their contribution to the visual quality of the street scene. However, there may be instances where buildings also have a valuable interior.

4.129 Many terraces, parades and other groups of buildings make an important contribution to the townscape and local distinctiveness of the borough which is greater than the individual importance of each building. Several of these groups have been identified as Buildings of Merit. Every effort should be made to protect these facades of terraces, parades or groups of buildings, especially the rooflines and any architectural detailing which adds to their character.

4.130 Both within and outside conservation areas, proposals for demolition or alteration should have particular regard to the effect of that proposal if the building is part of a terrace, parade or group because the consequences of demolition or unsympathetic alteration could be detrimental to the value of that group.

4.131 Locally important buildings are heritage assets of high local value in terms of townscape, architectural or historic interest, and it is especially important that they shall be retained in any development. Any alterations should only be carried out in a way that respects the scale, character and materials of the building. Within conservation areas, there are statutory controls over the demolition

of buildings and consent is normally required. Outside conservation areas specific consent for demolition is not normally required. Nevertheless, the council will seek to protect locally important buildings because they contribute to the character and heritage of the borough.

Shopfront Design

Purpose

4.132 The development plan (the London Plan and the Hammersmith & Fulham Local Development Framework) sets down the policy context for the integration of appropriate shopfront designs into the ground floor elevations of buildings in the Borough. This SPD will provide a sound basis for an approach to shopfront design which respects the architectural design of its context.

4.133 The policies are, in particular, SPD to policies DM G4 and DM G8 of Hammersmith & Fulham's Development Management Local Plan.

Policy Guidance

National Policy

4.134 The NPPF encourages good design. It warns that design which is inappropriate in its context, or which fails to take the opportunities available for improving the character and quality of an area and the way it functions should not be accepted. It states that high quality and inclusive design should be the aim of all those involved in the development process. A key objective of these policies is to ensure that developments respond to their local context and create or reinforce local distinctiveness.

London Plan

4.135 The London Plan promotes good design. It acknowledges that the quality and function of neighbourhoods and places, and local character, contribute to making London a special place and improve the quality of life.

Local Plan

4.136 Core Strategy policy BE1 states that all development should *"create a high quality environment that respects and enhances its townscape context and heritage assets"*, whilst Development Management Local Plan policy DM G4 Shopfronts states, amongst other things, that:

"In order to improve the appearance of the borough's streets, the council will encourage high quality shopfronts that are designed in sympathy with the age and architectural style of the building concerned, achieving a satisfactory relationship between the ground floor and the rest of the building. The scale of the shopfront should be carefully considered with its proportions, detailing [including vertical and horizontal subdivision] and materials, which have an affinity with the building"

4.137 In addition, policy DM G8 Advertisements states that, amongst other things:

"The council will require a high standard of design of advertisements which are in keeping with the character of their location and do not impact on public safety and will resist excessive or obtrusive advertising and inappropriate illuminated signs. The design of advertisements should be appropriate to their context and should generally be restrained in quantity and form. The council will use its powers to remove unsightly and inappropriate signs".

Local Context

4.138 Shop fronts and their associated advertisements play a vital role in determining the character of our town centres and shopping streets, primarily because they are the part of the building which has direct interface with the public realm, and have an immediate relationship with the human scale. The design of new shop fronts, therefore, needs careful attention.

4.139 The Council has encouraged a significant improvement in the standard of shop front design and the aim of this document is to maintain this trend of raising the quality, and promoting better designs.

4.140 There has been a revival of interest in shop front design which stems largely from the damage that inappropriate designs and the erosion of key architectural features have caused to our shopping streets.

4.141 Many of Hammersmith and Fulham's Victorian terraces of shops were originally unified in appearance by having their shop fronts installed within a well proportioned framework of pilasters and fascias which were finished in a uniform manner and provided the architectural base for the building. The individual shop fronts were inserted within this strong framework.

4.142 These guidelines are aimed at encouraging an approach to shop front design which acknowledges the relationship between the proposed shop front and the building into which it is set. The age and architectural character of the building will determine the approach to the design of the shop front.

4.143 The opportunity will be taken with each application to apply this guidance in conjunction with Development Plan policies to inspire good design adapted to individual circumstances. Thus each approved application could add to the general upgrading in the quality of shop fronts whilst enhancing the attractiveness and character of the street. The proposed designs for new shop fronts should recognise this aim and seek to be appropriate to their location.

4.144 The cumulative effect of better shopfront designs will be the enhancement of the visual appearance of the Boroughs shopping streets, thereby improving first impression and quality for users, visitors and potential investors. The emphasis is on good quality design of shop fronts and advertisements which will enhance the character of the shopping street and encourage investment and spending, bringing rewards which will ultimately benefit traders.

Insensitive Designs

4.145 The character and individuality of many of our shopping terraces has been eroded by insensitive shopfront design. Important architectural components and interesting architectural details which make buildings attractive have been discarded over a period of many years to make way for off-the-shelf replacements. It is now widely recognised that shopfronts and signs which disregard the architecture above and around them are the most damaging to an areas character and appearance.

4.146 Nevertheless, the Council still receives some applications for either new shop fronts or illuminated signs which involve designs that are unrelated to the buildings which house them and their location. The inherent qualities of a building, such as architectural character, scale and proportion are largely ignored, resulting in proposed alterations which are unsympathetic and inappropriate to the building and local street scene

4.147 The shopfront with large areas of uninterrupted glazing in a standard square section aluminium frame and bulky internally illuminated box signs together with the crude imposition of a corporate identity, are usually the most visually discordant elements in shopping areas. The integrity of the building and character of the street is eroded by such insensitive proposals.

4.148 Fascia signs, canopies and roller shutters are often regarded as a later addition distinct from the shop front and building façade. This is inappropriate in most cases, creating a projection which ignores both the design and structure of the building. Excessive fascia depth can also destroy the unity of both the façade and shopping street. Standard projecting box signs can be equally as intrusive where they are unrelated to the architectural character and design of the building or context of other neighbouring signs. The cumulative effect of these when viewed along the street can be one of visual chaos.

SPD Design Policy 22

Shop fronts in context

In order to improve the appearance of our streets, the council will encourage high quality frontages that are designed in sympathy with the age and architectural style of the building concerned, achieving a satisfactory relationship between the ground floor and the rest of the building.

4.149 The scale of the shop front needs to be carefully considered with its proportions, detailing [including vertical and horizontal subdivision] and materials, which have an affinity with the building. It may be appropriate in areas of consistent terraces or shopping parades for the shop front to reflect the scale and height of stallrisers and fascias of its neighbours thereby harmonising with the overriding character of the street scene.

4.150 All buildings, old and new, will provide a framework into which a shop front can be inserted. Many of Hammersmith and Fulham's 19th century buildings provide a framework of classical elements – pilasters, fascia and cornice which have a proportional relationship with the building. These elements are an integral part of the building façade and should be regarded as such in any design. The area for change is clearly defined within this framework. It is visually disruptive both for the building and street when the new shop front spills out beyond this framework obliterating architectural decoration and features.

4.151 It is important that redevelopment proposals which include retail areas similarly provide a framework into which a shop front of a suitable scale can be inserted. In some schemes it would be appropriate for the detailed design of the shop front to be considered at the same time as the architectural detail on the upper floors in order to ensure that the elevation in its entirety is consistent in terms of design and quality. An area of appropriate scale to accommodate a fascia sign for incoming shop tenants should be clearly defined. Provision should also be made for satisfactory integration of building services in the overall design. The design of the shop front should not be compromised by unsightly rows of louvres which interfere unacceptably with the proportions of the ground floor.

4.152 The emphasis is on quality and the flexibility of the design to adapt to individual circumstances. Good shop front design requires skill and sensitivity. Many of the most successful shop fronts in Hammersmith and Fulham have evolved through negotiation. Early consultation with the Council's Planning Division is encouraged.

SPD Design Policy 23

Pilasters, console brackets, etc

Architectural detail such as decorative pilasters, console brackets and other attractive features should be retained intact and restored where necessary.

4.153 In helping to integrate the new shop front into the façade, their retention can only enrich the new design making it visually more interesting. Cornices, pilasters and stallrisers also help to integrate a shop front design into its framework by giving the unit proportion, and visually supporting the building above.

SPD Design Policy 24

Listed buildings and buildings of merit

Listed Buildings and Buildings of Merit have a strong period character and therefore require sensitive restoration. The emphasis here will be on materials, colour and detailing. Quality in terms of workmanship and finishes will be uppermost.

4.154 The Council will expect the retention of an existing shop front where that is sympathetic to the building. Where parts of a shopfront or architectural features have been damaged or destroyed, the Council will encourage sensitive repair, keeping as much of the original fabric as possible. Where the original ground floor frontage has been removed, an accurate reconstruction of the original shop front may be desirable. Historical records are often available to assist a facsimile replacement.

SPD Design Policy 25

Access

The Council will expect new or altered shop fronts to accommodate the needs of disabled people.

4.155 The design of shop fronts should secure easy access for everyone by taking account of differing needs, such as the needs of people with partial sight and people who have an ambulant disability and use a walking aid such as a stick or wheelchair. Doorways should therefore be at least 800mm. wide, should have doors that are easy to open and should provide a level entrance or a non-slip ramp within the unit (See the section of the SPD on Accessible and Inclusive Design).

4.156 Large areas of glazing can be confusing and potentially dangerous for partially sighted people and children. Entrance doors should be clearly distinguished from their surroundings. Vision strips should be introduced on large unbroken areas of glazing.

SPD Design Policy 26

Canopies & blinds

Blinds can add colour and interest to the street scene. They should be appropriate to the period and character of the building and sensitively integrated into the overall design.

4.157 The need to achieve sufficient headroom on the public footway beneath the blind means that the mounting position of the blind needs to be considered in the overall context of the architectural features of the building and the shop front and fascia design. The erection of a blind will not always be feasible given these considerations. The purpose of canopies and blinds should be to afford weather protection, not act as a permanent and prominent substitute for a fascia or projecting sign. They should be retractable so that they may be pulled down only when required and so that the fascia is not permanently obscured.

4.158 Traditional canvas roller blinds were a common addition to 19th.century shop fronts. These blinds were housed in boxes which were traditionally located internally behind the fascia or retracted to form a moulded panel within the cornice above the fascia. This model should be used for any

proposed blinds on the 19th.century buildings. Blind boxes should not project forward of the fascia panel, nor obscure any architectural detail or features. Drawn sections will be required with the application. Blinds should:

- Be located between the pilasters, respecting the architectural sub-division of the building or terrace. They should not span more than one unit.
- Only be sited at ground floor fascia level. Blinds will not be permitted over doors alone or upper storey or basement windows
- Not interfere with the visibility of traffic signals or signs

4.159 Rigid bolt-on blinds made of acrylic or similar shiny materials can often mar an otherwise pleasant shop front design. They are often erected as a means of increasing advertising space. Their structure tends to obscure the fascia and introduces a dominant shape which would be out of character with much of Hammersmith and Fulham's townscape.

SPD Design Policy 27

Burglar alarms & fire alarms

Burglar alarms and fire alarms should not be mounted on the front elevation of the building and on key architectural features.

4.160 Although these items are necessary for many premises, their insensitive siting can be visually detrimental to a building. If possible they should not be mounted on the front elevation of the building, and key architectural features such as corbel brackets on the pilasters should be avoided. For recessed entrances they can be positioned on the soffit or on the door returns. For new shop fronts, they should be incorporated into the design of the frontage, where it should be possible to modify one part of the design to successfully accommodate the unit.

SPD Design Policy 28

Roller shutters

Roller shutters covering the whole of the frontage of an individual ground floor façade will be discouraged as they inevitably detract from the architectural integrity of the building. Where they form part of a continuous run of security shutters along a shopping parade, they have a particularly deadening effect on the street scene.

4.161 Shop traders are entitled to protect their goods and premises and many feel this is best achieved by installing security shutters. However solid roller shutters give the impression that an area is particularly unsafe and tend to provide a canvas for graffiti artists or flyposting to the detriment of the local visual amenity.

4.162 Efforts should be made to minimise any impact. They are features which should be planned for and accommodated internally.

4.163 The incorporation of security glass in shop windows is the preferred alternative to shutters.

4.164 Security grilles where absolutely necessary, should be open mesh and located internally. All box housings containing roller shutters or grilles should be mounted internally behind the fascia.

4.165 Removable external window security grilles of an open mesh form may be appropriate in certain circumstances.

SPD Design Policy 29

Advertisements

In the interests of amenity the design of advertising should respect and enhance its locality and use materials of high quality. Particular care will be necessary within conservation areas.

4.166 Visually, the fascia is the most prominent part of the shopfront and in some cases the whole building. It is therefore important that any proposed fascia is appropriate. Traditionally the fascia displayed the name of the shop, the nature of the business and the street number. This is still important today. The fascia area to receive this information is usually determined by the framework of the buildings ground floor.

4.167 Fascia panels should be in proportion with the shopfront and building and should be designed as an integral part of the shop. Where corbels / console brackets remain at the top of the pilasters, the fascia panel should normally be no deeper than the height of these architectural features and positioned below the cornice line, and line through with the capital mouldings on the pilasters. New fascia panels should not project forward from the face of the surrounding framework, and should not extend uninterrupted across a number of distinct buildings or architectural bays.

4.168 The temptation to conceal a bulkhead of a suspended ceiling by increasing the depth of the fascia sign should be avoided. A visually more pleasing solution is to set the false ceiling back from the glazing line.

4.169 The size of the lettering should be related to the area of the fascia.

4.170 Individually applied lettering or hand-painted signs will be encouraged as they give the shop a unique character respecting the individual approach necessary for each shopfront project. Gilding on a dark background can be visually prominent and particularly effective at night where it remains clearly visible.

4.171 If illumination of a sign is thought to be appropriate, then lighting from an external source e.g. swan neck lamps or light troughs provides a more discreet and acceptable form of illumination, if limited in size and number, than bulky internally illuminated fascia boxes. Alternatively, individual back lit or halo lit letters can give a subtle form of illumination and may be appropriate in certain circumstances.

4.172 Imaginative designs for projecting or hanging signs can add interest to the appearance of the shopfront and street.

4.173 These signs should be at fascia level and fixed centrally on a pilaster avoiding damage to architectural detail and ornamentation.

4.174 The size of the sign should be no greater than 900 x 600mm. The leading edge of the sign should be set back from the kerb by at least 500mm, and the sign should allow for a clearance height of at least 2.6m from the underside of the sign to the pavement [similar dimensional clearances should be used for canopies and awnings].

4.175 In some cases, the scope for fixing a projecting sign may be limited or non-existent due to minimum clearance distances for safety reasons, and the architectural detailing of the shopfront or building concerned. No more than one sign per business per elevation will normally be acceptable. Where premises are multi-occupied advertisements should be restricted so as to avoid the appearance of clutter and should be displayed so as to achieve harmony in the appearance of the elevation and in the context of the street scene.

4.176 All signs should be designed as an integral part of the shop front and not as free-standing items. “A” boards on the pavement outside the shopfront cause clutter and can be particularly hazardous for pedestrians, especially partially sighted and blind persons.

Appendix 1: Legislation and Policies

Planning Permission

4.177 Planning permission is required for new or replacement shop fronts or any other alterations materially affecting the external appearance of the building. Routine maintenance, such as replacing a door or window with one of the same design and materials, or repainting the existing shop front does not normally require planning permission.

4.178 When submitting planning applications for new shop fronts, applicants should submit elevation drawings, sections and floor plans showing the proposed shop front in its context. Its relevant context may vary from solely the upper floors of the building to a setting which incorporates existing shop fronts adjoining the application site. Drawings should be annotated to make reference to proposed materials and colour.

Conservation Areas

4.179 Many areas of special architectural or historic interest within Hammersmith and Fulham are designated as conservation areas in order to protect their character and appearance. Shop fronts of interest and character make a significant contribution to the street scene within conservation areas, and so their retention will, where appropriate, be sought.

4.180 Sometimes, original features survive hidden under later installations. These should be revealed and retained as they are likely to contribute to the special architectural and historic interest of the area.

4.181 The design of a new shop front should preserve or enhance the character or appearance of the conservation area by the sensitive use of appropriate design styles and materials.

Listed Buildings

4.182 Any alteration to a shop front which is part of a listed building will require Listed Building Consent if the proposed works affect the special character of the building. Even relatively small-scale changes to the exterior such as those to shop window frames and decorative detail would require listed consent, and may require planning permission. In addition, repainting and alterations to the interior of the shop where they affect the special character of the building require consent.

Local Register of Buildings of Merit

4.183 There are many buildings in the borough, in addition to the listed buildings, which are of merit and which contribute to the character of the locality because of their townscape value, architectural quality, or historic associations. These buildings are included in a Local Register contained within a Supplementary Planning Document. Although alterations to Buildings of Merit on the Local Register do not require Listed Building Consent, planning permission is required for new or replacement shop fronts or any other alterations materially affecting the external appearance of the building. Development will not be permitted if it would result in harmful alteration to Buildings of Merit identified on the Local Register. Any alterations should only be carried out in a way that respects the scale, character and materials of the building.

Signs

4.184 Alterations to signs and signboards may require consent under the Advertisement Regulations. Detailed drawings which show the design of the proposed signs, the proposed position and materials, in relation to the shopfront and surrounding architectural detail should be submitted with any application. Applicants are advised to consult the Regulations and contact the councils Planning Division for further advice on the type of signs considered to be appropriate for a particular location.

Building Regulations

4.185 Even if planning permission is not required, approval for changes to a shopfront may be required under the Building Regulations. These make sure that buildings are constructed or adapted in the right way, and with suitable materials. In particular, Fire Regulations have to be checked both from the structural aspect and also to ensure fast and easy escape from a building. Building regulations are completely separate from planning control: approval under them does not mean that planning permission has been given, nor does a planning permission imply approval under the Building Regulations. Applicants are advised to contact the – Building Control for further guidance and advice.

Additional Guidance

4.186 The council has issued guidance on shopfront design as part of the guidelines for frontage improvements to nos. 54 – 108 Uxbridge Road, a key terrace of buildings on the Local Register of Buildings of Merit forming an important frontage in Shepherds Bush Town Centre and Shepherds Bush conservation area.

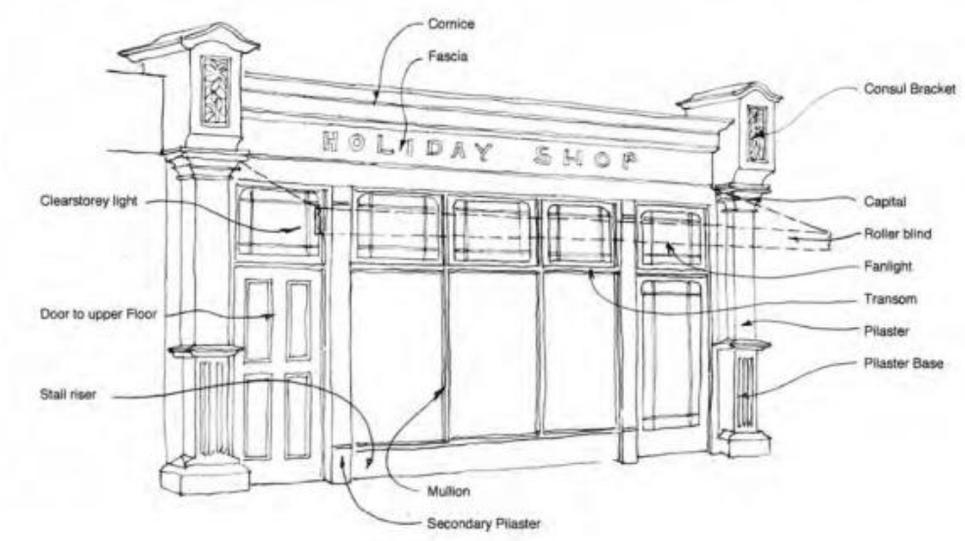
4.187 The shopfront design guidance in the Uxbridge Road document has been informed by, and is complementary to, the generic guidance in this publication.

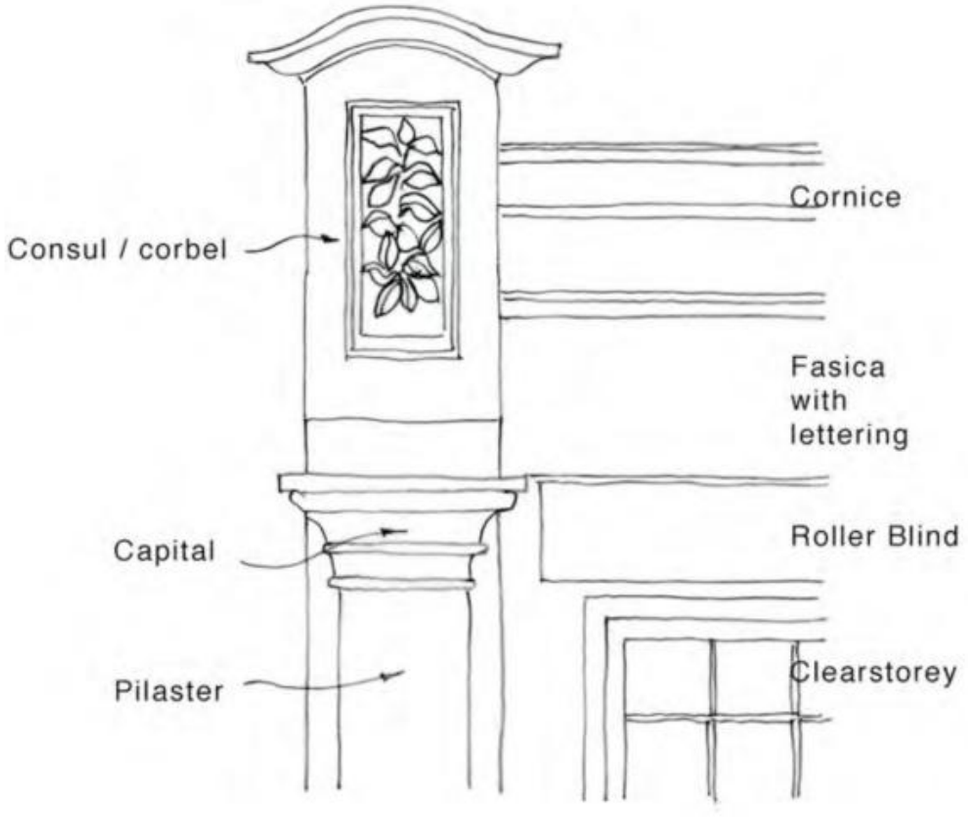
4.188 The Department has also contributed to a shopfront design study for Latymer Court in Hammersmith Road, in conjunction with the Latymer Court Freehold Company. The aim of this project is to encourage the general improvement to the ground floor frontages of the building with a consistent design based on the proportions and form of the original shopfronts.

CONTACTS

4.189 You are encouraged to discuss your proposals at an early stage with planning officers. More detailed advice on the appearance of shopfronts and signs for particular locations within Hammersmith and Fulham can be obtained by contacting the Planning Division.

Example shopfronts





Conservation Area Guidelines

Purpose

4.190 The development plan (the London Plan and the Hammersmith & Fulham Local Development Framework) sets down the policy context for the protection and enhancement of the boroughs Conservation Areas. This draft SPD provides a sound basis for an approach to developing proposals for alteration to the built fabric and townscape of Conservation Areas which retain their character, appearance and quality.

4.191 The policies are SPD to Policy BE1 of the Core Strategy and Policy DM G7 of the Development Management Local Plan.

Policy Guidance

National Policy

4.192 The Government's overarching aim is that the historic environment and its heritage assets should be conserved in a manner appropriate to their significance and enjoyed for the quality of life they bring to this and future generations. Section 12 of the NPPF is titled 'Conserving and enhancing the historic environment' and condenses the former PPS5. However, it maintains the spirit of the PPS in upholding the general policy that heritage assets should be "sustained" and "enhanced" for the benefits they bring to the community.

London Plan

4.193 The London Plan policy 7.8 on heritage assets includes the following:

- London's historic environment, including natural landscapes, conservation areas, heritage assets, World Heritage sites, Scheduled Ancient Monuments and memorials should be identified, preserved and restored.
- Development should preserve, refurbish and incorporate heritage assets where appropriate
- New development in the setting of heritage assets, and conservation areas should be sympathetic to their form, scale, materials and architectural detail

Local Plan

4.194 Core Strategy policy BE1 states, amongst other things, that all development within the borough, including in the regeneration areas should create a high quality urban environment that respects and enhances its townscape context and heritage assets. There should be an approach to accessible and inclusive urban design that considers how good design, quality public realm, landscaping and land use can be integrated to help regenerate places.

4.195 Development Management Local Plan includes policy DM G7 Heritage and Conservation which states, amongst other things, that "the council will aim to protect, restore or enhance the quality, character, appearance and setting of the borough's conservation areas and its historic environment, including listed buildings, historic parks and gardens, buildings and artefacts of local importance and interest, archaeological priority areas and the scheduled ancient monument". In addition to this, English Heritage provide and regularly update guidance on conservation areas and conservation values – such as Heritage Works: The Use of Historic Buildings in Regeneration" (2006), Conservation Principles (2008) and Understanding Place (2010) – that are instrumental in the management of the historic environment.

Other National Policy

Planning (Listed Buildings and Conservation Areas) Act 1990

4.196 Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 states:

"*Every local planning authority shall from time to time determine which parts of their area are areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance, and shall designate those areas as conservation areas."*

4.197 Designation introduces a general control over the demolition of unlisted buildings and provides the basis for policies designed to preserve and enhance all the aspects of character and appearance that detract/contribute to an area's special interest.

4.198 Under Section 71 of the Act, once an area has been designated:

"It shall be the duty of a local planning authority from time to time to formulate and publish proposals for the preservation and enhancement of any parts of their area which are conservation areas."

4.199 The council is producing a Conservation Area Character Profile for each conservation area. The "profile" is an appraisal which aims to give a clear assessment of the special interest, character, and appearance which justified the designation of the area as a Conservation Area. It also identifies key components that define the character or those which affect it, introduces relevant background material and suggests design guidelines to deal with each one. Some design guidelines are generic and these are reproduced here to aid all concerned in their efforts to preserve or enhance the character and appearance of all conservation areas In the Borough.

4.200 The profiles and these design guidelines support the council's statutory Local Development Framework which sets out the planning policy framework for the development of the Borough and development control decisions.

4.201 The Borough has 45 conservation areas with the first being designated in 1971. These are reviewed on a regular basis. All published and approved profiles are available on the council's web site. Profiles for each of the remaining conservation areas are to be produced as part of the council's ongoing work programme.

Local Context

4.202 Most of the borough's built fabric dates from the extensive building programmes in the nineteenth and early twentieth centuries. Hammersmith and Fulham has maintained a much-valued built heritage, much of which falls within the Borough's 45 designated conservation areas.

4.203 Of the Boroughs' residential areas those that were laid out to a consistent design and are of high architectural quality are also included in the Borough's conservation areas. In many of these areas, the street provides a sense of scale and the setting for the consistent terraces of uniform architectural design.

4.204 The town centres at Hammersmith, Fulham and Shepherds Bush, have developed from the earliest patterns of settlement, and now have their own character and sense of place. Their architectural and historic quality is reflected in their conservation area designations. In recognition of the importance of these areas in the sustainable regeneration of the borough, it is essential that development is encouraged which is mindful of the areas' historic form and which is of an appropriate high quality architectural design to complement the existing character and ensure the long term vitality and viability of these centres.

4.205 The current land use structure of Hammersmith and Fulham with its three town centres, local shopping parades, residential areas, open spaces, riverside and industrial / commercial areas is the main generator of the Boroughs rich and varied character.

4.206 The varied character of Hammersmith's riverside is reflected both in the Mall conservation area including Upper and Lower mall, and in the contrasting old industrial areas such as the Sands End conservation area. The River Thames is the main topographical feature in the Borough, defining its southern boundary. It contributes to the character and development patterns of Hammersmith and Fulham in many ways . There is a strong relationship between the river, the river edge, landward development and open spaces within the borough. The riverside in Hammersmith and Fulham has seen many changes over the centuries, and the last thirty years are no exception. Several key sites have been subject of major development proposals.

SPD Design Policy 30

Land Uses

The mixture of uses within a conservation area is a component of character and the impact of changing the balance of uses on that character must be carefully considered. Where a change of use is proposed, it should be consistent with the conservation of the asset.

4.207 The experience of the particular mix of uses within a historic area helps determine its character. This often reinforces the role and quality of its individual buildings and local townscape. The balance of uses within a conservation area is, therefore, important in defining its character, particularly if they reflect the historic development of the area. Conservation Area designation is seen as the means of recognising the importance of such factors and in ensuring that appropriate policies are adopted to address the preservation or enhancement of such character by maintaining the balance of uses where it exists.

SPD Design Policy 31

Alterations to Buildings

Extensions and alterations should be appropriate to the architectural character of the building and should not have a significant effect on the character of the conservation area and the building line and the pattern of development must be protected.

4.208 The physical character of a conservation area is defined by the form and layout of the buildings and their relationship to the spaces between. For example, it could be derived in part from the groups of terraces and set piece developments and their uniform appearance and form. Alterations to buildings forming part of such consistent groups, even those of a relatively minor nature, can have a particularly damaging effect, destroying the homogeneity. The scale, massing, rhythm and architectural character of the buildings within a street are key elements in defining its character. Extensions and alterations to properties should not have a significant visible effect upon their scale, massing, rhythm and architectural character when seen from the street or any public space.

4.209 The character of a conservation area is also derived from its distinctive street pattern and plot layout, which give clues to the historical development of the area. Protection of the building line and pattern of the older streets is very important in preserving the area's character.

SPD Design Policy 32

Roof Extensions and Materials

Front roof extensions are generally unacceptable and rear roof extensions should be sympathetic to the character of the conservation area.

4.210 Front roof extensions are generally considered unacceptable and will only be approved if the property is within a terrace that has been significantly impaired by front roof extensions.

4.211 The design of any rear roof extension should be sympathetic to the character of a conservation area. Where they are visible from the street, including long views, then particular attention will need to be paid to their appearance. In some cases, high visibility of the rear roof of properties may prohibit a roof extension where it would have a detrimental effect on the character of a conservation area.

4.212 Where traditional materials remain in place repairs or alterations to roofs and dormer windows should use matching traditional materials, i.e. slate, lead and timber. The reinstatement of traditional materials to roofs is encouraged whenever the opportunity arises.

4.213 Existing roof lines should not be disturbed. Raising the height of the ridge or increasing the pitch of front roof slopes to accommodate greater internal ceiling height is considered unacceptable. Original features such as decorative ridge roof tiles, finials, cresting's, cast iron gutters and down pipes, original roofing materials and their pattern should all be retained.

4.214 The demolition of original chimney stacks that are visible from the street or a public space is considered to be a material alteration to the roofscape and shape of a dwelling house. Their removal may require planning permission and should be resisted. Similarly, original chimney pots should be retained wherever possible.

4.215 Modern additions such as satellite dishes, T. V. aerials, roof-lights, roof lanterns, renewable energy micro-generation equipment (such as solar panels and wind turbines) and vents should be as inconspicuous as possible. They will not be permitted where they would be visually obtrusive and where alternative locations are possible. Satellite dishes should preferably be placed at roof level behind the chimney stack.

SPD Design Policy 33

Hip to Gable Roof Extensions

The loss of hipped roofs will be resisted.

4.216 Hip to gable roof extensions can undermine the symmetry of pairs of properties or terraces and where hipped roofs form part of the pattern of original development in a Conservation Area their loss will be resisted. Within pairs of properties hip to gable roof extensions will only be acceptable where they are carried out as a joint building operation to both properties, to preserve a symmetrical appearance between properties.

SPD Design Policy 34

Extensions

The design and materials of rear extensions should be in keeping with the architectural character of the existing property and conservation area and should integrate successfully with the building concerned.

4.217 Rear extensions should never dominate the main building and should meet the policies in the section of the SPD on Housing Quality.

4.218 Rear building lines should respect and take into account the value of rear gardens as private amenity space, as being of landscape value, and as areas providing the opportunity for biodiversity. Extensions should not, therefore, extend right up to the rear boundary of the property or dominate the rear garden. Significant erosion of a rear garden will not be permitted.

4.219 Rear roof terraces cut into the original back addition would normally require planning permission, and should be resisted, especially where the symmetrical appearance of back additions in a pair or terrace will be disrupted.

SPD Design Policy 35

Lightwells

Where lightwells are considered to be appropriate they must be sensitively designed and proportioned to accord with the Council's 'Design Guidelines for Lightwells SPD'.

4.220 Front gardens define the edge of the public realm and contribute to the street scene. They form an important element of the character of most of the Borough's streets and terraces and, when planted, provide a welcome greening of an otherwise hard urban environment. When the houses were built the inclusion of front gardens was regarded as adding status and, if kept in good order, improving privacy and the overall appearance of the properties. The Council encourages the retention and maintenance of planted front gardens.

4.221 The creation of lightwells by the excavation of all or part of the front garden of a residential property to provide windows to basements requires planning permission, as does the enlargement of an existing lightwell. Where there is no tradition of a lightwell in a particular property or street the introduction of an over-large, visible and inappropriately designed lightwell could be harmful to the appearance of an area. This has a negative impact and would not normally be permitted where the lightwell would take up more than 50% of the front garden or would result in the loss of a substantial part of any planted area of the front gardens that forms an integral part of the design of the street or terrace.

SPD Design Policy 36

Brickwork and Stonework, Painting, Render and Cladding

Properties' external brick or stone walls (including pilasters to shop surrounds) should be retained in their original condition and should not be painted, rendered or clad in any material.

4.222 Existing brick or stone elevations including chimney stacks should be properly maintained and appropriate repointing undertaken where necessary (usually with lime based mortar in a flush finish). If a property's brickwork or stonework has been painted, rendered or clad, advice should be sought from the Council regarding the removal of the paint, render or cladding. Planning permission may be needed for changes to brickwork and stonework and that consultation with the Borough's conservation officer should be sought.

4.223 Properties that have original unpainted stucco rendering, or have stucco mouldings, should preferably be left in their original state and specialist advice should be sought where re-rendering or repairs are necessary. Where render or stucco is painted, it should be repainted an appropriate matt colour (or colours) i.e. white, pale or pastel shades rather than vivid colours.

4.224 Glazed bricks or tiles and terracotta tiles or decorative panels should not be painted. Those that have been painted should be carefully cleaned after seeking advice from the Council.

SPD Design Policy 37

Windows and Original Features

Original architectural features such as timber sash windows timber or metal casement windows, panelled doors, decorative stucco, moulded window surrounds and door cases, and historic shopfronts should be maintained and repaired wherever possible.

4.225 Where renewal is unavoidable, owners are encouraged to reinstate these with exact replicas in the original opening style and original pattern of glazing bars, or where features are missing, recreate them using traditional or matching designs and traditional materials. Planning permission may be needed for replacement windows and that consultation with the Borough's conservation officer should be sought.

4.226 Owners of properties with unsuitable replacement windows, including PVCu (plastic) windows, should be encouraged to change them for those of a more appropriate design and materials to match the originals when an opportunity arises.

SPD Design Policy 38

Adapting for Climate change

Installation of microgeneration equipment and energy efficiency measures must be sensitively designed and situated to be sympathetic to the exterior character of properties and the character and appearance of conservation areas as a whole.

4.227 Opportunities may arise to alter buildings in conservation areas to enhance energy efficiency, improve resilience to climate change and allow greater use of renewable energy and the sustainable use of water. These measures will be generally supported, however there are likely to be instances where such measures will have damaging impact on heritage assets.

4.228 Installation of microgeneration equipment within a conservation area will require planning permission and needs careful consideration. Wind turbines, solar panels and air source heat pumps can be problematic in conservation areas as they may be visually intrusive and detrimental to the character and appearance of the street scene. Where householders wish to install equipment, this

should be done in a discrete manner such that the additions are sited in the least intrusive locations and the equipment is successfuuly integrated into the fabric of the builidng and the street scene generally.

4.229 Installations should not have an adverse effect on the character and appearance of the building on which they are located or the conservation area as a whole. Main building elevations and views of buildings from the public realm of buildings should be avoided.

4.230 Energy efficiency measures can equally have an adverse effect on the character and appearance of historic buildings and conservation areas. Internal efficiency measures such as secondary glazing should be considered and where these may be partially visible form the street, they should be designed in a manner which is sympathetic to the exterior character.

4.231 In parts of conservation areas where front gardens spaces are particularly characteristic, and contribute to the significance of the area, their replacement by the introduction of hard standings with electric car charging points for forecourt parking will be resisted. The loss of front gardens and their features, boundary treatments and the sense of enclosure these give, damages the uniform appearance of terraces and groups of houses.

SPD Design Policy 39

Other Additions

External impedimenta must be integrated into the design of the building and carefully sited to minimise their visual impact and original rainwater goods must be replaced in their original form and material.

4.232 Gutters, rainwater pipes and soil pipes should be replaced, when necessary, in their original form and material. Some alternatives such as powder coated aluminium may be acceptable but the use of PVCu (plastic) is inappropriate on buildings within conservation areas, and will be discouraged.

4.233 The positioning of gas and electricity meters on external walls of buildings within conservation areas should be avoided. If absolutely necessary, their location should be carefully considered to minimise their visual impact upon the building and townscape quality of an area.

4.234 The routing of external cables for telephone, T.V., alarms etc., and the location of alarm boxes, gas flues, air conditioning units etc. on external walls should be carefully considered so that they are located away from important architectural details to minimise their visual effect on the appearance of the building on which they are located, and the townscape quality of an area.

4.235 Satellite dishes will not be permitted where they would be visually obtrusive and where alternative locations are possible.

SPD Design Policy 40

Shop Surrounds

Shop surrounds should be repaired to match their original appearance.

4.236 Usually, groups of shops within a terrace were originally unified in appearance by having their shopfronts installed within well designed surrounds common to each shop within the terrace. It is important to repair or reinstate each shop surround to match its original appearance. More detailed guidance can be found in the section of the Supplementary Planning Document on Shopfront Design.

SPD Design Policy 41

Shopfronts

The removal of historic shopfronts will be resisted and new shopfronts in conservation areas should incorporate high quality designs which are appropriate to the architectural character of the building.

4.237 The removal or alteration of historically and architecturally interesting shopfronts (particularly ones original to their building) will be resisted and, where they have been removed, restoration will be encouraged.

4.238 Where parts of an original shopfront have been removed in the past, but surviving original elements and architectural features still remain, they should be retained.

4.239 New shopfronts in conservation areas should incorporate appropriate high quality designs and materials (such as painted softwood or bronze, iron and render) suitable for the period and architectural style of the building concerned, and should achieve a satisfactory visual relationship between the ground floor and the rest of the building.

4.240 Shopfronts spanning more than one original shop unit should not disrupt the vertical emphasis by the removal of intermediate pilasters and corbel brackets that originally divided the individual shop units.

4.241 More detailed guidance can be found in the Development Management Policy DM G4 and in SPD Design Policies 24 to 31.

SPD Design Policy 42

Shop Fascias, Signage and Lighting

The design of advertising on shopfronts should respect and enhance the character and appearance of the building and conservation area and use appropriate materials of high quality.

4.242 Fascia panels and shop signs should be integrated into the design of a shopfront and the building as a whole and be sympathetic in form and scale.

4.243 Existing architectural details should not be obscured, and the highest point of the fascia should never be above the perceived floor level of the first floor. Fascia panels should not extend uninterrupted across a number of distinct buildings, but instead should be divided by pilasters and corbel brackets in order to respect the width of individual building frontages.

4.244 When replacing or renewing a fascia, shopkeepers should always investigate whether the original fascia remains intact behind a later applied addition. Where the original remains it should be repaired and redecorated.

4.245 The most appropriate form of fascia for properties within a conservation area is a traditional painted fascia board. Internally illuminated box fascias and signs are considered to be inappropriate for shops within conservation areas.

4.246 Consent will not usually be granted to install internally illuminated projecting box signs.

4.247 More detailed guidance can be found in the section of the Supplementary Planning Document on Shopfront Design.

SPD Design Policy 43

Shop Security Shutters and Canopies

Security grilles should be open mesh and located internally. Solid shutters should be avoided. Canopies should be traditionally designed

4.248 Security grilles, where absolutely necessary, should be open mesh and located internally. Solid roller shutters should be avoided except where the window display remains visible and the door only is shuttered, or the shopfront is an open type e.g. greengrocers. Shutter boxes should always be located internally behind the shopfront.

4.249 Where canopies are required they should be traditionally designed and located immediately below or above the fascia panel. Straight canvas canopies capable of full retraction are appropriate to most shops in the conservation areas.

4.250 More detailed guidance can be found in the Shopfront Design section of this SPD.

SPD Design Policy 44

Opportunity Sites

New buildings must be carefully conceived to achieve a harmonious relationship with their neighbours.

4.251 Opportunity sites are sites where improvements are desirable and enhancement of the conservation area could be achieved through redevelopment or refurbishment.

4.252 Where these sites are identified, for example in conservation area character profiles, the potential for redevelopment will be judged against criteria suitable for a conservation area. New buildings should contribute positively to the visual quality of the area, and preserve or enhance the character and appearance of the area.

4.253 In considering proposals for new buildings in conservation areas A successful new building will be one whose design has taken account of the following characteristics of the surroundings where appropriate:

- The setting of the conservation area and the elements within it that contribute to its significance
- The buildings, public realm, routes and urban grain that define the distinct character of the conservation area
- The key townscape features that define the sense of place
- The quality and diversity of buildings, their uniformity and style and the fine grain detailing, decoration and materials

- Terrain and landscape features
- An appreciation of the most significant views in and out of the conservation area and the opportunity to enhance existing views and shape or define new ones
- The pattern of current and historic uses

4.254 The scale, proportion, massing, height, alignment and use of materials must be carefully conceived along with the finer grain detailing to achieve a harmonious relationship with neighbouring buildings. This does not mean that new buildings should slavishly copy their neighbours.

4.255 More guidance can be found in Building in Context: New Development in Historic Areas, CABE 2001.

4.256 The council will require applications for planning permission, whether outline or full, to be in sufficient detail for a judgement to be made in relation to the impact of the proposal on the character and appearance of the adjoining buildings and street scene and the conservation area as a whole. It is important, therefore, to be able to assess any proposal not just as a separate entity but as part of that area. For this reason an outline application without any details is unlikely to provide sufficient information. The council has statutory powers to ask for additional details within one month of the lodging of a planning application, if these are necessary to enable it to make a decision.

4.257 Opportunity sites may also include buildings and public spaces that are in need of redesign or refurbishment and, therefore, inclusion on the list of opportunity sites should not be taken as indicating a presumption in favour of redevelopment.

SPD Design Policy 45

Building Line

Any new development should respect the dominant building line on the street frontage.

4.258 The frontages on either side of a street define an enclosed space that is in a critical relationship to the scale of the buildings. This relationship can sometimes be lost by redevelopment breaking the rhythm of the elevations, spaces, entrances and fenestration patterns. Any new development should respect the dominant building line within a street, and the general rhythm of the facades, conforming to the height and alignment of the existing frontage.

4.259 The building line of the rear of buildings, often with a repetitive pattern of original subordinately designed rear extensions, can also be important in its relationship with gardens. It should be respected by the careful design of any new extensions to the rear.

SPD Design Policy 46

Building Height

Any new development should respect the general townscape in each area.

4.260 In many parts of the Boroughs conservation areas where there is a consistency of scale and height, any new development should respect the generally prevailing height, thereby preserving the character of the area.

4.261 It is acknowledged that across some of the conservation areas, there is a mix of building heights and the judgement to be made will be one aided by an analysis of both the immediate and surrounding townscape context.

SPD Design Policy 47

Landmarks

Where the landmarks make a positive contribution to the character or appearance of the conservation area, every effort should be made to retain these as focal points.

4.262 Most conservation areas have at least one distinct visual landmark in the form of an architecturally impressive building such as a church, theatre, town hall, rail station or an imposing office or mansion block or industrial building. These are often positioned prominently on a junction or at the end of a vista along a road. They can be of local or wider interest, but will often be of importance in defining and identifying the character of the conservation area.

SPD Design Policy 48

Setting of the Conservation Area

When new buildings are proposed, they must be carefully designed to maintain or enhance the contribution of the setting to the significance of the conservation area.

4.263 The setting of a conservation area is important in defining its character and appearance. All conservation areas have a setting which is the context in which the heritage asset is surrounded by and appreciated. The surroundings may contain buildings or features that have a positive, neutral or negative impact on the significance of the asset. The significance of an asset may be enhanced whether or not the setting was designed to do so.

4.264 Even where the asset is inaccessible to the public in a conservation area, the contribution of changes to the setting must be fully assessed, whether or not it is visible from the public realm.

4.265 Where the scale, height, massing, alignment, materials and proposed use of any new development respects the character and appearance of the neighbouring conservation area, a harmonious and successful design will be the likely outcome.

4.266 Any development or alterations to properties affecting the setting of a conservation area should take full account of its character and appearance, and should preserve or enhance it.

4.267 Applicants should describe the impact of their proposals on the setting of a conservation area in accordance with the method outlined in the English Heritage publication 'The Setting of Heritage Assets (2011)'

SPD Design Policy 49

Views

New development should not adversely affect key views within, into or out of Conservation Areas.

4.268 The relationship of the built environment to identified landmarks will give rise to significant vistas and panoramas which contribute to the character of the area. Great care should be taken to ensure that these key views are maintained and any new development within the view corridors does not adversely affect the views. The existence, and importance, of these views should help determine the appropriate height of new development in the conservation area. Similarly, the height and location of new buildings outside the conservation area can have important implications with regard to the quality of views into and out of the conservation area.

4.269 Applicants should adopt a methodology consistent with National and Regional guidance and English Heritage guidance notes in assessing key views. The following guidance documents should be considered where appropriate: The London Views Management Framework (GLA); Seeing the History in the View and the setting of Heritage Assets, both by English Heritage.

SPD Design Policy 50

Boundary Treatment

Alterations to or removals of traditional front boundaries will be resisted and where missing they should be replaced to their original design.

4.270 19th & Early 20th Century buildings were designed with a mix of front boundary treatments, varying from the earlier style of metal railings on a stone plinth with matching gates, to the later style of low brick walls with stone copings (simple flat blocks or more distinctively moulded) surmounted by metal railings or panels, and matching gates all flanked by stone or terracotta capped piers, and hedges, or a combination of these. They are important in defining the character of the area and visually uniting the streets and terraces. Where the original boundary railings, gates, walls or piers remain in front of properties they should all be retained, repaired, and kept in good condition.

4.271 Alterations to, or removal of, original or traditional front walls and railings and their footings should be avoided as this can have a visually detrimental effect upon the building and conservation area.

4.272 Where properties have lost all boundary structures so that they no longer have boundary definition the rhythm and enclosure of the street is spoilt. The boundary railings/walls that are missing should be replaced to their original design and height, together with matching gates where appropriate; in the later buildings a low brick wall of an appropriate and sympathetic design and materials should be provided. This is particularly important where they will strengthen the original uniformity of the development. Owners of properties where there are inappropriately designed walls or fences at the boundary will also be encouraged to replace them to the correct design and height, so that they no longer have a negative effect upon the appearance of the conservation area. Hedge planting and greenery in front gardens is also important, both visually in softening the streetscape and because of its biodiversity value, and should be retained wherever possible.

4.273 It is considered that in the majority of cases black or dark green is the most appropriate colour to paint metal railings and gates, but wherever possible the original colour scheme should be investigated. Invisible Green (Dulux Colour Reference 8406 G78Y) is often used.

4.274 Bin, cycle or meter enclosures in front gardens can often be unsightly features unsuitable within conservation .positions where they might be acceptable, the height and size of such enclosures should be designed in proportion to the height of the boundary treatment and the size of the garden. The use of traditional materials such as timber and brick to match the main building is preferred. They should never open directly onto the highway, and in streets and terraces with traditional front boundary railings or walls, should not form a new opening through them.

4.275 Where a building is on a corner site its flank boundary can be of equal visual importance to the front boundary. Traditionally the side boundary is often of a plainer form such as a simple stock brick wall, possibly with contrasting coloured brick string courses and coping stones, or a timber fence, but in some cases it continues the elaborate treatment of the front boundary around the side of the building. A simple timber garden door or garage doors may be incorporated into the side boundary treatment. It is important that the original design is respected, retained and repaired where necessary, as the flanks of corner buildings have a major visual impact upon the local street scene. Any new structure over one metre in height on a boundary adjoining the highway would require planning permission.

4.276 Some rear boundary walls or fences are also visible from public areas, and in such cases the effect of their appearance should also be considered. Any new structure over 2 metres in height would require planning permission.

SPD Design Policy 51

Forecourt Parking & Vehicular Crossovers

The destruction of front gardens and boundary's to create vehicular access and hard standings will be resisted.

4.277 There is considerable parking pressure within the Borough, which has resulted in an increased demand for forecourt parking. This can have a detrimental effect on the character and amenity value of the streetscape and should be avoided wherever possible. The introduction of hard-standings for forecourt parking results in the loss of front gardens and their features, boundary treatments and the sense of enclosure these give, and damages the uniform appearance of terraces and groups of houses.

4.278 The London front garden, mostly set back from the road behind a low brick wall, was known for its neatly clipped privet hedge, bedding plants and patch of lawn, but the trend to pave over the garden to provide forecourt parking is increasing the possibility of flash floods and increased local temperature. The result is a dirtier environment, a reduced amount of greenery in the city, and more car noise and pollution. The more the ground is covered by hard surfaces, the less rainfall will soak into the ground, and drains will overflow, discharging into rivers and putting extra pressure on the already overloaded Victorian sewerage and drainage systems. The creation of a vehicular access will, therefore, be resisted.

4.279 Where in exceptional circumstances forecourt parking is permitted then it should be designed to enhance the appearance of the conservation area and should use designs and materials which are consistent with Sustainable Drainage Systems (SuDS). More advice can be found in the council's SPD on Flood Risk Mitigation and Sustainable Drainage.

4.280 The creation of forecourt parking can result in the loss of on-street parking. This increases the potential for on-street parking stress, which can result in double parking and obstruction of the highway. This has a serious consequential effect on the health and safety of local residents, both directly and indirectly through the obstruction of emergency/social service vehicles. The maintenance of a safe and attractive environment for pedestrians and cyclists is also of primary importance and vehicular access to properties via footway crossovers conflicts with these aims. Consent for permanent crossovers and new vehicle access is needed under highway legislation and will only be granted in exceptional circumstances. In considering a request for crossovers under highway powers, the Council will likewise give particular attention to safety requirements.

SPD Design Policy 52

Disabled Access

Applications for development affecting heritage assets should achieve accessible and inclusive design wherever possible and practicable.

4.281 The Council supports the dignified and easy access for disabled people to and within historic buildings and historic public spaces. Suitable access for disabled people, which does not compromise a building's or areas special interest, can normally be achieved if treated as part of an integrated review of access requirements for all visitors or users, and if a flexible and pragmatic approach is taken. The English Heritage publication – Easy Access to Historic buildings provides useful guidance

SPD Design Policy 53

Landscape and Floorscape

Roads and pavements should form a neutral setting for buildings within the conservation area and all work should be carried out in accordance with the Council's street design guide "Street Smart"

4.282 It is not only an area's buildings but also the streets and spaces between them that are important to the character of an area. It is important that the roads and pavements form a neutral setting for the buildings within the conservation area. The materials used to pave footways and other surfaces are of prime importance especially in conservation areas. High quality natural materials such as York stone and granite setts can greatly add to the visual interest of an area. Guidance on streetscape design and the appropriate use of materials in historic settings can be found in the English Heritage publication – Streets for All.

4.283 Footpaths should be of uniform materials, ideally traditional, which are visually distinguishable from the road surface (which should ideally be black tar-macadam, unless original cobbles or granite setts exist. They should be visually subordinate within the townscape, providing a coherent character throughout the conservation area.

4.284 All original granite kerb stones and areas of historic stone paving should be kept if practicable where they form part of a significant composite scheme. Any works affecting these surfaces should be made good, reusing wherever possible the original materials, or if this is not possible, using matching materials and traditional construction techniques.

4.285 Ideally, new paving should be large rectangular slabs of York stone or artificial stone of a uniform colour laid in a traditional interlocking pattern.

4.286 The Council has adopted the use of tactile paving surfaces where necessary at pedestrian crossings. Utmost care and attention to detail is required to ensure that tactile paving and its associated dropped kerbs are seamlessly integrated into the surrounding paving and the context of the wider floorscape.

4.287 Any highway management schemes including vehicular crossovers should be of materials sympathetic to their surroundings and should be properly 'joined' to the surrounding footpaths/roads. All work on the highway should be carried out in accordance with the Council's street design guide "Street Smart" which promotes high quality design related to local character. Any hard landscaping,

paving, road surfaces or footpaths should be designed to contribute where necessary to managing surface water run-off in accordance with the Flood Risk Mitigation and Sustainable Drainage section of this SPD.

SPD Design Policy 54

Street Furniture

The Council is committed to improving the street scene. The aim is to promote high quality design and to eliminate visual clutter by removing redundant items of street furniture.

4.288 The Council is committed to improving the street scene. The aim is to promote high quality design and to eliminate visual clutter by removing redundant items of street furniture.

4.289 There are parts of the Borough's conservation areas which would benefit from the installation of more sympathetically designed lighting columns and lanterns as promoted by Streetsmart when the opportunities arise.

4.290 Historic cast iron bollards and railings such as those in Leamore Street and Cambridge Grove add to the visual character of an area and should be retained where they have survived. Damaged originals can often be repaired and reused, but where this is not possible an original bollard can be used to model new castings for replicas which can then also be used where additional bollards are required to reinforce local distinctiveness. Where a conservation area has no original bollards, and generally throughout the Borough, all unsatisfactory modern bollards will be replaced over a period of time with a special newly designed 'Hammersmith Bollard' that has been adopted by the Council for use as the standard. The use of all other bollards will be discontinued. Stainless steel bollards will be limited to specially designated schemes such as King Street.

4.291 Careful consideration will be given to the number and location of street signs, so as to avoid clutter. These will be reviewed with a view to reducing the number of columns by fixing signs to lamp posts etc.

4.292 The few remaining cast iron or enamel street name plates should be retained.

SPD Design Policy 55

Open Spaces

Development in a conservation area which is also within or adjacent to open space should respect and complement the character of the open space and conservation area.

4.293 Public and private open spaces within a conservation area have a major visual and amenity value and impact upon the character of what would otherwise be densely developed land by providing an open aspect within a built up area. Many open spaces within the Borough's conservation areas are identified within the Council's Local Development Framework as Nature Conservation Areas or Metropolitan Open Spaces. They offer areas for recreation and contemplation, for protection of wild fauna and flora, and the opportunity for biodiversity.

4.294 Designs should draw inspiration from their surroundings to ensure that the buildings are harmonious with their context. Where sports pitches, playgrounds and associated lighting are appropriate and satisfy these policies, they must be carefully integrated within the original layout and landscape to minimise their visual intrusion and enhance their surroundings.

SPD Design Policy 56

Trees

To protect trees in conservation areas. Additional tree planting is encouraged in appropriate locations.

4.295 Most trees in a conservation area, including those in rear gardens, are protected [see the Town and Country Planning [Trees] Regulations 2012]. Owners are urged to look after trees on their land and plant new ones in order to ensure a continuing stock of mature trees for future generations and to provide an opportunity for biodiversity.

4.296 The council will continue to plant new street trees where appropriate to ensure there is new stock in the future. Where the existing character of a conservation area is established by a line or group of a particular species then the Council will be seeking replacement with the same species. In other circumstances introduction of alternative species may be appropriate where they enhance the character of the conservation area in terms of their height spread, density and general amenity.

4.297 Planting more street trees will be considered throughout conservation areas where they would make a positive contribution to the street scene and where the width of the footway and underground services allow sufficient space to accommodate them.

4.298 The Council encourages the retention and maintenance of trees and shrub planting along boundaries of properties, as they enhance views and provide an opportunity for biodiversity.

SPD Design Policy 57

Continuity and Historic Names

The Council will encourage the retention of historic names of buildings and sites and promote the use of date and historic information plaques on buildings.

4.299 The Council considers the retention of the old names of sites and properties within conservation areas to be desirable. This would enable the historic identity and continuity of areas to be preserved. The names of historic or locally important developments and their associated signage and features should be kept. This is particularly relevant to public houses. Historic names and associations should also be taken into account in the naming of any new developments.

4.300 The Council will encourage, the inclusion of date plaques or historic information plaques on any new developments and have worked closely with the Hammersmith and Fulham Historic Buildings Group to develop a design. Several plaques have been erected to date providing interesting features in the townscape and points of reference for the future.

SPD Design Policy 58

Advertisement Hoardings, Poster Panels and Shrouds

The Council will refuse consent for advertisement hoardings, poster panels and high level signs that are harmful to visual amenity or public safety. Shrouds will only be permitted in tightly defined circumstances.

4.301 Advertisement hoardings are almost always harmful to visual amenity and are not substitutes for suitable boundary treatments. Where temporary consents exist, and the hoardings detract from the visual amenity of the area, the Council will resist the renewal of these consents. Where advertisement hoardings are being displayed illegally the Council will take the necessary action to secure their removal. Where hoardings are being displayed with the benefit of deemed consent and are causing harm to visual amenity or public safety the Council will endeavour to secure their removal through the use of discontinuance notices. The Council will refuse consent for the erection of any new advertisement hoardings within conservation areas because of their detrimental effect upon the appearance of these areas and on the buildings to which they are attached.

4.302 Poster panels can also have a detrimental effect upon the appearance of conservation areas, and on the buildings to which they are attached, by obscuring architectural detail or extending commercial signage into predominately residential locations. Free standing poster panels on the public highway and private forecourts can also obstruct pedestrian movement and add to visual clutter in the street scene. The Council will refuse consent for the erection of new poster panels where they are considered to be detrimental to visual amenity or public safety.

4.303 With very few exceptions, signage in conservation areas was originally installed at ground floor level on shop fascias and on commercial premises. Where upper level signage did occur, it was generally written inside the glass of first floor windows. The introduction of external high level signs can obscure or detract from the architectural detailing of the upper floors. At high levels it can also be more prominent over a wider area than the immediate locale and harm views. The Council will refuse consent for the erection of new high level signs because of their detrimental effect on the appearance of conservation areas and the buildings to which they are attached.

4.304 Advertisement shrouds are increasingly requested around buildings where repairs and cleaning works are taking place to the elevations. The Council recognises that there are occasions when works to buildings within conservation areas may require the erection of scaffolding and a protective screen for practical as well as Health and Safety reasons. Erection of a plain screen, or a screen with a full sized depiction of the elevation of the building behind it, may be acceptable for a period limited to the duration of the construction works. Applications for temporary advertisement consent for protective shrouds, to coincide with the duration of construction work, have occasionally been granted by the Council in the past where these incorporated a degree of commercial advertising in addition to a full size depiction of the building. In these cases the revenue derived from the advertising directly contributed to the refurbishment or restoration of the historic building to which the shrouds were attached. It is important; the advertisement should not over-dominate the building in terms of its size, height or illumination, and should only be displayed for a limited period. In this context, well sited signs of suitable size and design would normally be permissible, provided that they do not spoil the character or appearance of the area.

SPD Design Policy 59

Estate Agents Boards

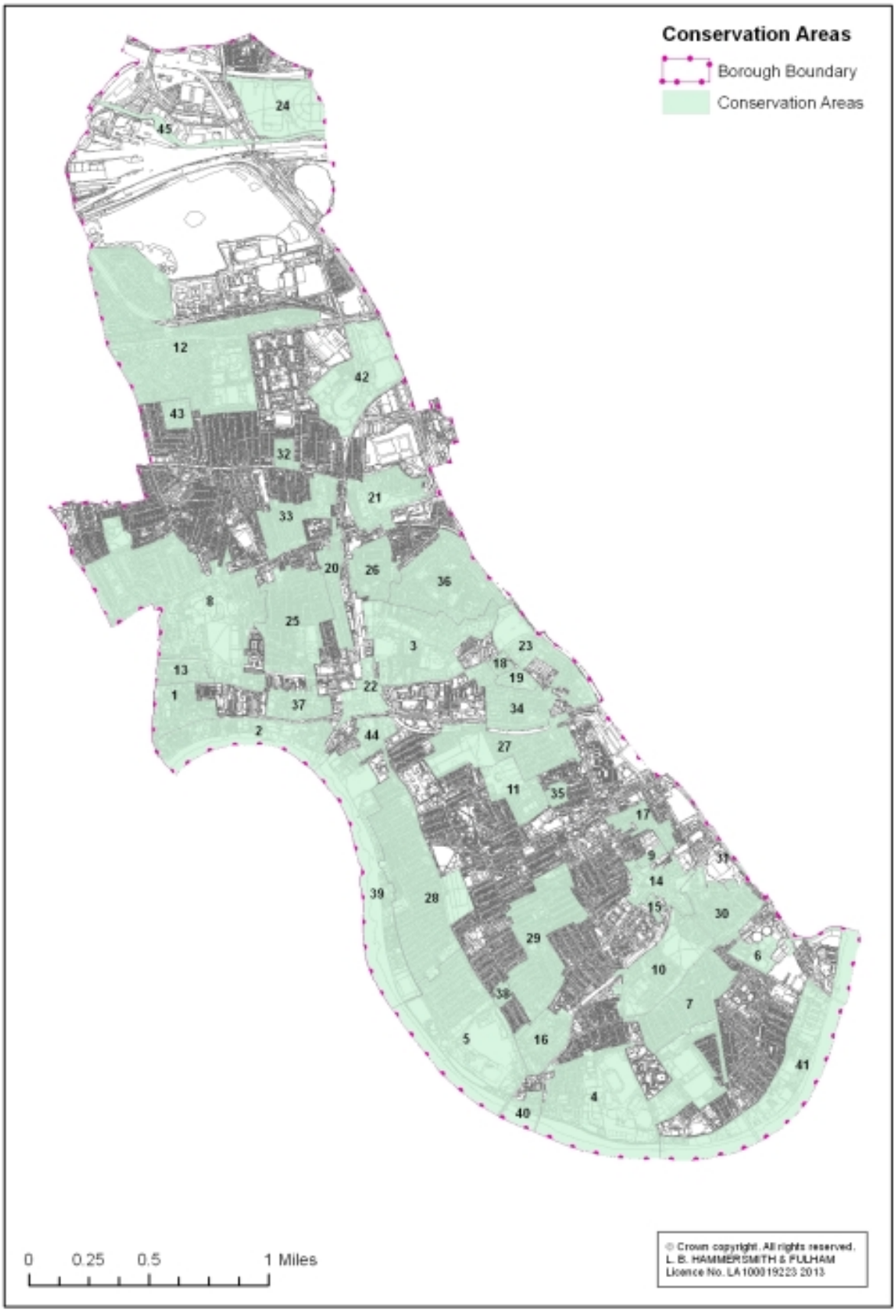
Consent will not be granted in areas where deemed consent has been removed under Regulation 7 Directions.

4.305 The undisciplined proliferation of "for sale" and "to let" boards looks very unsightly and has resulted in serious harm to the overall quality, character and appearance of conservation areas prior to the commencement of existing directives. Under Regulation 7 Directions, the qualified right to display specified classes of advertisements with deemed consent has been removed in parts of the following conservation areas: Baron's Court, Brook Green, Lakeside/Sinclair/Blythe Road, Olympia and Avonmore, Gunter Estate, Hammersmith Grove, Moore Park and Parsons Green and Walham Green.

4.306 Consent will not normally be granted for display of estate agents boards in these areas. The Council will review the effectiveness of the directive and from time to time may consider its extension to other conservation areas if an over proliferation of estate agents boards appears in them.

Conservation Areas

1. St. Peter's Square	16. Fulham Park Gardens	31. The Billings and Brompton Cutting
2. The Mall	17. Sedlescombe Road	32. Ingersoll/Arminger
3. Brook Green	18. Dorcas Estate	33. Coningham Road/Lime Grove
4. Hurlingham	19. Fitz George & Fitz James	34. Gunter Estate
5. Bishops Park	20. Hammersmith Grove	35. Turneville/Chesson
6. Imperial Square	21. Shepherds Bush	36. Lakeside/Sinclair/Blythe Road
7. Studdridge Street	22. Hammersmith Broadway	37. King Street (East)
8. Ravenscourt Park & Starch Green	23. Avonmore & Olympia	38. Colehill Gardens
9. Walham Green	24. St. Mary's	39. Fulham Reach
10. Parson's Green	25. Bradmore	40. Putney Bridge
11. Queen's Club Gardens	26. Melrose	41. Sands End Riverside
12. Wormholt & Old Oak	27. Baron's Court	42. Wood Lane
13. Westcroft Square	28. Crabtree	43. Cleverly Estate
14. Walham Grove	29. Central Fulham	44. Hammersmith Odeon
15. Barclay Road	30. Moore Park	45. Grand Union Canal


Conservation Areas
Borough Boundary
Conservation Areas
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Archaeology

Purpose

4.307 The overall objectives of the SPD are to:

- Establish more detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with the borough's archaeological heritage, namely Core Strategy borough wide strategic policy BE1 Built Environment and DM LP policy DM G7 Heritage and Conservation; and
- Provide more detail on the borough's archaeological priority areas.

4.308 The document provides a description of existing archaeological assets and includes policies that the council will apply when considering development proposals.

Policy Guidance

National policy

4.309 The National Planning Policy Framework (NPPF) published in March 2012 has as one of its 12 policies to:

"conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations".

4.310 Section 12 of the NPPF is entitled 'Conserving and enhancing the historic environment' and condenses the former PPS5. However, it maintains the spirit of the PPS in upholding the general policy that heritage assets should be "sustained" and "enhanced" for the benefits they bring to the community.

4.311 English Heritage is the Government's lead advisory body for the historic environment and has a statutory role in the planning system. The Greater London Archaeology Advisory Service (GLAAS) is part of English Heritage London Region and seeks to promote understanding and enjoyment of the archaeological heritage through its protection, management and interpretation.

London Plan

4.312 London Plan policy 7.8 is concerned with heritage assets and archaeology. This states in sub policy F that:

"Boroughs should, in LDF policies, seek to maintain and enhance the contribution of ……buried heritage to London's environmental quality, cultural identity and economy as part of managing London's ability to accommodate change and regeneration".

Local Plan

4.313 The council's Core Strategy policy BE1 on the Built Environment states that:

"all development in the borough…. should create a high quality urban environment that respects and enhances its townscape context and heritage assets" and adds that development throughout the borough should "protect and enhance the character , appearance and setting of the borough's conservation areas and its historic environment, including …..archaeological priority areas and the Fulham Palace Moated Sites scheduled ancient monument".

4.314 In the DM LP, policy DM G7 on Heritage and Conservation states that, amongst other things:

" The presumption will be in favour of the conservation and restoration of heritage assets, and proposals should secure the long term future of heritage assets. The more significant the designated heritage asset, the greater the presumption should be in favour of its conservation ".

Local context

4.315 The Borough's rich and varied townscape character that is evident today is largely a result of its historical development. Archaeological remains including prehistoric, Roman, Saxon, Medieval and post Medieval have been discovered in the Borough in areas which today form the focus for development and new information on the borough's archaeological heritage is regularly being provided through excavations linked to redevelopment schemes.

4.316 The current townscape and landscape structure of the Borough can be clearly traced through the successive layers of development over the past two hundred years. Most of the Borough's earliest buildings are now statutorily listed along with historic parks and gardens, and most of the early patterns of development are recognised in conservation area designation. For example, the small crossroads and village greens that first shaped the Borough are now the focus of conservation areas at Parsons Green, Walham Green, Brook Green, Starch Green and Shepherds Bush Green. There are also a number of buildings and artefacts of local importance and interest.

4.317 English Heritage has identified one ancient monument and 15 archaeological priority areas (APAs) in the borough. These are identified on the Core Strategy Proposals Map and are provided with a brief description below. In some cases further details may be found in the identified conservation area character profiles. Appendix 1 includes the detailed boundaries of the ancient monument and the APAs.

Fulham Palace Scheduled Ancient Monument

4.318 English Heritage has classified the Fulham Palace Moated Site as a Scheduled Ancient Monument. This is the most important archaeological site in the borough and lies in the Bishops Park Conservation Area. Excavations at Fulham Palace have uncovered Neolithic pottery, flint implements and features dating to circa 3,000-4,000 BC. Some of the flints may date to the even earlier Mesolithic period.

4.319 There is also evidence of Iron Age occupation, but the most extensive settlement evidence to date is of the Roman-British period, 3rd-4th centuries and possibly 5th century AD. Ditches, pits, gravel surfaces, coins, pottery, animal bones and items of women's jewellery; as well as building materials, stone brick and tiles, infer a substantial settlement. Its exact nature though is not yet known. The settlement appears to be centred on a road or trackway, probably in use since pre-Roman times, connecting with a ford across the Thames, linking Fulham with Putney. There is evidence of similar occupation there.

4.320 The gardens to Fulham Palace were first documented in the 16th century when Bishop Grindal established a botanic garden between 1559-70. Bishop Compton (Bishop between 1675-1713) was a horticulturalist and collector of rare plants and his collection included species from North America. It is thought that a formal garden layout recorded by Rocque in 1746 was the work of George London who advised Bishop Compton during the 1670s. These gardens were replaced by a less formal layout for Richard Javis in the 1760s. Further alterations took place between 1813-28 and 1828-56 and were undertaken by Bishops Howley and Blomfield. In 1973, Fulham Palace ceased to be the official residence for the Bishops of London and the gardens were opened as a public park.

Fulham Village APA

4.321 This was the main settlement of the parish from Saxon times onwards and now lies in the Bishops Park Conservation Area. According to documentary evidence, the principal Medieval settlement at Fulham was concentrated on the eastern side of Fulham High Street in the Fulham Park Gardens

Conservation Area. However, this settlement included the parish church (All Saints for the whole of the Borough) and the Bishop's Manor House at Fulham Palace, which are situated within the Bishops Park Conservation Area. The Bishops of London held the Manor from 704, when the Bishop of the East Saxons bought the estate from the Bishop of Hereford. The Medieval palace was demolished in 1506. By 1086, the time of the Domesday Book, Fulham appears to have been fairly prosperous with ample ploughland, meadows, woodland and a small weir, or fish trap. Areas of land were allocated to Normans and some burgesses of London, the latter of whom were possibly the predecessors of the affluent Londoners who held large estates in Fulham during the Medieval period.

4.322 There is no evidence fiom the Domesday Survey that in the 11th century Fulham village possessed a church. However, the first known rector was appointed in 1242 when a church must have existed. This Medieval church at All Saints was demolished in 1880 except for its 15th century tower. Bear Street was the original name for Fulham High Street, and it was used up to the end of the 18th century. Prior to the construction of the old Fulham bridge across the river Thames in the early 18th century, Bear Street extended from the river front, where the ferry docked, for a short distance north-easterly and then almost due north to the high ground by Colehill. Here the way divided, with one way extending north-west to Hammersmith (the existing Fulham Palace Road), and the other way extending eastwards to Walham Green.

Ravenscourt Leper Hospital APA

4.323 This area (now to the south of Ravenscourt Park station) had long had a reputation as a healthy place to live and provided the location for the most distant of the leper hospitals set up in and around London at the end of the mediaeval period. Known to have been in use from c. 1500 to the mid-17th century. The APA is situated within the Ravenscourt and Starch Green Conservation Area.

Ravenscourt Manor House (Palingswick) APA

4.324 The APA is situated within the Ravenscourt and Starch Green Conservation Area south of Ravenscourt Park. The house was first recorded in the 12th century and became one of the most significant houses after Fulham Palace.. By 13th century there was a large moated mansion situated in the ecclesiastical manor of the Bishop of London. In 14th century it was much enlarged and probably had an outer court occupied by Alice Perrers, the companion of Edward III's declining years. It was rebuilt as a brick mansion in the 16th century and again in 18th century. The Georgian brick building was too badly damaged by incendiary bombs in 1941 to be refurbished and was demolished.

Hammersmith Creek, Queen Caroline Street and Broadway APA

4.325 The APA lies within the King Street East, Mall and Hammersmith Broadway Conservation Areas. includes the possible original Saxon settlement of Hammersmith around the mouth of the now culveted Creek. It includes the Medieval and post-medieval settlement of Hammersmith along riverfront, and Roman coins and pottery have been uncovered from foreshore of Queen Caroline Street and Broadway. A 17th century convent and 17th century Portuguese embassy were on Hammersmith Road. The town brewery was established in 1780 by Thomas Cromwell and existed near the mouth of the Creek.

4.326 The village of Hammersmith was described in the mid 1720's by Defoe as "formerly a long scattering place, full of gardeners grounds with here and there a house of some bulk." In the first quarter of the 19th century Hammersmith Village was extending outwards from the Broadway and its principal thoroughfare King Street was lined with terraces.

Winslow Road Area APA

4.327 This APA, consisting mainly of the Hammersmith Embankment development site, has revealed prehistoric and Saxon settlements, a 17th century mansion, subsequently Brandenburgh House, and an 18th century theatre. On the southern edge of the grounds of Brandenburg House an early Saxon

settlement of the 5th/6th centuries AD was discovered during trial archaeological excavations in the 1980's. This is one of the most important early Saxon settlements in the London area discovered to date. Finds include the sunken floors of several huts, pottery, and the skeleton of a horse.

Parson's Green APA

4.328 Situated in the parsons Green Conservation area this APA is centered on Roman, medieval and post-medieval settlement around the green and Peterborough House to the south. The area was formerly part of the Manor of Fulham. Records state that Peterborough House once stood on the south-east of the green, having been built on the site of a famous mansion, formerly as Brightwells. Near to Peterborough House stood an ancient mansion which was formerly owned by Sir Edward Saunders, Lord Chief Justice of the King's Bench in 1682, and later became the residence of the famous novelist, Samuel Richardson.

Walham Grove APA

4.329 Medieval and post-medieval settlement and market place of the parish.

Sandford Manor House APA

4.330 The APA on the south side of King's Road extends from the borough boundary east of Stamford Bridge west as far as Cambria Street, and south to include Glyn Close. It relates to Sandford Manor House, a Grade II* listed building which was a sub-manor house from medieval times. The post-medieval manor house had saltpetre works, stoneware and tin-glaze pottery works, and cask and dye works within its curtilage

William De Morgan Pottery Works (Townmead Road Estate) APA

4.331 Late-19th and early-20th century, of interest to collectors and historians of the Arts and Crafts Movement. In 1888 the business was moved, for the last time, to Sands End (Fulham), where De Morgan began a ten-year partnership with the architect Halsey Ricardo. It was here that De Morgan created much of his finest work.

Hurlingham Park APA

4.332 Neolithic finds and 17th century plague pit. From before 1066 the land within this conservation area belonged to the Bishops of London and formed nursery gardens and meadows along the riverside. Hurlingham House, to the south of the APA, which was built from 1760 as a villa fronting the River Thames, now forms the main part of the Hurlingham Club House.

Broomhouse APA

4.333 Medieval and possible Saxon settlement.

Martin Brothers Pottery Works APA

4.334 Site of 19th century works of interest to collectors and historians. The Pottery was started in Fulham in 1873. The pottery is considered to represent the transition from decorative Victorian ceramics to twentieth century studio pottery in England.

Lygon Almshouses and corner of Finlay Street/Fulham Palace Road APA

4.335 This area was occupied in Neolithic times. Site of the village windmill from at least the beginning of the 15th century.

Rowberry Close APA

4.336 The riverside area has been occupied since pre-historic times. Archaeological work in the 1970's, during the redevelopment of Rosebank and adjoining wharves, produced Neolithic flint implements and pottery (circa 3,000 BC), late Iron Age pottery and an isolated Roman coin of the 4th century AD.

4.337 There is a high and dry sandbank here in a marshy stretch along the edge of the Thames and there may well have been a ford across the Thames in earlier times. The trackway connecting it is today represented by Crabtree Lane and Lillie Road.

4.338 Until the 19th century there was evidence of man-made earthworks along the riverside, possibly dating back to pre-Roman times.

4.339 Next to the Crabtree public house was a pottery operating in the 18th century and referred to in contemporary documents as the pot-house. Some green-glazed waste pottery fragments, possibly from this site, were found on the Crabtree Wharf opposite, during its redevelopment as Adam Walk in the 1970's.

King Street APA

4.340 Iron Age prehistoric earthwork, a short section of which was excavated at 120-124 King Street. May have protected a single farmstead, but may have been a more substantial settlement - a "proto-town", or possibly have been a long linear territorial boundary.

Archaeology elsewhere in the borough

4.341 The archaeological heritage of the borough does not stop at he boundaries of the ancient monument and the APAs, and heritage assets have been found elsewhere in the borough. The Greater London Archaeological Advisory Service (GLAAS) are of the view that it would be beneficial to have an APA designation along the whole riverside/foreshore area of the borough, given the highly significant potential of the River Thames to yield archaeological finds and sites both generally and in this section of the River more specifically.

4.342 The council has designated its existing APAs through the Core Strategy process and identified these on the Proposals Map. The council considers this to be the appropriate process for such designations, and whilst it is open to the possibility of a riverside/foreshore APA it is not intending to designate a new APA through this SPD. Instead it acknowledges the possibility of designating an additional APA at a future review of the Core Strategy and recognises the Thames to be an important area of archaeological potential.

Archaeological Policies

4.343 The archaeological policies establish more detailed guidance on the application of policies within the Core Strategy and DM LP. In applying these policies the council will use English Heritage's Historic Environment Planning Practice Guide which has been published to assist local authorities, owners, applicants and other interested parties in applying archaeological policies.

SPD Design Policy 60

Information requirements for applications for consent affecting heritage assets

The council will require an applicant to provide a description of the significance of the heritage assets affected and the contribution of their setting to that significance.

4.344 The level of detail should be proportionate to the importance of the heritage asset (see Glossary) and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the relevant historic environment record should have been consulted and the heritage assets themselves should have been assessed using appropriate expertise where necessary given the application's impact. Where an application site includes, or is considered to have the potential to include, heritage assets with archaeological interest, the council will require developers to submit an appropriate desk-based assessment and, where desk-based research is insufficient to properly assess the interest, a field evaluation. The council will encourage developers to inform local archaeological societies of the start of any archaeological excavation and to make arrangements for public viewing of excavations in progress, wherever possible, and for subsequent analysis, interpretation and presentation to the archaeological societies and the public of any archaeological results and finds.

4.345 This information together with an assessment of the impact of the proposal should be set out in the application (within the design and access statement when this is required) as part of the explanation of the design concept. It should detail the sources that have been considered and the expertise that has been consulted.

4.346 The council will not validate applications where the extent of the impact of the proposal on the significance of any heritage assets affected cannot adequately be understood from the application and supporting documents.

4.347 See also Greater London Archaeology Advisory Service (GLAAS) Charter as a source of advice and best practice principles

SPD Design Policy 61

Policies guiding the determination of applications for consent relating to all heritage assets

In decision-making the council will seek to identify and assess the particular significance of any element of the historic environment that may be affected by the relevant proposal (including by development affecting the setting of a heritage asset) taking account of:

(i) evidence provided with the application

(ii) any designation records

(iii) the historic environment record and similar sources of information

(iv) the heritage assets themselves

(v) the outcome of the usual consultations with interested parties; and

(vi) where appropriate and when the need to understand the significance of the heritage asset demands it, expert advice (from in-house experts, experts available through agreement with other authorities, or consultants, and complemented as appropriate by advice from heritage amenity societies).

4.348 In considering the impact of a proposal on any heritage asset, the council will take into account the particular nature of the significance of the heritage asset and the value that it holds for this and future generations. This understanding will be used by the council to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposals.

4.349 If the evidence suggests that the heritage asset may have a special significance to a particular community that may not be fully understood from the usual process of consultation and assessment, then the council will take reasonable steps to seek the views of that community.

4.350 The council will take into account:

– the desirability of sustaining and enhancing the significance of heritage assets, and of utilising their positive role in place-shaping; and

– the positive contribution that conservation of heritage assets and the historic environment generally can make to the establishment and maintenance of sustainable communities and economic vitality.

4.351 The council will take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design will include scale, height, massing, alignment, materials and use.

4.352 Where there is evidence of deliberate neglect of or damage to a heritage asset in the hope of obtaining consent, the resultant deteriorated state of the heritage asset will not be a factor taken into account in any decision.

4.353 Where loss of significance is justified on the merits of new development, the council will not permit the new development without taking all reasonable steps to ensure the new development will proceed after the loss has occurred by imposing appropriate planning conditions or securing obligations by agreement.

SPD Design Policy 62

Policies guiding the consideration of applications for consent relating to designated heritage assets

There will be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation will be.

4.354 Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset will require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden will be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, including scheduled monuments, grade I and II* listed buildings and grade I and II* registered parks and gardens, will be wholly exceptional.

4.355 Where the application will lead to substantial harm to or total loss of significance the council will refuse consent unless it can be demonstrated that:

(i) the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that harm or loss; or

(ii) (a) the nature of the heritage asset prevents all reasonable uses of the site; and

(b) no viable use of the heritage asset itself can be found in the medium term that will enable its conservation; and

(c) conservation through grant-funding or some form of charitable or public ownership is not possible; and

(d) the harm to or loss of the heritage asset is outweighed by the benefits of bringing the site back into use.

4.356 To be confident that no appropriate and viable use of the heritage asset can be found, the council will require the applicant to provide evidence that other potential owners or users of the site have been sought through appropriate marketing and that reasonable endeavours have been made to seek grant funding for the heritage asset's conservation and to find charitable or public authorities willing to take on the heritage asset.

4.357 Where a proposal has a harmful impact on the significance of a designated heritage asset which is less than substantial harm, in all cases the council will:

(i) weigh the public benefit of the proposal (for example, that it helps to secure the optimum viable use of the heritage asset in the interests of its long-term conservation) against the harm; and

(ii) recognise that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss.

4.358 Not all elements of a Conservation Area will necessarily contribute to its significance. The above policy will apply to those elements that do contribute to the significance. When considering proposals, the council will take into account the relative significance of the element affected and its contribution to the significance of the Conservation Area as a whole. Where an element does not positively contribute to its significance, the council will take into account the desirability of enhancing or better revealing the significance of the Conservation Area, including, where appropriate, through development of that element. This should be seen as part of the process of place-shaping.

SPD Design Policy 63

Policies guiding the recording of in formation related to heritage assets

Where the loss of the whole or a material part of a heritage asset's significance is justified, the council will require the developer to record and advance understanding of the significance of the heritage asset before it is lost, using planning conditions or obligations as appropriate.

4.359 The process of investigating the significance of the historic environment, as part of plan-making or development management, should add to the evidence base for future planning and further the understanding of our past. The council will make this information publicly available, including through the relevant historic environment record.

4.360 A documentary record of the past is not as valuable as retaining the heritage asset, and therefore the ability to record evidence of the past will not be a factor in deciding whether a proposal that would result in a heritage asset's destruction should be given consent. The extent of the requirement to record the past should be proportionate to the nature and level of the asset's significance. Developers should publish this evidence and deposit copies of the reports with the relevant historic environment record. The council will require any archive generated to be deposited with a local museum or other public depository willing to receive it. The council will impose planning conditions or obligations to ensure such work is carried out in a timely manner and that the completion of the exercise is properly secured.

4 Design

5 Amenity

Hot food takeaways

Purpose

5.1 This section of the Supplementary Planning Document (SPD) outlines the requirements of Hammersmith & Fulham Council with regard to the location and concentration of hot food takeaways outside of town centres and their proximity to areas where children and young people are likely to congregate. It supplements the Core Strategy and Development Management Local Plan (DM LP) policies and provides guidance on how to implement them.

5.2 The need for further criteria to assess hot food takeaways is considered necessary in order to help tackle the growing problem of obesity, particularly childhood obesity in the UK.

5.3 This supplementary planning document has been produced because the council recognises the role of planning in tackling health inequalities in terms of its ability to influence the availability and accessibility of fast food takeaways. However, the contribution that planning can make is considered to be limited and is unlikely to reduce childhood obesity on its own. A broader range of measures such as education, exercise and awareness are all needed to help reduce obesity and support healthier lifestyles and decision making with regard to eating habits. The council will work with relevant stakeholders to try to reduce obesity in the borough.

Policy Guidance

National Policy

5.4 The National Planning Policy Framework (NPPF) seeks to use the planning system to promote strong, vibrant and healthy communities, by creating a good quality built environment, with accessible local services that reflect the community's needs and supports its health and well-being. The NPPF also seeks to promote the vitality and viability of town centres, and meet the needs of consumers.

5.5 The Town and Country Planning (Use Classes) Order 1987 (as amended) puts uses of land and buildings into various categories known as 'Use Classes'. Since 21 April 2005, for planning purposes, Hot Food Takeaway shops have been classified as falling within Class A5 of the Town and country Planning Use Classes Order. This means that land or premises not already in class A5 use will require planning permission to operate as a takeaway.

London Plan

5.6 Health and health inequalities form a key part of the London Plan. Policy 3.2 encourages joint working to address health issues and emphasises the need to consider the potential impacts on health from development proposals and policies. Using local policies to control fast-food outlets near schools is mentioned as a complementary approach to healthy neighbourhoods.

5.7 Other policies crosscut with health indirectly and although they do not explicitly refer to food access as a determinant of health, they still positively contribute to improving both food access and health. Policy 2.15, for example, identifies neighbourhood centres and local shopping parades as playing a key role in meeting everyday needs.

Local Plan

5.8 The council's shopping policies will not permit additional hot food takeaways (Use Class A5) within the prime retail frontage of the borough's three town centres. Elsewhere in the borough they identify maximum proportions of ground floor frontages that can be occupied by these uses. Development Management Policies DM C4 (Managing uses in key local centres, neighbourhood

parades and satellite parades) and DM C5 (Small non-designated parades and clusters and corner shops) also state that the council, when considering proposals outside town centres will take into account the proximity to areas where children and young people are likely to congregate, such as schools, parks and youth facilities. The relevant council policies on takeaways are referenced below. This SPD supplements these policies.

LOCAL CONTEXT

5.9 In England, 22% of men and 24% of women aged 16 or over in England are obese [1]. Across Hammersmith and Fulham, Kensington and Chelsea and Westminster approximately 37,500 people aged 16 or over are known to be obese; this is approximately 6.9% of adult patients registered with an Inner North West London GP.

5.10 In respect of childhood obesity, the London Health Improvement Board (LHIB) have identified Childhood Obesity as a London wide priority, and are supporting the healthy Schools Programme. In addition they are developing a London Obesity Strategy Framework, and working on ways to support work with companies across London.

5.11 The Inner North West London obesity strategy reports on a review of Childhood Overweight and Obesity in Hammersmith and Fulham [2] in 2010 which found that Hammersmith and Fulham had a significantly higher prevalence of child obesity compared to the national average despite performance indicators such as physical activity and uptake of school lunches. The review found that key risk factors associated with child obesity were genetics, ethnicity, deprivation, eating practices, physical activity and parents who are overweight and obese. The two most important risk factors were considered to be eating practices and having parents who are overweight or obese.

5.12 Over the next 10 years, it is the aim of the Inner North West London Obesity strategy to reduce the rising obesity rates in Inner North West London for both adults and children and to reduce the numbers of children and adults who are obese and overweight. The vision includes bringing together areas of society which can influence how the council will make decisions about physical activity and eating.

5.13 Hammersmith and Fulham has a hierarchy of town and local centres that vary hugely in size, retail offer, environment and accessibility. The retail hierarchy includes three town centres, and 26 lower tier centres as well as many small non designated frontages and corner shops. The spatial distribution of the retail hierarchy means that most borough residents live within walking distance (400 metres) of a town centre or lower order local centre.

5.14 The council's most recent shopping survey (2011) and land use survey (2007) provide details of where the takeaway uses in the borough are located. Takeaways are mainly located on the borough's major road routes, including Uxbridge Road, Goldhawk Road, North End Road, Fulham Palace Road and Askew Road. There are more takeaways in the north of the borough than in the south, with 84 north of the A4 and 54 to the south. Nearly a third of takeaways (28%) are located within shopping parades.

5.15 Out of a total of 140 identified takeaway establishments, 31 are located within 400m of a secondary school. Schools with the most takeaways in their vicinity are:

- Sacred Heart High School (10)
- William Morris Academy (8)
- The London Oratory (7)

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1 The Health And Social Care Information Centre (2011) Statistics on Obesity Physical Activity and Diet in England

2 D Springer (2010) Healthy Weight, Healthy Lives A Review of Childhood Obesity In Hammersmith and Fulham

5.16 There are 97 identified takeaways within 400m of the borough's designated metropolitan, district and local parks.

5.17 The location of identified takeaways in the borough are shown in Map 1 on page 189.

POLICY

SPD Amenity Policy 1

Location and concentration of hot food takeaways

Proposals for new hot food takeaways (class A5 use) outside of the town centres will only be permitted where:

- **they are in accordance with the council's adopted policy quotas;**
- **they are located more than 400 metres away from secondary schools, local parks or youth facilities; and**
- **no more than two A5 units would be located adjacent to each other.**

An indicative 400 metre exclusion zone around secondary schools and parks is shown in Map 1.

Justification

5.18 The link between childhood obesity and access to hot food takeaways is well established, and the criteria which resists hot food takeaways within walking distance (400 metres) of secondary schools, parks or youth facilities is considered to be an appropriate way of reducing the accessibility of unhealthy food outlets to young people in the borough. This approach is consistent with the objectives of the Inner North West London Obesity Strategy.

5.19 The reason for the exclusion zone being drawn around secondary schools, and not including primary schools, is because children attending secondary schools are considered to have a greater opportunity to access nearby takeaway facilities if they are able to leave their school premises during lunch time and because they are less likely to be accompanied by an adult on their way to and from school. Primary school pupils, on the other hand, are not allowed out at lunchtime and are more likely to be escorted to and from school by an adult. Nonetheless, a number of primary schools fall into the 400m exclusion zone because of their proximity to secondary schools, parks and youth facilities.

5.20 In addition to the 400m exclusion zone criterion, the council also wishes to control clustering of hot food takeaways. Whilst it is recognised that hot food takeaways can contribute to the mix of uses in local centres, there is a risk particularly within the smaller centres, that these uses could dominate the local retail food offer if their location is not managed, Consequently, to ensure that shopping areas are balanced with a mix of uses, especially in the designated centres, the concentration and clustering of hot food takeaways will be controlled by not permitting more than two hot food takeaway units to be adjacent to each other.

5.21 Where there is a clear barrier, such as a major road, railway or river, between a proposed hot food takeaway and a secondary school, park or youth facility, the distance from the takeaway to the sensitive location where children may congregate will be measured by way of the shortest pedestrian route.

Other Issues not subject to policy 1

Opening hours, noise and disturbance

5.22 The council accepts that the viability of hot food takeaway premises can depend on late evening trade. However, the need to protect residential amenity will guide the appropriateness of later hours of operation for such establishments.

5.23 In order to appropriately control the opening hours of takeaways the council will apply Development Management Policies DM C6 (Managing the impact of food, drink and entertainment uses), H9 (Noise) and H11 (Environmental Nuisance and control of potentially polluting uses), together with relevant supplementary planning documents such as the Noise SPD. In addition, where planning permission is to be granted for a hot food takeaway, conditions may be placed on hours of operation, in order to control such activity.

Litter

5.24 Hot food takeaways can generate large amounts of litter in their immediate vicinity and often, further a field, particularly in areas where customers settle to eat their takeaway meals. Although the proprietor has little control over where its customers drop their litter, they can act to significantly reduce the potential of its occurrence by providing litterbins within their premises.

5.25 It is the operators' responsibility to ensure that their internal litterbins are regularly maintained and emptied, and the surrounding area remains litter free. Where a litter problem is found to be directly linked to specific takeaway premises, the council can issue a Street Litter Control Notice. Any operator seen to be in non-compliance with such a notice, could incur a fine.

Crime and disorder

5.26 Hot food takeaways can often attract a gathering of people which can result in crime and disorder, particularly at night. Where there are concerns over crime and antisocial behaviour in the area, the applicant may be asked to enter into a legal agreement (planning obligation) which may require the provision of a financial contribution to fund the provision of safety and security measures such as CCTV systems.

Cold Sandwich takeaways (Use class A1) and café's and restaurants (Use class A3)

5.27 In planning terms, there is a distinction between a cold food sandwich takeaway shop (Class A1), a restaurant or café (Class A3), a drinking establishment (Class A4) and a Hot Food Takeaway (Class A5). Since 21 April 2005, for planning purposes, Hot Food Takeaway shops have been classified as falling within Class A5 of the Town and country Planning Use Classes Order.

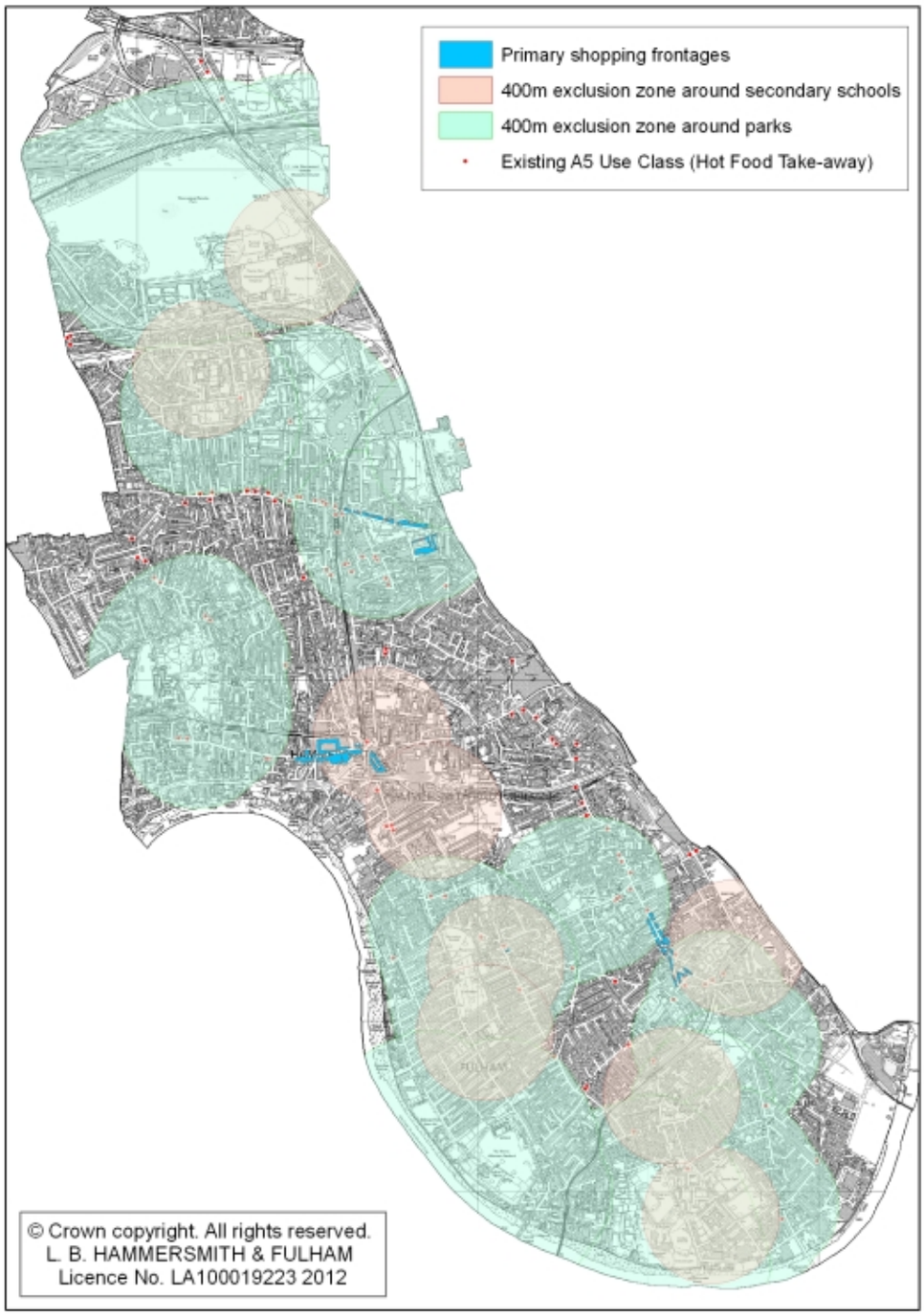
5.28 Establishments whose primary business is for the sale of hot food for consumption off the premises, fall within the A5 Class. Often, the proposed layouts of premises or whether cooking is taking place provide a clear guide as to whether the use will fall into the A1 class, A3 Class or the A5 Class. In determining the dominant use of the premises, consideration will be given to:

- The proportion of space designated for food preparation and other servicing in relation to designated customer circulation space
- The number of tables or chairs to be provided for customer use
- Whether cooking is taking place on the premises

5.29 The Council will expect the applicant to demonstrate that the proposed use will be the primary business activity.

Map 1:

Map showing an indicative exclusion zone of 400 metres around secondary schools and the borough's metropolitan, district and local parks:



Contaminated land

Purpose

5.30 The overall objectives of the SPD are to:

- Establish detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with addressing the potential risks from land affected by contamination during development, namely Core Strategy borough wide strategic policy CC4 and DM LP policy DM H7 Contaminated land; and

- Provide guidance to owners, developers, architects, surveyors and their environmental consultants when submitting planning applications to develop or change the use of a piece of land which may be potentially contaminated or where a sensitive use is proposed.

- Ensure a consistent approach in dealing with planning application submissions relating to the assessment of land potentially affected by contamination based on relevant published statutory guidance and current best practice.

5.31 The document provides a description of potentially contaminated land in the borough and provides a list of policies that the council will apply when considering development proposals on or near such land or where a sensitive use is proposed. The policies are based on the National Planning Policy Framework (NPPF) 2012 and the council's Core Strategy and DM LP.

Policy Guidance

National policy

5.32 The NPPF published in 2012 identifies the need to address the issue of contaminated land through the planning process.

5.33 The Department for Food, Environment and Rural Affairs (Defra) is the Government's regulatory body for contaminated land and has provided guidance in addressing contaminated land published as Contaminated Land Report 11 (CLR11) Model Procedures for the Management of Land Contamination.

5.34 Along with local authorities, the Environment Agency (EA) is Defra's enforcing body in addressing contaminated land where controlled waters may be affected. The EA also function as a statutory consultee and has published Guidance for the Safe Development of Housing on Land Affected by Contamination.

London Plan

5.35 London Plan policy 5.21 is concerned with the remediation of land affected by contamination. Further policies address related issues including water quality (Policy 5.13 Water Quality and Wastewater Infrastructure); soil and aggregate waste generated as part of redevelopment or remediation (Policy 5.16 Waste Self-sufficiency, Policy 5.19 Hazardous Waste and Policy 5.20 Aggregates); dust produced during redevelopment and movement of vehicles transporting soil waste (Policy 7.14 Improving Air Quality); and, the reuse of material generated during remediation (Policy 5.3 Sustainable Design and Construction).

Local Plan

5.36 Core Strategy policy CC4 states that the presence of contamination on a site can affect or restrict the beneficial use of land, though development can present an opportunity to deal with it. Contamination can create risks to human health, property and the wider environment. Where necessary, remediation works will be required to ensure the development can be safely built and occupied without posing any unacceptable risks to human health or the environment.

5.37 In the DM LP, policy DM H7 addresses the issue of dealing with land affected by contamination through the planning process. Relevant issues such as management of waste and environmental nuisance are covered in policies DM H5 and DM H11 respectively.

5.38 Contaminated land issues are relevant to a number of topics covered in the Planning Guidance SPD, in particular Archaeology, Noise and Environmental Pollution, Flood Risk Mitigation and Sustainable Drainage, Guidance for Lightwells, Biodiversity Conservation and Enhancement and Sustainable Construction chapters.

Further national Guidance

5.39 There are a number of legislative and guidance documents which control the development of potentially contaminated land or the development of land for a sensitive use as well as other relevant pollution matters. A list of current guidance and legislation may be found in the Reference section. As these documents are often updated and changed, it is essential that the most relevant guidance is acquired and used at the time of development works.

5.40 Part 2A of the Environmental Protection Act (EPA) 1990 requires local authorities together with the Environment Agency to identify and remediate contaminated land. Part 2A addresses the need for remediation based on the current use of the site, as opposed to planning which focuses on the future or proposed use. Paragraph 121 of the NPPF states that 'after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990. In most cases, the enforcement of remediation is imposed through planning permissions and relevant conditions rather than through Part 2A. For further information about this regime please refer to the Council's Part 2A Inspection Strategy.

5.41 The Building Control regime also includes the consideration of land affected by contamination. Building Control guidance under the Building Act 1984 is contained in Approved Document C (2004 with 2010 amendments is the current version). The relevant Building Control guidance should be considered at the time of development. The requirements of this regime is to secure the health and safety of persons in and about a building and safeguarding them and the building against adverse effects from both on-site and offsite, man-made or natural sources of contamination.

5.42 Unacceptable risks from contamination are also a consideration in regards to Demolition Notices given to the council under section 80 of the Building Act 1984. This Notice is required outside of, and in addition to the planning regime. Where notice is received by the council that demolition is to take place at a site where an unacceptable risk from land affected by contamination may exist, the council may serve a counter notice with conditions that these risks are addressed prior to demolition commencing.

Local Context

5.43 The existence of pollutant linkages is dependant upon local conditions and may be preliminarily assessed by evaluating the known:

- potential sources determined from the current and historical use of a site and surrounding area;

- the pathways determined from local geology, surface and groundwater and built attributes of a site and surrounding area; and
- potential receptors determined from the local geology, surface and groundwater and users of the site and surrounding area.

Historical uses

5.44 A rich history of industrial land uses and practices has resulted in the potential contamination of land within the borough. The physical development of the borough has predominantly taken place since the 1860s. Up to the late 19th century the area was largely rural with market gardening and nurseries as well as brickfield excavations and associated swampy land. The main development of the Borough coincided with the arrival of the railways (Metropolitan, District, Central and Piccadilly lines) between 1864 and 1906. Industrial development was focused along the River Thames, the Grand Union Canal and the railways. Since the War and largely since the 1980s, the riverside has gradually undergone (from Fulham Reach towards Hammersmith) transformation from industrial uses and working wharves to private residential and office buildings.

5.45 A number of industrial uses, past and present, are known to have existed across the borough. Some of these uses are outlined in the list of potentially contaminating uses in the Technical Details section and further information on the contaminants associated with these uses may be found in the Department of the Environment (DOE) Industry Profiles.

Surface water

5.46 Surface water features in the borough are the River Thames, Chelsea Creek & the culverted Counter's Creek (runs along boundary with RBK&C) and Stamford Brook (runs along western edge of the borough, though the outlet has been covered since 1936). The Grand Union canal runs along the north-west of the borough, and there are several man-made ponds (e.g. in Ravenscourt Park, Bishop's Park), though these features are not likely to be in hydrological continuity with other water bodies.

Geology and Groundwater

5.47 The solid geology for the whole borough comprises chalk overlain by London Clay. The principal body of groundwater (the principal aquifer) is located in the chalk and is relatively protected by the thick impermeable band of clay (non-aquifer) above. Drift deposits overlying the clay generally comprise:

- River Terrace Deposits (Kempton Park gravels) in the southern area of the borough (northern border approximately Goldhawk Road) - classified as a secondary aquifer; and
- River Brickearths (Langley Silt) between Goldhawk Road and the southern boundary of Wormwood Scrubs – classified as a non-aquifer, though a secondary aquifer (comprising the River Terrace Deposits) may lie beneath.

5.48 Drift deposits are minimal northwards of Wormwood Scrubs. It should be noted that significant areas of the natural geology within the borough have undergone excavation and subsequent infilling with made ground material. Where the relatively impermeable Brickearth layer has been removed or compromised, a pathway to the underlying secondary aquifer may be created.

5.49 Investigations across the borough have noted that made ground material, often of significant (i.e. greater than 1m) thickness, is present above the River Terrace Deposits in areas not previously known to have been excavated.

Ground gas

5.50 Ground gas can be generated by the natural lithology within the borough, putrescible constituents of made ground and the degradation of contaminants in soils and/or groundwater. Ground gases of concern typically comprise carbon dioxide (an asphyxiant) and methane (explosive), though in some cases further gases such as hydrogen sulphide or carbon monoxide may be present.

Ecology

5.51 There are not currently any statutorily protected nature sites in the borough, however there are a number of non-statutory sites of importance. Open space, which accounts for approximately 17% of the borough, may constitute a sensitive land use forming pathways to receptors: humans, animals, ecological systems and crops. Open spaces in the borough include parks, nature conservation areas and allotments. It should be noted that some of these open space areas were formed on land where wide scale bombing occurred in the borough during World War II (e.g. Normand Park).

SPD Amenity Policy 2

Planning Control

As contamination is a material planning consideration, applications will be determined taking into account the sensitive nature of the development and any known or suspected contamination, including applying and enforcing any necessary conditions.

5.52 Such conditions may require that land is remediated in the course of development to an appropriate standard, taking account of its intended use, and that, if necessary, it is properly maintained thereafter. (See Amenity Policy 16 on Planning Conditions).

SPD Amenity Policy 3

Developer responsibility

Where development is proposed, the developer is responsible for ensuring that development is safe and suitable for use for the purpose for which it is intended. The developer is thus responsible for determining whether land is free from any unacceptable risks to human health, buildings and other property, controlled waters and the wider environment. Where unacceptable risks are present, it must be demonstrated that these risks are abated through remedial action without undue impact during and following the development. In particular, the developer should carry out an adequate investigation to inform a risk assessment to determine:

- **whether the land in question is already affected by contamination through source - pathway - receptor pollutant linkages and how those linkages are represented in a conceptual model;**
- **whether the development proposed will create new linkages, e.g. new pathways by which existing contaminants might reach existing or proposed receptors and whether it will introduce new vulnerable receptors; and**
- **what action is needed to break those linkages and avoid new ones, deal with any unacceptable risks and enable safe development and future occupancy of the site and neighbouring land.**

5.53 The developer should be aware that actions or omissions on his part could lead to liability being incurred under Part 2A. Where an agreed remediation scheme includes future monitoring and maintenance schemes, arrangements will need to be made to ensure that any subsequent owner is fully aware of this requirement and assumes ongoing responsibilities that run with the land.

5.54 The successful assessment (and, where necessary, remediation, of land) should provide the necessary confidence to owners and occupiers of land, after development, about its condition and hence its standing in relation to relevant environmental protection regimes including Part 2A of the EPA 1990.

SPD Amenity Policy 4

When to consider Contamination

On a precautionary basis, the possibility of contamination should be assumed when considering both development plans and individual planning applications in relation to all land subject to or near to previous potentially contaminative uses and also where uses are being considered that are particularly sensitive to contamination – e.g. housing, schools, hospitals, children's play areas, nurseries, allotments.

5.55 The presence of contamination in, on or under land does not, by itself, necessarily present an unacceptable risk, nor therefore necessarily require action. Risk arises and land is considered to be adversely affected by contamination where there is a pollutant linkage; that is to say where a receptor (i.e. humans, controlled waters, ecological systems, property) is impacted upon by a contaminant source via a pathway (eg. ingestion, inhalation). A source could be natural, such as ground gases produced from the degradation of organic matter in soil, or man made, including the bi-products of industry such as heavy metals and fuel oils. The hazards may be chemical (toxic, carcinogenic), biological (pathogens), radioactive or physical (asphyxial, explosive). The Technical Details section includes examples of potentially contaminative uses (sources) as well as examples, listed by receptor, giving common pathways and effects from land contamination which should be considered. These lists are not intended to be comprehensive and all former industrial land should be regarded as potentially affected by contamination. Further details on these industrial sources are contained in the Department of the Environment Industry Profiles.

5.56 Less stringent pollution control and poor site management in the past has led to a substantial legacy of sites contaminated by former uses. While modern pollution control legislation and good practice in site management have largely reduced the impact of current industrial activity and help to prevent new contamination, a wide range of commercial and other activity has had and still would have the potential to cause contamination.

5.57 Some sites may have been investigated or remediated previously, to varying standards, but this does not preclude the need for further assessment or remediation. Guidance and standards have changed over time, and are regularly evolving. Therefore any previous investigation, assessment or remediation should be reviewed in light of current standards to determine the need for further consideration.

5.58 Potentially hazardous substances, such as methane, carbon dioxide or elevated concentrations of metallic elements may also be present in the ground due to the underlying geology. Since these may pose a risk to human health or to the environment, their presence is a material consideration. It is necessary to consider the potential for both naturally-occurring and industrial contaminants to exist.

5.59 Developers should recognise that contamination may pose problems on land other than the originating site. For example, contaminants may migrate or be transported by wind or water onto land that has no specific association with the contaminating industrial use or ground gases, such as methane or carbon dioxide, may travel onto a site through the ground. Contaminants may also be present on land where there are no specific records of contaminating uses, such as in made ground where unsuitable fill has been used.

5.60 Particular attention should also be paid to the condition of the site and of neighbouring land where the proposed use would be particularly vulnerable to contamination, where the current circumstances or past use suggest that contamination may be present or where it has other relevant information. Full account should be taken of whether the proposed use or development is likely to be adversely affected by contamination. For example, the addition of a new storey to an existing building is unlikely to be significantly affected by contamination whereas lateral expansion onto former industrial land potentially carries a higher risk and building extensions or undertaking landscaping that disturbs the ground may breach protecting layers.

SPD Amenity Policy 5

Key Contamination Considerations

Developers, applicants or their agents should carry out the following key actions to ensure that delays and further expense are avoided:

- **Appoint a competent person to undertake any necessary assessment or remediation;**
- **Liaise with the council's specialist officer dealing with contamination as early in the process as possible;**
- **Ensure that land potentially affected by contamination is addressed in a phased approach seeking agreement with the council at each phase;**
- **Ensure that key stages in development are timed and planned with consideration of the assessment of contamination;**
- **Ensure that key elements of design upon which contamination may be a factor are carefully considered;**
- **Ensure that the conveyance of ground materials on and off site are in line with guidance and legislation and that the relevant paperwork is collated**
- **Ensure that any changes to development details are considered in the development's conceptual site model.**
- **All of the guidance and requirements outlined in the Technical Details and Submission Details sections should be followed.**

Environmental Consultant

5.61 Due to the complex and highly technical nature of this subject, it is strongly recommended that suitably qualified and experienced Environmental Consultants are appointed to undertake any contaminated land assessment, investigation, remediation or verification.

Local Authority Liaison

5.62 It is essential that the council's specialist officers who deal with contaminated land are contacted as soon as possible in the process and that communication between them and the appointed Environmental Consultant continues throughout the process.

5.63 The council holds information regarding land potentially affected by contamination within their remit. This information should be sought as early as possible when considering a development to ensure that any of the council's potential concerns are addressed. The council may provide this information through environmental searches with associated fees to cover their time and relative expenses for gathering the information and presenting it in a usable format.

Phased Approach

5.64 It should be noted that the process for addressing land potentially affected by contamination entails a phased, or stepped approach (See the Actions Table and Development Phases flow chart in the Technical Details and Submissions Details Sections respectively). Each step informs the next and it is essential that a report of each step is submitted to and approved by the council before the next step is undertaken. It should also be noted that if one step identifies that no risk exists and no further actions are required and this is agreed by the council, the phases that follow may not be necessary.

Timeframe

5.65 The time required for each phase varies: some may take a significant length of time which could impact the timescales set for the development. For example, the intrusive site investigation will likely include ground gas or groundwater monitoring which typically require a minimum of 3 months (but sometimes 6 months and longer) before any development may commence including levelling of the site or piling.

Design

5.66 Some investigation outcomes may require a change to the design of the development itself. For example, if elevated ground gas is found, it may be necessary to incorporate design features such as a sub-floor void. This information is necessary as soon as possible in the process to ensure that these issues may be considered during the initial design process.

Soil Exportation and Importation

5.67 Regardless of whether land at the site is considered affected by contamination, the importation or exportation of soil at the development site will need to be detailed and reported to the council as part of the verification works. In regards to soil removal, the appropriate duty of care must be shown including analytical reports demonstrating the waste class of the material as well as the conveyance notes for the material should be provided. Soil imported to the site, whether for levelling, soft landscaping or other purposes will require the material to be tested (as a minimum, following placement at the receiving site), compared to site specific guideline values and included in the verification report.

Changes to Development Details

5.68 The assessment of a development is site specific and any change made to the design or end use may deem the assessment of the original proposed use null and void and require the risks associated with the site to be reassessed. These changes include, but are not limited to the end use (commercial versus residential), the size of the development, the inclusion of a basement or the re-levelling of the site.

SPD Amenity Policy 6

Pre-Applications

Proposers of development on potentially contaminated sites should arrange pre-application discussions with the council's specialist officers who deal with contaminated land and the Environment Agency (where pollution of controlled water and the waste management implication of land contamination are likely to be issues) and other authorities and stakeholders with a legitimate interest in order to:

- **help to identify the likelihood and possible extent and nature of contamination and its implications for the development being considered; and**
- **receive assistance in scoping any necessary environmental impact assessment and identify the information that will be required by the council to reach a decision on the application when it is submitted.**

5.69 The council will advise developers to undertake the requisite steps to assess contamination where they appear necessary but have not yet been addressed.

5.70 Contamination may add to the difficulty and cost of developing a site or even preclude certain uses. Low cost remedial methods generally take more time than high cost methods and may impact on the construction schedule and negatively impact on the viability of a scheme if not identified early in the development process.

5.71 Identification of potential problems at an early stage can enable a more positive approach to bringing forward development, thereby leading to a higher value land use, which in turn, could better cover the costs of remediation. Early attention to the contamination issues can help in locating development that is less sensitive to contamination on areas where the contaminated state of the land is likely to be more difficult to address.

SPD Amenity Policy 7

Other material considerations

Proposals for particular types of development in different parts of the borough need to take account of potential contamination alongside other material considerations. They need also to take into account issues of sustainability, disturbance to existing occupiers and the cumulative negative environmental impact of issues (air quality, dust, noise, odours, traffic movements etc.) which might arise from the contamination or its remediation.

5.72 Reference should be made to guidance in the Noise and Environmental Pollution sections of this SPD in regards to air quality, dust, noise, odour and wider environmental impact as well as the section on Sustainable Construction for guidance on minimising other relative cumulative environmental impacts.

5 Amenity

SPD Amenity Policy 8

Information required from the applicant

Where land affected by contamination is known or suspected at all or part of a site or where the proposed use may be particularly sensitive to contamination, an appropriate contamination assessment will need to be submitted with the application to enable the council to determine whether the proposed development can proceed. This assessment should include, as a minimum, the following:

- **A preliminary risk assessment report to include a desk study, site reconnaissance (walk-over), and conceptual site model.**
- **A report on a site investigation targeting unacceptable risks identified in the preliminary risk assessment including a risk assessment of the investigation's findings and a revised conceptual site model; or, where investigation is not yet possible or is not deemed necessary by the council in deciding the application, a site investigation scheme setting out how it will be undertaken.**
- **A strategy for effectively dealing with any existing or new unacceptable risks identified in the revised conceptual site model.**

SPD Amenity Policy 9

Assessment procedure

All works associated with the assessment and investigation of land potentially affected by contamination should be carried out by or under the direction of a suitably qualified competent person and in accordance with BS10175 (2011) Code of Practice for the Investigation of Potentially Contaminated Sites and the Defra/Environment Agency's Model Procedures for the Management of Contamination (CLR11) 2004 or current guidance. It is expected that the phased approach recommended in CLR11 will be implemented. In the case of all submissions relevant to the assessment and remediation of land affected by contamination, the council will require evidence to demonstrate that these works have been carried out to an acceptable professional standard.

5.73 In order to inform the preliminary risk assessment of the site, a number of sources should be queried including historic maps, trade directories, planning records, petroleum officer records, the Environment Agency and the council' s specialist officers dealing with contaminated land. It should be noted that commercial searches provided on the internet, whilst they may provide a useful indication of the possible presence of contamination, are not sufficient to establish the presence or absence of contamination.

5.74 Only a specific investigation can establish the actual level and types of contamination at a particular site. On sites where a high risk from land potentially affected by contamination is present and a particularly sensitive use is proposed, the council will require that a site investigation is undertaken and submitted as part of the application. This should be agreed with the council's specialist officers dealing with contaminated land.

5.75 Where a site investigation is required, but will take place consequent to the granting of planning permission, it will be secured by means of planning conditions as will the requirement for a detailed risk assessment of the investigation's findings, a remediation strategy and the verification of these remedial works. The table in the Planning Conditions section below describes the phased steps

required to satisfy the council that land affected by contamination has been adequately addressed. A flow chart of these steps and a description of their required detail are provided in the Submission Details section.

5.76 A flow chart of the phased approach recommended in CLR11 may be found in the Submission Details section. Guidance on how to fill in the 1-App Planning Application form in regards to land potentially affected by contamination may be found in the Technical Details section.

Environmental Impact Assessment

5.77 Developers should be aware that any environmental impact assessments and associated environment statements (ES) that may be needed as part of the planning approval process have a more limited purpose and scope to contaminated land assessments and accordingly cannot be used as a substitute for the preparation of a contaminated land assessment.

5.78 An Environment Statement (ES) aims to ensure that the likely significant environmental effects of a proposed development and the measures proposed to mitigate those effects are fully understood and are taken into account before development is allowed to proceed. The scope of the ES is limited to the requirements detailed in the relevant Town and Country Planning (Environmental Impact Assessment) Regulations It may not therefore provide comprehensive information about the existing condition of the land, including whether the site is contaminated. Such information would be provided only to the extent that it is relevant to the environmental effects of the development itself or to the means by which the development is to be carried out. An ES is, therefore, by itself, no guarantee that the potential for contamination at a site to affect the proposed development has been fully assessed.

5.79 For example, a proposal to cover a site with inert material to isolate the surface from underlying contaminants and allow development to proceed would not necessarily have significant environmental effects. However, it would not deal with what may already be significant ongoing pollution of groundwater arising from substances migrating from the contaminated materials into the saturated zone or other water resources. Such pollution could result in the land being identified as contaminated under Part IIA of the EPA 1990, which would be a material planning consideration not covered by the ES.

5.80 Therefore, in order for an ES to be the sole source of information on the consequences of development of a potentially contaminated land site, it will need to consider the effects of the proposed development and the implications of the existing condition of the site. This may be achieved by adhering to Policies 8 and 9 of this document.

SPD Amenity Policy 10

Outline Applications

Where Outline Applications are made, the council will need to be satisfied that any risks from land potentially affected by contamination have been properly assessed and, if there is an unacceptable risk, the options appraised sufficiently to identify a viable remediation scheme that will reduce the risks to acceptable level, just as it would with a full application. Outline permissions will not be granted until the council is satisfied that it understands the contaminated condition of the site and that the proposed development is appropriate as a means of remediating it. Consideration will be given by the council to the placement of planning conditions on a case by case basis.

5.81 Extreme caution is taken by the council in the granting of outline planning permission. The council must be satisfied that it has sufficient information from the applicant about the condition of the land and its remediation and the full range of environmental impacts arising from the proposals to be able to grant permission in full at a later stage. A grant of outline planning permission that cannot be

sustained at the detailed approval stage because it becomes apparent that the necessary remediation is not viable or practicable or because the ES (where EIA is required) demonstrates unacceptable adverse impacts could leave the council vulnerable to a claim for compensation.

SPD Amenity Policy 11

Reserved matters

Where the council is satisfied with the information submitted to make a decision and further investigations and the detailed design of remediation is still needed, these will be identified as reserved matters to enable detailed approval at an appropriate stage and give the developer greater certainty before incurring the costs involved.

5.82 Where the council is minded to grant outline planning permission, the length of time needed for further investigations and detailed design should be considered by the Developer in determining the timescale for submission of a detailed application on the reserved matters.

SPD Amenity Policy 12

Determining Applications (including Consultations)

In determining applications, the council will need to be satisfied that the development does not create or allow the continuation of unacceptable risk arising from the condition of the land in question or from adjoining land. In particular, it should satisfy itself that existing significant pollutant linkages will be broken by removing the source, blocking the pathway or removing receptors and that the development will not create new pollutant linkages by changing or creating exposure pathways e.g. creating new pathways to groundwater by site investigation drilling or piling.

5.83 For land use planning purposes, what constitutes an unacceptable risk is wider than for Part 2A purposes since planning is concerned with proposed development and future use and thus with both existing and new risks. In addition, the range of receptors is wider than under Part 2A and includes, for example, general fauna and flora, landscape and amenity. When remediation of land affected by contamination is achieved by means of development, these differences between the two regimes should be recognised and allowed for by developers and their advisors.

5.84 The standard of remediation to be achieved through the grant of planning permission for new development (including permission for land remediation activities) is the removal of unacceptable risk and making the site suitable for its new use, including the removal of existing pollutant linkages. All receptors relevant to the site should be protected to an appropriate standard. As a minimum, after carrying out the development and commencement of its use, the land should not be capable of being determined as contaminated land under Part 2A of the EPA 1990.

SPD Amenity Policy 13

Site investigation and remediation

Developers should satisfy the council that they have adequately considered issues associated with site investigation and remediation such as cumulative negative environmental impacts from dust, noise, odour and traffic movements arising from the remediation activities and the possible need for measures to control or mitigate them. A balance should be struck between the overall social and economic benefits from the development, including the remediation proposals, and the temporary impacts of the remediation process. Applicants are recommended to consider carefully the waste management implications when deciding the best approach to remediation and the handling and treatment of contaminated soils and other material.

5.85 Reference should be made to guidance in the Noise and Environmental Pollution SPD in regards to dust, noise, odour and wider environmental impact as well as to the Sustainable Construction SPD for guidance on minimising other relative cumulative environmental impacts. Reference should also be made to the Sustainable Remediation and Integrated Environmental Considerations sections of this SPD.

SPD Amenity Policy 14

Safety

Developers should satisfy the council that the development can be carried out safely without unacceptable risks to workers, neighbours or other offsite receptors. It is important that risk to workers is managed using standard hierarchy of control measures under the relevant legislation.

5.86 The council's specialist officer dealing with contaminated land will be consulted on any application for development proposed on a site which might be on or near to land affected by contamination or where a sensitive use is proposed. This officer will need to be satisfied that the information submitted adequately assesses the site.

5.87 In addition to the council consulting with their specialist officer's dealing with contaminated land, they may also consult other statutory bodies who may also have relevant responsibilities, including the Environment Agency, Natural and English Heritage. Other bodies, such as water companies and local community and conservation or amenity groups may be able to advise on issues related to specific receptors.

SPD Amenity Policy 15

Granting Planning Permission

Where it is satisfied that the development proposed will be appropriate with regard to the information currently available about the contamination (if any) of the site and the proposed remediation measures and standards, the council will grant planning permission subject to any conditions requiring such further investigations, remediation (including verification) and onward monitoring as would be necessary, reasonable and practical.

5.88 The council will refuse permission if it is not satisfied on the basis of the information provided by the applicant and that available from other sources, including the responses of those consulted, that the development would be appropriate. This could include cases where:

- circumstances, including information available to the council, clearly suggest the possibility of contamination or of unacceptable risk and no information has been provided or obtained that excludes the reasonable possibility of such contamination or risk;
- the council considers that unacceptable risk exists and cannot be dealt with adequately to deliver a development that is suitable for its intended use and which results in the removal of such risks; or
- the steps needed to deliver an appropriate development and deal with unacceptable risk are not already in place and cannot be secured by suitable planning conditions, e.g. because these are not within the powers of the developer since action is needed on other land outside the developer's control or influence.

SPD Amenity Policy 16

Planning Conditions

Where planning conditions in relation to the assessment and, where necessary, the remediation of contaminated land are placed, further submission requirements may be necessary. A summary of common submission requirements are as follows:

- **to propose and receive approval for a preliminary risk assessment**
- **to propose and receive approval for further investigation and characterisation of the site to confirm the nature and extent of contamination and validate the conceptual model and allow more refined risk assessment and appraisal of remedial options;**
- **to propose and receive approval for a remediation scheme that ensures the removal of unacceptable risks to make the site suitable for use and outlines a verification plan; and**
- **to report any previously unidentified contamination encountered during development works and to propose and receive approval for a remediation scheme to deal with this contamination.**
- **to submit and receive approval for a verification report that demonstrates the effectiveness of the remediation carried out, preferably before building begins and catergorically before the site is occupied by future users.**
- **to propose and receive approval for any onward long-term monitoring past the completion of development.**
- **to submit and receive approval for a verification report of the success of any onward long-term monitoring.**

5.89 The preliminary risk assessment report shall comprise: a desktop study which identifies all current and previous uses at the site and surrounding area as well as the potential contaminants associated with those uses; a site reconnaissance; and a conceptual model indicating potential pollutant linkages between sources, pathways and receptors, including those in the surrounding area and those planned at the site; and a qualitative risk assessment of any potentially unacceptable risks arising from the identified pollutant linkages to human health, controlled waters and the wider environment including ecological receptors and building materials.

5.90 The site investigation scheme shall be based upon and target the risks identified in the approved preliminary risk assessment and shall provide provisions for, where relevant, the sampling of soil, soil vapour, ground gas, surface and groundwater.

5.91 Following a site investigation undertaken in compliance with the approved site investigation scheme, a quantitative risk assessment report shall: assess the degree and nature of any contamination identified on the site through the site investigation; include a revised conceptual site model from the preliminary risk assessment based on the information gathered through the site investigation to confirm the existence of any remaining pollutant linkages and determine the risks posed by any contamination to human health, controlled waters and the wider environment.

5.92 The remediation method statement shall detail any required remediation works and shall be designed to mitigate any remaining risks identified in the approved quantitative risk assessment. This statement should include a plan which defines how all remedial works shall be verified. This should include plans for verification of the duty of care to be undertaken in the removal of soil from site, the testing of any soil brought onto or reused on site and how the installation of gas abatement measures is to be verified.

5.93 The report produced if, during development, contamination not previously identified is found to be present at the site shall indicate the nature of the contamination and how it is to be dealt with. Any required remediation shall be detailed in an amendment to the remediation statement and verification of these works included in the verification report.

5.94 Once the remediation method statement has been carried out in full, a verification report should be produced confirming these works and shall include: details of the remediation works carried out; results of any verification sampling, testing or monitoring including the analysis of any imported soil; all waste management documentation showing the classification of waste, its treatment, movement and disposal; and the verification of gas membrane placement.

5.95 An onward long-term monitoring methodology report shall include details and timeframes for assessing the success of the remediation undertaken. A verification report of these monitoring works should demonstrate that no residual adverse risks exist.

5.96 All assessments, investigations and reports should adhere to the required guidelines in Policy 9. A table outlining the phased steps above may be found below. A flow chart of the phasing and an itemised list of the necessary information to be included in each of the steps listed above may be found in the Submission Details section.

Reports	**Actions**
Phase 1 Preliminary Risk Assessment	**Step 1** Consult Local Authority on specific requirements
	Step 2 Appoint Environmental Consultant to undertake steps 3, 5 of Phase 1 and Phases 2, 3 and 4
	Step 3 Compile relevant Preliminary Risk Assessment / Desk study and conceptual site model information and produce a Report
	Step 4 Submit Step 3 Report to the Local Authority with the planning application or towards the satisfaction of a planning condition

Reports	Actions
	Step 5 After the Local Authority has accepted the Step 4 submission and when a potential risk has been identified, produce a Site Investigation Scheme based on its findings and submit to the Local Authority for approval
Phase 2 Site Investigation	**Step 6** Implement site investigation once approval of the scheme in Step 5 is granted by the Local Authority
	Step 7 Undertake a Risk Assessment of the results from the site investigation by comparison to appropriate criteria and determine whether there are any unacceptable risks.
	Step 8 Submit a report detailing the findings of the Site Investigation and the Risk Assessment described in Step 7 for approval by the Local Authority
Phase 3 Remediation	**Step 9** After the Local Authority has accepted the Step 8 report and where an unacceptable risk has been identified, identify and evaluate options for remediation
	Step 10 Submit a Remediation Strategy to the Local Authority for approval
Phase 4 Verification	**Step 11** After the Local Authority has accepted the Remediation Strategy, implement the remediation
	Step 12 Undertake verification of the remediation being undertaken
	Step 13 Submit a Verification Report including all information obtained in Step 11 and Step 12

NB: Onward monitoring is not covered in this table, but may be required

SPD Amenity Policy 17

Sustainable Remediation

Where remediation is deemed necessary, a sustainable remediation strategy should be implemented for which there is the least negative environmental impact.

5.97 Traditional methods of containing contamination to break a pollutant linkage on site such as encapsulation or the use of permeable reactive barriers may minimise the use of 'dig and dump' and hence producing less waste which must then be transported over large distances created further environmental impacts. However, these methods may have an effect on the local hydrogeology and their impact should be considered in regards to other environmental factors such as an increased flood risk or the generation of leachates.

5.98 In-situ remediation should be considered and time should be factored into any development schedule for the implementation of such a scheme. Where works are phased or space allows, areas should be designated for stockpiling material for re-use on or near to the site. Another option which should be considered is the designation of areas where 'soil hospitals' may be established or the use of off-site nearby soil hospitals at which ex-situ remediation techniques are employed on contaminated soil to enable their re-use on or near to the site. When remediation or containment are not feasible and removal of the soil is the only option, the waste hierarchy of: reduce, reuse, recycle, recover, dispose should be employed.

5.99 The CL:AIRE Definition of Waste: Development Industry Code of Practice, V2, 2011 (or relevant current guidance) should be referenced and integrated where possible. Reference should likewise be made to the Sustainable Demolition SPD.

Integrated Environmental Considerations

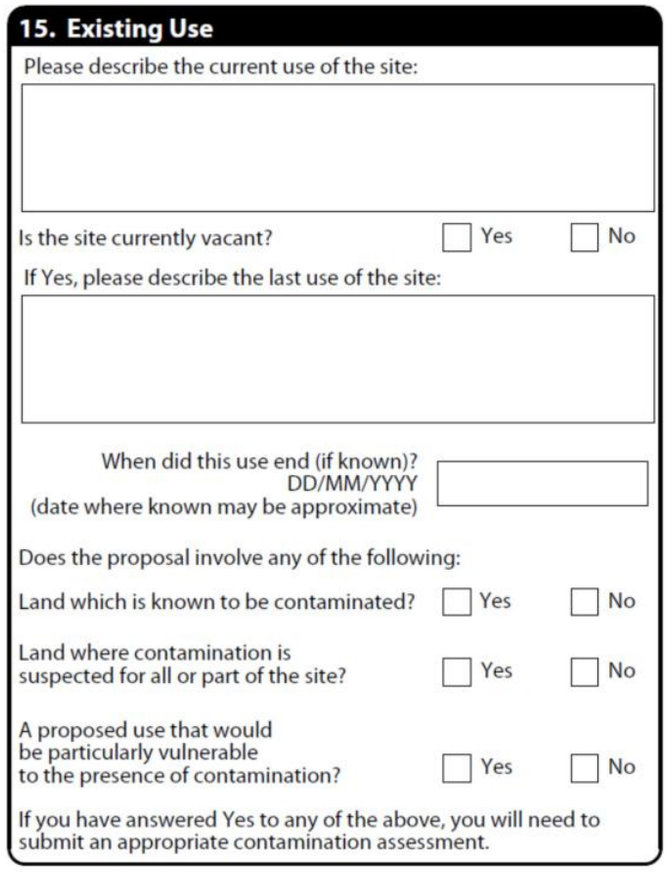
5.100 During the investigation, remediation, verification and on-going monitoring of the site, the environmental impact of these works should be considered when determining the suitability of the methods employed. Some environmental considerations include the production of odours or dust from activities such as excavation, stockpiling or remediation and the production of particulate matter or gases which may impact on local air quality by mechanical equipment utilised on the site. A balanced consideration of the environmental impacts of these works should be undertaken in determining the most appropriate methods to be employed. Reference should be made to the Noise and Environmental Pollution SPD for further guidance.

Technical Details

5.101 All LPAs in England are now required to use the 1-App planning application. Included within this application is an Existing Use section which requires the applicant to make a statement regarding the potential for land affected by contamination to exist at the subject site.

5.102 The existing use section is shown below in Figure 1 and details for completing this section follow:

Figure 1 - Extract from Planning Application Form (1 App)



15. Existing Use

Please describe the current use of the site:

Is the site currently vacant? ☐ Yes ☐ No

If Yes, please describe the last use of the site:

When did this use end (if known)?
DD/MM/YYYY
(date where known may be approximate)

Does the proposal involve any of the following:

Land which is known to be contaminated? ☐ Yes ☐ No

Land where contamination is suspected for all or part of the site? ☐ Yes ☐ No

A proposed use that would be particularly vulnerable to the presence of contamination? ☐ Yes ☐ No

If you have answered Yes to any of the above, you will need to submit an appropriate contamination assessment.

- Land which is known to be contaminated? – This includes any development on land which is known to be affected by contamination.
- Land where contamination is suspected for all or part of the site? – This includes development on or near to land which has had a previous contaminative use, but where it is not known whether the land is affected by contamination. It is suggested that the council's specialist team responsible for contaminated land are contacted and an environmental search is commissioned which will provide the applicant with information held by the council regarding the potential for contamination to exist.
- A proposed use that would be particularly vulnerable to the presence of contamination? – This is any use that may be sensitive to the presence of contamination. It should be noted that contamination is not restricted to previously developed land and may occur on Greenfield sites.
- If the answer is 'Yes,' to any of these questions, Phase 1 Preliminary Risk Assessment (as detailed in the submission details section of this document) should be submitted with the planning application. (NB: A factual report ordered over the internet is not a Phase 1 report as required under the planning regime). The council's specialist officers dealing with contaminated land should

be contacted as early in the process as possible. Where the council considers there to be a high risk from land potentially affected by contamination at the site, further working including intrusive investigation, risk assessment and remediation may be required at the application stage.

Examples of Pathways and Effects from Land Contamination

Human Health

- Uptake of contaminants by food plants grown in contaminated soil – heavy metals (e.g. cadmium, lead) and persistent organic pollutants including certain pesticides and veterinary products may result in an accumulation in food plants to concentrations where they exceed legal limits and/or may pose a hazard to human health. Uptake will depend on concentration in soil, its chemical form, soil pH, plant species and prominence in diet.
- Ingestion and inhalation – substances may be ingested directly by young children playing on contaminated soil, by eating plants which have absorbed metals or are contaminated with soil or dust. Ingestion may also occur via contaminated water supplies. Metals, some organic materials and radioactive substances may be inhaled from dusts and soils.
- Skin contact – soil containing tars, oils and corrosive substances may cause irritation to the skin through direct contact. Some substances (e.g. phenols) may be absorbed into the body through the skin or through cuts and abrasions.
- Irradiation – As well as being inhaled and absorbed through the skin, radioactive materials emitting gamma rays can cause a radiation response at a distance from the material itself.
- Fire and explosion – materials such as coal, coke particles, oil, tar, pitch, rubber, plastic and domestic waste are all combustible. If heated by contact with buried power cables or careless disposal of hot ashes they may ignite and burn underground. Both underground fires and biodegradation of organic materials may produce toxic or flammable gases. Methane and other gases may explode if allowed to accumulate in confined spaces.

Buildings

- Fire and explosion – underground fires may cause ground subsidence and cause structural damage to buildings. Accumulations of flammable gases in confined space leads to a risk of explosion. Underground fires may damage building services.
- Chemical attack on building materials and services – sulphates may attack concrete structures. Acids, oils and tarry substances may accelerate corrosion of metals or attack plastics, rubber and other polymeric materials used in pipework and service conduits or as jointing seals and protective coatings to concrete and metals.
- Physical – blast-furnace and steel-making slag (and some natural materials) may expand if ground conditions are changed by development. Degradation of fills may cause settlement and voids in buried tanks and drums may collapse as corrosion occurs or under loading from construction traffic.

Natural Environment

- Phytotoxicity (prevention/inhibition of plant growth) – some metals essential for plant growth at low levels are phytotoxic at higher concentrations. Methane and other gases may give rise to phytotoxic effects by depleting the oxygen content in the root zone.
- Contamination of water resources – soil has a limited capacity to absorb, degrade or attenuate the effects of pollutants. When this is exceeded, polluting substances may enter into surface and groundwater.
- Ecotoxological effects – contaminants in soil may affect microbial, animal and plant populations. Ecosystems or individual species on the site, in surface waters or areas affected by migration from the site may be affected.

Examples of Potentially Contaminating Uses of Land and Situations Where Land may be Affected by Contamination

5.103 A number of industrial uses, past and present, are known to have existed across the borough. Some of these uses are outlined in list below; further information on the contaminants associated with these uses may be found in the Department of the Environment (DOE) Industry Profiles.

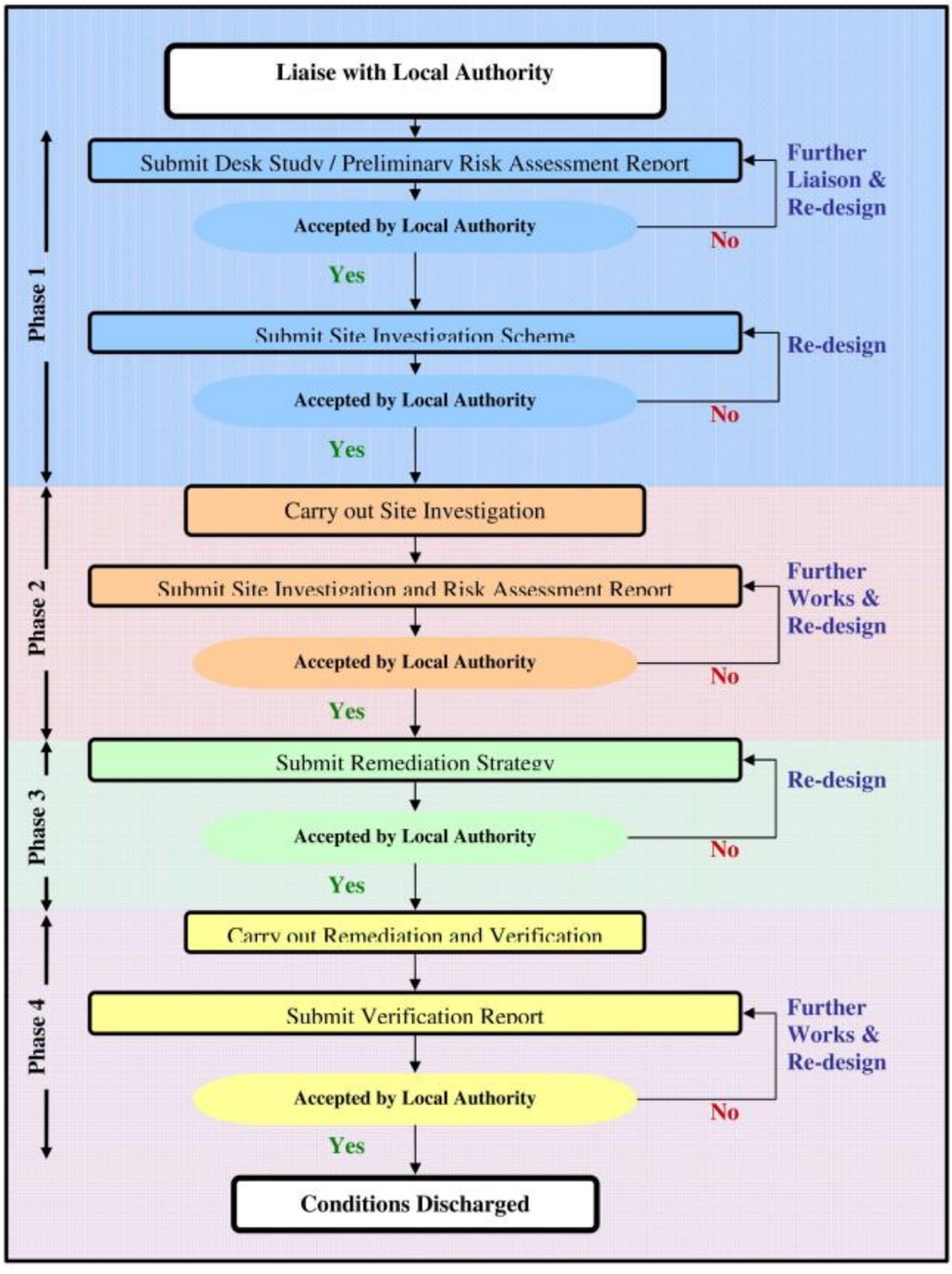
- Smelters, foundries, steel works, metal processing & finishing works
- Heavy engineering & engineering works, e.g. car manufacture, shipbuilding
- Military/defence related activities
- Electrical & electronic equipment manufacture & repair
- Gasworks, coal carbonisation plants, power stations
- Oil refineries, petroleum storage & distribution sites
- Manufacture & use of asbestos, cement, lime & gypsum
- Manufacture of organic & inorganic chemicals, including pesticides, acids/alkalis, pharmaceuticals, solvents, paints, detergents and cosmetics
- Rubber industry, including tyre manufacture
- Munitions & explosives production, testing & storage sites
- Glass making & ceramics manufacture
- Textile industry, including tanning & dyestuffs
- Paper & pulp manufacture, printing works & photographic processing
- Timber treatment
- Food processing industry & catering establishments
- Railway depots, dockyards (including filled dock basins), garages, road haulage depots, airports
- Landfill, storage & incineration of waste
- Sewage works, farms, stables & kennels
- Abattoirs, animal waste processing & burial of diseased livestock
- Scrap yards
- Dry cleaning premises
- All types of laboratories

Other uses & types of land that might be contaminated include:

- Radioactive substances used in industrial activities not mentioned above – e.g. gas mantle production, luminising works
- Burial sites & graveyards
- Agriculture – excessive use or spills of pesticides, herbicides, fungicides, sewage sludge & farm waste disposal
- Naturally-occurring elevated concentrations of metals and other substances
- Methane & carbon dioxide production & emissions from natural and made ground

Submission Details

Flow Chart of Contaminated Land and Planning Procedure



NB: Onward monitoring is not covered in this flow chart, but may be required

Phase 1: Preliminary Risk Assessment/Desktop Study

- Purpose and aims;
- Credentials of the person/organisation undertaking the study
- Details of the client; site location and current layout plans (appropriately scaled and annotated, including the National Grid Reference;
- A Site reconnaissance;
- Desktop study to include:
  - Appraisal of the site history based on period maps/aerial photographs (scaled and annotated);
  - Assessment of the environmental setting including interpretation and implications of:
    - geology, hydrogeology & hydrology of the area information from the Local Authority regarding the potential for contaminated land at the site
    - information from the Environment Agency on water abstractions, pollution incidents, surface water quality, IPPC authorisations and landfill sites within 250m.
    - ecological issues.
  - Any archaeological considerations.
  - Appraisal of the site reconnaissance.
  - Assessment of current/proposed site use and surrounding areas;
  - Review of any previous site contamination studies (desk based or intrusive, or IPPC investigations where relevant) and remediation works;
  - Review of local authorities planning and building control records, drainage and utilities plans.
- Preliminary qualitative risk assessment to include:
  - initial conceptual model of the site showing the nature and extent of the potential/identified contamination sources in relation to receptors and pathways
  - appraisal of the potential sources, pathways and receptors (pollutant linkages);
  - identification of pollutants associated with potential sources and any potential areas of concern.
- Recommendations for an intrusive investigation to include the identification of the areas most likely to be contaminated, exploratory grid, number and depth of exploratory locations, ground water/gas/vapour monitoring wells with proposed installation specifications, list of the most probable contaminants, sampling protocol and on site/off site testing requirements e.g. methods, LODs.

Phase 1: Site Investigation Scheme

- Liaison with the Local Authority Contaminated Land Officer;
- Review of any previous site investigation contamination studies (desk-based or intrusive or IPPC investigations where relevant) and remediation works;
- Site investigation scope to assess all potential pollutant linkages identified by the preliminary risk assessment and to include:
    - scaled and annotated maps showing exploration locations, on site structures, storage tanks/facilities, power and water mains, sewage, interceptors, soakaways and other service infrastructure etc.;
    - justification of sampling regime and exploration locations, including the sampling grid, number of samples taken and their depths;
    - sampling and analytical strategies and rationale – must be relevant to the pollutant linkages identified in the preliminary risk assessment;
    - indicative instruments to be used during investigation such as PID, oil/water interface probe, etc.
    - sampling, storage, transportation protocols and analytical procedures;
    - borehole/trial pit logs;
    - ground water/gas and soil vapour monitoring well design, placement and frequency/period of sampling;
    - representative waste acceptance criteria analysis on soils earmarked for removal
- Analysis of samples to be carried out by a UKAS accredited laboratory using MCERTS certified testing methods QA/QC where they exist and must include:
    - all contaminants likely to be on site and
    - where relevant, the identification of different species and distinction between varying carbon chain lengths etc., for example Polyaromatic Hydrocarbons (PAHs), Total Petroleum Hydrocarbons (TPHs);
    - Off site testing and choice of methods and LODs

Phase 2: Site Investigation and Quantitative Risk Assessment

- Results and findings to include:
  - where appropriate, details and justification of any changes from the original site investigation scheme;
  - ground conditions with a detailed description of soil and groundwater regimes including details of their interaction, the strata encountered, any signs of contamination or unusual appearance of deposits, the presence of asbestos, and the potential for mobility and leachability;
  - testing results from a UKAS accredited laboratory carried out by MCERTS certified testing methods QA/QC.
  - 2-D contour maps or 3-D models/cross sections showing distribution of contaminants of concern in the unsaturated and saturated zones.
  - discussion of soil/groundwater/surface water contamination – visual, olfactory and analytical. Comparison of analytical results with appropriate standards is essential;
  - discussion of ground gas monitoring and determination of gassing regime
  - statistical appraisal of the testing data providing representative concentrations values for chemicals of concern within averaging areas and discussing uncertainties relating to their determinations.
  - Tier 1 quantitative risk assessment: comparison of the representative values of chemicals' concentrations with appropriate generic soil guidelines
  - Considerations of the GW pollution, presence of ground gases/vapours.

- If the generic soil guideline values are exceeded, a site specific quantitative risk assessment may be required. This should assess the potential risk to human health and/or environmental receptors and include:
  - justified/referenced and well documented input parameters
  - sensitivity analysis for input parameters; and
  - inclusion of raw output data/model printouts as part of the report

- Provide a revised conceptual site model on the basis of the investigation and quantitative risk assessment.
- Provide recommendations for further investigations where potential pollutant linkages remain.
- Recommendations for remediation – these must be appropriate for the 'suitable for use' approach, based on current use and circumstances of the land and its proposed new use;
- Recommendations for soil re-use or disposal.

Phase 3: Remediation Strategy

- Objectives, aims, timetable
- Options appraisal and the choice of remedial train including an assessment of any by-products of using the chosen remedial technique and justification of chosen method (Sustainability and Integrated Environmental Considerations, as outlined in Section 5 of this document should be considered and implemented when possible).
- The method to include:
    - pollutant linkages to be broken (as identified by the site investigation and risk assessment);
    - description of the ground conditions and regimes (soil/gas/surface water and groundwater etc);
    - physio-chemical properties of contaminants and their spatial distribution, mobility, bioavailibility, toxicity;
    - remediation methodology;
    - remedial targets, their derivation and justification;
    - detailed specification of gas abatement measures (i.e. membrane, sealing at service points, etc.);
    - site plans and cross-sections scaled and annotated;
    - phasing of works and approximate timescales;
    - consents and licenses (e.g. discharge consents, part B authorisations for mobile plant, asbestos waster removal licence etc)
    - details of environmental monitoring that will be undertaken;
    - site management measures to protect neighbours, environment and amenity during works, including where appropriate:
        - health and safety procedures;
        - dust, noise and odour controls and
        - control of surface run off;
- Details required to verify the remediation objectives will be met, including:
    - frequency of sampling, storage, dispatching, analytical protocols;
    - on site visual/olfactory observations, logging, photographing;
    - chemical analysis;
    - proposed clean-up standards;

- soil re-use or importation analytical regime;
- soil removal documentation demonstrating duty of care;
- verification/certification of gas abatement measures placement;
- reporting.

- Details on the lifespan of the recommended remediation works.
- Contingency plan for the discovery of contamination not previously identified at the site
- Details of future monitoring requirements (where necessary) once remediation has been completed;

NB. During the remediation works, if changes to the strategy have to be made, you must agree these with the Local Planning Authority, in writing, before they are implemented.

Phase 4: Completion and Verification

- Details and justification of any changes from the original remediation strategy (including details of previously unidentified contamination);
- Details and credentials of the appropriate person certifying the report;
- Details of remediation works carried out at the site including::
    - chemical laboratory and in-situ/on site test results;
    - monitoring of groundwater and gases during remediation and details of monitoring programme post completion of remedial works, where agreed.
    - summary data plots and tables relating to the remedial targets achieved or otherwise;
    - plans, cross-sections, 2D-3D computer generated models of the site, counter maps showing the residual distribution of the contaminants in soil and groundwater;
    - plans showing treatment areas and details of any differences from the original remediation strategy;
    - waste management documentation including waste transfer notes showing the class of waste material, any waste treatment, destinations, volumes and hauliers;
    - if there has been a capping layer of imported soil installed on the site or part of it, then the following information will be required:
        - a brief history of land use of the site that soil has originated from which should be supplemented by site maps and chemical testing results of the soil imported.
        - chemical testing results of the installed soils.
        - details of testing should be approved beforehand by the Council.
    - where gas/vapour abatement measures have been installed, the following information will be required:
        - details and justification of any deviation from agreed abatement scheme
        - confirmation that the system approved by the Local Planning Authority as per has been implemented;
        - photographs;
        - certification of implementation;
        - details and credentials of the appropriate person certifying implementation.
- Recommendations on any further long-term monitoring/risk management work needed. Where further long-term monitoring is required the reader should refer back to phase 3.
- Confirmation that remediation objectives have been met, for example, a certificate of completion.

Resources

- British Standards Institute, BS5930:1999+A2:2010 Code of practice for site investigation, 1999
- British Standards Institute, BS10175:2011 Investigation of potentially contaminated sites – Code of practice, 2001
- British Standards Institute, BS3882:2007 Specification for topsoil and requirements for use, 2007
- British Standards Institute, BS8485:2007 Code of practice for the characterisation and remediation from ground gas in affected developments, 2007
- Building Regulations, 2010 Approved Document C Site Preparation and resistance to contaminants, 2004 incorporating 2010 amendments.
- BRE, Cover Systems for Land Regeneration, March 2004
- SA Wilson, GB Card & S Haines, Ground Gas Handbook, 2008
- Chartered Institute of Environmental Health and CL:AIRE, Guidance on Comparing Soil Contamination Data with a Critical Concentration, 2008
- Chartered Institute of Environmental Health and Department for Environment Food and Rural Affairs, Local Authority Guide to the Application of Part 2A of the Environmental Protection Act 1990 – Extended to cover Radioactive Contaminated Land, 2007
- Chartered Institute of Environmental Health and Land Quality Management, Generic Assessment Criteria for Human Health Risk Assessment, 2006
- CIRIA, C665 – Assessing risks posed by hazardous ground gases to buildings, 2007
- CIRIA, 689 – The VOCs Handbook. Investigating, assessing and managing risks from inhalation of Volatile Organic Compoinds (VOCs) at land affected by contamination, 2009
- CIRIA, A guide for safe working on contaminated land sites (R132), 1996
- CL:AIRE, A Framework for Assessing the Sustainability of Soil and Groundwater Remediation, 2010
- CL:AIRE, Definition of Waste: Development Industry Code of Practice, 2011
- Department for Environment Food and Rural Affairs, Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance
- Department for Environment Food and Rural Affairs & Environment Agency, Model Procedures for the Management of Land Contamination – Contaminated Land Report 11 (CLR11), 2004
- Department of the Environment, Industry Profiles
- Environment Agency, Guiding Policies for Land Contamination, 2010
- Environment Agency, Guidance on Requirements for Land Contamination Reports, 2005
- Environment Agency, Remedial Targets Methodology – Hydrogeological Risk Assessment for Land Contamination, 2006

- HMSO, Building Act 1984
- HMSO, Environmental Protection Act 1990
- National House-Building Council, Environment Agency and Chartered Institute of Environmental Health, Guidance for the Safe Development of Housing on Land Affected by Contamination - R&D Publication 66, 2008
- National House-Building Council and RSK Group Plc, Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are Present, 2007

Noise and environmental pollution

Purpose

5.104 The overall objectives of the SPD are to:

- provide more detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with the borough's environmental protection from noise and certain other types of pollution and with helping to improve air quality, namely the Core Strategy borough wide strategic policy CC4 – Protection and Enhancing Environmental Quality and DM LP policies DM H8 Air Quality, DM H9 - Noise and Vibration Sensitive Development, DM H10 – Light Pollution, DM H11 - Environmental Nuisance and Control of Potentially Polluting Uses; and
- provide more detail on the type of supporting information that the council requires to be submitted with applications to show compliance with these and the London Plan policies.
- set out a consistent approach in dealing with planning application submissions relating to noise and other pollution such as dust, smell, smoke, fumes, gases, steam, lighting and air quality, based on relevant statutory guidance and most current best practice

Policy Guidance

5.105 The planning system is a proactive means of managing the borough's air quality and any potential increase in ambient background noise and other pollution. While development is encouraged, the council will aim to protect existing and prospective amenity within the borough, in accordance with national, metropolitan and local government policies.

National Policy

5.106 The Government's National Planning Policy Framework states that "planning should …. contribute to conserving and enhancing the natural environment and reducing pollution" (see NPPF para.17).

5.107 The Noise Policy Statement for England by DEFRA advises further on considerations that should be had for working to secure a healthy environment.

5.108 The NPPF seeks to achieve sustainable development and states that the planning system should be concerned with "preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability".

5.109 Some national noise standards are derived to some extent from publications of the World Health Organisation, the latest being "Guidelines for Community Noise 1999".

5.110 The Environmental Noise (England) Regulations 2006 give effect to EU Directive 2002/49/E, relating to the assessment and management of environmental noise. The Environmental Noise (England) Regulations 2006 will assist in the formulation of a National Ambient Noise Strategy; work on this is currently under way.

London Plan

5.111 London Plan 2011 Policy 7.14 seeks to tackle air pollution and improve air quality and the health and well-being of London's people.

5.112 London Plan 2011 Policy 7.15 seeks to reduce noise and enhance soundscapes new technologies and improved practices to reduce noise at source"

Local Policy

5.113 Core Strategy policy CC4 Protecting and Enhancing Environmental Quality supports national and metropolitan policy measures to enhance and protect the environmental quality of the borough from harmful emissions to land, air and water.

5.114 The Development Management Local Plan includes more detailed policies such as

- Policy DM H8 Air Quality. This follows the national air quality objectives and the council's Air Quality Action Plan. It states that the council will seek to reduce the potential air quality impacts of new major developments.
- Policy DM H9 Noise sets out the general considerations for developments within the borough where development may generate or be adversely affected by noise, in accordance with the London Plan and the National Planning Policy Framework.

- Policy DM H10 Light pollution In accordance with the National Planning Policy Framework , the Council seeks to limit the impact of light pollution from artificial light on local amenity and nature conservation.

- Policy DM H11 Control of Potentially Polluting Uses. This states that in order to ensure the protection and enhancement of our natural and built environment, it is necessary to control various types of pollution that have potentially adverse impacts on the amenity of people who live and work within the borough.

Local Context

5.115 In many areas of the borough, the main existing external environmental noise sources are road and rail traffic and to a lesser extent aircraft noise mostly over southern parts. Industrial pollution within the borough is minimal, however, wherever transport or industrial developments are in close proximity to residential amenity, noise and other polluting emissions will need to be contained and minimised.

5.116 Industrial types of noise can also be associated with building services plant and equipment, such as air-conditioning systems, commercial kitchen extracts etc. This type of noise can be a problem particularly in the borough's busy town centres where residents live in close proximity to shops, restaurants, pubs and entertainment premises. Consideration must also be given to this type of noise where such installations are proposed n new regeneration and opportunity areas of mixed residential and commercial uses.

5.117 Pubs, clubs, restaurants, cafés and places of entertainment add to create a vibrant community particularly in the borough's town centres. However, such commercial uses have the additional potential for noise disturbance from customers on and around the premises, not least because associated activities occur in the evening and often extend late into the night.

5.118 Any increase of vehicle use such as private hire vehicles and deliveries associated with commercial sites can adversely affect residents, both in the town centres and in quieter streets.

5.119 Cooked food outlets can not only give rise to noise disturbance but also often emit unwanted cooking smells unless effective odour control equipment and extract ventilation is installed. An assessment of the impact of noise, smell and other pollution from commercial developments and outdoor uses on nearby residential occupiers will therefore be required at planning application stage.

5 Amenity

5.120 The council recognises that there is an ever increasing need for residential accommodation within the borough. However, poor design and layout of rooms often leads to neighbour noise complaints which could be minimised by suitable stacking of rooms. Furthermore, the trend for hard surface flooring necessitates careful consideration of the sound insulation to prevent excessive transmission of noise to adjoining dwellings.

5.121 Wherever premises are being demolished and building work is being carried out, there is the potential for excessive noise and dust affecting existing occupiers in the area. It is important to ensure that new developments are created without causing unnecessary pollution during the development stages.

5.122 In the north of the borough, there are a number of waste and recycling sites, primarily regulated by the Environment Agency. Where applications are received for new sites or extensions, the council will work with other bodies such as the Environment Agency to ensure that dust, smell and other pollution will be adequately contained and controlled.

5.123 The whole of Hammersmith and Fulham was designated as an Air Quality Management Area for Nitrogen Dioxide (NO2) and Particulate Matter (PM10) in 2000. This followed a review and assessment process that showed that the Government's national objectives for these pollutants would not be met in H&F. The objectives can be found in Defra's Local Air Quality Management Policy Guidance document which is available online here: http://archive.defra.gov.uk

5.124 Exposure to high levels NO2 and PM10 has been shown to cause and exacerbate respiratory and cardiovascular diseases, particular in vulnerable groups such as the sick and elderly.

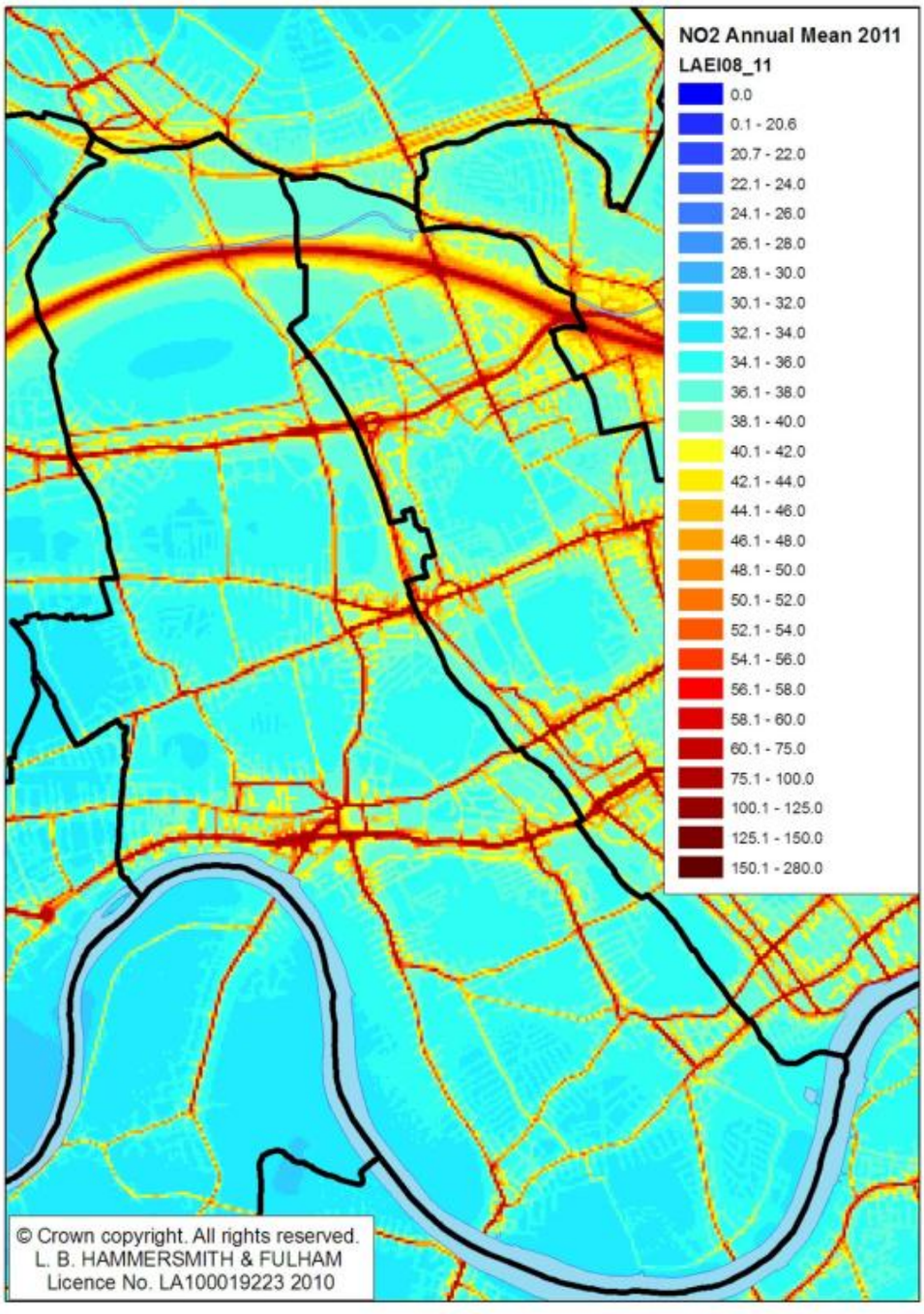
5.125 As required by the Government's local air quality management regulations, the council is implementing an action plan of measures to help meet the objectives for these and a number of other pollutants. The Action Plan is available online: www.lbhf.gov.uk

5.126 Measures focus on reducing emissions from traffic, buildings and industry. Demolition /construction activities also need to be controlled to ensure their impacts are minimised. Further guidance on demolition/construction is provided in the Sustainable Construction SPD.

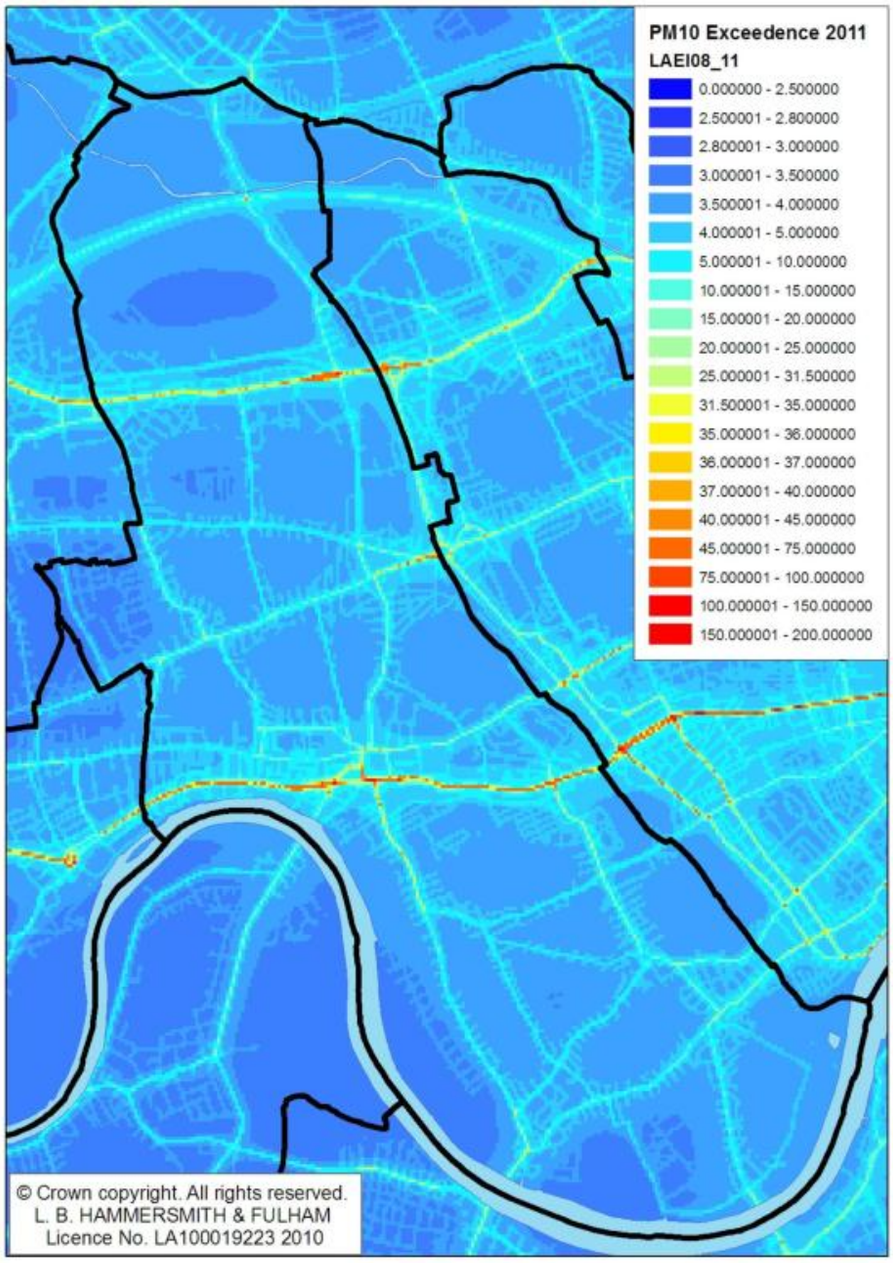
5.127 As shown in Maps 1 and 2 on the following page, the highest levels of NO2 and PM10 tend to be found along the main road network in the borough which reflects the fact that road traffic is one of the main sources of emissions. Buildings are the other main local source of emissions, particularly Oxides of Nitrogen from gas boilers. On the maps, yellow/orange/red areas all show areas where exceedences of the national objectives for NO2 and PM10 are likely.

5.128 Planning has a key role to play in helping to reduce emissions, for example by encouraging sustainable travel habits and minimising emissions from buildings.

Map 1 Annual Mean NO2 Concentrations in H&F (2011) (concentrations shown in µg/m^3)



Map 2 Daily PM10 Exceedences in H&F (2011) shows the number of days when 50 µg/m^3 is exceeded



General Noise and Pollution Policies

SPD Amenity Policy 18

Noise and vibration - survey and report

Applications for residential and other noise sensitive developments that are proposed near existing noise sources and for developments that have the potential to increase existing noise or vibration levels either due to location, use, activity or installation should be submitted with a noise and/or vibration survey and report prepared by a competent professional acoustician such as a member of the Institute of Acoustics to support the proposal.

5.129 Noise and/or vibration surveys and reports will generally be required for most types ofdevelopments. These should consider and assess:

- Internally and externally located building services plant and equipment,
- Residential and other noise sensitive developments proposed in areas that would be exposed to existing noise from sources including transport, commercial and industrial uses and vibration from surface railways, including heavy freight trains and trains of the underground network.
- Significant demolition and construction phases including those of subterranean developments;
- Places of entertainment,including proposed pubs and clubs, sports facilities, religious centres, cultural sites, educational establishments, recreational or leisure centres, retail centres and other commercial uses.

5.130 Noise and vibration monitoring reports will be required for substantial demolition and construction works, especially those close to noise sensitive premises.

5.131 Applicants for subterranean developments should consider noise and vibration levels and protective measures against adverse effects on nearby properties, foundations, roads and services. These requirements will need to be addressed in a Construction Method Statement, to be submitted with the planning application and comply with the Subterranean Developments Act and Code of Practice or successive legislation, policy, standard or guidance. Alternatively, applicants may chose to apply for a Section 61 consent which may be granted with relevant conditions.

5.132 Should you not submit a noise survey and report with the application as required above or obtain and follow advice of Council Officers, your application may be refused or conditions imposed to limit the impact of noise or vibration, as applicable. However, where compliance requires external noise attenuation, such as acoustic enclosures, acoustic screens or plant equipment permission may be refused where these have an unacceptable visual impact on the host building or where the requirements of a condition are not otherwise shown to be achieved (see Appendix 1 and 2 for more details and criteria).

SPD Amenity Policy 19

Dust, smell, smoke, fumes, gases, steam, lighting, etc.

Applications for developments or uses with the potential to emit pollution from lighting, dust, smell, steam, fumes or other effluent should be submitted with details of the proposed installation and/or use and effective mitigation measures, in accordance with relevant guidance and criteria.

Dust

- **Processes and storage**: developments with potential emissions of dust such as silos and processes involving wood-dust, flour, fibre, plastics, etc. should include the installation, operation, and maintenance of suitable enclosures and filtration plant, with a cut out device to prevent overfilling and escape of dust.
- **Waste, aggregates, etc:** dust emissions from manufacturing, handling and/or storage of waste, aggregates and similar materials should be prevented and controlled by screening, enclosing and sufficiently wetting dusty operations, stock piles and dusty surfaces as well as by implementing a regular cleaning schedule for the site and surrounding areas.
- **Sand blasting:** Operations such as sand blasting may need to be replaced by alternative methods such as chemical cleaning.
- **Demolition and construction**: A demolition method statement and construction management plan will be required for most developments and should include details of appropriate control measures for demolition and construction phases, such as:-

    - enclosures for dust emitting work;
    - preparation work off-site or away from sensitive locations, where possible;
    - screening of the site and of dust emission sources;
    - covering of stockpiles of building materials and waste;
    - using effective water spray on dusty operations and surfaces;
    - wheel washing of vehicles leaving a building site;
    - lorry loads to be covered or enclosed;
    - suitable alternative and/or additional measures.

(See Appendix 6 for more details and criteria)

Smell, fumes, gases, steam, etc.

5.133 Sources of smell, fumes and steam may include launderettes, dry cleaners, restaurants, take-aways and other commercial or school kitchens, paint spraying/ vehicle repair shops, waste storage and disposal sites, etc.

- Commercial kitchens:

5.134 To prevent adverse effects on the local amenity from cooking smells, applications for cooked-food outlets such as food factories, hotel and school kitchens, restaurants, take-aways, etc. should be submitted together with details of an odour control system including extract ducting, in accordance with the DEFRA ‘Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems’ 2005, or successive legislation, policy, standard or guidance.

(See Appendix 7 for more criteria on extract ducts)

- Paint spraying, powder coating, vehicle repair shops, dry cleaners etc.

5.135 All paint spraying and powder coating operations should be enclosed in a proprietary booth. Details will be required for approval by the Council of the installation, operation, and maintenance of suitable arrestment/filtration plant, containment and/or an effective extract system serving spray booths, work shops, dry cleaner’s, launderettes etc.

5.136 Vehicle spraying facilities and other substantial uses of paint may require a permit under the Environmental Permitting (England and Wales) Regulations 2010 from the Council’s Environmental Quality team. Contact environmentalquality@lbhf.gov.uk , tel. 020 8753 3454.

- Waste storage/ disposal/ transfer sites are generally licensed by the Environment Agency, in consultation with the Local Authority, Water Authorities and Health & Safety Executive. Where the Local Planning Authority is consulted on an application for a waste site, requirements may be made for operations to be enclosed or to otherwise contain noise, dust and smell emissions Contact www.environment-agency.gov.uk, tel 08708 506 506 and environmentalprotection@lbhf.gov.uk, tel. 020 8753 3376.

Lighting

- Floodlights, Security Lights and Decorative Lighting:

5.137 Artificial light is essential in our modern society. It has many uses including illumination of streets, roads and hazardous areas for security, to increase the hours of usage for outdoor sports and recreation facilities and to enhance the appearance of buildings at night.

5.138 The increased use of lighting, however, can cause light pollution from light in the wrong place at the wrong time. This can be intrusive or cause sky-glow from upward light or glare due to incorrectly angled lighting and impact on residents quality of life and wildlife.

5.139 Lighting levels and positioning of floodlights, security lights and other lighting installations will be required to conform to the recommendations of the Institution of Lighting Professionals in the 'Guidance Notes For The Reduction of Light Pollution 2011 or successive legislation, policy, standard or guidance.

(See Appendix 8 for more details and criteria)

- Illuminated signs and advertisements:

5.140 Illumination should not be intermittent and there should be no changing light pattern. The council may also require that there will be no moving parts in either the structure or in the advertising content of the advertisement.

5.141 Details of lighting levels should be submitted before display of illuminated signs and advertisements, demonstrating compliance with the recommendations of the Institution of Lighting Professionals "Guidance Notes For The Reduction Of Light Pollution 2005, 'Technical Report No 5, 1991 - Brightness of Illuminated Advertisements" or successive guidance, legislation, policy or standard

(See Appendix 8 for more details and criteria)

Air Quality

SPD Amenity Policy 20

Assessment of Air Quality Impacts of new Development

Major developments that have the potential to increase local emissions of key pollutants such as NO2 and PM10 should have their air quality impacts assessed in line with this guidance.

5.142 Air quality can be a material consideration in the determination of a planning application. It is important that the planning process ensures not only that new development proposals do not have detrimental impacts, but also that wherever possible, they help to improve local air quality.

5.143 Some developments such as schools, nurseries, hospitals and care homes for the elderly and also housing may be more sensitive to the potential impacts of poor air quality. Therefore if such developments are proposed in areas with elevated pollution levels above the national objectives, then the applicant will be required to show how exposure to pollutants will be reduced to acceptable levels.

5.144 It is important for air quality issues to be considered early in the planning process and to be assessed in detail if necessary (e.g. for developments that may increase local emissions significantly or that might introduce new exposure) as mitigation measures may need to integrated at an early stage into a development's design to reduce emissions and reduce exposure.

5.145 A detailed study of air quality impacts from major developments will be required for those developments that:

- Require an Environmental Impact Assessment;
- Require a permit application under the Pollution Prevention and Control Regime;
- Could have significant impacts on air quality;
- Could introduce new exposure in poor air quality areas;
- Include large scale demolition/construction phases.

5.146 For some developments, screening models may be acceptable to assess potential impacts, whereas for other, larger and more complex developments, detailed dispersion modelling will be required. Guidance on appropriate models to use to assess air quality impacts can be found in London Council's guidance document 'Planning and Air Quality' and Environmental Protection UK's guidance document 'Development Control: Planning for Air Quality' which can be found online here: www.environmental-protection.org.uk

5.147 Some assessments may need to look at both the associated emissions and exposure potential, whereas others developments that will have only a minimal air quality impact (e.g. a car free development) will only need to assess exposure issues if it is planned for an area of poor air quality i.e. adjacent to a busy road.

5.148 Air quality assessments should assess impacts in terms of additional emissions of NO2 and PM10 as well as showing the expected effects on local concentrations of these pollutants. If there are sensitive receptors in the vicinity, then the assessment should model likely impacts at these specific locations. If exceedences of the national objectives are shown, then suitable mitigation measures should be proposed to reduce exposure.

5.149 There are three basic steps to assessing the relative impacts of the proposed development:

- Assess the existing air quality situation in the study area (existing baseline);
- Predict the future air quality without the development in place (future baseline);
- Predict the future air quality with the development in place (with development).

5.150 As well as assessing traffic emission impacts, new 'point' sources such as energy centres should also be assessed if they form part of a development's proposals, with reference to the GLA's guidance on emissions standards for Biomass and CHP plant.

5.151 Details of the air quality assessment should be compiled in a report which should contain the following information:

- Details of the Proposed Development – a brief description of the development, including identification of expected traffic changes and any on-site sources of emissions; identification of local receptors such as residential properties close to and within the proposed development.

- Details of Relevant Air Quality Standards/Objectives – a brief summary of the pollutants included in the assessment and the relevant standards and objectives.
- Details of the Assessment Method – a description of the assessment method used, including the model assumptions made and input data used – e.g. traffic data; emission data; meteorological data; baseline pollutant concentrations; choice of baseline year/future year and other relevant input parameters used. Details of model verification should also be supplied.

5.152 Details of the Assessment Results – information on the modelling outputs should be included to enable assessment of the relative impacts of the proposed development. As a minimum requirement, the following should be included:

- Impacts of the construction phase of the development;
- Details of the emissions from the development and a comparison of how this compares with the existing development;
- Impact that changes in emissions will have on ambient air quality concentrations;
- Any exceedences of the air quality objectives caused by the development, or any worsening of a current breach;
- Consideration of whether any of the council's Air Quality Action Plan measures could be compromised by the development.

5.153 Details of Mitigation Measures – where identified as necessary, information of the mitigation measures planned to cut emissions during construction/demolition and the operational phase of developments should be included in the assessment. Examples of measures include:

- Ensuring the control of air quality impacts during the construction phase (See Sustainable Construction SPD), including monitoring of air quality impacts where identified as a requirement;
- Minimising the number of parking spaces;
- Implementing Travel Plans which cover issues such as:
- safe pedestrian routes;
- secure cycle parking and changing facilities;
- facilities for public transport, such as bus stops and lay-bys;
- the management and use of parking spaces;
- the provision of information on public transport, walking and cycling access to the site.
- Encouraging use of vehicles that run on clean fuels (e.g. by including vehicle recharging points);
- Minimising building emissions from on-site energy generating plant and equipment. If a biomass based system is planned, refer to the Mayor's Air Quality Strategy for advice on how to minimise emissions.

5.154 The London Councils' guidance document on planning and air quality issues, which is available online, provides more detailed guidance on how to carry out air quality assessments and determine whether mitigation measures are required: www.londoncouncils.gov.uk

5.155 The Low Emission Strategies Partnership: www.lowemissionstrategies.org provides advice on how large developments can minimise their air quality impacts, particularly in relation to reducing traffic emissions.

5.156 Development proposals should ensure that where provision needs to be made to reduce emissions, that these are made on-site where possible. If this is not feasible, wider measures with equivalent air quality benefits may be required, either on a scheme by scheme basis or through joint area based approaches.

SPD Amenity Policy 21

Assess and Minimise Exposure to Poor Air Quality

For locations at risk of experiencing high pollution levels, where a new development is proposed that includes a use that is potentially sensitive to poor air quality an exposure assessment should be carried out and, where necessary, appropriate mitigation measures used to minimise that exposure.

5.157 Development proposals could result in an increase in exposure to existing poor air quality. In H&F, this is most likely where a development is planned for a site that is directly adjacent to a busy main road or junction or industrial process. This could be of particular concern if the development includes new sensitive receptors – e.g. developments such as care homes, hospitals, housing, schools and nurseries. Increased exposure to poor air quality should therefore be minimised. The London Councils guidance provides advice on the concentrations of NO2 and PM10 that are generally regarded as acceptable in terms of exposure in new developments.

5.158 If major developments are planned in locations where air quality assessments predict likely exceedences of the Government's air quality objectives (or if additional negative air quality impacts from a new development are identified), measures will be required to mitigate these impacts and reduce exposure for the new development.

5.159 Mitigation measures that should be considered include design solutions such as layout and orientation, the use of low emission heating systems, mechanical ventilation systems, buffer zones in the form of vegetation/open space and smarter travel measures that support and encourage sustainable travel.

5.160 Consideration should be given to the characteristics of the site as particular elements of a scheme may be more sensitive to air pollution than others. Suitable design, layout, orientation and construction of developments might avoid increasing exposure whilst minimising energy demand and energy loss. For example, it may be possible to provide a planted area of trees and/or bushes as a 'buffer zone' between busy roads and new developments.

5.161 Where possible, opening windows should be located on the side of buildings which are not directly adjacent to the main source of pollution. Similar considerations should be given to locating air intakes where ventilation systems are installed. Intakes should be located as high as possible (e.g. roof height) as pollution levels decrease with height.

5.162 In mixed use developments, it helps if the ground floor is used for office/retail/ commercial uses etc with residential properties located on higher floors away from air pollution (and noise) at ground level.

5.163 Where it can be clearly shown that onsite mitigation measures are impractical or inappropriate, it may be necessary to implement measures that can provide the equivalent air quality benefits elsewhere in the local area.

SPD Amenity Policy 22

Noise Sensitive Development - Noise and Vibration

Wherever possible and practicable, residential and other noise sensitive development including hospitals, sheltered and nursing homes, offices, schools and similar establishments proposed in areas where they would be exposed to existing external noise shall be designed so as to be located away and protected from significant transport, industrial and/or commercial and other non-residential noise sources.

Locations for new dwellings or conversions or other noise sensitive developments that are exposed to noise from transport and/or other non-residential sources should be assessed in accordance with relevant guidance and criteria. Planning applications for sites near substantial transport and/or other non-residential noise should be accompanied by an acoustic report detailing maximum existing noise levels for night and daytime periods and noise mitigation measures, as applicable.

5.164 Noise sensitive developments include residential dwellings (including conversions), sheltered and nursing homes, offices, schools, hospitals and similar establishments that are proposed in areas where they would be exposed to existing noise. They also consist of developments where new occupiers would be exposed to noise due to inappropriate construction and/or design layout of buildings, rooms and external amenity space

5.165 Separation of noise sensitive developments from significant existing noise sources can be achieved, for example, by good design layout of the development and location of habitable rooms on quieter facades. In addition, adequate sound insulation will be required. Where mechanical ventilation is required in areas of high noise levels and poor air quality, this should be noise attenuated and the air intake should be from the cleanest aspect of the building.

5.166 Early discussion with an Environmental Health Officer is recommended for applications where sites are exposed to high noise levels. Contact the Environmental Health Department on tel. 020 8753 3376 or email environmentalprotection@lbhf.gov.uk

5.167 In some situations, applicants may offer contributions, arrangements or restrictions as part of a legal agreement, to help reduce existing noise from neighbouring sites and achieve an acceptable noise environment for prospective occupiers in the proposed development.

5.168 Significant vibration within the borough is most likely to be generated by surface trains and trains using tunnels of the underground network. Ideally, track form and wheel/rail interface would be in the optimum condition to minimise vibration generation. Road traffic is unlikely to generate any significant vibration where the road surface is in reasonable repair. A vibration assessment should be undertaken and report be submitted to the Council where railways, either surface or underground, are within 75m of a proposed development site.

(See Appendices 1, 2 and 3 for more guidance and criteria)

SPD Amenity Policy 23

Sound Insulation between dwellings and between commercial and residential premises

Careful consideration should be given to the design of stacking and adjoining similar rooms in adjoining dwellings and to sound insulation or separation of dwellings from communal and commercial areas that could be a source of noise disturbance to residents.

5.169 The requirements of the Building Regulations are usually deemed adequate for the sound insulation transmission loss between floors and walls of adjoining dwellings. No planning conditions are normally necessary.

5.170 However, poor or inappropriate installation of sound insulation, inappropriate workmanship during the construction or conversion of the building and inappropriate arrangement/ stacking of rooms can cause serious neighbour noise disturbance from normal household activities and behaviour. These are frequent causes of complaints both in conversions and new builds.

5.171 It is essential that conversions and new dwellings are designed with the appropriate room arrangement in separate adjoining dwellings, ensuring that:-

- large family units are not situated above smaller units,
- similar types of rooms in neighbouring dwellings are stacked above each other or adjoin each other, ie. bedroom – bedroom, living room – living room, etc.
- halls are used as buffer zones between noise sensitive rooms of one dwelling and living areas of adjoining dwellings and communal areas incl. main entrances, staircases, lift shafts, service areas, etc.

5.172 Where the arrangement of rooms is shown to be unsuitable and likely to give rise to neighbour noise nuisance, enhanced sound insulation will be required. Ideally specialist operatives approved by the system supplier/designer should undertake the installation of sound insulation, with adequate site control to ensure good quality work.

5.173 The contemporary fashion for hard surface finishes such as hardwood floors make good impact sound insulation in floor/ceiling structures of apartment blocks essential.

5.174 The requirements of the Building Regulations specify the minimum standard of sound transmission loss required between floors and walls of adjoining dwellings. These requirements are rarely adequate where commercial use adjoins residential use.

5.175 If an application proposes a development where residential and commercial uses will share separating floors, ceilings or walls, an assessment of the sound insulation performance of the floor, ceiling or wall should be submitted together with construction details of any proposed sound insulation system and structure. Substantially enhanced sound insulation, compared to the minimum residential standards of the Building Regulations, will be required.

(See Appendix 3 for more guidance and criteria)

SPD Amenity Policy 24

Noise Generating Development

All noise generating development, including plant, machinery and equipment and where the proposed use or activities have the potential for people to generate noise, will be subject to requirements to minimise noise to relevant criteria, where applicable, in order to protect residential and other noise sensitive amenity.

Vehicle noise

5.176 The impact of an increased use of vehicles associated with new developments, including deliveries, location of loading bays and service yard activities involving the use of forklifts etc. will need to be assessed and details be submitted in a Service Management Plan.

5.177 A prediction of any changes in existing traffic volume should be outlined in a Transport Assessment. DM LP Policy J and the section on Transport in this SPD provide information on how to assess the likely impact from HGV's and other vehicles.

(See Appendix 2 - 6 for more guidance and criteria)

Noise associated with: pubs, clubs, bars, restaurants, take-aways, places of entertainment, sports, religious, cultural, educational, leisure, retail etc.

5.178 Developments likely to generate noise should normally be separated from noise sensitive and residential uses. However, a mixture of development, when correctly proposed, can add to the attractiveness of a mixed residential, social, sports and commercial area.

5.179 Commercial developments such as fast food restaurants, music venues and public houses pose particular difficulties, partly because associated activities are often at their peak in the evening and late at night. Consideration must be given not only to noise that is generated within the premises but also the attendant problems of associated vehicle noise and noise that may result from participants in activities or customers.

5.180 Careful consideration should be given to the likely noise impact of people arriving, queuing or otherwise congregating and departing the venue. Entry and exit routes, designated smoking areas and other outdoor uses such as pub gardens etc. should be carefully located away from noise sensitive facades or be effectively screened.

5.181 An assessment will be required of the impact of noise from commercial and other non-residential developments on existing occupiers of noise sensitive premises and prospective occupiers in proposed mixed developments. The assessment should identify all likely noise sources and include a prediction of the potential noise impact on occupiers of adjoining and surrounding properties.

5.182 A site management plan should be submitted with details of effective mitigation measures, such as:-

- Active management of entrances and exits to minimise noise disturbance from people as they arrive, queue, congregate and depart from the premises or use smoking areas. Similar controls should be in place on likely routes in the vicinity that customers may take to public or private transport.
- Suitable arrangements for additional private vehicles, taxis and mini cabs visiting the site, parking and driving away. Where appropriate, arrangements should be made with taxi and private hire

vehicle companies to ensure drivers arrive and depart as quietly as possible without sounding horns or leaving engines idling unnecessarily.
- Prevention of noise disturbance caused by staff before, during and after opening hours including staff who arrive early morning or depart late at night after trading.
- No disposing of bottles and cans to outdoor bins or areas in the evening, at night and during the early morning. Similar restriction may also apply to the use and emptying of bottle banks.
- Screening or enclosing noise emitting activities/ areas to protect noise sensitive premises such as outdoor storage areas, pub gardens, etc.
- Considerations for deliveries and refuse collections (See Appendix 5- 4.3)

5.183 Organised delivery of food from the premises will not be permitted where the amenity of occupiers in the area is likely to be adversely affected. Alternatively, times of deliveries may be restricted and submitted details should demonstrate that motor vehicles including vans, motor cycles, mopeds, scooters etc. are used sensibly and are parked in a suitable location where starting up and manoeuvring does not cause noise disturbance to residents.

5.184 Pubs, clubs and other non-residential developments in this category should be constructed with adequate sound insulation ensuring that music noise and the general 'hubbub' created by people using the site does not materially impact on the amenity of occupiers of surrounding properties. There should be adequate control of noise breakout through doors and windows by effective glazing and acoustic lobbies. Where appropriate, the volume of amplified and live music should be further controlled by sound limiters and/or similar other electronic devices set at levels agreed by the Environmental Health Officer.

5.185 Hammersmith & Fulham Council is the Licensing Authority under the Licensing Act 2003 and is responsible for granting premises licences, club premises certificates and temporary events notices in respect of the provision of licensable activities and personal licences in the borough. The borough's Licensing Policy shall be observed where the proposed development includes licensable activities.

5.186 Where the licensed use of premises gives rise to noise disturbance, the council will take enforcement action in respect of relevant planning conditions and nuisance. In addition, a review of the premises license which could affect the permission for licensable uses may be instigated by the Police, the Environmental Protection team or affected residents.

5.187 Where entertainment or loud group activities such as singing, chanting etc. take place or music is played at non-residential sites the council will require that associated noise should not be audible at noise-sensitive premises, including their outdoor amenity space at any time.

5.188 At schools and pre-school centres, consideration must be given to protecting the amenity of neighbouring occupiers from noise in outdoor play areas, teaching areas and access routes. Where possible, such areas and routes should be located away from neighbouring noise sensitive premises or be adequately shielded by noise barriers. Outdoor use of school premises by community groups outside school hours is likely to be restricted to minimum hours to prevent disturbance to nearby occupiers.

5.189 Activities in school premises such as music, singing, performances and other loud group activities should be located in well insulated rooms with windows and doors closed, to ensure that associated noise will not be audible at noise sensitive premises.

5.190 Minicab offices adjoining noise sensitive uses will be required to have adequate sound insulation and to keep doors and windows shut to prevent sounds from the use of communication equipment such as 2-way radios etc. being audible at or within noise sensitive premises.

5.191 Where the amenity of occupiers of neighbouring premises could be adversely affected by noise, the council does not normally permit a minicab office to be used by drivers of vehicles in connection with the development nor by any customer of the business, for the purpose of waiting or making/taking orders and instruction, collecting clients, or for the purpose of taking refreshments or using the facilities.

(See Appendices 4 and 5 for more guidance and criteria)

Industrial sources of noise and vibration

5.192 Noise sources of an industrial type can include industrial operations as well as the use of building services plant and equipment such as air-conditioning, mechanical ventilation, extract systems, commercial refrigeration and other mechanical installations at residential and non-residential premises. A noise assessment and details of mitigation measures, where applicable, should be submitted for the council's approval.

5.193 To prevent breakout of industrial type noise from the use of industrial and commercial premises, the council will require details of adequate sound insulation of the building envelope and separating walls, floors and ceilings. Details shall demonstrate that the industrial use, installation or activity within the building is not normally audible at surrounding or adjoining noise sensitive premises including their private amenity areas.

5.194 Where installations such as condensers, fan units, extract systems and similar fixed plant or equipment are proposed to be installed at external facades, planning permission must be sought.

5.195 Where machinery, ducting or other equipment such as building services, air conditioning, mechanical ventilation or commercial refrigeration systems are installed, they must be mounted with proprietary resilient anti-vibration isolators to prevent vibration noise being transmitted to noise sensitive premises. Fan motors shall be vibration isolated from the casing and adequately silenced. Details of anti-vibration measures shall be included in a noise report.

(See Appendices 1 and 4 for more guidance and criteria)

SPD Amenity Policy 25

Outdoor uses incl. recreational and sporting activities, deliveries, etc.

Outdoor events and uses will need to be assessed in regard to frequency and times of use and the noise level likely to be emitted from activities, music, public address systems, generators, etc.

5.196 Proposed noise sources should be located and directed away from noise sensitive premises. The council may restrict the use and require noise mitigation measures such as sound limiters for amplified sounds, sound barriers and enclosures, as necessary to prevent undue disturbance to the amenity of nearby occupiers, in accordance with relevant legislation, policy, standards and guidance adopted by the council.

5.197 The borough's Licensing Policy shall also be followed where the proposed development includes licensable activities.

5.198 Where applications include a proposal for outdoor seating at cafes and licensed premises, this may not be permitted or the times of external use of tables and chairs be restricted, based on potential effects of noise on the amenity of neighbouring occupiers. The council will require details of measures to minimise noise from outdoor areas and prevent the use and occupation of tables and chairs outside permitted hours of use.

5.199 Where the amenity of residents would be adversely affected, the disposal of bottles, cans and refuse to external bins or areas of the development and refuse collection should not be carried out during late evenings, night time, nor early mornings.

5.200 Vehicle engines should not be left running while vehicles used in conjunction with the development are stationary.

5.201 A service management plan will be required to demonstrate that disturbance from deliveries and collections associated with the use of the premises will be minimised.

(See Appendix 5 for more guidance and criteria)

SPD Amenity Policy 26

Construction and Demolition Works

A Demolition Method Statement and Construction Management Plan will be required for substantial developments and where the site is close to other premises.

5.202 The method statement and plan should consider issues such as structural stability of adjacent properties, including party walls and foundations, as well as impact on underground services, such as water mains and sewers (See also SPD Amenity Policy 18).”

(See Appendix 6 for more guidance and criteria)

APPENDIX 1 . Noise and Vibration Survey and Report

Where a noise and or vibration survey and assessment report is required at pre-application stage or by condition, this must be carried out by a qualified and competent acoustic consultant such as a member of the Institute of Acoustics (IOA). The applicant should provide the chosen consultant with the details of the Council's requirements contained within this SPD so that they can respond accordingly with appropriate noise and/or vibration assessments and report.

IOA contact details and information: Tel. 01727 848 195
Email: ioa@ioa.org.uk
Web site: www.ioa.org.uk
The Association of Noise Consultants web site is www.association-of-noise-consultants.co.uk

Noise reports should contain the following information, as applicable:

- details of measurement methodology, calculations and predictions;
- plans and photographs of noise measurement positions showing the distance and spatial relationship between source and receiver;
- times and time periods of measurements;
- weather and wind conditions at time of measurements outside;
- results of noise surveys and conclusion;
- recommendations for mitigation works and specifications where appropriate;
- Architects drawings of the proposed external plant or equipment to include details of any required acoustic enclosures and acoustic screens, showing the location, size, distance and visual impact of such installations on the host building. This is especially important at historical buildings or buildings situated in conservation areas.

• Monitoring points:

for external noise, the noise limit will normally be chosen to protect the nearest noise-sensitive premises and the best position for the monitoring point(s) will usually be outside the noise sensitive premises. In situations where extraneous noise makes monitoring difficult and is likely to give an unrepresentative result, an alternative position without such interference should be chosen. The noise level at the alternative monitoring point should be a reliable indicator of the level at the building or area to be protected from the specific source under consideration.

• Meteorological conditions:

details of wind speed, direction and temperature gradient should be noted. Measurements or predictions should be made under reasonably stable conditions. A suitable condition is a light wind with a vector component up to 2m/s from source to receiver; this will increase the noise level by about 2 dB(A) compared with a no wind case.

• Please see criteria for assessment of different types of developments in the following appendices:

- Transport noise affecting noise sensitive premises – Appendix 2

- Building vibration – Appendix 2
- Sound insulation and outdoor amenity criteria – Appendix 3
- Industrial noise and vibration – Appendix 4
- Noise from non-residential uses – Appendix 5
- Construction and demolition – Appendix 6

Further information about noise surveys and reports for specific applications may be sought from the Environmental Health Department on tel. 0208 753 3376 or email environmentalprotection@lbhf.gov.uk

APPENDIX 2 Transport Noise and Vibration affecting Noise Sensitive Premises

Transport Noise

Where an Environmental Impact Assessment is required, the likely effects of noise will be one of the considerations to be dealt with in the environmental statement prepared by the developer.

Where residential developments are proposed in an area where they are exposed to dominant transport or mixed transport/ industrial noise sources, a detailed assessment of the transport noise should be carried out

Table 1 below lists noise levels for various transport sources during day and night time periods. Where a noise assessment shows that transport noise levels exceed those levels, details should also be provided of noise mitigation measures that will protect internal premises as well as external private amenity space such as gardens and balconies, to the Good criteria specified in BS 8233 or successive legislation, policy, standard or guidance.

Table 1

road traffic 07.00 - 23.00 23.00 - 07.00	dBA Leq(T) 63 57
rail traffic 07.00 - 23.00 23.00 - 07.00	dBA Leq(T) 66 59
air traffic 07.00 - 23.00 23.00 - 07.00	dBA Leq(T) 66 57
mixed sources 07.00 - 23.00 23.00 - 07.00	dBA Leq(T) 63 57

Mixed sources may include different types of transport such as road vehicles, rail and aircraft noise as well as non-dominant industrial noise.

The measured noise levels used for the assessment should represent the typically noisiest periods of the week, during daytime between 07:00-23:00 and night time 23:00 to 07:00, at the position of the proposed dwelling facade.

BS 7445-1:2003 defines and prescribes best practice during the recording and reporting of environmental noise. It is inherently applied in all instances when making environmental noise measurements, unless amended or superseded by later policy or standards which should then be followed.

The number and noise level of individual noise events should be indicated in a noise report for assessment of the suitability of development where multiple events of 45dB Lmax or more (slow time weighting) occur within habitable rooms within any one hour

A reduction of 13 dB(A) from the façade level may be assumed as the noise attenuation provided by a partially open window.

Noise levels should normally be determined at a height of 1.2m to 1.5m above ground level at the position of the proposed dwelling, 1m from the facade. Noise levels at upper or lower floor levels should also be established if significant differences in noise exposure are anticipated at different floor levels. Measured façade levels should be assumed to be 3dB(A) higher than levels measured away from any buildings at free field position.

In areas of high noise levels. applicants must demonstrate not only sound insulation to the Good standard of BS8233 or successive legislation, policy, standard or guidance (see Appendix C), but also appropriate room layout and orientation of habitable rooms on quieter facades away from major noise sources, together with details of silenced mechanical ventilation or whole-house system, the air-intake being at the cleanest aspect of building.

Where traffic figures or predictions are required in accordance with “Calculation of Road Traffic Noise”, DOT and Welsh Office, 1988, the Highway authority should be consulted on the traffic flow data.

Vibration

Any site affected by vibration will require an assessment of the impacts of vibration levels. Vibration acceleration (m/sec^{2}rms) shall be measured on the foundations, ground beams or pile caps if possible, in each of the three orthogonal directions x, y and z, as necessary.

The Vibration Dose Values (VDV) should be calculated and assessed from the measured acceleration levels in accordance with BS 6472-1:2008 or successive policy or standard. For residential and other noise sensitive development, the VDV (m/s1.75) should not exceed the levels in Table 2, which indicate low probability of adverse comment.

VDV levels (m/sec1.75) with Low Probability of Adverse Comment:

Table 2

07:00 – 23:00 16 hours, day	23:00 to 07:00 8 hours, night
0.2 to 0.4 0	0.13

Measurements of vibration should normally be taken on a building structural surface. In some circumstances, measurements may have to be made outside the structure or on some surface other than points of entry to the human subject. In such situations, the relevant multiplying factor should be used.

Amplification of vertical vibration magnitudes needs to be considered where resonance occurs in certain floor constructions, eg. suspended floors.

Where VDVs exceed those of Table 2, proposals shall be submitted to demonstrate that vibration can be mitigated to acceptable levels.

Building vibration within existing buildings or sites should normally be measured in acceleration terms (VDV) or corrected to derive the VDV. However, in some cases, such as impulsive events (eg. blasting or pile driving), measurement of peak particle velocity PPV is appropriate so that peak values may be identified.

To protect occupants, users and building structures from harm and damage, the following levels of vibration from all sources during demolition and construction are not to be exceeded:

3mm/s PPV (mm/sec for residential accommodation, listed buildings, offices and those properties in a poor state of repair

5mm/s PPV for non-vibration-sensitive buildings.

More stringent criteria may be necessary for commercial premises that are vibration sensitive such as hospitals, photographic studios and educational premises.

Potential vibration and re-radiated noise caused by trains running in tunnels will need to be considered and relevant assessments made.

Re-radiated vibration noise within habitable residential rooms, as a result of vibration from adjacent railways and other sources, should not exceed 35dB LAmax(s). Where it is predicted that noise from this source is likely to exceed 35dB LAmax(s), proposals to mitigate re-radiated noise to acceptable levels shall be submitted for the Council's approval. However, due to the high cost of mitigating vibration effects, this should be subject to early discussion with the Environmental Protection team. Please contact the team on tel. 020 8753 3376 or email environmentalprotection@lbhf.gov.uk

The content of a vibration assessment report shall follow the format suggested in Annex A (informative) of BS 6472-1:2008 (Guide to Evaluation of human exposure in buildings) (1Hz to 80Hz) or adopted successive policy or guidance.

APPENDIX 3 Noise Sensitive Premises – Indoor and Outdoor Noise Standards and Sound Insulation

Residential development

5.203 BS8233:1999 Code of Practice - Sound insulation and noise reduction for buildings, gives guidance on control of noise in and around buildings and suggests 'good' and 'reasonable' criteria and limits intended to guide the design of new buildings and those proposed for a change of use. Hammersmith & Fulham Council require the 'good' standards for habitable rooms and gardens or balconies in terms of the overall level LAeq and Lmax(fast) for individual noise events as indicated in Table 3 below of BS8233.

Table 3. 'Good' criteria for dwellings.

Bedrooms	30 dB LAeq,T 45 dB Lmax(fast) (2300-0700) – individual noise events
Living rooms and dining rooms	30 dB LAeq,T
Gardens and other external amenity areas (balconies etc)	50 dB LAeq,T

Ideally, the internal levels should be achieved with windows open. However, on some sites exposed to high levels of traffic noise, windows would need to be acoustically glazed and tightly closed at least for some of the time. Alternative means of ventilation would be required.

Room layout and stacking:

In designing new dwellings and conversions, serious consideration must be given to appropriate room arrangements and stacking of separate adjoining dwellings, ensuring that:-

- large family units are not situated above smaller units,
- similar types in neighbouring dwellings are stacked above each other or adjoin each other, bedroom over bedroom, living room over living room, etc.
- halls are used as buffer zones between noise sensitive rooms of one dwelling and living areas of the adjoining dwelling and communal areas incl. main entrances, staircases, lift shafts, service areas, etc.

Building Regulations 2003 Part E describes the method for testing of airborne noise between rooms and across facades and impact sound insulation of floors. It sets the minimum acceptable levels of airborne sound insulation DnT,w + Ctr and impact sound insulation L'nT,w for new dwellings and conversions.

See also: - BS EN ISO 140:1998 - standard for sound insulation testing measurements

BS EN ISO 717 - standard for the calculation from those measurements

or successive legislation, policy, standard or guidance.

Enhanced sound insulation between different residential uses:

It is important to note that Part E of the Building Regulations lists the minimum acceptable levels only. Therefore, where the arrangement of rooms in separate adjoining dwellings is shown to be unsuitable in terms of preventing transmission of household noise and consequently is likely to give rise to neighbour noise complaints, the council will require better sound insulation of relevant walls, floors and ceilings. Applicants and developers should aim for an enhancement of the minimum levels stated in the Building Regulations by at least 10-15dB.

Sound Control for Homes 1993, BRE and CIRIA, provides practical advice on sound insulation and control within dwellings of noise from outside sources and noise transmitted within and between dwellings. The sound insulation of building elements such as windows is measured in a laboratory. Good fitting of windows is essential to maintain the laboratory tested insulation value.

Residential / non-residential separation:

Building Regulation minimum values of DnT,w+Ctr for walls and glazing, floors and ceilings, as appropriate, should be significantly enhanced by at least 10-15dB where commercial/ sports/ entertainment and similar non-residential development is intended in the same or attached building or in close proximity to noise sensitive premises. Applications for developments where residential and commercial units adjoin each other should be accompanied by a sound insulation assessment and details of the sound reduction achieved by the proposed separating structures.

Sound insulation assessment

Assessment details of the sound insulation performance and sound reduction achieved by relevant floors, ceilings and/or walls should be submitted, in accordance with above mentioned or successive legislation, policy standard or guidance, together with construction/ installation details of any proposed sound insulation system and structure, in accordance with manufacturers' recommendations.

Mechanical Ventilation

Where mechanical ventilation is required in developments exposed to high noise levels, details should be submitted for the Council's approval, of adequate silencing of the ventilation system, outside and inside. Consideration should also be given to through-the-wall or window passive vents, acoustically lined where necessary and whole building passive stack or mechanical systems. Windows must be openable to allow natural ventilation when desired even in noisy areas. All schemes for ventilation shall comply with Document F1 'Ventilation' The Building Regulations 2000 and BS4142:1997 or successive legislation, policy, standard or guidance.

Amenity areas

Details of environmental noise affecting residential outdoor amenity space where this is provided should be included in a noise survey report. In outdoor amenity areas such as gardens and balconies, the steady noise level should not exceed 50dBLAeq (16hour, 0700 – 2300)), with 55dBLAeq (16hour) being the upper limit. In order to achieve this noise limit, consideration should be given to carefully siting amenity areas away from noise-exposed facades and/or the provision of acoustic screening.

Non- residential development

Noise levels for reasonable resting/sleeping conditions in developments other than residential dwellings, such as hotels, hospitals, and residential homes should be similar to those for dwellings.

Noise affecting non-residential developments should be mitigated where necessary to achieve the standards recommended by BS8233:1999 or successive legislation, policy, standard or guidance or other more specific documentation that applies to the development.

Acoustic requirements for indoor noise levels for all occupied spaces in schools are currently covered by DfES Building Bulletin 93 “Acoustic Design of Schools” 2003. If superseded, successive legislation, policy, standard or guidance should be adhered to.

APPENDIX 4 Industrial Noise and Vibration Sources / Plant, Machinery, Equipment

BS 4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas.

Noise measurements of externally located machinery or equipment should be carried out at the nearest and/or most affected noise sensitive façade or garden, as appropriate, with all machinery operating together, as intended, at maximum capacity. An assessment of the noise or potential noise should be made by measurement and calculation, in accordance with the procedure outlined in BS4142:1997 or successive legislation, policy, standard or guidance, to determine the likelihood of complaints at neighbouring premises. Such a survey should establish ambient, background and specific noise levels. Paragraph 9 of BS4142:1997 indicates:-

- the likelihood of complaints where the specific noise level is around +10dB above the measured background noise level;
- marginal significance where the specific noise level is +5dB above the measured background noise level;
- positive indication that complaints are unlikely where the specific noise level is more than -10dB below the measured background noise level;

A detailed noise report should be submitted for approval by the council (please see Appendix 1). Details shall demonstrate that the combined external noise level at maximum capacity, emitted by plant, machinery or equipment, will be at least 10dBA lower than the typically lowest existing background noise level LA90 (15mins daytime, 5mins night). For tonal noise, a +5dB feature correction should be added

Where noise sources exceed the Council's noise limit, details of mitigation measures will be required, such as the installation of silencers, screening, enclosures, anti-vibration isolators, relocation of the offending noise source or replacement with quieter alternatives.

Where appropriate, the council may require a post installation noise assessment and regular servicing of plant, machinery or equipment in accordance with manufacturer's instructions or as necessary, depending on the extent of use, to ensure that compliance with the noise limit requirement is maintained.

Where a predictive assessment indicates that complaints from prospective occupiers of residential or other noise sensitive premises would be likely as a result of noise from existing industrial/ commercial noise sources, the application is likely to be refused. The applicant would need to demonstrate that they are in negotiation with the owners of the industrial/commercial facilities to control and reduce noise sufficiently to ensure that complaints will be unlikely. However, the Council cannot impose conditions outside the application site.

APPENDIX 5 Noise from Non-Residential Uses such as pubs, clubs, bars, restaurants, take-aways, places of entertainment, sports, religious, cultural, educational, leisure, retail etc. and outdoor uses

Internal noise control

To prevent breakout of noise and ensure that the amenity of occupiers of the surrounding premises is not adversely affected by noise, mitigation measures will be required where appropriate. Details should be submitted to the Council for approval, of mitigation measures that will be implemented. They may include one or more of the following or suitable alternatives:

- adequate sound insulation of the building envelope and party walls, glazing, floors and ceilings;
- acoustic lobbies;
- self closing devices to all external doors;
- sound limiter on amplification systems, with separate controls for bass and overall volume and wired into the mains electric circuit;
- all music amplifiers (incl. those for singing and speech), whether in-house, hired or otherwise brought in, routed via an effective sound limiter;
- loudspeakers fitted with anti-vibration mounts and correctly positioned and angled into the venue;
- keeping external doors and windows closed; etc.

Entertainment noise

The Institute of Acoustics' Good Practice Guide on the Control of Noise from Pubs and Clubs gives guidance on the control of the different types of noise that may arise and, in particular, recommends that, where entertainment takes place on a regular basis, music and associated sources, should not be audible inside noise-sensitive property at any time.

This recommendation has been adopted by the council which requires that amplified and instrumental music, organized singing and amplified voices are not audible at noise sensitive premises.

Health & Fitness clubs

Details of the sound reduction index of the building envelope and internal separating structures will be required to demonstrate compliance with the council's standard for sound insulation between commercial and noise sensitive premises against airborne and vibration noise from the use, especially at low frequencies including music, use of equipment, group movements/ activities, etc.

Proprietary anti-vibration mounts and/or other mitigation measures for the isolation of exercise equipment and loud speakers from the building structure will be required, where appropriate.

Music and amplified voices should not be audible at noise sensitive premises.

Outdoor uses

at non-residential sites incl. petrol station, car wash, play area, delivery route, pub garden, sports field, entertainment and cultural activities, etc.

Sound Barriers and Enclosures

Where sound barriers are required to minimise noise from continuous or intermittent and impact noise typically associated with the use of non-residential premises such as warehouse activities, car parks, outdoor areas at food outlets, shops, entertainment premises, sports and play grounds, associated vehicles etc., the following points should be considered:

LAmax levels should be used as the most representative measurement of impact and intermittent sounds.

Sound barriers should preferably be constructed of brickwork, concrete, earth banks etc.

Timber is liable to warp and can more easily suffer damage, as such reducing the effectiveness of the barrier and reducing the serviceable life to less than the recommended 40 years.

For sound-absorbent timber barriers, the construction should observe the following or relevant successive guidance or standards: -

HA 65/94, A Design Guide for Environmental Barriers – guidance on installation with regard to the appearance of the noise barrier in the environment.

HA 66/95, Environmental Barriers, technical requirements to build barriers for 20 years low maintenance and a 40 year operational life.

BSEN 1794 Parts 1,2 and 3 - testing of the airborne sound insulation of the proposed barrier and also sound absorptive performance where appropriate.

BS 5589: 1989 - quality and preservations of timber used in barriers.

The standards and criteria specified above can be achieved by thickness and density of panels and cover strips, eg:

Spruce - Abutting panels at least 30mm thick, with joints sealed by cover strips at least 30mm thick and extending at least 25% over adjacent panels.

Tongued and grooved panels to be not less than 35mm thick.

Douglas Fir - Abutting panels at least 22mm thick, with joints sealed by cover strips at least 22mm thick and extending at least 25% over adjacent panels.

Tongued and grooved panels to be not less than 27mm.

Acoustic enclosures for machinery and equipment should be provided with effective absorbent lining to inside surfaces and to any ventilation louvers. Details will be required of the sound reduction provided by the enclosure to achieve compliance with the Council's standard of 10dB below the lowest L90 background level.

Outdoor Music etc.

The use of outdoor areas and the noise level likely to be emitted from activities, music, public address systems, generators etc. may need to be restricted in terms of times of use. In addition, proposed noise sources must be located and directed away from noise sensitive premises. The council may require noise mitigation measures such as sound barriers, enclosures and noise limiters, time limits etc. as necessary to prevent undue disturbance to the amenity of occupiers.

Deliveries and Refuse Collections

Where possible, deliveries should be carried out during weekday business hours between 08:00 -18:00 Monday to Friday. In town centres, these times may be extended to Saturday. Where Sunday deliveries are proposed, the applicant should demonstrate the need for Sunday deliveries. If permitted, times of Sunday deliveries will be restricted as appropriate, eg. to 10:00 – 16:00, to prevent undue disturbance to neighbours.

Where night time deliveries are proposed, justification for not delivering during day time should be provided, together with details of measures to minimise any noise, in accordance with current guidance. Regard should be had to: -

- Transport for London's code of practice for quieter out-of-hours deliveries
- FTA (Freight Transport Association) Guidance 'Delivering the Goods' – a toolkit for improving night-time deliveries
- or successive legislation, policy, standard or guidance

Refuse collections should, where possible, be similarly carried out during weekday daytime hours after 7am and/or in accordance with the above mentioned guidance, as appropriate.

Applications that include deliveries and commercial refuse collections, particularly where night time or Sunday deliveries are proposed, should be submitted with a Service Management Plan. Details should include applicable environmental controls on the following points:-

- times and frequency of deliveries and collections;
- location of loading bays and service areas, away from noise sensitive premises or effective enclosure and sealing of loading bay and docking areas;
- vehicle movements, incl. forklifts;
- quiet reversing methods; preference will be given to broadband reversing alarms or alternative quiet safety methods for reversing;
- minimisation of noise in the use of cages, trolleys, pallets and forklifts;
- mitigation measures such as barriers, low noise wheels on cages, low noise surfaces on tail lift decking and delivery routes for trolleys etc, low noise stops etc;
- silent electronically operated shutters;
- charging of mobile refrigerated units on vehicles should be electric, not diesel powered and located remote from noise sensitive premises. Noise emitted from the charging of mobile refrigeration units is subject to a noise limit of at least 10dBA below the existing background noise at any time, as assessed according to the BS4142:1997 procedure (Please see Appendix 4)
- good practice working methods in and around the service yard, incl. handling of pallets and cages;
- vehicle engines should not be left running while vehicles used in conjunction with the development are stationary.
- no music nor loud voices.

APPENDIX 6 Construction and Demolition Work

A Demolition Method Statement and Construction Management Plan will be required for substantial developments and where the site is close to other premises. Details shall include control measures for:

Dust:

Best Practicable Means (BPM) should be used in accordance with the Best Practice Guidance by the GLA 2006 for The Control of Dust and Emissions from Construction and Demolition or successive legislation, policy, standard or guidance. Details should include screening, covering and damping down of stockpiles, surfaces and dusty operations as well as wheel washing for vehicles leaving the site.

Noise and vibration:

Where possible, preparation work should be done at off-site or enclosed locations. Best Practicable Means (BPM) should be used to minimise noise and vibration, including low vibration methods and silenced equipment and machinery for piling, concrete crushing, drilling, excavating etc. in accordance with BS 5228:2009, 'Approved Code of Practice For Noise And Vibration Control On Construction And Open Sites'. This standard also gives guidance on noise monitoring for construction sites. If superseded or amended, successive legislation, policy, standard or guidance should be adhered to.

Where large scale development is proposed close to noise sensitive premises, applicants are advised to apply for consent under S.61 Control of Pollution Act 1974 (Control of Noise and Vibration at Construction Sites).

Working hours:

Construction and demolition works audible at the site boundary, including associated deliveries of materials, equipment and machinery, should only be carried out between the hours of 0800 - 1800hrs Mondays to Fridays and 0800 - 1300hrs on Saturdays and at no other time including Sundays and Bank/Public Holidays.

Neighbour liaison:

Prior to the commencement of any site works, the Environmental Protection team and all noise sensitive occupiers likely to be affected by the works should be notified in writing of the nature and duration of works to be undertaken and of the name and contact details of a responsible person, to whom enquiries/complaints should be directed at any time for the duration of the works. Regular updates on the work progress should be provided to all interested parties in writing.

Lighting:

glare and lighting shall be minimised, in accordance with recommendations of the Institution of Lighting Professionals in the 'Guidance Notes For The Reduction Of Light Pollution 2005'. (Please see Appendix 8)

Smoke:

no waste materials should be burnt on site of the development, unless specifically authorised by legislation or the council (e.g Wood affected by dry or wet rot).

Concrete crushing requires a permit under the Environmental Permitting Regulations 2010 or successive legislation, policy, standard or guidance. Please contact the Council's Environmental Health Department on Tel. 0208 753 3454 or email: environmentalprotection@lbhf.gov.uk

Where works involve materials containing **asbestos**, specialist licensed contractors and carriers should be employed for the safe handling and disposal of asbestos materials. Please contact the Health & Safety Executive on tel. 0845 345 0055 or via www.hse.gov.uk.

All **waste** materials associated with demolition and/or construction should be contained on site in appropriate containers and disposed of at a licensed disposal site.

Where the construction project is worth more than £300,000, a Site Waste Management Plan (SWMP) should be submitted to the Local Planning Authority, in accordance with the Site Waste Management Plans Regulations 2008. For more details, visit www.defra.gov.uk or www.netregs.gov.uk

APPENDIX 7. Smell, Fumes and Steam from Commercial and Industrial Premises

Kitchens in restaurants, cafes, take aways, hospitals, schools etc.

Details shall be submitted for approval by the Council of the installation, operation, and maintenance of odour abatement equipment and extract system, in accordance with the 'Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems' January 2005 by DEFRA or successive legislation, policy, standard or guidance.

Applications for large food production premises without adequate kitchen extract and odour control are likely to be recommended for refusal.

All new or relocated extract ducts on external facades require planning permission.

All extract ducts should normally terminate above the level of the main roof of any building within 20m of the building housing the commercial kitchen. Where this height is not acceptable due to visual adverse effects on local amenities, the extract should terminate at least 1m above the eaves of the main building. In exceptional situations, effective alternative systems may be considered at lower levels for small outlets only.

The extract duct should discharge vertically upward (ie. without bends) in order to facilitate good dispersion of effluent and minimise downwash.

External doors to the commercial kitchen shall be fitted with self closing devices, which shall be maintained in an operational condition and at no time shall any external door nor windows to the kitchen be fixed in an open position, in order to prevent escape of smell or noise to neighbouring premises.

Details of a suitable cleaning schedule and/or maintenance contract for the extract system and odour control system may be required.

Fumes, smell and steam associated with vehicle workshops, dry cleaners, launderettes and use of solvents, paint spraying, powder coating, dry-cleaner's etc.

Details will be required for the Council's approval of the installation, operation, and maintenance of suitable arrestment plant and extract system for vehicle workshops, paint spraying and powder coating as well as dry cleaner's etc. Effective spray booths and extract system and ducting will be required for operations and work shops where fumes, smells or steam would be emitted. For requirements of extract ducting – please see above.

APPENDIX 8 Artificial Lighting

Floodlights, Security lights and Decorative Lighting

5.204 The recommendations of the Institution of Lighting Professionals in the 'Guidance Notes For The Reduction Of Light Pollution 2011' shall be observed in respect of minimising light pollution. If superseded or amended, the successive guidance, legislation, policy or standard should be adhered to.

5.205 Lighting contours should be provided by an experienced lighting engineer for the applicant, to demonstrate that vertical illumination, ie. lux levels at neighbouring facades of premises surrounding the development, will normally be no more than 10lux at ground floor and 5lux at first floor and higher. Further guidance is available from the Institution of Lighting on tel. 01788 576 492 or via www.theilp.org.uk

5.206 Glare should be prevented by:

- correctly locating, aiming and shielding the luminaires;
- using luminaires with double asymmetric beams designed so that the front glazing is kept at or near parallel to the surface being lit;
- keeping the main beam angle of lights, directed towards a potential observer, below 70 degrees.

5.207 Use of lights should be minimised, preferably by installation of an automatic time control switch co-ordinated with dusk and dawn.

5.208 Sky-glow should be prevented by avoiding up-lighters, shielding luminaires and directing the beam downward.

Illuminated signs and advertisements

5.209 The council will require details of lighting levels (cd/m2) before display of illuminated signs and advertisements, demonstrating that the recommendations of the Institution of Lighting Professionals "Guidance Notes For The Reduction Of Light Pollution 2011, in particular the 'Technical Report No 5, 1991 - Brightness of Illuminated Advertisements" or successive guidance, legislation, policy or standard is adhered to.

APPENDIX 9 Radiation

Telecommunications equipment / Mobile phone installations

5.210 Radiation exposure limits to time-varying electric, magnetic and electromagnetic fields (up to 300GHz) from the installation and the cumulative effect of equipment at any one site shall be in accordance with guidelines by ICNIRP (International Commission on non-ionising Radiation Protection) or successive guidance, legislation, policy or standard.

5.211 Advisory body: Health & Safety Executive, contact tel. no. 0845 345 0055 www.hse.gov.uk

Electricity transformers

5.212 Limits for electromagnetic radiation, separation distance from sensitive buildings and shielding of electricity transformers/ electrical substations and other installations emitting electromagnetic radiation must be observed.

5.213 Based on preventing well established biological effects, the ICNIRP reference levels for public exposure are 100 microteslas and 5 kilovolts per meter.

5.214 Advisory body: Health Protection Agency, www.hpa.org.uk , Email: webteam@hpa.org.uk

References – legislation, policy, standards and guidance

If superseded or amended, successive legislation, policy, standard or guidance adopted by the council should be adhered to.

Environmental Protection Act: 1990

Part III (as amended by the Noise and Statutory Nuisance Act 1993) requires local authorities to serve abatement notices where noise emitted from any premises or from vehicles, machinery and equipment in the street and other environmental issues such as dust, smell, smoke, fumes, gases, steam, lighting constitute a statutory nuisance.

Control of Pollution Act: 1974

Part III gives local authorities powers to control noise from construction sites. It also introduced the concept of the Noise Abatement Zone (NAZ).

Noise Act: 1996 , London Local Authorities Act: 2004

Fixed penalty notices for nuisance.

British Standards Institution Codes of Practice and Government Guidance Documents. Reference should be made to the following, as applicable: -

British Standard 8233:1999 'Sound insulation and noise reduction for buildings' – Code of Practice

British Standard 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings

British Standard 4142:1997 Method for Rating industrial noise affecting mixed residential and industrial areas

'Sound Control For Homes', BRE & CIRIA 1993

Building Bulletin 93. Acoustic Design of Schools.

Document F1 'Ventilation' The Building Regulations 2000.

Good Practice Guide on the Control of Noise from Pubs and Clubs, Institute of Acoustics, March 2003, www.ioa.org.uk

Code of Practice on Environmental Noise at Concerts, Noise council 1995

Licensed Property: Noise Control. Effective Management of Noise from Licensed Premises, British Beer and Pub Association, www.beerandpub.com

Voluntary Code of Practice for the Fast Food Industry (DEFRA Consultation Draft Document 2003) www.defra.gov.uk

Control of Odour and Noise from Commercial Kitchen Exhaust Systems, www.defra.gov.uk

Guidance Notes for the Reduction of Light Pollution, Institute of Lighting Professionals, 2000, revised May 2003, www.ile.org.uk

Guidelines for Community Noise, World Health Organisation, 1999

2009 WHO night noise guidelines. Discusses health effects, effects of sleep disturbance and threshold levels.

British Standard BS5228:2009 Approved Codes of Practice of for noise and vibration control on construction and open sites.

Best Practice Guidance by the GLA 2006 for The Control of Dust and Emissions from Construction and Demolition.

BRE (Building Research Establishment) 5 pollution control guides on the control of particles, vapour and noise from construction sites. These advise on pre-project planning, site preparation, haulage, storage of materials and site operations:.

The sections are as follows:

Part 1: pre-project planning and effective management. ISBN1 86081 6541

Part 2: site preparation, demolition, earthworks and landscaping. ISBN 1 86081 655X

Part 3: haulage routes, vehicles and plant. ISBN 1 86081 6568

Part 4: materials handling, storage, stockpiles, spillage and disposal. ISBN 1 86081 6576

Part 5: fabrication processes and internal and external finishes ISBN 1 86081 6584

The guidance is available from the BRE bookshop on 0207 505 6622 email: enquiries@bre.co.uk , website www.bre.co.uk.

The granting of planning permission does not remove the need to comply with these controls.

5 Amenity

6 Sustainability

Flood risk mitigation and Sustainable Drainage (SUDS)

Purpose

6.1 The overall objectives of the SPD are to:

- Establish more detailed guidance on the application of policies within the Core Strategy and DM Local Plan that are concerned with the implementation of flood mitigation measures, including Sustainable Drainage Systems (SuDS), namely Core Strategy borough wide strategic policy CC2 Water and Flooding and DM Local Plan policy DM H3 Reducing Water Use and the Risk of Flooding; and
- Provide more detail on the supporting information that the council requires to be submitted with applications to show compliance with these and the London Plan policies.

6.2 For further information on requirements in terms of water conservation measures, please refer to the GLA's SPD on Sustainable Design and Construction.

Policy Guidance

National Policy

6.3 One of the key national objectives in the Government's National Planning Policy Framework (NPPF) is that "planning should support the transition to a low carbon economy in a changing climate, taking full account of flood risk…". To achieve this objective, the NPPF states that the planning system should aim to do the following in terms of flooding:

- minimise vulnerability and provide resilience to impacts arising from climate change; and
- avoid inappropriate development in areas at risk of flooding by directing development away from areas at highest risk or where development is necessary, making it safe without increasing flood risk elsewhere.

London Plan

6.4 Policy 5.12 Flood Risk Management states that the Mayor will work with all relevant agencies including the Environment Agency to address current and future flood issues and minimise risks in a sustainable and cost effective way.

6.5 In relation to promoting sustainable drainage, Policy 5.13 Sustainable Drainage states that developments should utilise sustainable drainage systems (SuDS) unless there are practical reasons for not doing so, and should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible in line with the Mayor's drainage hierarchy.

6.6 Other relevant policies include Policies 5.10 Urban Greening and 5.11 Green Roofs which outline how green infrastructure can also make a contribution to sustainable drainage by absorbing a proportion of surface water and therefore reducing rates of water flow and Policies 5.14 Water Quality and Wastewater Infrastructure and 5.15 Water Use and Supplies, which will help ensure that London has adequate and appropriate wastewater infrastructure to meet the requirements placed upon it by population growth and climate change and also help minimise the use of mains water.

Local Plan

6.7 The council's Core Strategy and Development Management policies are supported by a Strategic Flood Risk Assessment, which is available on the council's website at: www.lbhf.gov.uk

6.8 Boroughwide Strategic Policy CC2 Water and Flooding states that the council will expect all development to minimise current and future flood risk and the adverse effects of flooding. In addition, the council will strive to reduce the risk of flooding from surface water and foul water by requiring development proposals to include appropriate sustainable drainage systems and systems to reduce the amount of water discharged to the foul water drainage.

6.9 Development Management Policy DM H3 Reducing Water Use and the Risk of Flooding requires developments to reduce the use of water and minimise current and future flood risk and the adverse effects of flooding on people by implementing a number of key measures. Policy DM A8 Basement Accommodation and Lightwells also supports the policy on basement flats outlined in Policy DM H3 that, where there is a medium to high risk of flooding and no satisfactory means of escape can be provided, new self contained basement flats will not be permitted.

Local Context

6.10 H&F benefits from 7km of riverside frontage along the Thames which helps to enhance the environmental quality and character of the borough. However, it also means that the borough is potentially more at risk of flooding than some other parts of London. The whole borough has been identified in the council's surface water management plan as a Critical Drainage Area, indicating that there are multiple and inter-linked sources of flood risk, with much of the borough at risk from surface water flooding.

6.11 Over 60% of the area of H&F and about 75% of the population are in the Environment Agency's (EA's) Flood Zones 2 and 3 which indicate medium to high risks of flooding. However, the EA's Flood Zone designations do not take account of flood defences and, therefore, represent a theoretical maximum extent of tidal flooding. The tidal Thames is defended to a 1 in 1000 year standard by a series of walls, embankments, flood gates and barriers, with the Thames Barrier providing a significant level of protection. The actual risk and extent of flooding from the Thames is mitigated by these flood defences, although there is still a risk of over-topping or breach that could affect parts of the borough.

6.12 In addition to the risks of tidal flooding, the borough's Strategic Flood Risk Assessment also identified that much of H&F is at risk from sewer and/or surface water flooding. This is mainly because both foul and surface water drainage are directed into a combined sewer system. Wastewater from other boroughs also passes through the local sewer system, which can become overwhelmed when large volumes of surface water enter the system very quickly – i.e. during very heavy downpours. Climate change impacts such as more frequent extreme weather events are expected to increase the frequency and severity of this type of flooding. The borough already has many residential streets with basement properties which are potentially vulnerable to surface water flooding. It is therefore vital that basement developments are carried out with appropriate flood mitigation measures in place to guard against future flood events.

6.13 Local risks from groundwater flooding are uncertain as there are only limited records available. However, it is important that new developments are not subject to this type of flooding in the future. Therefore the potential risks of groundwater flooding should also be covered in Flood Risk Assessments.

6.14 Taking account of flood risk issues for new developments, incorporating appropriate mitigation measures where necessary and integrating sustainable drainage measures where feasible are therefore very important in helping to protect the borough from the potential impacts of flooding.

Flood Risk Mitigation and Sustainable Drainage Policies

SPD Sustainability Policy 1

Flood Risk Assessment

Planning applications must provide supporting information in line with the requirements of this SPD to show that appropriate consideration has been given to all forms of flood risk. Where necessary, a drainage strategy and information on proposed mitigation measures should be provided. There may need to be consultation with the Environment Agency and Thames Water.

Information should be included on proposed sustainable drainage measures and any ongoing management requirements, in consultation with the Environment Agency and Thames Water where necessary, to show compliance with Development Plan policies on sustainable drainage. Any approved drainage measures shall thereafter be retained and maintained in accordance with the approved details.

The Sequential Test and Exception Test

6.15 In terms of flooding, the council considers that the Sequential Test permits the initial consideration of all sites in H&F for development, even though 60% of the borough is in the Environment Agency's (EA's) Flood Zones 2 and 3. This is because most of the borough is at risk from some form of flooding and it would be unreasonable to restrict development only to the EA's Flood Zone 1 which is in the north of the borough. Therefore, developers do not need to apply the Sequential Test. However, sites may still need to satisfy the requirements of the Exception Test and an appropriate site specific Flood Risk Assessment (FRA).

6.16 The Exception Test should be applied in line with the information outlined in the tables below – i.e. it is applicable where applications include proposals for 'highly vulnerable' developments in Flood Zone 2, 'more vulnerable' and/or 'essential infrastructure' developments in Zone 3a and 'essential infrastructure' developments in Zone 3b. These vulnerability classifications are defined further in Table 2.1 of the SFRA.

Flood Risk Vulnerability Classifications

Vulnerability Classification		Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood Zone	1	Y	Y	Y	Y	Y
	2	Y	Y	Exception Test required	Y	Y
	3a	Exception Test required	Y	N	Exception Test required	Y
	3b	Exception Test required	Y	N	N	N

Y = suitable for development (subject to FRA requirements) / N = development not permitted

For the Exception Test to be passed:

a) It must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by the borough's SFRA (available online here: www.lbhf.gov.uk).

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 FRA must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

6.17 For some developments, (e.g. particularly very large major schemes), Thames Water will carry out an initial investigation of whether or not the existing water supply and drainage systems can accommodate the additional demand for drinking water and drainage requirements associated with the development. If they have concerns about the capacity of the existing infrastructure, particularly where combined flows of foul and surface water could put additional pressure on the Counters Creek sewer system, Thames Water will require a Drainage Strategy that details how the foul/surface water flows will be managed, illustrating any proposed new drains or alterations to the connection points in the existing sewer system. Thames Water Developer Services can be contacted on 0845 850 2777 if developers need further advice on their requirements.

Key Flood Risk Vulnerability Classifications (see full NPPF for complete list)

Essential Infrastructure	• Essential transport infrastructure - inc. evacuation routes • Essential utility infrastructure (e.g. energy generation)
Water Compatible	• Flood control infrastructure • Water/sewage transmission infrastructure • Water based recreation, amenity open space • Docks, marinas, wharves
Highly Vulnerable	• Basement dwellings (self-contained) • Emergency services (police/fire/ambulance) stations required to operate during flood events • Installations requiring hazardous substances consent
More Vulnerable	• Buildings used for: dwelling houses, student halls of residence, drinking establishments, nightclubs, hotels • Hospitals, residential institutions (e.g. care homes, hostels, prisons) • Non-residential uses for health services, nurseries and educational establishments
Less Vulnerable	• Buildings used for shops, restaurants, cafes, offices, financial/professional services • Emergency services stations not required to operate during flood events

6.18 Where a proposed development requires an Exception Test to be carried out, full details should be supplied with the planning application showing how each of the criteria will be complied with. It should be noted that the Exception Test cannot be used for all scenarios – for instance, 'highly vulnerable' developments such as self-contained basement dwellings could not be justified via the Exception Test for Flood Zone 3a and will not be permitted due to the flood risk associated with such developments.

6.19 FRAs should be carried out with reference to the guidance in the H&F SFRA (Appendix A.1). Comprehensive guidance in the form of a joint EA/Defra report titled "FRA Guidance for New Development" is also available on the Environment Agency website here: http://sciencesearch.defra.gov.uk

6.20 The level of detail that will be required will depend on the flood risk and on the size of the development, but all FRA's should demonstrate how flood risk to the development in question (and other sites, including neighbouring areas) from all sources will be managed, both now and in the future, in order to provide adequate protection from local flood risks.

Drainage Strategies

6.21 For some developments, (e.g. particularly very large major schemes), Thames Water will carry out an initial investigation of whether or not the existing water supply and drainage systems can accommodate the additional demand for drinking water and drainage requirements associated with the development. If they have concerns about the capacity of the existing infrastructure, particularly where combined flows of foul and surface water could put additional pressure on the Counters Creek sewer system, Thames Water will require a Drainage Strategy that details how the foul/surface water flows will be managed, illustrating any proposed new drains or alterations to the connection points in the existing sewer system. Thames Water Developer Services can be contacted on 0845 850 2777 if developers need further advice on their requirements.

FRA Requirements for Flood Zone 1

6.22 For proposals in Flood Zone 1, detailed FRAs are only required for developments greater than 1ha in size. If a flood risk is identified, the FRA must demonstrate how this will be managed to ensure the site's safety. Where necessary, flood resilient design measures and SuDS measures should be included. The EA's FRA Guidance Note 1 provides further detailed advice:

www.environment-agency.gov.uk

6.23 Detailed FRAs are not required for smaller developments (less than 1ha) in Zone 1. However, such sites could be at risk of surface water flooding in this zone, even if there is a low risk of fluvial flooding. Therefore flood proofing measures should still be considered, such as those outlined below particularly where development includes basement level accommodation. In particular, the fitting of non-return valves to stop foulwater from sewers surcharging back into properties should be considered as a standard requirement in the borough.

6.24 There is also a requirement for developments of less than 1ha to comply with policies on sustainable drainage, so surface water drainage still needs to be assessed and impacts mitigated with details of SuDS measures being submitted with the application (see next section for further details). The EA's advisory comments on the information to be provided can be found online here:

www.environment-agency.gov.uk

FRA Requirements for Flood Zones 2 and 3

6.25 For Zones 2 and 3, all major development proposals are required to submit detailed FRAs. Smaller developments (i.e. those with fewer than 10 residential units and less than 1000m2 floorspace) are also required to submit FRAs, unless they fall into the 'householder and minor extension' category outlined below.

In summary, detailed FRAs should include information on the following:

- Determine whether the development is at risk of flooding from any source – the details and maps in the H&F SFRA and Surface Water Management Plan (once published) can be used to identify

areas potentially at risk of flooding. In the case of major schemes, Thames Water and the EA should be contacted for further information (including checking issues such as the capacity of the local sewers to cope with the proposed development);

- Determine whether the development will be at risk of flooding in the future as a result of climate change impacts;
- Assess the level of residual flood risk – the SFRA and SWMP can be used to identify areas at high/medium risk due to failure or a breach of flood defences and susceptibility to surface water flooding;
- Demonstrate that the development will be safe without increasing the risk of flooding elsewhere;
- Demonstrate how flood risk will be managed, ensuring that any proposed flood risk management measures will be sufficiently funded so the site can be developed and occupied safely throughout its lifetime;
- Demonstrate that for developments adjacent to the river, the consent of the Environment Agency has been agreed if development is not set back 16 metres from the river wall so as to allow the wall to be maintained, modified or raised if necessary;
- For developments adjacent to the River, consideration will need to be given to whether the life of the flood defences is commensurate with the life of the development and whether any remedial works are required;
- Demonstrate that the development is compliant with national, regional (London Plan) and local policy; and
- Demonstrate, where possible, that the developer has contributed to reducing flood risk over a wider area.

6.26 The EA's FRA Guidance Note 3 provides further detailed advice on the information to be provided in detailed FRAs and can be found online here: www.environment-agency.gov.uk

6.27 The FRA should provide details of flood resilient design measures that will be incorporated to help reduce the potential impacts of flooding. Examples of the types of measures that can be used include:

- Using concrete floors rather than timber on the ground floor;
- Using flood resilient building materials and fittings;
- Fitting non-return valves to prevent sewers surcharging into properties;
- Locating power sockets above the possible flood level;
- Incorporating temporary door or air vent flood boards to stop the entry of flood water; and
- Signing up to the EA's Flood Warning Service.

6.28 Detailed guidance on flood resilient construction can be found in the joint EA/DCLG document: "Improving the Flood Performance of New Buildings" which is available online: www.planningportal.gov.uk/uploads/br/flood_performance.pdf. The EA also provides a summary leaflet with examples of measures that can be taken to flood proof properties. Advice and the leaflet is available here:

www.environment-agency.gov.uk/homeandleisure/floods/113213.aspx

6.29 Measures are not necessarily limited to those outlined above – further information is provided in section A2 Guidance on Mitigation Measures of the SFRA. Depending on the specific risks that a site may have to mitigate, further measures may also be required to combat potential groundwater flooding and SuDS measures will also be required (see below).

6.30 For householder and minor extensions (apart from those involving habitable basements) and non-domestic extensions with less than 250m2 floorspace, there is no requirement for a detailed FRA to be carried out. However, information should be submitted in line with the EA's FRA Minor Extension Advice Note which can be found online here: www.environment-agency.gov.uk

- to show that one or other of the flood mitigation measures shown below is to be implemented in the development

Applicant to choose one or other of the flood mitigation measures below	**Applicant to provide supporting information detailed below aspart of their FRA**
Either; Floor levels within the proposed development will be set no lower than existing levels AND, flood proofing of the proposed development has beenincorporated where appropriate.	Details of any flood proofing / resilience and resistance techniques, to be included in accordance with `Improving the flood performance of new buildings' CLG (2007).
Or; Floor levels within the extension will be set 300mm above the known or modelled 1 in 100 annual probability river flood (1%) or 1 in 200 annual probability sea flood (0.5%) in any year. This flood level is the extent of the Flood Zone.	This must be demonstrated by a plan that shows finished floor levels relative to the known or modelled flood level. All levels should be stated in relation to Ordnance Datum.

6.31 Change of use proposals for existing buildings may also require FRAs to be submitted, depending on the vulnerability of the new use to flooding. For example, as shown in Table 2.1 of the SFRA, most commercial buildings are less vulnerable than residential buildings and basement dwellings are regarded as more vulnerable than other residential uses. Therefore, a proposal to convert a commercial property into residential use would require an FRA to be carried out. An Exception Test may also be required. The FRA will need to show how the site's increase in vulnerability to flooding will be mitigated.

6.32 Basements (as part of new developments or as extensions to existing properties) that have internal access to a higher level are classified as 'more vulnerable' and require detailed FRAs (for both Flood Zones 2 and 3). Those in Zone 3 will need an Exception Test as well. Self contained basement dwellings that do not have a suitable alternative means of escape are not permitted in Flood Zone 3. In Flood Zone 2, such a proposal would need an Exception Test and (if the test is passed), an FRA.

6.33 Any design elements included in new developments to help mitigate the potential risks of flooding need to be considered at the same time as the requirements of other Development Plan policies. For example, all new dwellings have to meet the "Lifetime Homes" standard, which includes requirements on providing good levels of accessibility and inclusive design. Flood mitigation strategies therefore have to be carefully balanced with these requirements and with national Building Regulations that require level access into new public buildings and workplaces. Further details are contained in the council's SPD on Access.

SPD Sustainability Policy 2

Sustainable Drainage Measures

Planning applications must provide supporting information in line with the requirements of this SPD to show that appropriate consideration has been given to managing surface water drainage. Information should be included on proposed sustainable drainage measures, in consultation with the Environment Agency and Thames Water where necessary, to show compliance with Development Plan policies on sustainable drainage.

National Standards for SuDS

6.34 The Government is currently developing a national approach to the adoption and use of Sustainable Drainage Systems (SuDS) as required by schedule 3 of the Floods and Water Management Act 2010. A set of national standards on sustainable drainage is being drawn up to help guide the design, construction, operation and maintenance of SuDS schemes and SuDS Approving Bodies (SABs) will be established to check and approve all SuDs proposals.

6.35 Schedule 3 of the Act includes a provision that requires developers to seek drainage approval from the SAB before starting any construction work that has drainage implications. The SAB must determine if the application meets the national standards. All approved SuDS that serve more than one property must be adopted and maintained by the SAB. However, until this part of the Act is implemented, it is recommended that developers follow the SuDS guidance outlined and referenced in this SPD.

Local Requirement for SuDS

6.36 Because of the risk of surface water and sewer flooding in the borough, all new developments are required to control surface water run-off through the use of sustainable drainage systems – unless there are practical reasons for not doing so. This includes ‘major’ and ‘non-major’ developments. House-holder developments should also be designed to at least avoid increasing runoff and preferably to reduce it as much as practicable.

6.37 Implementing SuDS measures is particularly important where developments are proposed in parts of the borough where the existing local drainage system is operating close to full capacity, such as the Counters Creek system. However, as well as providing flood mitigation, some SuDS measures can also help contribute to open space, improving visual appeal of sites and enhancing biodiversity by providing habitats for local wildlife. SuDS can also help reduce pollution by filtering out sediment, metals and hydrocarbons that might otherwise enter sewers or water bodies.

6.38 Where a development requires an FRA, SuDs information should be included to show how sustainable drainage measures will contribute to reducing flood risk. However, it should be noted that developments that do not require FRAs (e.g. because they are located in a low flood risk area or due to their small size) will still need to consider surface water run-off issues and include SuDs measures.

6.39 SuDS information can also be included as part of a Code for Sustainable Homes or BREEAM assessments as the need to attenuate surface water through SuDS is included in these environment assessment schemes. However, specific additional information will be required to show how the key targets set out in 6.40 are to be achieved on-site.

6.40 Developments should ensure that surface water runoff is managed as close to its source as possible in line with the London Plan drainage hierarchy). The key objectives that planning policies require in terms of surface water drainage are to aim for:

- Greenfield run off rates
- 50-100% attenuation of the undeveloped site's surface water run-off (at peak times)

6.41 Sustainable drainage schemes should clearly demonstrate how they will achieve the required attenuation of surface water run-off through the implementation of the drainage hierarchy. As well as helping to minimise runoff, SuDS can help to improve water quality and also provide additional amenity space and increase habitats, improving biodiversity. Use of the drainage hierarchy is intended to ensure that all practical and reasonable measures are taken to manage surface water higher up the hierarchy and that the amount of surface water managed at the bottom of the hierarchy is minimised. Where SuDS measures are proposed for integration into 'designed landscape' areas, this should be done in a way that is sensitive to their heritage value.

6.42 Applications for all developments should include information on current surface water runoff characteristics of the undeveloped site, including typical volumes and flow rates, assess the potential risks from this type of flooding and propose SuDS mitigation measures to reduce runoff in line with the targets outlined in 6.40 above. The tools on the HR Wallingford website may be useful in helping calculate surface water run-off characteristics.

6.43 It is important to note, that for brownfield sites, the term "undeveloped site" refers to the state of the existing site prior to the proposed development (i.e. pre-development). It does not refer to a greenfield site which existed prior to any form of built development.

In summary, the following information should be provided:

- a location plan;
- an estimation of existing, pre-development run-off rates;
- an estimation of the post development run-off rates;
- a statement on how surface water run-off will be managed;
- calculations showing the required stormwater storage provision;
- details of the proposed SuDS to meet the stormwater storage requirements;
- outline drainage plan
- details of proposed maintenance arrangements,
- ground conditions
- proposed use of the site

6.44 Different rainfall events will have different impacts on sites and create a range of potential flow rates. Climate change impacts are predicted to cause more frequent and heavier rainfall events of the type that are most likely to cause drainage systems to be overwhelmed. Developments must therefore be assessed to show that the SuDs proposals are capable of adequately attenuating surface water flows during such storms. The nationally agreed return period which should be designed for is a 1 in 100 year event with a 30% allowance for climate change. The largest peak flow should be calculated for a range of storms likely to occur within this period to see which one creates the greatest volume/runoff rate impacts - this will determine how much attenuation needs to be designed into a development through the implementation of SuDS measures.

6.45 Schemes should aim to manage their surface water runoff so that it mimics (as far as practicable) greenfield conditions (typically around 5l/s/ha) where surface water evaporates, gets absorbed by plants and trees, or infiltrates into the ground or flows over the surface into water bodies such as streams, rivers, ponds etc over a period of time. This contrasts with the current arrangement for many sites in the borough which are typically covered in mostly impermeable surfaces (such as buildings and roads) where rainfall is quickly routed into the combined sewer system, exacerbating the potential flood risk during heavy downpours.

Implementing SuDS Measures

6.46 The applicability of SuDS measures should be assessed in line with the drainage hierarchy requirements of the London Plan.

6.47 For the larger developments, it is likely that a combination of measures will be required to adequately reduce surface water run-off. The Construction Industry Research and Information Association (CIRIA) provide guidance, including case studies on their website: www.ciria.org. In particular, their “Planning for SuDS – making it happen” (publication C687) provides a comprehensive review of the benefits that SuDS measures provide and advises on how they can be implemented.

6.48 Any proposed SuDS measures must comply with the requirements of the Building Regulations part H on Drainage and Waste Disposal. In all cases, it must be established that the SuDS proposals are feasible, provide the required amount of attenuation, can be adopted and properly maintained and will not lead to detrimental impacts on or off site. Consideration should be given to local ground conditions, including the potential presence of contaminated land in order to assess the best approach to incorporating SuDS.

6.49 As shown in the table below, not all development types are suitable for all SuDS measures, but there are a number of feasible options that high density developments typically found in H&F should be able to integrate in order to help manage surface water runoff. Drawings and supporting calculations should be provided to show the location, size etc of SuDS measures such as attenuation tanks, green roofs, permeable paving installations. (source: Planning for SuDS – making it happen, CIRIA, 2010)

Storing Rainwater for Later Use

6.50 As a first step, when assessing SuDS measures, consideration should be given to storing rainwater on-site for later use. On a small scale, this can be achieved by installing water butts to collect roof runoff for uses such as irrigation of gardens and soft landscaped areas. The suitability of integrating rain gardens should also be considered – these can be features such as planted depressions that are watered directly by downpipes channelling roof runoff water.

6.51 On a larger scale, rainwater harvesting systems can be used to collect and store water for internal use as well, for example to feed WCs. As well as diverting surface water from the sewer system rainwater re-use also reduces the use of potable water for basic uses such as garden watering and toilet flushing. However, rainwater harvesting can be of limited value in terms of attenuating surface water flows as there is always the possibility of tanks/butts being full at the time of a heavy downpour – which is when sites need their attenuation capabilities most. Further measures, such as those outlined below will therefore need to be implemented.

6.52 Potable and non-potable water must meet minimum levels of quality to ensure they do not adversely effect human and animal health, vegetation or other sensitive receptors. It is therefore necessary that where rainwater recycling systems are included in a development that they are appropriately tested, monitored, protected and treated as required.

Infiltration Techniques

6.53 Soakaways are an infiltration technique traditionally used to dispose of surface water in locations without easy access to the public sewer or a suitable watercourse. However, they are now considered as a SuDS method that can also be suitable in urban settings. Soakaways can store immediate run-off from roofs and hard surfaces and then allow water to quickly infiltrate into the surrounding soil.

6.54 However, in H&F much of the borough has clay soils, which are not very permeable. Using infiltration measures such as soakaways is therefore of limited value and unlikely to be capable of making a significant contribution to reducing surface water flows from new developments. Using soakaways or other infiltration methods on contaminated land also carries groundwater pollution risks and there are also requirements for soakaway pits to be installed at least 5m away from buildings in order to avoid any potential structural impacts due to ground movement etc. This requirement is also difficult to comply with in H&F where buildings are often located in close proximity to each other.

6.55 There may be some sites where directing surface water into a soakaway could be considered, most likely on a small scale where the ground conditions can be shown to be suitable and the required separation distances can be achieved. If such infiltration techniques are proposed, then a detailed site assessment will be required in line with the guidance contained in the Building Research Establishment (BRE) Digest 365 to show compliance with Building Regulations.

6.56 An alternative to soakaways is permeable paving, where surface level paved areas are installed with permeable components which can either allow runoff to soak in to the ground (if it is suitable) or collect it and channel it to an underground storage tank or soakaway. Porous surfaces can be used which allow water to infiltrate across its entire surface (e.g. gravel, porous concrete/ asphalt) or alternatively impermeable surfaces such as concrete slabs can be used, so long as these are separated by permeable voids that allow infiltration.

6.57 Areas of soft landscaping can be easier to integrate into sites and can serve as useful means to attenuate surface water flows. Where space is at a premium, soft landscaping can also be provided in the form of green (and brown) roofs. These are now well established as a technique to collect, clean and attenuate flows from roof surfaces. The amount of attenuation provided will depend on their design, in particular, on their substrate depth. In addition to the SuDS benefits, green/brown roofs also provide other benefits (such as providing additional insulation, helping to increase a site's biodiversity etc). Green roofs are particularly appropriate for new buildings with flat roofs. For additional advice on biodiversity, green/brown roofs and living walls see Biodiversity SPD.

Surface Level Attenuation

6.58 Larger landscaped features such as ponds, filter strips and shallow vegetated channels called 'swales' may be feasible on some development sites, depending on the amount of space that is available. Such features are encouraged where possible as they can be used to improve the visual landscape and local biodiversity value as well as reducing run-off and encouraging infiltration (where ground conditions are suitable (see Biodiversity section of this SPD). They can also provide water quality benefits by helping to filter out pollutants.

6.59 Surface level attenuation features such as swales can provide large areas to store runoff water during heavy downpours, but they will also need to be designed to convey this runoff to another SuDS component or watercourse.

6.60 The design and maintenance of SuDS schemes such as those outlined above should be undertaken in accordance with the Construction and Design Management Regulations 2007 to ensure compliance with health and safety requirements (due to the presence of features that can fill with water). Features that include permanent open water can use planting to restrict access, but this is unlikely to be necessary for SuDS components such as swales where water will only be present occasionally and at shallow depth.

Underground Attenuation

6.61 If there is inadequate space for surface level SuDS measures, then it is likely that underground pipes and storage tanks will be required. These can be used to store surface run off during heavy storms, attenuating the flows into the public sewer to levels that significantly reduce the risks of flooding.

6.62 Storage can take the form of structures such as oversized pipes, concrete tanks or plastic modular geocellular tank systems. Using underground storage as a SuDS measure can be useful on constrained, previously developed sites where space is at a premium. The structural design of underground pipes/tanks should be designed in accordance with BS EN 1295:1998 on the structural design of buried pipelines under various conditions of loading.

6.63 Where such measures are proposed, these should be shown in detailed drawings and calculations should be included to show that the amount of storage provided is adequate to reduce surface water flows to meet the requirements outlined in the London Plan and Core Strategy policies.

Watercourse Discharge

6.64 For developments directly adjacent to the River Thames, discharging surface water run-off directly into the river is an option that should be assessed in consultation with the Environment Agency and Thames Water. The runoff may be contaminated, so it could need some form of treatment before it can be accepted into the River, but this option can represent a relatively straight-forward method of significantly cutting surface water flows into the public sewer. Drainage systems discharging directly into the River should be designed to take account of the effects of tide-locking and should ensure that runoff does not cause erosion of the riverbed. Drainage outfalls built into the flood defences will need to ensure the integrity of the defences is maintained.

Sewer Discharge

6.65 Discharging run-off into the public sewer is the final option for surface water. If there is a separate surface water drain then this should be connected to in preference to the combined sewer. However, in H&F, almost all of the sewer system is combined. Directing surface water into the public sewer should only be considered once SuDS measures have been used to reduce run-off rates to meet the objectives outlined, which means that, as a minimum, a development site should reduce surface water flows going into the sewer by 50%.

Retrofitting SuDS

6.66 Smallscale works such as householder alterations/extensions can provide an opportunity for installing SuDS – even if this is a simple measure such as using a water butt to collect and store rainwater or installing some permeable paving. Alternatively, consideration could be given to allowing downpipes to direct rainwater to a soakaway (if there is adequate space and ground conditions are suitable) or to a ‘rain garden’. If a roof is being replaced as part of renovation works, consideration could be given to integrating a green roof.

6.67 It should be noted that permitted development rights for householders wishing to install hard surfacing which exceeds 5m2 in front gardens have been removed, although smaller areas are still allowed without the need for planning permission. However, if a permeable surface is planned, this can still be done without the need for planning permission (regardless of area).

6.68 Permeable surfacing materials include gravel, permeable concrete block paving or porous asphalt. Laying an impermeable surface that directs runoff to a lawn or border to drain naturally is also acceptable as permitted development. If the surface to be covered is more than 5m2, planning permission will be needed for laying traditional, impermeable driveways that do not provide for the water to run to a permeable area. Further guidance on the design and construction options can be found online: www.communities.gov.uk

SuDS Maintenance

6.69 Most SuDS measures that are implemented in new developments will need to be regularly inspected and maintained to ensure their efficient operation. Where surface level measures such as swales, basins, green roofs etc are installed, then they can be maintained as part of landscape maintenance work. For measures that have required the installation of underground SuDS components such as storage tanks, a maintenance plan should be followed, in line with the component manufacturer's requirements.

6.70 Wherever SuDS measures are installed in new developments, details of a management plan for their maintenance and repair, should this be necessary, will be required by the council to show that the SuDS will be properly maintained for the lifetime of the development.

Storage of refuse and recyclables

Purpose

6.71 This Supplementary Planning Document (SPD) has been produced to provide guidance on the facilities that are required and the information the council expects developers to provide on recycling and refuse storage when submitting a planning application.

6.72 The document will supplement the recycling and refuse policies included in the council's Core Strategy, adopted in 2011, namely borough-wide strategic policy CC3 Waste Management, and the proposed Development Management Local Plan (DM LP), namely policy DM H5 Sustainable Waste Management .

6.73 The emphasis is on provision of waste and recycling facilities at source to serve local needs and minimise any detrimental impacts on the environment. The council expects developers to take account of the advice in this guidance document in preparing planning applications, particularly for major schemes, bearing in mind that under Section 46 of EPA (Environmental Protection Act) 1990, "where a waste collection authority has a duty by virtue of section 45(1)(a) to arrange for the collection of household waste from any premises, the authority may, by notice served on him, require the occupier to place the waste for collection in receptacles of a kind and number specified. [3]" www.legislation.gov.uk

6.74 This guidance also supplements the policies in the London Plan, particularly Policies 5.16 Waste Self-sufficiency and 5.17 Waste Capacity.

Policy Guidance

National Guidance and Legislation

Waste Strategy 2007[4]

6.75 The Government published the Waste Strategy for England 2007 on 24th May 2007. It sets out a vision for sustainable waste management.

6.76 Key objectives of the strategy include: to decouple waste growth from economic growth and put more emphasis on waste prevention and reuse; meet and exceed the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020; increase diversion from landfill of non-municipal waste; secure the investment in infrastructure needed to divert waste from landfill; and to get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.

6.77 Waste Strategy 2007 did not set recycling targets for individual local authorities, but introduced national targets:

- Recycling and composting of household waste – 45% by 2015 and 50% by 2020; and
- Recovery of municipal waste – 67% by 2015 and 75% by 2020.

Government Review of Waste Policy in England, June 2011[5]

3 Environmental Protection Act, 1990, Section 46
4 **Waste Strategy for England, 2007**
5 Government Review of Waste Policy in England, 2011,

6.78 As part of the Government's commitment to ensure that the UK is on the path towards a 'zero waste' economy, it reviewed all aspects of waste policy and delivery in England. The Review's findings were published in June 2011, alongside a series of actions for the future. These include commitments to:

- work with business on a range of measures to prevent waste occurring wherever possible, ahead of developing a full Waste Prevention Programme by December 2013;
- launch a grant funding scheme for innovative reward and recognition schemes which could incentivise people to do the right thing;
- encourage councils to sign new Recycling and Waste Services Commitments, setting out the policies they will follow in delivering waste services to households and businesses.
- scrap unfair bin fines and taxes while bringing in powers to deal with repeat fly-tipping offenders and genuine nuisance neighbours;
- remove the Landfill Allowance Trading Scheme from April 2013
- meet the revised Waste Framework Directive target to recycle 50% of the UK's waste by 2020.

The Waste Framework Directive (2008/98/EC) and The Waste (England and Wales) Regulations 2011

6.79 The Directive sets the UK a statutory target to recycle 50% of waste from households by 2020. It also requires that there are separate collections for paper, metal, plastic and glass by 2015. "Separate collections" can include co-mingled waste collection followed by separation at recycling facilities.

6.80 The Regulations transpose the Directive into law. The Regulations require that:

- There is a national waste prevention plan in place by December 2013
- Producers and transporters of waste apply the waste hierarchy to waste in their care

London Plan

6.81 The Mayor's spatial development plan for London, The London Plan, has planning policies that cover all London's waste. Both of the Mayor's waste strategies (see below) will be supported by, and should be read in the context of the London Plan.

6.82 Policies 5.16 and 5.17 are particularly relevant to waste and recycling.

Mayor's Municipal Waste Management Strategy

6.83 Both the Municipal and Business Waste Strategies were released in November 2011 after extensive consultation.

6.84 The strategy sets out four objectives for the Mayor's plans for managing municipal waste in London:

1. Provide Londoners with the knowledge, infrastructure and incentives to change the way they manage municipal waste in order to reduce the amount of waste generated, encourage the reuse of items that are currently thrown away, and to recycle or compost as much material as possible.

2. Minimise the impact of municipal waste management on our environment and reduce the carbon footprint of London's municipal waste.

3. Unlock the massive economic value of London's municipal waste through increased levels of reuse, recycling, composting and the generation of low carbon energy from waste.

4. Manage the bulk of London's municipal waste within London's boundary, through investment in new waste infrastructure

6.85 The Mayor has set his own, more ambitious (than national) targets for the management of municipal waste in London. The targets are:

1. To achieve zero municipal waste direct to landfill by 2025.

2. To reduce the amount of household waste produced from 970kg per household (p/h) in 2009/10 to 790kg p/h by 2031 (i.e. a 20 per cent reduction p/h).

3. To increase London's capacity to reuse or repair municipal waste from approximately 6,000 tonnes a year in 2008 to 20,000 tonnes a year in 2015 and 30,000 tonnes a year in 2031.

4. To recycle or compost at least 45 per cent of municipal waste by 2015, 50 per cent by 2020 and 60 per cent by 2031.

5. To cut London's greenhouse gas emissions through the management of London's municipal waste, achieving annual greenhouse gas emissions savings of approximately:

- 545,000 tonnes of CO2eq in 2015
- 770,000 tonnes of CO2eq in 2020
- One million tonnes of CO2eq in 2031.

6.86 To achieve the Mayor's objectives and targets, the strategy outlines six policies, each containing a number of proposals.

Mayor's Business Waste Management Strategy

6.87 The overriding aims of the Business Waste Management Strategy are to:

- Focus on waste reduction and the more efficient management of resources to reduce the financial and environmental impact of waste
- Manage as much of London's waste within its boundaries as practicable, by taking a strategic approach to developing new capacity
- Boost recycling performance and energy generation to deliver environmental and economic benefits to London.

6.88 The Mayor's key targets for the management of business waste are as follows:

- Achieve 70 per cent reuse, recycling and composting of C&I waste by 2020, maintaining these levels to 2031
- Achieve 95 per cent reuse, recycling and composting of CDE waste by 2020, maintaining these levels to 2031.

6.89 To achieve the Mayor's objectives and targets, the strategy outlines four policies, each containing a number of proposals, including:

- To use the planning system to ensure that the design of new and refurbished buildings provides suitable waste storage and access for collections.

Sustainable Design and Construction SPG

6.90 Promoting sustainable waste behaviour is an important element of the Mayor's Supplemental Planning Guidance (SPG) on Sustainable Design and Construction, 2006.

6.91 One of the essential standards in relation to waste is to provide facilities to recycle or compost at least 35% of household waste by means of separated, dedicated storage space, by 2010. The preferred standard is that this rises to 60% by 2015.

6.92 The SPG will be updated in 2012, and any planning applications will be expected to take the latest version of the SPG into account.

Local Plan

6.93 Core Strategy , policy CC3 states that, inter alia, the council will pursue sustainable waste management, including "ensuring that all developments provide suitable waste and recycling storage facilities."

6.94 In the submission Development Management Development Local Plan (DM LP), policy DM H5 states that, inter alia, "all developments, including where practicable, conversions and changes of use, should aim to minimise waste and should provide convenient facilities with adequate capacity to enable the occupiers to separate, store and recycle their waste both within their own residence and via accessible and inclusive communal storage facilities, and where possible compost green waste on site".

Local Context

6.95 Waste or refuse, is the term used to describe unwanted or discarded materials. Recyclables are waste materials that can be re-processed into marketable products, provided they can be kept separate from other waste. It is essential that satisfactory facilities for the storage of refuse and recyclables, together with adequate means of access for collection, are provided in all developments in order to enable efficient recycling and refuse collection. These needs should be taken into account at the outset of the design of the development and made an integral part of it.

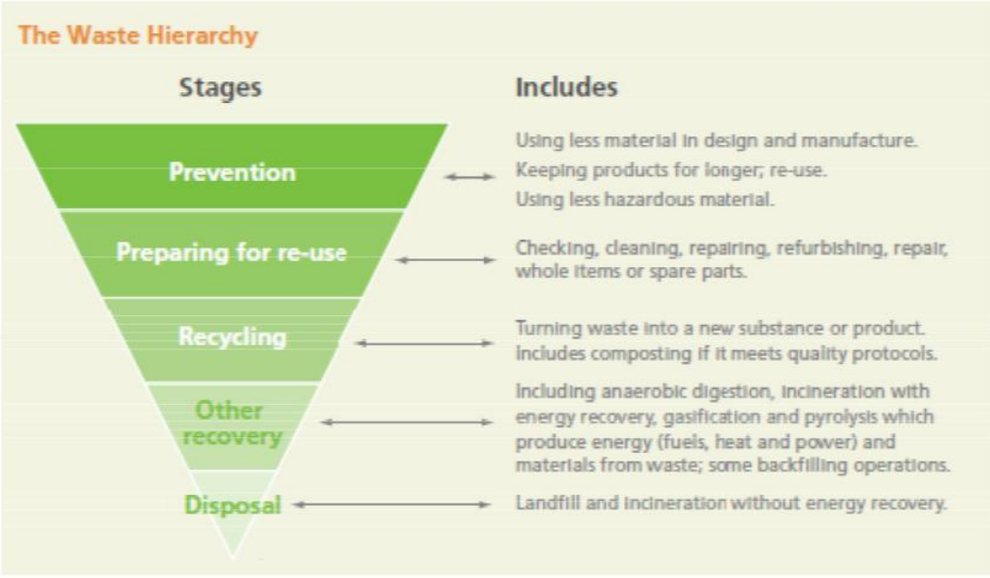
6.96 As a Waste Collection Authority (WCA), Hammersmith & Fulham council collects municipal waste, which includes household refuse and recyclables, street sweepings, litter, flytipped materials, commercial waste, industrial waste and waste from municipal parks and gardens. The level of municipal waste has decreased from over 88,000 tonnes in 2006/7 to an estimated 76, 600 tonnes in 2011/12; a decrease of 13%. Much of this waste has a hidden value and can either be reused, composted or recycled.

6.97 Western Riverside Waste Authority (WRWA) is the statutory Waste Disposal Authority (WDA) for LBHF, as well as the Royal Borough of Kensington and Chelsea, Lambeth and Wandsworth. Most of the waste collected by LBHF is managed through a riverside site (Smuggler's Way), close to Wandsworth Bridge in the London Borough of Wandsworth. Currently most of the non-recyclable municipal waste is transported by river to an Energy from Waste (EfW) facility in Bexley. Recyclable materials are dealt with by a new Materials Recycling Facility (MRF) with a capacity for 84,000 tonnes located at Smuggler's Way.

6.98 WRWA has "Power of Direction" over the borough's Municipal Waste (under the EPA 1990) and the council is obliged to deliver all of its Municipal Waste to WRWA designated waste management sites, currently operated by Cory Environmental Limited.

6.99 In line with the waste hierarchy (figure 1), Hammersmith & Fulham council aims to reduce the amount of waste it collects by encouraging waste minimisation, and increase the level of recycling of municipal waste in the borough. At the time of writing there are no local statutory waste recycling targets, but the council recognises the important role of waste minimisation and recycling in maintaining cost effective services and protecting the environment. As a result, suitable arrangements in developments specifically to encourage recycling by making it easier both for occupants and for collection are required, especially in larger and mixed use developments.

Figure 1 The Waste Hierarchy Source Defra Waste Review 2011



6.100 We are not acting in isolation by pursuing these improvements – the Mayor of London is setting a similar agenda through the policies in the London Plan and the Mayor's Municipal Waste Management and Business Waste Management Strategies which promote the reuse of resources and reductions in levels of waste production. All London Boroughs are expected to follow this lead with the aim of making developments more sustainable and reducing the dependence on landfill and other disposal methods.

Refuse and recyclables policies

Storage of Segregated Waste

6.101 This guidance is applicable to all applications, including applications for new developments, conversions or changes of use, which will materially affect the generation of waste by the development or at the site. Site specific issues and constraints will be taken into consideration where applicable; however in all cases some provision for both waste and recycling must be made.

6.102 This supplementary guidance does not cover construction and demolition waste (see separate Sustainable Construction SPD) or hazardous substances.

SPD Sustainability Policy 3

Residential Waste Storage

Adequate waste and recycling storage should be provided in all residential developments in the borough in order to encourage and increase the opportunities for the recycling and composting of waste.

Residential developments served by kerbside collections

6.103 For domestic properties, where refuse is collected in ordinary dustbins or black sacks, the council provides a kerbside weekly or in some cases, a twice-weekly collection service for mixed (co-mingled) recycling.

- Materials collected include:
- Glass bottles and jars
- Paper
- Cardboard (including corrugated)
- Metal cans, tins and empty aerosols
- Household plastic packaging – including bottles, butter and margarine tubs, yogurt pots and food trays (but not including plastic bags or plastic films)
- Beverage/food cartons (tetra pak or similar)

6.104 The council provides special orange coloured "smart" sacks (single use) for this recycling service free of charge. Rolls of smart sacks are delivered to every household receiving the service at regular intervals (at the time of writing, four times a year). All of the above materials can be placed into the recycling sacks, with no need to sort. Sorting is carried out at the WRWA Materials Recycling Facility (MRF) in Wandsworth.

6.105 The sacks are collected at the same time as refuse sacks, by a split-back vehicle with a compartment for refuse and a compartment for recycling.

6.106 Residential developments serviced by a kerbside refuse and recycling collection should be built with adequate storage for both refuse and recycling both inside and outside the dwelling.

SPD Sustainability Policy 4

Internal Storage

Internal storage for waste and recycling must be located in an accessible and commonly used area inside each dwelling.

6.107 This should be easily accessible from external storage areas, near to areas of high waste production and be hard wearing and washable. Kitchens and utility rooms are generally the most appropriate locations. In a kitchen, the internal storage for refuse and recycling should be away from circulation areas e.g. below a worktop, to prevent restricting assess for people with mobility difficulties.

6.108 The capacity for recycling must be at least equal to storage for refuse and storage space should allow for the ratio of recycling to waste to be adaptable to meet future demand. Adequate space to accommodate at least one smart sack must be provided in the same location as the receptacle for the non-recyclable waste. The smart sack specification is as follows:

- Capacity: 80 litres
- Width when closed: 370mm
- Width when open: 680mm
- Height: 940mm

SPD Sustainability Policy 5

Compost bins

Where there is access to a garden, space should be provided for a compost bin of at least 1 metre diameter by 1.2 metre height.

6.109 Internal space should also be provided for a container or bag to store this compostable waste for a couple of days so that the resident does not have to make daily trips to the compost bin. Transportable kitchen caddies with a sealed lid are popular for this purpose and measure approximately 250mm width by 205mm depth by 205mm height (5 litre capacity). At the time of writing the council offers reduced-price home compost bins and home composting accessories for residents to purchase.

SPD Sustainability Policy 6

External Storage

At residential premises served by kerbside collections, space must be made available outside for the storage of refuse and recycling.

6.110 These spaces must be at ground floor level, at the front of the property and within 10 metres of vehicle access and ideally within 3 metres of the entrance to the premises from the public highway or access road. Storage locations should be on a hard, level surface that is accessible to disabled people.

6.111 The refuse service in operation by the council is the collection of standard dustbins or bags. These dustbins, typically around 80 litres, are not provided by the council and must be supplied by the resident or developer. Residents must also supply their own black refuse bags. Wheelie bins are not acceptable containers because they are not compatible with collection vehicles and are too tall for bags to be safely removed from them. For each individual household an external cupboard or designated storage space is needed, capable of holding at least two ordinary dustbins, whose specification conforms to BS 792 or BS 4998, or alternatively space or holders for at least two refuse sacks, each of about 100 litre capacity. Additional space of at least 160 Litres is also needed for recycling sacks. See the table below for the approximate capacity needed depending on household size.

Recommended capacities for properties served by kerbside collections

Household number	Refuse	Recycling
1 household (4-6 people)	3-5 dustbins (minimum 3 dustbins or 300 litres)	2-3 recycling sacks (minimum 240 litres)
1 household (1-3 people)	2-3 dustbins (minimum 2 dustbins or 200 litres)	2 recycling sacks (minimum 160 litres)

6.112 It is not acceptable for any waste to be stored on the public highway (with the exception of black sacks and recycling sacks placed out on collection day, or after 9pm on the preceding day). Waste stored on the public highway at any other time may result in enforcement action being taken against the resident.

6.113 Appendix 1 provides full details on the collection requirements for the external storage of domestic waste.

SPD Sustainability Policy 7

Residential developments not served by kerbside collections

Properties that are not served by a kerbside collection must be provided with communal refuse and recycling bins

6.114 For properties not suited to a kerbside service, e.g. mansion blocks and estates, they must instead be provided with wheeled refuse bins for communal use, to be located in a bin store orstores and/or at the end of chutes accessible along a step-free route from the dwellings they serve. In most instances these properties must also be served by communal recycling 'smart' banks (special euro bins with orange lids which take the same range of materials as the smart sack, described earlier), located in a bin store or at the end of chutes. The refuse and recycling banks are emptied weekly or more frequently if necessary. The exception to providing the smart bank is where there are 10 or less flats in a property, where it may be possible for the council to offer the smart sack service, provided there is adequate space on the highway to put these out for collection. Where resident service bodies have duties under the Equality Act 2010 to make service adjustments for individual disabled residents, this may in some instances include an assistance arrangement to porter refuse to communal bin and recycling stores. For further information about Equality Act 2010 and Building Regulation step-free access requirements, see Appendix 1 to the Access Section of this document.

SPD Sustainability Policy 8

Internal storage

The overriding policy for facilities in flats is that recycling should be at least as convenient for residents as it is to dispose of refuse.

6.115 Internal storage for waste and recycling must be located in an accessible and commonly used area inside each dwelling, near to areas of high waste production and hard wearing and washable. Kitchens and utility rooms are generally the most appropriate locations.

6.116 Internal storage must provide for both non-recyclable waste and mixed recyclables. If residents will be using chutes or external bins, the space needed internally for storage can be slightly less than for kerbside properties as the waste will not have to be stored all week at the property. It is recommended that between 100 and 150 litre capacity is provided internally, split approximately 50:50 between refuse and recycling. The council provides reusable bags (fig. 2) for residents to use to store and transport recycling to the chute or bins.

Figure 2 Reusable bag

6.117 The specification of these bags is as follows:

- Width: 310mm
- Height: 370mm
- Depth: 250mm

6.118 When considering the option of refuse chutes, the following should be taken into account:

- Developers should not provide a refuse chute alone, as this does not comply with Policy 6 above.
- If chutes are to be considered, one of the following two solutions should be designed:

1. Two separate, parallel chutes, one for refuse and one for recycling. The appearance of the two chute hatches and accompanying signage should clearly indicate the differences between the chutes in order to maximise recycling and minimise contamination.
2. A bi-separator (mechanical) chute. This is one chute with a separator at the base, which residents control via a button at the chute hatch, depending on whether they are depositing refuse or recycling. The separator determines whether the waste is diverted at the base into a refuse or recycling bin.

- Chute dimensions – this must be carefully considered to help prevent blockages from oversized items. Chutes should be a minimum of 450mm in diameter, have a smooth non-absorbent surface, close fitting access doors and be ventilated at top and bottom.
- Alternative arrangements for larger items should be made to minimise risk of blockages.
- At the base, chutes should be equipped with shutters for collection crews to utilise when emptying the bins, to avoid risk of injury from falling waste.
- In general, chute design should comply with BS1703 (specification for refuse chutes and hoppers).

6.119 At developments where a refuse porterage service is proposed, the service should incorporate the porterage of recyclables to the recycling banks provided. Please note that the standard council service provides either smart sacks OR smart banks (but not both) to residential properties. Residential management companies can however purchase smart sacks from the council for residents to use in conjunction with smart banks (minimum purchase 1 box of 10 rolls).

6.120 At present the council does not provide a separate food waste collection. Food waste macerators in sinks provide an alternative method of waste disposal. Any use of this system would have to be agreed with local water companies and the council. For premises with limited external storage space, wormeries could be an alternative to compost bins. Residents can place cooked and uncooked food waste into the wormery to produce a small amount of compost and liquid plant feed.

The Can-O-Worms 70 litre and 45 litre are currently available from the council at a subsidised price. Both measure 500mm in diameter, the 70 litre wormery measures 730mm in height and the 630mm wormery measures 630mm in height. An example is seen in figure 3 below.

Figure 3 Wormery

SPD Sustainability Policy 9

External storage

All new residential developments employing communal containers should provide a purpose built area to include space for recycling banks.

6.121 Careful consideration should be given to the design, siting and location of units so as not to adversely affect the streetscene, particularly in conservation areas. The bin store must be capable of housing the maximum number of bins required, based on an assessment of projected arisings (See below).

6.122 The council recommends calculating the required waste capacity based on the following formula:

A x ((B x C) + 30)

Where:

A = number of dwellings

B = volume arising per bedroom (100l)

C = average number of bedrooms

So for example in a development of 10 x 1 bed flats and 10 x 2 bed flats, the following applies:

A = 20

B = 100l

C = 1.5

20 x ((100 x 1.5) + 30) = 3600 litres

6.123 The recommended split of refuse and recycling is a ratio of 55% refuse, 45% recycling. So in this example 1980 litres is required for refuse and 1620 litres for recycling. This would be rounded up, to give a final recommendation of 2 x 1100 litre refuse bins and 2 x 1280 litre recycling bins.

6.124 Eurobin and chamberlain dimensions are detailed in Appendix 2. For all refuse and recycling containers provided by the council, a delivery charge is levied, as well as a weekly hire charge per container.

6.125 If bins are to be located in a shed or cupboard then adequate ventilation must be provided together with electric lighting controlled by a local switch.

6.126 All bin areas need to be washed down at intervals and a local hose point should be provided with adequate drainage.

6.127 Internal waste storage rooms should be constructed within a fire compartment structure, which is designed to contain a fire. Where risks are greater, for example in multi-storey buildings, fire extinguishers should be deployed, and automatic fire sprinkler or waste mist system considered.

6.128 Waste storage chambers should in general comply with BS5906:2005.

6.129 If bins are to be located in the open then these must have a fence or wall on at least three sides. However they must be safe for users by being well lit and visible from public vantage points.

Siting of storage areas

6.130 Policy 8 - The siting of storage areas for containers and chutes should not cause householders to carry refuse further than 25 metres (excluding vertical distance).

6.131 Storage areas should be on a hard level surface, approached along a path or route that is accessible to disable people.

6.132 It is not acceptable for any waste to be stored on the public highway (with the exception of black sacks and recycling sacks placed out on collection day, or after 9pm on the preceding day, from street properties), so specific, suitable and convenient storage space must be provided within all developments. Wherever practical it should be possible to collect waste direct from the bulk bin storage area so that there is no requirement for it to be moved to a collection point, particularly to a point on the public highway.

6.133 Appendix 1 provides full details on the collection requirements for the external storage of domestic waste.

6.134 In order to encourage and promote awareness of recycling in new developments it is good practice to provide signage in waste storage chambers discouraging the deposit of recyclables in the refuse containers, and encouraging and directing use of the recycling banks provided. The council's recycling team will be able to provide guidance on the design to be used for the signage

6.135 It is also good practice for any information packs provided to new residents to include full information on available recycling facilities along with encouragement to use them. We also recommend that permanent information on recycling is displayed in a prominent position such as on information boards in entrance halls. The council will be able to assist in specifying the type of information to be provided in the packs.

6.136 For larger developments, compaction units could be used for both refuse and recycling (in separate units). Refuse bins and recycling banks located around the development would be transported to and emptied into the chutes by site management staff. The units would be provided by the developer or site management company, and removed/emptied/returned by the council on a regular basis.

6.137 The council should be consulted on compaction units before any purchases are made, to ensure compatibility with existing collection vehicles.

6.138 The use of compacting disposal units does not necessarily reduce the amount of space required for waste storage as there must be sufficient capacity for waste even when the mechanical aid fails to function.

6.139 When calculating number of compactors/frequency of collections required, total capacity required should be calculated based on the A x ((B x C) + 30) formula discussed earlier. For refuse, assume a 4:1 volume reduction and so divide the required capacity by 4 to arrive at the compactor capacity required. For mixed recycling, assume a 3:1 volume reduction and so divide the required capacity by 3 to arrive at the compactor capacity required.

SPD Sustainability Policy 10

Bulky waste

For multiple occupancy developments, provision should be made for a storage area in which to contain any household bulky waste (e.g. furniture, white goods) awaiting collection by the council.

6.140 The council promotes a reuse service which can provide collection of furniture, electrical waste and other bulky items and reuse or recycle them. This is a chargeable service.

6.141 The council itself can remove waste from this storage area on a regular or ad-hoc basis depending on requirements. This is a chargeable collection, and waste collected is generally disposed of rather than recycled (the exception being white goods and electrical waste, which are recycled).

6.142 The recommendations above regarding bin store rooms (e.g. well ventilated, wash down facilities) also apply here.

SPD Sustainability Policy 11

Commercial Waste

In commercial developments, sufficient space should be designed in to accommodate the appropriate number of bins or bags, for both recyclables and non-recyclable waste and to meet the specific needs of the potential user.

6.143 Careful consideration must be given to the likely composition and quantities of wastes expected to arise and whether the type of handling system proposed is compatible with that operated by the council in case the occupier opts to use the council as the waste carrier.

6.144 Guidance on waste capacities required for different commercial premises (including restaurants, offices and supermarkets) are contained in the British Standard for Waste Management in Buildings (BS5906:2005).

6.145 The council offers collection of the same range of co-mingled materials for commercial recycling as it does to residents, thereby minimising the need for a number of separate bags/containers. It should be noted that other waste collectors collect recycling materials segregated and more space may be necessary both internally and externally for recyclables, if the intention is to use a private collection company.

6.146 For premises such as pubs, bars, nightclubs and restaurants, where a large number of empty bottles are produced, adequate space must be provided for their separate storage and collection.

6.147 In all locations where clinical waste is likely to be generated (e.g. medical, dental and veterinary establishments), separate storage and collection arrangements are required for clinical and non clinical waste. This is particularly important where orange bags are in use for clinical waste, as there is potential for cross-contamination with smart sacks.

6.148 Storage areas for commercial and domestic premises within the same development or area should be completely separate to avoid confusion over ownership and charging for commercial collections.

6.149 If possible the storage unit should have the capacity to contain two 1100 litre euro bins (one for general waste and one for recycling). The euro bin will need the access requirements set out in Appendix 1.

6.150 If the developer intends the council to be the waste carrier, each business must take out a waste and /or recycling agreement with the council in advance of supply of bins. Fees apply for both waste and recycling collections. This is either on the basis of bin rental charges plus a collection charge or the number of pre-pay sacks supplied where a sack-based collection service is required. Appendix 2 advises on the supply of compatible containers. The council can provide both refuse and recycling sacks and eurobins for businesses. A council Sales Officer will be available to advise on all available options. Please telephone 020 8753 1100 for further information.

6.151 Each application will be assessed to ensure that the number of containers or sacks provided will meet the needs of the business. Normally this would be on the basis of a weekly collection, however, where this frequency is not sufficient, consideration will be given to more frequent collections.

6.152 Although the council does not offer a separate commercial food waste collection, there are numerous collections offered by private companies across London. Storage space for food waste containers should be planned into the design of the kitchen, along with recycling and refuse. External storage space for food waste containers should also be considered, to minimise odour and mess.

6.153 Owing to the nature of food waste, food premises should have adequate space to store waste in one or more wheelie bins or eurobins of a suitable size. It is recommended that in order to avoid potential odours, a minimum of two collections per week should be allowed for.

Alternative waste collection methods

6.154 For large scale developments, the council is keen to promote the use of new technology which can lead to increases in recycling and reductions in operational costs and carbon emissions.

6.155 For example, a vacuum system such as that currently in use on a new development in Wembley. The system consists of a network of underground tubes into which waste from residents and businesses is deposited, before suction is applied to transfer the waste to a single bulking-up location. Multiple waste streams can be collected in this way, and it has the following advantage:

- Improved residential environment – due to fewer vehicle movements on site, less noise, and fewer emissions.
- Greater waste separation and recycling
- Lower operational collection costs
- No need for multiple bin locations, increasing development footprint available for residential or commercial use.

6.156 This and other technological solutions proposed are looked upon favourably by the council.

SPD Sustainability Policy 12

Community Recycling Facilities

Where a developer is including communal recycling facilities for use by the general public in addition to specific recycling facilities for the occupiers, the location of the community recycling site should be easily accessible for both users and collection teams.

6.157 It is recommended that in order to achieve optimum level of use by the public, these communal sites should be located by entrance/exit points to housing, transport interchanges or main routes to local facilities.

6.158 In addition the facility must be secure (locked into position), not obstruct any utility points and be located away from windows and ventilators to minimise odour and noise nuisance. Design and location of the facility should be forwarded to the council to ensure it will permit safe use, not obstruct driver sightlines and design out crime.

6.159 Suitable arrangements must be made for the management and maintenance of any refuse/recycling areas that are not included on public highway, including cleansing of the site and upkeep of any soft landscaping.

6.160 In terms of collection requirements the policies for collection vehicle requirements in Appendix 1 apply.

Litter, Cleanliness and grounds maintenance

6.161 New developments are usually located in areas of private land, and any areas not classed as public highway would not be cleansed by the council.

6.162 Under the Environmental Protection Act (1990) landowners have a responsibility to keep land under their control free of litter

6.163 The council offers a chargeable sweeping/cleansing service for private land, estimates are available upon request.

6.164 Developers need also to consider whether litter bins are required for users of communal areas or visitors to the site. If litter bins are to be installed, dual litter bins for the separate collection of litter and recycling should be used. Developments near to tube stations may also want to consider the installation of commuter recycling bins for the collection of newspapers.

6.165 Developments of flats with communal grounds should show where arrangements will be made for the on-site composting of garden waste. Composting on-site will result in cost savings for the management company, reducing disposal costs and providing a supply of compost to use on-site.

SPD Sustainability Policy 13

Planning Application Procedures

Planning applications should clearly identify the proposed refuse and recycling storage points and the access routes for collection vehicles.

6.166 Particular care needs to be taken when designing the access to bin storage areas above or below ground floor level, which have to be accessed by the collection vehicles using a ramp.

6.167 Where possible full details of the proposals should be submitted at the application stage. Otherwise a suitable condition will be attached to any outline planning permission requiring the submission of details of refuse and recycling provisions for the development. Appendix 3 indicates the information that is required to be submitted.

6.168 If the developer is considering engaging a private waste contractor to handle waste arisings, they should consult potential contractors on the design of purpose built facilities at an early stage, copying their proposals to the council.

6.169 In major residential or commercial developments the council may require a waste management plan to be submitted.

6.170 Discussions concerning the provision of waste storage should take place directly with the council. These guidance notes seek only to provide some basic advice on the requirements for storage of waste and recyclable materials.

For consultation and advice on any scheme contact:

Waste and Recycling Team

77 Glenthorne Road

London

W6 0LJ

0208 7531100

Appendix 1 – Collection requirements for refuse and recycling storage

Siting and Access

By collectors

Each refuse container should be sited at ground level.

In new developments, the siting of storage containers should, wherever possible, allow movement of containers to the nominated collection point without being taken through a building, unless it is a porch, garage, carport or other covered open space.

The distance between the container and the collection vehicle, at the time of collection, should not exceed 10 metres.

All paths between the container enclosures and collection vehicles should be a minimum 2 metres in width, free from kerbs or steps and have a smooth, hard wearing surface capable of withstanding the loading imposed by a fully loaded wheeled container i.e. 1280 litre eurobin- max 500 kilos/940 litres chamberlain bin- max 375 kilos.

All roads and approaches to buildings or refuse storage areas should be level unless the slope falls away from the storage area at a gradient no steeper than 1:12

Residents or, in some cases caretakers are responsible for moving their bins/bags to the collection point on the collection day.

Access for collection must be provided between 6am -9pm, Monday to Sunday.

Any locks to the storage areas must have a standard ‘Fire Brigade’ 1, 2 or 4 pattern. Where there are electronic gates and /or barriers controlling access to such areas, codes should be provided to the collectors.

By Collection vehicle

These are requirements for the current council collection vehicles. If you intend to use an alternative operator please check their requirements.

Roads providing access to the collection point should have foundations and a hard wearing surface capable of withstanding a fully laden collection vehicle of 26 tonnes gross vehicle weight (GVW), with a minimum axle weight of 11 tonnes. Access ramps need to be capable of supporting this same weight.

Roads should have a minimum width of 5 metres and arranged so that the collection vehicle can continue mainly in a forward direction. Vehicles should not be expected to reverse more than 50 metres to reach a loading position. Vehicles operating in service areas should enter and leave in a forward direction.

If a turning space is necessary, the road layout should permit a turning circle of 18.5 metres, kerb to kerb or 21.1 metres wall to wall.

Any gates or arches on the vehicle route to the storage area should give a minimum clearance of 3.72 width and 4.3 metres height.

Serious consideration must be given to any existing or planned traffic control measures such as controlled parking zones, yellow lines, red routes, bus lanes etc. and access planned so that they do not restrict the times when domestic collections can be made, and do not impede the council’s ability to make collections without increasing risks to health and safety.

Appendix 2 - Containers and maintenance

The council does not provide refuse bins or bags, or smart banks free of charge. It does however provide smart sacks for residential properties with kerbside collections.

Suitable refuse bins and smart banks may be hired by the council to businesses or multi-storey residential blocks where a waste and recycling agreement is taken out. The maintenance, repair and replacement of containers are included within the terms of the hire agreement except where damage is caused through vandalism or the negligence of the lessee. If the developer chooses to hire council bins, they should notify the council in advance and again when they require installation. The containers typically provided by the council are detailed below.

It is not recommended that developers supply their own bins as the management company would then be responsible for all repairs and replacement bins. However, should developers opt to supply their own bins, these must be compatible with council vehicles and lifting equipment.

Technical specification of containers used by the council

Euro bins and chamberlains are acceptable for the storage of refuse. Standard 1100 and1280 litre euro bins are typically used as recycling bins, however smaller 660 and 330 litre bins are also available if necessary. If you supply your own recycling bins for the council to collect you must ensure that the lid is orange and marked with appropriate signage (i.e. list of accepted materials).

The following are guideline dimensions only. Developers should check the dimensions to ensure adequate space between bins when siting a number of units together, allowing for their manoeuvre, for example in and out of enclosures and where necessary through doorways and gates for collection.

Container	Height	Length	Width
Eurobin (1280L)	1480mm	1265mm	985mm
Eurobin (1100L)	1475mm	1250mm	980mm
Eurobin (660L)	1330mm	1250mm	720mm
Eurobin (360L)	1100mm	620mm	860mm
Chamberlain- square= (940L)	1410mm	1010mm	950mm
Chamberlain- square= (740L)	1410mm	1010mm	765mm

(= Chamberlains are only recommended and supplied where sites cannot take eurobins, due to restricted space and access)

Appendix 3 - Details to be provided by the developer

The developer should provide details of:-

The likely volume of waste and recycling arisings, in order to assess the number of receptacles that will be required.

The system proposed to encourage the segregation of wastes for recycling, especially in the case of multi-storey premises.

The type(s) of container proposed to store wastes and recyclables;

The location of refuse and recycling storage areas (plans);

The method and frequency of collections anticipated, including any arrangements for replacement and storage of full containers between collections;

The arrangements for vehicle access to the proposed area(s);

The surfacing / screening and accessibility (for both user and waste operatives) for the area

Details of access for disabled people up to refuse and recycling storage points and of porterage assistance within large developments for disabled people who require it. BS8300:2009 provides further guidance on this.

The signage and public information that will be provided to residents to encourage recycling and waste management.

Biodiversity

Purpose

6.171 The SPD provides supplementary detail to policies within LBHF's Core Strategy 2011 and Development Management Local Plan (DM LP) that are concerned with conserving and enhancing the borough's biodiversity.

6.172 The objectives of this SPD include:

- assisting applicants seeking planning permission by informing them of the level of biodiversity related information required to support planning proposals;
- providing guidance on how design features to increase biodiversity should be considered and integrated within development proposals as part of a high quality design;
- ensuring that development works are undertaken to provide an enhancement to the site post build for biodiversity, protecting the numbers of species, the state of populations, the sizes and types of habitat, the functionality and sustainability of the ecosystems protected or provided through the build processes and in perpetuity; and
- encouraging landowners to maintain and monitor species and habitats in perpetuity for sustainable biodiverse ecosystems and ecosystem services through the employment of Ecological Management Plans (EMP).

National policy

6.173 The responsibility on local authorities for biodiversity conservation is detailed in section 40 of the Natural Environment and Rural Communities Act 2006. The Act places all public authorities in England and Wales under a statutory duty to have regard to the conservation of biodiversity in exercising their functions[(6)]. The duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making. Section 40(3) of the Act further states that 'conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population of habitat.'

6.174 The Wildlife and Countryside Act 1981 provides more general protection for a range of species and habitats.

6.175 Appendix 1 sets out in detail the international and national legislative and policy framework for biodiversity conservation.

Policy Guidance

6.176 Chapter 11(paragraphs 109-119) of the National Planning Policy Framework details the national planning policy on biodiversity conservation.

London Plan

6.177 The London Plan makes reference to the protection or enhancement of biodiversity in a number of separate policies. These include:

- Policy 7.19 – Biodiversity and access to Nature, which states that "development proposals should wherever possible make a positive contribution to the protection, enhancement, creation and management of biodiversity";
- Policy 2.18 – Green infrastructure – The network of open and green spaces;

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6 Section 40, The Natural Environment and Rural Communities Act 2006, which states that:,"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"

- Policy 5.3 – Sustainable Design and construction;
- Policy 5.10 – Urban Greening; and
- Policy 5.11 – Green roofs and development site environs

Local Plan

6.178 The council's strategic planning policies aimed at conserving and enhancing the borough's biodiversity are listed in the adopted Core Strategy and the Development Management Development Plan Document (DM LP). Relevant Core Strategy policies include:

- Borough wide Strategic Policy – OS1: Improving and protecting parks and open spaces;
- Borough wide Strategic Policy – RTC1: River Thames and Grand Union Canal; and
- Borough wide Strategic Policy – CC4 : Protecting and enhancing environmental quality

In respect of DM DPD policies concerned with biodiversity matters, key policies include:

- Policy DM E3 -Nature conservation;
- Policy DM E4 – Greening the borough;
- Policy DM E1 – Access to parks and open spaces; and
- Policy DM F2 – The design and appearance of development within the Thames Policy area;

Local Context

6.179 As a densely urbanised inner London borough, little remains of Hammersmith and Fulham's original natural ecosystem complexes. Despite this, some good quality wildlife habitat can still be found along the borough's waterways and railtracks and also within its parks, cemeteries and community gardens where these are not over-manicured. The River Thames and the Grand Union Canal also form two important 'blue' wildlife corridors and are used by many species of birds, bats, fish and invertebrates to travel across the borough, allowing some species to colonise the borough and adding to local biodiversity.

6.180 A 1988 study[7] of the borough's wildlife habitats identified a total of 225 hectares of green space in the borough which constitutes 14 percent of the total surface area of the borough. A breakdown of this into different habitat types shows that over 60 percent of green space in the borough (150 hectares) comprises formal parkland, sports pitches and amenity grassland. Of the remainder, the majority is made up of grassland (30 hectares) and herbaceous communities (18 hectares). Only around 6 hectares of native woodland remains in the entire borough.

6.181 In this context, opportunities to enhance and create new habitats for biodiversity in the borough will mostly exist in:

- incorporating design measures to increase biodiversity within new developments;
- improving the quality of existing nature conservation areas and green corridors; and
- making existing open spaces more multifunctional and capable of supporting biodiversity.

6.182 The borough's nature conservation areas and green corridors are identified in Appendix 3 of the Core Strategy and the associated Proposals Map. The borough's nature conservation areas are categorised according to the criteria in 'Nature Conservation in Hammersmith and Fulham – Ecology Handbook 25 (1993)', prepared by the London Ecology Unit. These categories are as follows:

a) Areas of Metropolitan importance

b) Areas of borough-wide importance

7 Nature Conservation in Hammersmith and Fulham – Ecology Handbook 25 (1993)

c) Areas of local importance

d) Green Corridors

6.183 a) Areas of Metropolitan Importance – Sites which contain the best examples of London's habitats; sites which contain rare species, rare assemblages of species or which are of particular significance within large areas of otherwise heavily built-up London. These sites have the highest priority for protection.

6.184 Hammersmith and Fulham contains parts of three Areas of Metropolitan Importance as listed below:

- the Grand Union Canal;
- the River Thames with its foreshore, drawdocks and inlets including Chelsea Creek; and
- Kensal Green Cemetery.

6.185 b) Areas of Borough-wide Importance – Sites which are important from a borough perspective, damage to which would constitute a significant loss to the borough. Borough sites are divided on the basis of their quality into two grades, however all are important from a borough-wide context.

6.186 In Hammersmith and Fulham six (13 discrete sites for NI160 purposes) sites of Grade I importance and three (3 discrete sites for NI160 purposes) of Grade II importance have been identified. These are as follows:

6.187 Areas of Grade I borough-wide importance

- Wormwood Scrubs
- Old Oak Common
- Fulham Palace and Bishops Park – including All Saints' Churchyard
- Former British Gas Pond at end of Chelsea Creek to west of Railway
- Hurlingham Club Grounds
- Rail side habitats – various locations

6.188 Areas of Grade II borough-wide importance

- St Mary's Cemetery
- Hammersmith Park
- Ravenscourt Park

6.189 c) Areas of Local Importance – Sites which are, or may be of particular value to nearby residents or schools. The sites may be used by schools for nature study purposes or may be run by management committees mainly composed of local people. Areas of local importance are particularly important to areas that are otherwise deficient in nearby wildlife sites. Areas of deficiency are defined as built-up areas more than one kilometre from an accessible Metropolitan or Borough site. There are sixteen areas of local importance in Hammersmith and Fulham. These are listed below:

- White City Community Gardens
- Wormholt Park
- Wendell Park
- Cathnor Park
- Shepherds Bush Common
- Furnivall Gardens
- St Paul's Open Space
- Fulham Palace Road Cemetery
- Normand Park

- South Park
- Eel Brook Common
- Little Wormwood Scrubs Park
- Loris Road Community Garden
- Godolphin Road Community Garden
- Hammersmith Cemetery

6.190 d) Green Corridors – Green Corridors are relatively continuous areas of open space leading through the built environment and which may link sites to each other and to the Green Belt. They often consist of railway embankments and cuttings, roadside verges, canals, parks, playing fields and rivers. Green corridors are valuable as they can link isolated fragments of wildlife habitat, provide valuable habitat in their own right and allow animals and plants to penetrate further into the built environment to colonise these areas. In Hammersmith and Fulham, the River Thames and the Grand Union Canal form two important green corridors. There are three other green corridors running alongside the following rail lines:

- West London Line – Fulham Road to Chelsea Creek
- West London Line – Westway to Lillie Road
- Euston to Watford DC Line.

6.191 These green corridors are broken into discrete land parcels for NI160 into the following:

- Central line west of White City
- District line north of Fulham Broadway
- West London line south of Earl's Court
- Disused trackbed west of Hammersmith station
- Kensal Green Railway Cutting
- Old Oak Sidings
- West London line at Sands End
- West London line south of Earl's Court
- Wormwood Scrubs Railway Embankment

Protecting biodiversity in the development process

6.192 The policies listed below are categorised into two broad themes – Policies 1 to 5 focus on protecting existing biodiversity on proposed development sites. Policies 6 to 11 are mainly concerned with enhancing levels of biodiversity on development sites and across the borough generally.

SPD Sustainability Policy 14

Protection of existing biodiversity

Applicants for development proposals should:

1. ensure thorough initial investigations are conducted on the proposed development site to assess existing levels of biodiversity;

2. provide accurate and up to date survey information with planning applications on existing trees, including protected trees, any habitats or biodiversity features and the presence of plants, invertebrates, amphibians, reptiles, birds or mammals (including bats) on the proposed development site;

3. undertake assessments where surveys confirm the existence of protected or priority species or habitats that detail the proposed development's impact on these species or habitats;

4. ensure that where such assessments demonstrate that species or habitats are likely to be affected by the development, the development where possible avoids adverse effects on these and mitigates any unavoidable impacts arising from the development; and

5. assess the impact of development on nearby nature conservation areas or green corridors.

6.193 All applicants seeking planning permission for proposed developments are encouraged to engage in early pre-application discussions with the council in order to:

- help establish whether any protected species or habitats exist on the proposed development site;
- identify any potential impact of the development on biodiversity; and
- outline the scope of any surveys and assessments that may be needed to support a planning application

6.194 Developers should undertake initial site investigations of the proposed development site to assess existing levels of biodiversity on the site before any demolition or site clearance has commenced and before the layout of the new development has been designed. In particular, the site investigations should assess whether the site contains any protected species or habitats.

6.195 Trees form an important element in biodiversity conservation, providing shelter and food for a range of different species and being of conservation value in their own right. Developers should aim to design the development to maximise the number of trees that will be retained, especially those of conservation and heritage value. Development proposals should also identify suitable locations for tree planting, including those for significant trees wherever possible. The council may require developers to submit an Arboricultural Implications Assessment and an Arboricultural Method Statement if trees are present on or adjacent to the development site and are likely to be affected by the proposed development.

6.196 Most development sites, including buildings are used or colonised by a range of fauna, flora and fungi species. Developers may need a qualified ecologist to conduct a survey aimed at identifying different protected species present and the potential of the site to support species that may be missed by the survey. Surveys of species and habitats often need to take place at particular times of year and need to be planned in advance. Appendix 3 provides a table showing the appropriate times of year to undertake surveys for different species. It should be noted that if surveys related to the proposed development are to be conducted that are likely to result in an offence under regulation 39 or 43 of the Conservation (Natural Habitats, & c.) Regulations 1994, it is recommended that a licence is first

obtained from Natural England. Persons wishing to carry out survey work that could affect animals or plants that are a European protected species should contact the relevant local area team of Natural England.

6.197 The development should be designed and laid out in a manner that avoids harm to the wildlife and habitats in designated nature conservation areas and green corridors. If this is not possible, harm must be minimised and the harm should be compensated for either on the development site or within the area.

6.198 Proposed developments adjacent to or in the vicinity of a designated nature conservation area will also need to ensure that landscaping schemes provided as part of the development do not adversely affect the nature conservation area and are biodiversity friendly.

SPD Sustainability Policy 15

Protected and Priority Species

Where development proposals involve any of the activities shown in Appendix 4, a Protected or Priority Species Survey and an associated Assessment will be required with the planning application if:

• there are reasonable grounds to believe that the site is being used by a Protected or Priority Species; and

• the current level of biodiversity of the site is unknown.

The information gained from the site survey and assessment should be up-to-date and sufficient to allow the development impact to be appropriately assessed.

6.199 There are strong legislative measures in place to conserve Protected or Priority species. Different types of development including the proposed total or partial demolition of buildings as listed in the table in Appendix 4 can impact upon some protected species more than others for example bats and/or nesting birds . Where required, developers should conduct Protected Species surveys and assessments on sites where such developments are planned before any work associated with the proposed development begins. Surveys and assessments should be prepared by qualified ecologists.

6.200 Appendix 5 contains a flowchart providing guidance on the steps developers need to take to ensure the protection and enhancement of biodiversity on development sites.

Requirements for species surveys

6.201 Where species surveys are to be conducted, these should be:

- undertaken and prepared by competent persons with suitable qualifications and experience (such as a member of the Institute of Ecology and Environmental Management) and must be carried out at an appropriate time and month of year (see Appendix 3), in suitable weather conditions and using nationally recognised survey guidelines or methods where available;
- informed by the results of a search for ecological data from Greenspace Information for Greater London (GiGL), the biological records centre for London, and other environmental organisations, as appropriate. These may include for example:

  - London Bat Group; or
  - the London Natural History Society (LNHS).

- prepared at an appropriate level of detail and must record which species are present and identify their numbers (may be approximate); and map their distribution and use of the area, site, structure or feature (e.g. for feeding, shelter, breeding).

6.202 Further information on appropriate survey methods can be found on the website of the Institute of Ecology and Environmental Management: Sources of Survey Methods www.ieem.net

6.203 Failure to provide accurate and up to date survey information may be a reason to refuse the registration of the planning application or may result in its subsequent refusal when considered against policy.

Requirements for assessments of species surveys

6.204 The assessment must identify and describe potential development impacts likely to harm the Protected or Priority Species and / or their habitats identified by the survey (these should include both direct and indirect effects both during construction and afterwards). Where harm is likely, evidence must be submitted to show how:

- alternative designs or locations have been considered;
- adverse effects will be avoided wherever possible;
- unavoidable impacts will be mitigated or reduced; and
- impacts that cannot be avoided or mitigated will be compensated.

6.205 The assessment should also give an indication of how species numbers are likely to change, if at all, after development so as to establish whether there will be a net loss or gain.

6.206 The information to be provided in response to the above requirements is consistent with those required for an application to Natural England for a European Protected Species License. For further detailed information see: www.naturalengland.org.uk

6.207 A Protected or Priority species Survey and assessment may form part of a wider Ecological Assessment and/or part of an Environmental Impact Assessment.

6.208 A full Protected or Priority Species survey and assessment may not be required if:

- the council has stated in writing that no Protected or Priority Species surveys and assessments are required; or
- it is clear that no Protected or Priority Species are present on the development site despite the guidance in Appendix 6 suggesting their likely presence, and the applicant is able to provide evidence with the planning application to demonstrate that such species are absent (this might be in the form of a letter or brief report from a suitably qualified and experienced person, or a relevant local nature conservation organisation, or where information is obtained from Greenspace Information for Greater London (GiGL); or
- it is clear that the development proposal will not significantly affect any Protected or Priority Species present. In this instance, only limited information needs to be submitted. This information should:

  - a) demonstrate that there will be no significant affect on any Protected or Priority Species present; and
  - b) include a statement acknowledging that the applicant is aware that it is a criminal offence to disturb or harm protected species should they subsequently be found or disturbed.

SPD Sustainability Policy 16

Designated sites, Priority Habitats, etc

If the application is likely to affect any of the Designated Sites, Priority Habitats or biodiversity features listed in Appendix 7, a survey and assessment for the relevant feature(s) must be submitted with the application.

A site survey and assessment will not be required where the applicant is able to provide copies of pre-application correspondence with the council's ecologist or ecological advisor and/or other competent parties (e.g. Natural England or the London Wildlife Trust), showing that they are satisfied that the proposed development will not affect any of the areas listed in Appendix 7.

6.209 In addition to Protected and Priority species, the council will have regard to the protection of the borough's nature conservation areas, Priority Habitats and green and blue corridors within the borough

Development adjacent to the River Thames or the Grand Union Canal

6.210 The River Thames and the Grand Union Canal together constitute the borough's 'blue' corridors. Both these waterways, but especially the River Thames provide habitat for a wide range of species and act as important wildlife corridors, allowing a large number of species to travel through the borough. In some instances, the river and the canal provide the means for species to enter and establish themselves within the borough and other parts of London. In order for the River Thames and the Grand Union Canal to continue functioning as habitat and corridors for wildlife, new development along the River Thames and Grand Union Canal should be carried out taking into account the following ecological principles:

- Enhance the function of the River Thames and the Grand Union Canal as wildlife corridors and introduce measures to encourage riparian biodiversity;
- Investigate the managed retreat of the riverbank and establish areas of biodiversity friendly landscaping where practicable;
- No loss of Local Sites of Nature Conservation Importance;
- No negative ecological or environmental impact on Local Sites of Nature Conservation Importance in proximity to the river and the canal;
- Retention, protection and enhancement of all existing priority1 habitats and species;
- A net increase in open space including natural and semi-natural green space;
- The incorporation of green Infrastructure and SUDs in developments;
- Green roofs and other green design features are required on all buildings, where practicable. Building design should also incorporate nesting features (e.g. bird boxes) into the structure of buildings where practicable;
- Light spillage should be reduced within and adjacent to areas of ecological value, including green / blue ribbons (corridor linkages); and
- An ecological and environment impact assessment must be submitted with any major planning application

Details of survey requirements for Designated Sites and Priority Habitats

6.211 Where surveys of Designated Sites and Priority Habitats are to be conducted, these should be:

- prepared by competent persons with suitable qualifications and experience (such as a member of the Institute of Ecology and Environmental Management) and must be carried out using nationally recognised survey guidelines or methods where available. Further information on appropriate survey methods can be found on the website of the Institute of Ecology and Environmental Management Sources of Survey Methods: www.ieem.net
- informed by the results of a search for ecological or geological data from Greenspace Information for Greater London (GiGL), the biological records centre for London, and other environmental organisations, as appropriate. These may include:
    - London Wildlife Trust
    - London Bat Group
    - London Natural History Society (LNHS)
    - Local Regionally Important Geological Sites (RIGS) Groups
    - prepared to an appropriate level of detail and must:
        - record which habitats and features are present on, and where appropriate, around the site;
        - identify the extent and area of the site, protected habitat and/or biodiversity feature; and
        - map the distribution of the site, protected habitat and/or biodiversity feature on site and/or in the surrounding area shown on an appropriate scale plan.

6.212 Information on internationally and nationally designated sites can be found at: www.natureonthemap.org.uk Information on locally listed nature conservation areas can be found on the council's web site at: www.lbhf.gov.uk

Details of Assessment requirements for Designated Sites and Priority Habitats

6.213 Assessments prepared in relation to the survey should identify and describe potential development impacts likely to harm Designated Sites, Priority Habitats, and listed Biodiversity Features. This should include both direct and indirect effects occurring during construction and after development. Where harm is likely, evidence must be submitted to show:

- How alternative designs or locations have been considered;
- How adverse effects will be avoided wherever possible;
- How unavoidable impacts will be mitigated or reduced; and
- How impacts that cannot be avoided or mitigated will be compensated.

6.214 The assessment should give an indication of the likely change in the area (hectares) of Priority Habitat(s) on the site after development such as to whether there will be a net loss or gain. Proposals are encouraged that will enhance, restore or add to designated sites, Priority Habitats, or Biodiversity Features.

Sharing of Ecological Data Findings

6.215 The council will provide a copy of any ecological data including survey and assessment findings submitted as part of a planning application to Greenspace Information for Greater London (GiGL), London's Open Space and Biodiversity Records Centre. Developers should be aware that this data will be made publicly available once it is transferred to GiGL. This data exchange will help to increase the knowledge, protection and enhancement of biodiversity in the borough and across London generally.

6.216 In order to ensure consistency with GiGL's data management, developers should provide a table of data containing the following minimum information, as an appendix to any ecological or survey reports:

- Grid Reference
- Date
- Species
- Observer (the person who made the record)
- Location name
- Abundance (if recorded)

6.217 A standard data entry form in Excel format showing the required and all optional fields can be downloaded from the GiGL web site at: www.gigl.org.uk

6.218 Unless otherwise stated, all data will be managed and made available in accordance with GiGL's accessing data policy (which includes putting it on the National Biodiversity Network). Further information is available on GiGL's web site.

SPD Sustainability Policy 17

Development Proposals

Development proposals on all land should protect any significant biodiversity and/or habitat features present on the site and avoid harm to any nearby nature conservation areas. Where appropriate to the scale and nature of the site, new development should be designed and located in a manner that retains, as far as practicable, existing biodiversity and habitats and natural landscape features on the site.

6.219 The built up nature of the borough and the absence of major nature conservation sites makes it important that new developments are sympathetic to preserving existing nature conservation interests on the site such as locally significant trees and natural landscape and habitat features. Early consideration of the need to preserve any significant nature conservation interest on the site should allow innovative design solutions to be devised that are cost effective, add to the character of the development and will not impair the efficient functioning of the development.

SPD Sustainability Policy 18

Invasive plant species

Where a site is to be redeveloped, developers should identify the presence of any invasive plant species at an early stage and introduce measures to prevent the spread of these species during and after construction.

6.220 Animals and plants that have been introduced to an area where they do

6.221 not normally occur may become invasive. Some vigorous or invasive non-native plant species in particular can impact negatively upon biodiversity by out-competing native flora and rapidly dominating local ecosystems. This can then affect other species, resulting in an overall decline in biodiversity. Section 14(2) of the Wildlife and Countryside act 1981 makes it an offence to, 'plant or otherwise cause to grow in the wild' any plant species listed in Schedule 9 of the Act.

6.222 Under part II of schedule 9 of the Wildlife and Countryside Act (as amended) 1981, landowners are required to eradicate the following invasive plant species that are likely to be found on development sites in Hammersmith and Fulham:

- Japanese knotweed(Fallopia japonica);
- Himalayan Giant Hogweed (Heracleum mantegazzianum).

6.223 Additional invasive non-native plant species likely to exist in development sites in the borough include:

- Himalayan balsam (Impatiens glandulifera);
- Tree of Heaven (Ailanthus altissima);
- False Acacia (Robinia pseudoacacia)
- Alkanet (Pentaglottis sempervirens)
- Butterfly bush (Buddleia davidii)
- Snowberry (Symphoricarpos albus)

6.224 Developers should also ensure the following aquatic plant species are not introduced to any water bodies, including garden ponds on or adjacent to the development site:

- Curly waterweed (Elodea crispa)
- Pennywort (Hydrocotyle ranunculoides)
- New Zealand pygmy weed (Crassula helmsii)
- Water-primrose (Ludwigia grandiflora)
- Parrot's feather (Myriophyllum aquaticum),
- Chinese Water fern (Azolla filiculoides)

6.225 A further list of invasive non-native species (INNS) will be produced by the council and updated as required. Further London wide information is available from the London Invasive Species Initiative (LISI) and the Invasive Non-Native Species Secretariat: https://secure.fera.defra.gov.uk

6.226 The Environment Agency provides advice on the measures to control invasive species. Where it is intended to use herbicides or pesticides close to water, an application must be made to the Environment Agency.

SPD Sustainability Policy 19

Impact on nature conservation areas

Proposals for major development or development sites close to a nature conservation areas, will normally require an Ecological Management Plan (EMP). An EMP should include:

- **details of ecological surveys undertaken and the results of these surveys.**
- **measures to protect species and habitats during site preparation, construction and occupation.**
- **measures to increase the ecological value of the site once the development is complete, to ensure a net gain for biodiversity.**
- **measures to ensure the biodiversity value of the site is maintained for the long term (5 years +) after development is complete, including a monitoring program. The developer and / or site manager must ensure the EMP is handed over and explained to any maintenance company or staff responsible for maintaining landscaping and / or gardens and buildings.**

6.227 EMPs are normally prepared for developments that have or will attract biodiversity to the development site or developments that will exert an impact upon sites containing biodiversity. The preparation of an EMP will help ensure that the needs of biodiversity are considered after the development has been completed and can also establish long term biodiversity friendly management and maintenance regimes regardless of a change in property ownership.

6.228 A simplified version of the EMP should also be provided for householders and other occupiers of the site, explaining how biodiversity is being protected and enhanced on the site.

SPD Sustainability Policy 20

Enhancement of Biodiversity

Development proposals, (excluding householder applications) should include design measures that will enhance, restore or create features or habitats used by wildlife.

Appropriate to the scale, type and potential impacts of the proposed development on biodiversity, developers should create new and/or enhance existing green infrastructure and habitats in or around new developments by incorporating some, or all of the measures listed below:

- **Creating new green infrastructure, including green corridors linking habitats on and next to the site so that wildlife can move between habitats;**
- **Creating new habitats such as hedges and ponds that will benefit wildlife. Often even small scale, cost effective habitat creation can provide significant biodiversity gains and greatly add to the visual interest of the development;**
- **Ensuring that landscape schemes, including ornamental landscaping and management routines, benefit wildlife and biodiversity.**
- **Integrating nesting and roosting opportunities for bats and birds into buildings and other built structures;**
- **Wherever appropriate, developers should consider how their landscape proposals relate to and contribute to meeting the London Plan targets for the improvement and expansion of priority habitats; and**
- **Designing external lighting to minimise light spill and other light pollution.**

For open spaces around development, the emphasis should be on developing multifunctional spaces that can also effectively function as habitats for biodiversity.

For strategic development sites, a Green Infrastructure Strategy setting out the key principles for green infrastructure development on the site will be required. This may be part of a Concept Statement or development brief that will influence the site planning and design and help ensure green infrastructure is incorporated from the early stages of the project. Concept statements can also be used as the basis for the Design and Access Statement.

Where on-site improvements to green infrastructure are not possible, developer contributions or suitable green infrastructure provision in other areas of the borough may be required.

6.229 If considered early in the design process, and taking account of the scale and type of the proposed development, the adoption of suitable design measures can effectively enhance biodiversity in the borough in a cost effective manner. This enhancement will usually result from protecting existing biodiversity and:

- increasing the area of existing habitat(s) and /or;
- creating new functional habitat(s) and /or;
- implementing specific measures that will benefit certain species including protected or priority species.

6.230 Depending on their nature and scale, new development proposals present a wide range of opportunities to enhance local biodiversity. These opportunities may include:

- the installation of bird nesting bricks/boxes and bat roosting boxes;
- the adoption of biodiversity friendly landscape management strategies;
- the incorporation of green and/or brown roofs; and
- the creation of new multifunctional, biodiversity-friendly open spaces.

6.231 Simply increasing the number of plant species on the development site will not necessarily be considered as enhancement of biodiversity.

6.232 Any biodiversity surveys and associated assessments of species and habitats that may be required may include recommendations that can contribute to this enhancement. If an assessment is prepared, it should also give an indication of how species numbers are likely to change, if at all, after development.

6.233 The council will aim as far as possible to enhance the overall level of biodiversity across the borough by maximising opportunities for incorporating biodiversity features into new developments as part of its commitment to good design.

6.234 Greenspace Information for Greater London (GiGL) has prepared London Habitat Suitability Maps for the London Biodiversity Partnership. These maps can be used to help identify the most suitable type of habitat for a particular site to create or restore priority habitats. Indicative maps are available on GiGL's website at:www.gigl.org.uk

6.235 In cases where the site is not covered by the London Habitat Suitability Maps, large-scale habitat creation should reflect the landscape character of the area, as identified in Natural England's London's Natural Signatures project. This is available at the Natural England web site at: www.naturalengland.org.uk

6.236 Green infrastructure is the network of functional green space which supports natural and ecological processes and is integral to the health and quality of life of communities. It includes:

- Parks and Gardens – urban parks, Country and Regional Parks, formal gardens
- Amenity Greenspace – informal recreation spaces, housing green spaces, domestic gardens, village greens, urban commons, other incidental space, green roofs
- Natural and semi-natural urban greenspaces - woodland and scrub, grassland (e.g. downland and meadow), heath or moor, wetlands, open and running water, wastelands and disturbed ground), bare rock habitats (e.g. cliffs and quarries)
- Green corridors – rivers and canals including their banks, road and rail corridors, cycling routes, pedestrian paths, and rights of way
- Other - allotments, community gardens, city farms, cemeteries and Churchyards.[8]

6.237 Depending on its scale and nature, new development can provide varied opportunities to enhance and increase the borough's green infrastructure. New developments may also contribute towards the enhancement of green infrastructure by including elements such as :

- naturalised Sustainable Urban Drainage System such as swales and ponds;

8 Green Infrastructure Guidance (Natural England 2008)

- Green roofs and living walls; and
- Tree planting schemes (including street trees).

6.238 Natural England's Natural Development project has been set up to demonstrate how both large and small scale development can incorporate green infrastructure. More information is available from Natural England's web site at: www.naturalengland.org.uk

6.239 Where on-site improvements to green infrastructure are not possible, developer contributions or suitable green infrastructure provision in other areas of the borough may be required. Further details on how developer contributions relating to green infrastructure and biodiversity generally will be determined are listed in the section on s106 obligations in this SPD.

6.240 Modern buildings typically do not offer any external nooks, surfaces or entry points for birds or bats and are effectively impenetrable to species such as swifts, swallows and sparrows that rely on built structures for nesting and roost sites, contributing to their decline. Developers should consider how to incorporate nesting and roosting opportunities for birds and bats into the structure of new buildings. This should include the use of commercially available 'swift bricks' or other similar products that are incorporated into the walls of buildings. Where this is not feasible the attachment of nest boxes and bat roost boxes to the external walls of new buildings should be considered. The roofs of tall buildings may be suitable for the installation of nesting structures for Peregrines or other raptors.

6.241 Care should be taken to avoid positioning nest bricks or boxes on the side of buildings that get direct sunlight. For more information see 'Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build', RIBA, March 2010 and other sources such as the Royal Society for the Protection of Birds website at:

www.rspb.org.uk and the London's Swifts web site at: www.londonsswifts.org.uk

6.242 In order to minimise stress and disturbance to local wildlife, it is important to carefully manage any potential light pollution issues associated with new development and impacting upon nearby areas where wildlife is found. This is especially important in a heavily built up borough like Hammersmith and Fulham where areas where wildlife refuge areas are relatively scarce and disturbance from light pollution to existing natural areas can have a significant adverse impact on local wildlife.

SPD Sustainability Policy 21

Landscaping and planting

Developers should incorporate existing natural features that enhance biodiversity such as trees, hedges, scrub, tall grass and ponds into the landscape scheme for the site. The council will discourage landscaping schemes utilising extensive areas of impermeable surfaces, lawn and formal garden areas or plant species that do not enhance biodiversity. Landscaping schemes should seek to include ecological features of natural woodlands such as overstorey tree canopies, middle storey shrubs and understorey ground covering plants to maximise the capacity of the landscaped area to support diverse biodiversity. Some species provide higher quantities of nectar and these should be chosen where they can be demonstrated not to become invasive non-native species.

Development sites adjacent to, or in the vicinity of a designated nature conservation area, green corridor or green / blue infrastructure, should use native plant species, preferably of local provenance in landscape schemes. Where appropriate a green buffer should be planted between the River Thames and the Grand Union Canal and any development site.

For other development sites, aim for at least 50 per cent of plants used for landscaping to be native (both species and planted area) and preferably of local provenance.

Where non- native plants, grasses, shrubs and trees are used in landscape schemes, they should be valuable for wildlife and non-invasive.

The council will encourage the planting of biodiversity friendly hedges and/or planted fences or walls as an alternative to fencing to create wildlife friendly boundaries to development sites.

6.243 The built up nature of the borough means that space for biodiversity is very limited. It is therefore important that new open spaces created as a result of development are multifunctional and are designed to be capable of providing functional habitat for a diverse variety of species. Accordingly, the council will seek to ensure that landscape designs for new development will:

- create habitat niches for a range of wildlife species;
- use selected plant species that provide food and shelter for local wildlife; and
- are conducive to biodiversity friendly management regimes concerning pruning, mowing, fertilising, pesticide and water use.
- Provide flowering periods scattered throughout the year and have food sources accessible to native fauna, i.e. not be composed of double flowered cultivars, that prohibit access to nectar or do not have nectaries.

6.244 Hedges are particularly suitable for creating habitats in heavily built up boroughs where lack of space is an issue. Hedges can significantly add to local biodiversity if appropriate hedge species are used and biodiversity friendly management routines followed, including allowing hedges to grow to a suitable size.

6.245 Where hedges are not practical, wildlife friendly fencing which has a 150mm gap between the fence and the ground and does not have any spikes along the top or bottom of the fence will be encouraged. Wherever possible, all fencing or walls should be planted with biodiversity friendly climbing plants and fitted with bird nesting boxes to create living surfaces that will soften the edges of the development, provide valuable habitat and create additional visual interest.

6.246 Some examples of biodiversity-friendly landscaping measures are listed below:

- Encouraging the natural urban flora of derelict plots through appropriate management;
- Making or restoring a wildlife pond;
- Opening culverts or re-naturalising river channels;
- Enhancing the wildlife value and sustainability of flower beds;
- Implementing changes in mowing regimes, shrubbery management or herbaceous planting; creating wild flower meadows, either through minimising turfed areas and sowing wild flower seed and/or relaxing the management of existing turf;
- Greening of buildings with climbing plants to provide vertical habitat
- Creating natural habitats such as woodland, hedges, ponds, wildflower meadows, areas of long grass and log piles;
- Leaving rough grassland areas with appropriate mowing regimes as wildlife corridors;
- Planting hedgerows or shrubbery to improve nesting habitat for birds;
- Linking habitats and wildlife corridors within the development site to habitats and wildlife corridors adjacent or near to the site;
- Avoiding the use of peat, herbicides and pesticides and implementing a chemical free management regime; and
- Aiming to safely compost and reuse green waste to best practice guidelines from the site wherever possible, and to not spread pathogens.

SPD Sustainability Policy 22

Trees

The council will expect developers to plant trees where appropriate and will itself continue to plant appropriate trees in suitable locations. Normally native species (approximately 70 native tree type species and hybrids) that maximise their value to biodiversity should be planted. If felling is necessary, trees must be replaced with other suitable species, normally native species that will benefit biodiversity. Newly planted trees must be nurtured until well-established and subsequently maintained.

6.247 Trees provide a valuable contribution to local amenities and the street scene, allowing improvements to the environmental quality of the area to be achieved at a relatively low cost. The council will continue to plant new trees as part of its on-going tree planting programme, but sub-surface services or nearby foundations may make it impractical to plant trees in some streets. New development schemes provide the opportunity for onsite landscaping including tree planting. Tree species that are chosen for planting should be suitable for their location and as far as possible be indigenous species and of maximum benefit to biodiversity.

6.248 A few examples of native tree species with an approximate associated species number in the UK are:

- Quercus robur (English Oak) – 300 spp.
- Betula pendula (Silver Birch) – 250 spp.
- Salix caprea (Pussy Willow) – 180 spp.
- Alnus glutinosa (Common Alder)- 150 spp.

6.249 A few examples of non-native trees with an approximate associated species number in the UK are:

- Platanus X hispanica (Plane Tree)- 60 spp.
- Gingko biloba (Maidenhair tree)- 50 spp.
- Ailanthus altissima (Tree of Heaven) – 70 spp.

6.250 The loss of trees will nearly always result in a deterioration of environmental character and will not be acceptable without good cause, particularly if subject to a Tree Preservation Order. Pruning or lopping should be investigated as an alternative. A tree that is felled should normally be replaced with a tree species that optimises its value to biodiversity and is suitable to the area in all other respects. As far as practicable, native tree species should be used. Any works affecting trees in conservation areas must be notified to the council six weeks in advance.

SPD Sustainability Policy 23

Sustainable Drainage Systems

Wherever possible new developments should incorporate Sustainable Drainage Systems (SUDS) that will enhance biodiversity. The council may require developers to provide a suitable SUDS design and management statement or management plan. The level of detail in the plan is likely to include:

- **A description of the area including a map.**
- **Proposed design of the SUDS.**
- **Species and habitat targets.**
- **Provision for the ongoing management of new sites.**
- **Persons responsible for undertaking the management.**
- **Means of reviewing the management plan.**

6.251 Sustainable Drainage Systems (SUDS) can be particularly beneficial in higher density areas because they can assist in managing surface water run off and enhance biodiversity. Biodiversity-friendly SUDS designs such as grass swales, infiltration strips, reedbeds and ponds will provide habitats for amphibians, birds, mammals and insects whilst also contributing to landscape settings and possibly open space requirements. For further information see the section on Flood Risk and SUDs and www.ciria.org.uk/suds/ and http://sudsnet.abertay.ac.uk

SPD Sustainability Policy 24

Green and Brown Roofs

Developers should seek to incorporate biodiversity friendly Green or Brown Roofs and Living Walls into new developments

6.252 Developers should aim for all roofed areas to be greened (including areas used for renewable energy generation such as photovoltaics but excluding other non-green fixtures such as air conditioning units).

6.253 There are two main types of green roofs, intensive roofs and extensive roofs. In accordance with Environment Agency advice the council encourages the following standard on the proportion of intensive and extensive green roofing in new buildings:

- 25 per cent of the green/living roofs to be intensive/semi-intensive
- 75 per cent extensive green roofs to be designed for biodiversity

6.254 Intensive roofs - Intensive and semi-intensive roofs are similar to gardens and parks and are valuable for biodiversity. Public access is allowed on these roofs (to residents for example) and the green roof is in effect a roof garden. The council will expect intensive roofs to be designed to the following criteria:

- Intensive roofs should aim to cover at least 70 per cent of the roof area in soil, vegetation and water features. This will reduce water run-off from the roof and ensure the roof's effectiveness in the drainage strategy for the development;
- At least 25 per cent of the vegetation should be native (preferably endemic native species that occur on or within 250 m of the development site) No more than 50 per cent of the vegetation used should to be non-native
- At least 25 per cent of the vegetation should be of known value to wildlife;
- No more than 25 per cent of the vegetation should be purely ornamental;
- A range of bird nesting boxes, invertebrate boxes, logs and log piles should be included to create habitat niches for biodiversity.

6.255 Extensive roofs - Extensive green roofs are low-nutrient, well-drained habitats that offer an opportunity to replicate ecological characteristics of brownfield sites and other such habitats. Access is generally restricted to maintenance staff and they are less costly to create than intensive roofs.

6.256 These roofs may also be 'brown' roofs. A brown roof is one where plants are allowed to colonise naturally rather than being planted. In general, extensive green roofs can be installed on a variety of roofs, both flat and sloping. For slopes greater than 9.5 degrees or 17 percent (2:12 slope) additional structures to prevent slippage of materials will be needed. For slopes greater than 30 degrees or 58 per cent (7:12 slope) specialised media and retention devices will be required. The impact of increased slope on the distribution of water within the planting media should be taken into account in the species used on different sections of the roof.

6.257 The council will expect extensive roofs to be designed to the following criteria:

- The substrate depth should be between 75mm and 150mm ;
- A single substrate can be used, but to provide the greatest benefit to biodiversity, a variety of substrates should be used. It is important that designers are aware that the choice of substrate should not undermine the potential of the roof systems to act as an interceptor and source control mechanism in the Sustainable Drainage (SUDS) Management Train
- A mix of wildflowers and sedums. The wildflower species should preferably be species that already occur on or within 250 m of the development site. Where these are not available species should be chosen based upon the guidance provided by the Environment Agency below. A complete list of these species and their ecological value is provided in Appendix 8:
    - at least 10 species of high ecological value
    - at least 10 species of medium ecological value
    - at least 10 species of standard ecological value
- Areas of sand, bare shingle and a series of individual logs and log piles should also be provided to create additional habitat.

6.258 Developers should make use of the guidelines detailed in:

1. The Environment Agency publication on living roofs, available at:

www.environment-agency.gov.uk

2. The Living Roofs web site: www.livingroofs.org

6.259 Due to their relatively large surface areas, Living or 'Green' roofs and 'Living Walls' can provide significant additional habitat for wildlife, as well as reduce water runoff and insulate buildings. This assumes greater significance in a built up borough, where additional land for biodiversity is not readily available. Additionally, green roofs can positively contribute to the sustainable management of urban water runoff and can help to insulate the building from temperature extremes.

6.260 Wherever possible the council will encourage the design of green roofs that provide food and habitat for the local Biodiversity Action Plan Priority species including the:

- House Sparrow (Passer Domesticus)
- Stag Beetle (Lucanus Cervus)
- Bumble Bee (Bombus Humilis)
- Black Redstart (Phoenicuros Ochruros)

Expertise

6.261 It is advisable for an ecologist to be present during the installation of an extensive roof as roofing contractors often lack the required expertise to install the ecological elements of green roofs. In general where a green roof is required as a condition for granting planning permission it should be designed to ensure that it reduces the rate of surface water run off, minimises energy use and benefits biodiversity.

- Developers will be expected to provide:
- The ecological rationale for the selection of the plant species;
- A landscape plan and cross-section of the roof to show how the green roof has been designed;
- A long term maintenance plan to ensure the functionality of the green roof.
- An assessment of the roof's capacity to intercept runoff for Sustainable Urban Drainage Systems.

Living walls

6.262 Developers should consider how living walls and/or fences may be incorporated into proposed developments taking into account the scale and nature of the development. The plants chosen for a living wall should be beneficial for biodiversity by offering one or more of the following:

1. Roosting and nesting sites for birds – generally the thicker the climber, the more opportunities for roosting and nesting will be provided.
2. Nectar sources for insects - plants that flower early or late in the season, such as Hedera helix (ivy) are particularly valuable.
3. Food - Fruit for birds and insects.
4. Shelter - Hibernation sites for insects such as butterflies and lacewings.

6.263 Living walls protect buildings from weathering and temperature fluctuations and can also benefit wildlife by providing habitat and food for birds and invertebrates.

6.264 A living wall can be created by:

- Growing self-clinging climbing plants such as ivy up walls .
- Providing a wooden or metal trellis attached to the wall for plants to climb up;
- Growing plants in a specially designed hydroponic system attached to the wall.

6.265 Further information on designing living walls can be found in:

- Living Roofs and Walls : Technical Report: Supporting London Plan Policy (GLA, February 2008)
- Planting Green Roofs and Living Walls by Nigel Dunnett and Noël Kingsbury (Publ.2004, Timber Press).

Appendix 1 – Legislative and Policy Framework for Biodiversity Conservation

The legislative and policy framework that requires local authorities to have regard for, and implement adequate biodiversity conservation measures is set out below:

International legal obligations

Convention on Biological Diversity (1992) - Article 6 of the Convention on Biological Diversity creates an obligation for parties to develop or adapt national strategies, plans or programmes for the conservation and sustainable use of biological diversity

- Ramsar Convention on Wetlands of International Importance especially waterfowl habitat (1971)
- The Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)
- EC Directive 2009/147/EC ('The Birds Directive') and EC Directive 92/43/EEC ('The Habitats Directive') – Together these directives form the cornerstone of Europe's nature conservation policy. In May 2011, the European Commission adopted the EU 2020 Biodiversity Strategy[(9)] that aims to halt the loss of biodiversity and ecosystem services in the EU by 2020.
- Environmental Impact Assessment (85/337/EEC) Directive (EIA Directive) (as amended by Directive 97/11/EC);
- Strategic Environmental Assessment (2001/42/EEC) Directive (SEA Directive).
- Water Framework Directive (2000/60/EC)

England and Wales Legislation

- Wildlife and Countryside Act 1981
- Environmental Protection Act 1990
- Environmental Information Regulations 2004
- The Protection of Badgers Act 1992
- Planning and Compulsory Purchase Act 2004
- Conservation (Natural Habitats, &c.) Regulations 1994
- The Offshore Marine Conservation (Habitats, &c.) Regulations 2007
- The Environment Act 1995
- Natural Environment and Rural Communities Act 2006
- Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999
- Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

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9 Communication from the Commission to the European Parliament, the, the Economic and Social Committee and the Committee of the Regions - Our life insurance, our natural capital: an EU biodiversity strategy to 2020

- National Parks and Access to the Countryside Act 1949
- Countryside and Rights of Way Act 2000
- Local Government Act 2000
- The Environmental Protection (Restriction of Use of Lead Shot) (England) Regulations 1999

National Planning Policies

- National Planning Policy Framework

National Biodiversity conservations strategies

- The UK Biodiversity Action Plan(1994)
- Working with the Grain of Nature – A Biodiversity Strategy for England (2002)
- Securing the Future – The UK Sustainable Development Strategy (2005)
- Conserving Biodiversity – The UK Approach (DEFRA) (2011)

Appendix 2 - Ecological Survey Seasons

Key: Optimal Survey Time: ■ **Extending into:** □

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Badgers		■	■	■	□	□	□	□	□	■	■	□
Bats (Hibernation Roosts)	■	■	■								■	■
Bats (Summer Roosts)				□	■	■	■	■	■ □			
Bats (Foraging/ Commuting)				□	■	■	■	■	■	□		
Birds (Breeding)			■	■	■	■	■	■				
BIRDS (Over Wintering)	■	■									■	■
Dormice	■				■	■	■	■	■		■	■
Great–Crested Newts		■ AQUATIC	■ AQUATIC	■ AQUATIC	■ AQUATIC	TERRESTRIAL	TERRESTRIAL	TERRESTRIAL	TERRESTRIAL	TERRESTRIAL		
Invertebrates				■	■	■	■	■	■			
Natterjack Toads				■	■							
Otters	■	■	■	■	■	■	■	■	■	■	■	■
Reptiles				■	■	■	■	■	■			
Water Voles		□	■	■	■	■	■	■	■	□		
White-Clawed Crayfish							■	■	■			
Habitats/Vegetation				■	■	■	■	■	■			

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

Appendix 3 - Criteria and indicative thresholds for when a Protected Species survey and assessment will be required

(Source: Template for biodiversity and Geological Conservation: Validation checklists, Association of Local Government Ecologists (June 2007)

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	Species Likely To Be Affected And For Which A Survey Will Be Required												
	Bats	Barn Owl	Breeding Birds	Wintering Birds	Gt. Crested Newt	Schedule 8 plants	Reptiles	Amphibians	Plants	Invertebrates	Harvest Mouse	Stag Beetle	BAP Species
Proposed development which includes the modification conversion, demolition or removal of buildings and structures (especially roof voids) involving the following: • All agricultural buildings (e.g. farmhouses and barns), whatever their condition, particularly of traditional brick or stone construction and/or with exposed wooden beams greater than 20cm thick. The only exception is modern agricultural buildings of prefabricated construction with steel/sheet materials. • Roofs of any type, or demolition of a built structure, regardless of location, except for those either of prefabricated construction with steel/sheet materials (such as modern warehouses) or flat roof structures with no roof voids, soffit or barge boards. • All unused industrial chimneys, which are unlined and of brick or stone construction; • All tunnels, culverts, mines, kilns, icehouses, adits, military fortifications, air raid shelters, cellars and similar underground ducts and structures; • All bridge structures, aqueducts and viaducts (especially over water and wet ground).	✓ ✓ ✓ ✓	✓	✓ ✓										
Proposals involving lighting of churches and listed buildings or flood lighting of green space within 50m of woodland, water, field hedgerows or lines of trees.	✓		✓										

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	**Species Likely To Be Affected And For Which A Survey Will Be Required**												
	Bats	Barn Owl	Breeding Birds	Wintering Birds	Gt. Crested Newt	Schedule 8 plants	Reptiles	Amphibians	Plants	Invertebrates	Harvest Mouse	Stag Beetle	BAP Species
Proposals affecting woodland or field hedgerows and/or lines of trees with connectivity to woodland or water bodies	✓		✓				✓		✓				
Proposals affecting established grassland (i.e. not ploughed or seeded for 5 or more years) or 'roughland' (i.e. grassland partially covered with scrub or trees), *excluding* residential gardens and grassland managed intensively for sports or amenity use and *including* roadside verges			✓	✓			✓		✓	✓	✓		
Proposed tree work (felling or lopping) and/or development affecting: • old and veteran trees that are older than 100 years; • trees with obvious holes, cracks or cavities, • trees with substantial ivy cover; • trees with a girth greater than 50cm at chest height;	✓ ✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓ ✓										
Proposals affecting gravel pits or quarries and natural cliff faces and rock outcrops with crevices or caves	✓	✓					✓						✓
Proposals within 250m* of a pond (excluding small garden ponds). Does not apply to Householder applications. Where known records for great crested newt occur this should be 500m.			✓		✓								✓
Proposals affecting or within 200m* of rivers, streams, canals, lakes or other aquatic habitats such as fenland, marshland or reedbed. Does not apply to householder applications.	✓		✓	✓	✓	✓		✓	✓		✓		

Proposals for Development That Will Trigger a Protected and / or Priority Species Survey	Species Likely To Be Affected And For Which A Survey Will Be Required												
	Bats	Barn Owl	Breeding Birds	Wintering Birds	Gt. Crested Newt	Schedule 8 plants	Reptiles	Amphibians	Plants	Invertebrates	Harvest Mouse	Stag Beetle	BAP Species
Proposals affecting 'derelict' land (brownfield sites), allotments and railway land.			✓	✓	✓		✓	✓		✓	✓		
Proposals affecting bare ground and/or sparsely vegetated sites, wherever they are located.			✓	✓									
Proposed Development affecting any buildings, structures, feature or locations where protected and / or priority species are known to be present .**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Distances may be amended to suit local circumstance on the advice of the Local Planning Authority or the local Natural England team or the Hammersmith and Fulham Biodiversity Partnership.
* *Confirmed as present by either a data search (for instance via GIGL / local environmental records centre) or as notified to the developer by the local planning authority and/or by Natural England, the Environment Agency or other nature conservation organisation.

Appendix 4 - Flowchart showing the steps developers need to take to ensure biodiversity is protected and enhanced

Pre-application stage

1. Identification of site for proposed development

↓

2. Assess the biodiversity value of the site and its surroundings:
   - Does the site or adjacent land have a nature conservation designation?
   - Are legally protected species present?
   - Are Biodiversity Action Plan (priority) species or habitats present?

↓

3. If the development will have a negative impact on species and / or habitats present on the site, can an alternative site be found?

   If an alternative site cannot be found, can the development be redesigned to avoid harm to species and habitats?

   If harm cannot be avoided, you must set out how harm will be minimised and compensated for.

↓

4. If trees are present on or adjacent to the site you will need to provide:
   - A topographical survey
   - A tree survey (including information on any trees protected by Tree Preservation Orders)
   - A tree constraint plan

   Consult the Trees and Development SPD fur further information.

Application stage

5. The Local Planning Authority will consider if the information submitted by the developer is adequate and accurate. Additional information and / or surveys may be required.

6. If European protected species, such as bats or great crested newts, are present the Local Planning Authority must apply the three tests set out in the Habitats Regulations:

   - No satisfactory alternative to the development
   - Impacts are not detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range
   - The development is in the interests of public health or safety, or other imperative reasons for overriding public interest, including those of social, economic and environmental benefit.

   A licence from Natural England may also be required.

7. An Aboricultural Implications Assessment and an Aboricultural Method Statement may be required for trees present on and adjacent to the site. Consult the Trees and Development SPD for further information.

8. The planning application will be determined in accordance with national legislation and this Biodiversity SPD.

9. If planning permission is granted conditions may be attached requiring further mitigation, enhancements for biodiversity, tree planting and / or compensation for unavoidable loss.

Post application stage

10. Where a licence from Natural England is required ensure this has been obtained before work commences.

11. Ensure that landscaping and biodiversity conditions are met. If an Ecological Management Plan is required ensure this is provided and any monitoring requirements are met.

Appendix 5 –London BAP priority species found in Hammersmith and Fulham

LONDON BAP PRIORITY SPECIES		UK BAP Priority	UK SCC	UK Red Data List	UK Scarce	London SAP current
Vascular plants						
Black poplar	*Populus nigra betulifolia*					●
Chamomile	*Chamaemelum nobile*	●	●	●		
Juniper	*Juniperus communis*	●				
Lesser calamint	*Clinopodium calamintha*			●	●	
Pennyroyal	*Mentha pulegium*	●		●		
Fungi						
Oak polypore	**Piptoporus quercinus**	●		●		
Invertebrates						
Brown hairstreak (butterfly)	Thecla betulae	●			●	
Cinnabar (moth)	*Tyria jacobaeae*	●				
Garden tiger (moth)	*Arctia caja*	●				
Stag beetle	*Lucanus cervus*	●			●	●
Birds				Red	Amber	
Bittern	**Botaurus stellata**	●		●		
Black redstart	**Phoenicurus ochrurus**		●		●	●
Bullfinch	**Pyrrhula pyrrhula**	●		●		
Cuckoo	*Cuculus canorus*	●			●	
Dunnock	*Prunella modularis*	●			●	
Herring gull	*Larus argentatus*	●			●	
House sparrow	**Passer domesticus**	●		●		●
Lapwing	*Vanellus vanellus*	●			●	
Lesser redpoll	*Carduelis flammea*	●			●	

Linnet	**Carduelis cannabina**	●		●		
Peregrine	**Falco peregrinus**		●		●	●
Reed bunting	**Emberiza schoeniclus**	●		●		
Sand martin	**Riparia riparia**		●		●	●
Skylark	**Alauda arvensis**	●		●		
Song thrush	**Turdus philomelos**	●		●		
Starling	**Sturnus vulgaris**	●		●		
Tree pipit	*Anthus trivialis*	●		●		
Turtle dove	**Streptopelia turtur**	●		●		
Wood warbler	*Phylloscopus sibilatrix*	●			●	
Yellow wagtail	*Motacilla flava*	●			●	
Yellowhammer	**Emberiza citrinella**	●	●	●		
Reptiles, Amphibians, Mammals & Fish						
Common lizard	*Lacerta vivipara*	●				●
Common toad	*Bufo bufo*	●				
Slow-worm	*Anguis fragilis*	●	●			●
Common pipistrelle (bat)	*Pipistrellus pipistrellus*	●				●
Daubenton's bat	*Myotis daubentoni*		●			●
Harvest mouse	*Micromys minutus*	●				
Leisler's bat	**Nyctalus leisleri**		●		●	●
Noctule (bat)	*Nyctalus noctula*	●	●			●
Serotine (bat)	*Eptesicus serotinus*		●		●	●
Soprano pipistrelle (bat)	*Pipistrellus pygmaeus*	●				●
European eel	*Anguilla anguilla*	●				
Smelt (fish)	*Osmerus eperlanus*	●	●			

Protected species found in Hammersmith and Fulham

	Protected Species	UK BAP Priority	London BAP Priority
Reptiles			
Common Lizard (Lacreta vivipara		Yes	Yes
Slow worm (Anguis fragilis)		Yes	Yes
Amphibians			
Common Toad (Bufo bufo)	Schedule 5, Wildlife and Countryside Act 1981	Yes	Yes
Common Frog (Rana temporaria)			
Fish			
River Lamprey (Lampetra fluviatilis)			
Smelt (Osmerus eperlanus)			
Mammals	All 17 Bat species found in the UK, Schedule 5, Wildlife and Countryside Act 1981		
Common pipistrelle (Pipistrellus pipistrellus)	Schedule 5, Wildlife and Countryside Act 1981	Yes	Yes
Daubenton's bat (Myotis daubentoni)	Schedule 5, Wildlife and Countryside Act 1981	Yes	Yes
Leisler's bat (Nyctalus leisleri)			
Soprano Pipistrelle (Pipistrellus pygmaeus)			
Common shrew (Sorex araneus)			
Birds	All wild birds (except certain listed pest species and sporting birds) are protected under the Wildlife and Countryside Act 1981 (as amended). Species on Schedule 1 receive additional protection.		
Black Redstart (Phoenicurus ochrurus)			Yes
Dunnock (Prunella modularis)		Yes	Yes
House Sparrow (Passer domesticus)		Yes	Yes

Lesser Redpoll (Carduelis flammea)			Yes
Song Thrush (Turdus philomelos)		Yes	Yes
Starling (Sturnus vulgaris)		Yes	Yes
Firecrest (Regulus ignicapillus)			
Goldcrest (Regulus regulus)			
Green Woodpecker (Picus viridus)			
Grey Wagtail (Motacilla cinerea)			
House Martin (Delichon urbica)			
Kestrel (Falco tinnunculus)			
Kingfisher (Alcedo atthis)			
Mistle Thrush (Turdus viscivorus)			
Mute Swan (Cygnus olor)			
Swift (Apus apus)			
Tawny Owl (Strix aluco)			
Invertebrates			
Brown hairstreak (butterfly)			
Cinnabar (moth)			
Garden tiger (moth)			
Stag beetle			
Plants			
Allium sphaerocephalon	Schedule 8, Wildlife and Countryside Act (as amended) 1981		
Cicerbita alpina	Schedule 8, Wildlife and Countryside Act (as amended) 1981		
Veronica spicata	Schedule 8, Wildlife and Countryside Act (as amended) 1981		
Carex depauperata	Schedule 8, Wildlife and Countryside Act (as amended) 1981		
Stachys germanica	Schedule 8, Wildlife and Countryside Act (as amended) 1981		

Appendix 6 - Local requirements for designated sites and priority habitats: Criteria for when a biodiversity site survey and assessment will be required.

1. Designated Sites (as shown on the LDF proposals map)

• Nature conservation areas and NI 160 sites

• Green corridors and NI 160 sites

2. Priority Habitats (Habitats of Principal Importance for Biodiversity relevant to Hammersmith and Fulham under S.41 of the NERC Act 2006)

• Floodplain grazing marsh

• Fen, marsh, swamp and reedbeds

• Lowland heathland and/or dry acid grassland

• Lowland meadows (e.g. species-rich flower meadows)

• Lowland mixed deciduous woodland (ancient woodland)

• Lowland wood-pasture and parkland

• Rivers and streams (e.g. chalk streams)

• Standing open water and canals (e.g. lakes, reservoirs, ponds, aquifer fed fluctuating water bodies)

• Wet woodland

• Traditional orchards

3. Other Biodiversity Features (as identified by the Hammersmith and Fulham Wildlife Partnership - see paragraph 84 ODPM Circular 06/2005).

The features listed below may provide habitat for priority species and may require survey.

• Secondary Woodland and Mature/Veteran Trees

• Disused tunnels (e.g. roosts for bats)

• Tree lines providing sheltered feeding habitat for bats

• Previously developed land with biodiversity interest

• Urban green space (parks, allotments, cemeteries, churchyards flower-rich

• Road verges and railway embankments)

• Sites identified as Wildlife Corridors

Appendix 7 – Environment Agency list of wildflower species and their ecological value, each of which is found either growing wild or cultivated in LBHF

Common Name	Latin Name	Ecological Value
Thrift	*Armeria maritima*	Standard
Clustered bellflower	*Campanula glomerata*	Standard
Harebell	*Campanula rotundifolia*	Standard
Red valerian	*Centranthus rubra*	Standard
Wild basil	*Clinopodium vulgare*	Standard
Deptford pink	*Dianthus armeria*	Standard
Maiden pink	*Dianthus deltoides*	Standard
Purple toadflax	*Linaria purpurea*	Standard
Pasque flower	*Pulsatilla vulgaris*	Standard
Meadow clary	*Salvia pratensis*	Standard
Spiked speedwell	*Veronica spicata*	Standard
Basil thyme	*Acinos arvensis*	Medium
Agrimony	*Agrimonia eupatoria*	Medium
Blue fleabane	*Erigeron acer*	Medium
Common stork's-bill	*Erodium cicutarium*	Medium
Ladies bedstraw	*Galium verum*	Medium
Common rockrose	*Helianthemum nummularium*	Medium
Field scabious	*Knautia arvensis*	Medium
Musk mallow	*Malva moschata*	Medium
Hoary plantain	*Plantago media*	Medium
Cowslip	*Primula veris*	Medium
Self-heal	*Prunella vulgaris*	Medium
Meadow buttercup	*Ranunculus acris*	Medium
Bulbous buttercup	*Ranunculus bulbosus*	Medium
Salad burnet	*Sanguisorba minor*	Medium
Small scabious	*Scabiosa columbaria*	Medium
Biting stonecrop	*Sedum acre*	Medium
White stonecrop	*Sedum album*	Medium
Reflexed stonecrop	*Sedum rupestre*	Medium
Bladder campion	*Silene vulgaris*	Medium
Wild thyme	*Thymus polytrichus*	Medium
Breckland thyme	*Thymus serpyllum*	Medium
Hare's-foot clover	*Trifolium arvense*	Medium
Hop trefoil	*Trifolium campestre*	Medium
Yarrow	*Achillea millefolium*	High
Kidney vetch	*Anthyllis vulneraria*	High
Common knapweed	*Centaurea nigra*	High
Viper's bugloss	*Echium vulgare*	High
Dove's-foot crane's-bill	*Geranium molle*	High
Fox and cubs	*Hieraceum aurantiacum*	High
Perforate St. John's-wort	*Hypericum perforatum*	High
Autumn hawbit	*Leontodon autumnalis*	High
Rough hawkbit	*Leontodon hispidus*	High
Ox-eye daisy	*Leucanthemum vulgare*	High
Common toadflax	*Linaria vulgaris*	High
Bird's-foot trefoil	*Lotus corniculatus*	High
Black medick	*Medicago lupulina*	High
Common restharrow	*Ononis spinosa*	High
Marjoram	*Origanum vulgare*	High
Fox and cubs	*Pilosella officinarum*	High
Wild mignonette	*Reseda lutea*	High
Dark mullein	*Verbascum nigrum*	High
Great mullein	*Verbascum thapsus*	High

Sustainable construction

Purpose

6.266 The overall objectives of the SPD are to:

- Establish more detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with the implementation of sustainable construction practices, namely Core Strategy borough wide strategic policies CC3 Waste Management and H3 Housing Quality and Density and DM LP policy DM H2 Promoting Sustainable Design and Construction; and

- Provide more detail on the type of supporting information that the council requires to be submitted with applications to show compliance with these and the London Plan policies.

6.267 This SPD covers only the construction phase of building new developments (not design aspects) and aims to ensure the demolition and construction phases of development do not unnecessarily or unreasonably impact on the local environment, including residents, and seeks to minimise the use of resources. The sustainability requirements in terms of building design are detailed in the GLA's SPG on Sustainable Design and Construction.

Policy Guidance

National Policy

6.268 The National Planning Policy Framework (NPPF) expects the planning system to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs, while protecting and enhancing the natural and historic environment.

6.269 As well as considering the potential impacts of new developments once they are operational, this is also taken to mean that the construction (including demolition) process should also be carried out in such a manner that the natural and historic environment is protected and impacts minimised.

6.270 To support this objective, the Government works in partnership with the construction industry to help improve their sustainability performance. A joint initiative in the form of the Strategy for Sustainable Construction has been published (available online at: www.bis.gov.uk) which represents a commitment from the industry to reduce its carbon footprint and its consumption of natural resources.

6.271 National environmental assessment methods such as the Code for Sustainable Homes (www.communities.gov.uk) and BREEAM (www.breeam.org) also include sections on managing the demolition /construction of buildings and provide useful guidance on how to minimise environmental impacts.

London Plan

6.272 The main policy in the London Plan dealing with sustainable construction issues is Policy 5.3 Sustainable Design and Construction which requires the highest standards of sustainable construction to improve the environmental performance of new developments.

6.273 Two other policies of particular relevance to construction work are policies Policies 5.16 Waste Self-sufficiency and 5.20 Aggregates which promote sustainable waste management through the recycling and re-use of materials during construction. The Mayor also encourages the use of the Demolition Protocol developed by London Remade to support recycling and reuse of construction materials. For further details, see: http://aggregain.wrap.org.uk

6.274 The GLA has also produced Best Practice Guidance on the Control of Dust and Emissions during Demolition and Construction which addresses the environmental impact of construction, including minimising emissions of dust and construction plant and vehicles emissions. The BPG can be found here: http://static.london.gov.uk

Local Plan

6.275 Core Strategy Policy CC3 Waste Management highlights the need to promote sustainable waste behaviour, including sustainable demolition in new and existing developments and seeking, where possible, the movement of waste and recycling materials by sustainable means of transport.

6.276 Policy H3 Housing Quality and Density notes that the council will expect all housing development to be "well designed and energy efficient in line with the requirements of the Code for Sustainable Homes" (CSH).

6.277 Development Management Policy DM H2 Promoting Sustainable Design and Construction requires the implementation of sustainable design and construction measures by implementing the London Plan sustainable design and construction policies, requiring Sustainability Statements for all major developments and encouraging the integration of sustainable design and construction measures in all other (i.e. non-major) developments, where suitable.

Local Context

6.278 The council's Core Strategy sets out the council's vision to create a borough of opportunity for all within the next 20 years which prioritises the regeneration of disadvantaged areas, including the building of new homes, shops, offices, schools and other infrastructure requirements. This involves large-scale regeneration projects across the borough, for example in the Earls Court West Kensington and White City Opportunity Areas. The rate of demolition and construction in the borough is therefore set to increase substantially in the future. As well as promoting growth and bringing economic and social improvements to the borough, developments such as the major regeneration projects provide opportunities to tackle environmental concerns through their sustainable design and construction.

6.279 Recent improvements to the Building Regulations and local planning policies have raised the environmental standards for new buildings particularly in relation to energy efficiency and carbon reduction. However, despite this progress on energy and other issues that reduce environmental impacts of buildings once they are occupied, there is still a need to reduce the environmental impacts of the building process itself.

6.280 The construction industry is a significant consumer of resources, produces millions of tonnes of waste a year and is responsible for nearly a third of all industry-related pollution incidents. Construction activities are also a significant source of complaints from residents about impacts such as noise and dust. By adopting sustainable practices and making better use of resources, the construction industry can make a significant contribution to the pursuit of sustainable development and help to improve people's quality of life and protect the natural environment.

Sustainable Construction Policies

6.281 Applications for major developments should include information showing how sustainability policies will be met during the demolition and construction phases. Smaller developments are also encouraged to use sustainable construction methods.

6.282 The supporting information should set out a clear description of how the development is to be constructed in a sustainable manner, with reference to the principal issues highlighted in this SPD and other supporting guidance, including details of how the relevant Development Plan policies are

to be complied with. This information can be incorporated into the Sustainability Statements required for major developments to show compliance with wider sustainable design and construction requirements, as outlined in London Plan policy 5.3 and DM LP policy DM H2.

6.283 The Considerate Constructors Scheme (www.ccscheme.org.uk) provides a structured way for construction site activities to be managed to reduce their impacts on the local environment. The scheme is applicable to construction projects that are planned to last for 6 weeks or longer. Whilst it is not compulsory to sign up to, membership of the scheme demonstrates a commitment by site managers and contractors to manage their activities in a neighbourly and sustainable manner.

6.284 If a project involves listed buildings or archaeological priority areas, the potential impacts of the measures outlined in this document would need to be assessed before being implemented. Further information and case studies can be found on the Historic Environment Local Management website: www.helm.org.uk.

SPD Sustainability Policy 25

Conserve Energy, Materials and Water Use

As part of the supporting information provided with major planning applications details of how use of resources such as energy, water and building materials will be minimised during the construction phase should be provided. This can be included as part of a BREEAM / Code for Sustainable Homes assessment, where one has been completed.

Energy

6.285 Energy use is not as significant during construction as it will be once the development is occupied and operational. The main energy use is likely to be the transport of materials to/from the site and the use of machinery and equipment during demolition/construction work. Sites may also require lighting for safety and security reasons and there may also be small requirements for heat and power if there are any temporary buildings on site – e.g. site offices, storage compounds etc. The Carbon Trust provides a useful checklist to help assess energy use on construction sites. This can be accessed online here: www.carbontrust.co.uk.

6.286 Issues that should be considered in order to reduce the energy consumption of the demolition/construction process include:

- Using local suppliers if possible to reduce emissions from transporting materials /equipment to/from the site;
- Consider the use of pre-fabricated elements to reduce energy use in the construction phase and speed up assembly. The supplier location for pre-fabricated elements should be considered in order to minimise transportation impacts;
- For very large sites located next to the river, canal or suitable railhead, consider using these forms of transport to deliver aggregates or remove demolition waste rather than using a high number of HGV journeys;
- Do not leave plant/machinery/vehicles running unnecessarily;
- Use energy efficient lighting on site, in site office buildings, along the site perimeter etc;
- Use light sensors to switch outdoor lighting on/off automatically and direct lighting to minimise light lost to the sky;
- Preferably do not use materials with high embodied energy impacts to (unless a compelling whole life energy or technical case for its use can be made). Refer to the BRE Green Specification Guides for further information;

- Operate site offices etc with energy efficiency in mind for heating, lighting and electrical appliances; and
- Promote energy efficient behaviour to site personnel.

Materials

6.287 Information on individual building materials and their environmental impacts is not provided in this section, but comprehensive information is available in the BRE Green Guide to Specification (www.bre.co.uk) and WRAP's Recycled Content Toolkit, which is incorporated into their Net Waste Tool, available online here: www.wrap.org.uk

6.288 However, some general issues that should be considered when specifying materials for developments include:

- Minimising the use of new aggregates and re-using material on site, if possible;
- Using timber from sources acceptable to the Forest Stewardship council (FSC) or if this is not possible then use timber from a known temperate source to avoid the use of illegally logged timber;
- Avoiding use of materials from other vulnerable habitats – e.g. peat;
- Not using insulation materials containing ozone depleting substances or those with the potential to contribute to climate change;
- If practical, try to source materials from local suppliers;
- Including some materials derived from recycled/re-used content if possible (refer to the WRAP toolkit for further information)
- If demolition is to be carried out, use the ICE Demolition Protocol (see 2.11 for weblink) to appraise the possibility of saving materials for re-use on site; and
- Avoid using materials with high embodied energy.

Water

6.289 Most water used on construction sites does not need to be of drinking water quality as it will be used for tasks such as cleaning, damping down, mixing with construction materials/backfill etc, but mains water is likely to be the source used for all uses on site. If water shortages occur (e.g. During drought conditions in the summer), restrictions on non-essential water use may be introduced to conserve drinking water, which could impact on construction site activities. Detailed guidance on water efficiency measures for construction sites is available from WRAP:

www.wrap.org.uk

Water use on site can be minimised by:

- Considering the collection and storage of rain water on site for use instead of mains water;
- Using water efficient equipment on site;
- Using water efficient appliances in site offices and any other on-site facilities; and
- Preventing problems arising that may need water use to control. E.g. minimise dust emissions as much as possible to reduce the need to damp down surfaces and use water sprays.

SPD Sustainability Policy 26

Reduce Air, Noise and Water Pollution Impacts

As part of the supporting information provided with major planning applications, details of how pollution impacts will be minimised during the construction phase should be provided. This can be included as part of a BREEAM / Code for Sustainable Homes assessment, where one has been completed.

Air Pollution

6.290 Best Practice Guidance on the control of dust and emissions from construction and demolition has been issued by the GLA/London councils: http://static.london.gov.uk

6.291 This contains thorough guidance on appropriate control measures to keep dust from demolition/construction and emissions from site traffic and plant equipment to a minimum.

Examples of mitigation measures that can be implemented include:

- Putting barriers around dusty activities;
- Carrying out dust generating activities such as concrete crushing away from any neighbouring receptors;
- Hard surfacing haul routes to prevent vehicle movements from generating dust;
- Damping down stockpiles of fine material;
- Regularly servicing plant machinery to maintain operational efficiency and to minimise emissions;
- Not allowing any burning of materials on site;
- Minimising the number of vehicle access and exit points and locating them where impacts can be mitigated;
- Covering skips and lorries loaded with construction materials; and
- Using low sulphur diesel in vehicles and equipment, incorporating particulate filters and catalytic converters to minimise emissions.

Noise Pollution

6.292 While some level of disturbance may be unavoidable, developers and their contractors are expected to minimise noise nuisance and disturbance to neighbours during any construction and demolition works. British Standard 5228 “Noise control on construction and open sites” provides guidance on controlling noise (and vibration) impacts. The Environment Agency also provides guidance on its ‘NetRegs’ website: www.environment-agency.gov.uk

6.293 If impacts are inadequately controlled and are affecting neighbouring properties, the council can serve a notice under the Control of Pollution Act 1974 and impose requirements on contractors including time restrictions, plant and machinery restrictions and noise limits.

Examples of how noise can be kept to a minimum include:

- Identifying noise generating activities and substituting with low noise alternatives, if possible;
- Siting noisy equipment away from noise sensitive premises, such as housing;
- Not operating noisy equipment, such as generators and pumps etc unnecessarily;
- Complying with working hours restrictions (e.g. no noisy works outside the hours of 8am to 6pm weekdays);

- Using screening, isolation or other acoustic design solutions (e.g. use a separate compound for all cutting/grinding, well away from neighbouring properties); and
- Not arranging deliveries to the site too early in the morning.

Water Pollution

6.294 Surface water bodies and groundwater are protected by regulations, although some discharges to watercourses may be permitted. The Environment Agency (EA) is the main regulatory body on this issue and should be contacted for further advice on the management of discharges from construction sites, particularly where there are large-scale demolition / construction works close to the river or canal. Unregulated discharges to surface and ground water should be avoided at all times. Further advice from the EA on pollution prevention can be found on their website here: www.environment-agency.gov.uk

Actions that can be taken to avoid pollution incidents include:

- Store and handle raw materials, wastes, chemicals, salts and fuels in a responsible way, so that they cannot enter surface waters and groundwater;
- Produce and use a 'spillage' procedure to follow in the event of an accidental spillage of toxic materials;
- Stand above-ground storage tanks/drums/containers on an impermeable base within a bund. The bund should be made of material that is impermeable to the liquid being stored;
- Remove underground storage tanks if there are any present, as part of the site preparation;
- Collect any wastewater generated from site activities and screen before discharging. Dispose of remaining sludge according to environmental regulations;
- Cover piles of building materials like cement, sand and other powders, regularly inspect for spillages, and locate them where they will not be washed into waterways or drainage areas;
- Cover up and protect all drains on site;
- Designate specific areas for activities such as fuel deliveries and cleaning and have appropriate safety equipment and spillage controls in place; and
- Use non-toxic paints, solvents and other hazardous materials where possible.

SPD Sustainability Policy 27

Promote Sustainable Waste Behaviour

As part of the supporting information provided with major planning applications, details of how sustainable waste practices will be implemented during the construction phase should be provided. This can be included as part of a BREEAM / Code for Sustainable Homes assessment, where one has been completed.

Waste

6.295 Every construction project will generate a variety of different wastes and there is already a range of legislation governing how this is to be dealt with. However, not only is waste becoming more and more expensive to dispose of, it also gaining value as a resource, meaning that more sustainable waste management, including the re-use and recycling of waste on-site makes economic sense as well as providing environmental benefits.

6.296 The Site Waste Management Plans Regulations came into force in 2008 making such plans compulsory for all construction projects in England costing over £300,000 (excluding Vat), although smaller projects may find the preparation of such Plans to be beneficial as well.

6.297 Site Waste Management Plans provide a structure for systematic waste management at all stages of a project's delivery, focusing mainly on site practices. They help reduce costs of waste management and can also increase profit margins by helping identify issues such as:

- The types and quantities of waste that will be generated
- Resource management options for these wastes
- How to monitor/report on resource use/waste generation

6.298 A guidance document on Site Waste Management Plans is available from WRAP: www.wrap.org.uk

6.299 Some waste processing activities may need a license or an exemption from the Environment Agency, who should be contacted for further information on licensing requirements.

Examples of sustainable waste practices include the following:

- Use of pre-fabricated and standardised components can minimise waste as well as speed up assembly on site. If not feasible, use low waste fabrication techniques;
- Opportunities to recycle existing materials on site – e.g. as aggregate – can avoid the aggregate levy and the landfill tax;
- If an existing structure is to be demolished, some components may be re-usable – e.g. slate roof tiles, bricks and wooden beams etc could be removed, stored on site and then reused during construction. A pre-demolition audit will identify items of value and recovery options (refer to the Demolition Protocol for more information);
- Only specify and purchase what is needed and include some recycled construction materials in the specification;
- Sort waste on-site to maximise opportunities for recycling and reuse; and
- Use post-demolition audits to show how appropriate waste management practices have been followed.

6.300 For detailed guidance on contaminated land issues, refer to the relevant section of this SPD.

SPD Sustainability Policy 28

Conserve the Natural Environment, particularly Biodiversity

Include as part of the supporting information provided with major planning applications, details of how the natural environment, including biodiversity will be protected during the construction phase. This can be included as part of a BREEAM / Code for Sustainable Homes assessment, where one has been completed.

Natural Environment

6.301 Contractors have the ability to influence how the construction process affects nature conservation resources on and around the site. Natural England (www.naturalengland.org.uk) can advise on how to prevent damage to habitats and protect safeguarded species (see Biodiversity SPD).

6.302 Whilst it is important to prevent damage to habitats and to protect safeguarded species during construction and demolition on development sites, these building activities can also result in a dispersion of pests that may reside on the site into the surrounding area and may result in the same pests infesting the new building. It is therefore important for developers and construction contractors to employ qualified pest control professionals where necessary to develop and follow safe, effective and environmentally responsible strategies to control pests on construction sites.

Examples of appropriate actions to protect the natural environment include:

- Carry out a site audit to identify whether or not there are any protected species present and ensure wildlife legislation is complied with
- If protected species are involved there may be a statutory requirement for obtaining a license and the work may need to be undertaken in a particular season to avoid impacts on breeding etc;
- If the site is being cleared prior to construction, phased clearance of vegetation may also help mitigate impacts;
- Consider the particular landscape or vegetation required by any important animal and plant species already present on site;
- If existing mature trees need to be kept on site, the roots and crown can be protected during the construction process. Trees on the site boundary may also need to be shielded during construction work to avoid any damage;
- Other sensitive locations such as water habitats and their surroundings should also be protected or shielded to prevent aquatic wildlife from damage during demolition and/or construction;
- If there is no alternative and removal and replacement of habitat /species is required prior to construction, this should be supervised by an ecologist; and
- Make site-based staff aware of their responsibilities relating to wildlife encountered onsite, especially protected species.
- employ qualified pest control professionals where necessary to develop and follow safe, effective and environmentally responsible strategies to control pests on construction sites

Sustainable energy

Purpose

6.303 The overall objectives of the SPD are to:

- Establish more detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with the implementation of sustainable energy policies, namely Core Strategy borough wide strategic policy CC1 Reduce Carbon Emissions and Resource Use and Adapt to Climate Change Impacts and DM LP policy DM H1 Reducing Carbon Dioxide Emissions; and
- Provide more detail on the supporting information that the council requires to be submitted with applications to show compliance with these and the London Plan policies.

Policy Guidance

National Policy

6.304 The Government has set national targets for the reduction of carbon dioxide emissions – a 34% reduction by 2020 and 80% by 2050 (based on 1990 levels). The National Planning Policy Framework (NPPF) makes it clear that the planning system has a key role to play in helping to achieve these targets and the UK's transition to a low carbon economy.

6.305 The NPPF states that planning plays a key role in securing radical reductions in greenhouse gas emissions. This is to be achieved through the appropriate location and layout of new development, active support for energy efficiency improvements to existing buildings and the delivery of renewable and low-carbon energy infrastructure. To this end, the NPPF supports local planning authorities in adopting proactive strategies to mitigate climate change, including those that help increase the use and supply of renewable and low-carbon energy. Further details on national policies on sustainable energy and carbon reduction can be found in the NPPF document, paragraphs 148-153.

London Plan

6.306 The London Plan includes a number of policies on climate change mitigation aimed at facilitating significant reductions in carbon dioxide emissions from new developments. Key policies include:

- Policy 5.1 Climate Change Mitigation , which sets out the Mayor of London's aim to achieve an overall reduction in London's carbon dioxide emissions of 60 per cent (below 1990 levels) by 2025.
- Policy 5.2 Minimising Carbon Dioxide Emissions, which sets targets for major development proposals to make the fullest contribution to minimising carbon dioxide emissions in accordance with the energy hierarchy.
- Policy 5.3 Sustainable Design and Construction, which includes a reference to minimising carbon dioxide emissions across development sites, including the building and services (such as heating and cooling systems).
- Policies 5.5 Decentralised Energy Networks and 5.6 Decentralised Energy in Development Proposals, which promote the use of localised decentralised energy systems.
- Policy 5.7 Renewable Energy, which seeks to increase the proportion of energy generated from renewable sources
- Policy 5.9 Overheating and Cooling, which seeks to reduce the impact of the urban heat island effect in London and encourages the design of places and spaces to avoid overheating and excessive heat generation.

Local Plan

6.307 Core Strategy - Borough Wide Strategic Policy CC1 Reduce Carbon Emissions and Resource Use and Adapt to Climate Change Impacts requires developments to make the fullest possible contribution to the mitigation of and adaptation to climate change.

6.308 Policy H3 Housing Quality and Density also includes reference to the council expecting all housing developments to be well designed and energy efficient in line with the requirements of the Code for Sustainable Homes.

6.309 Development Management Local Plan Section H of the Development Management Local Plan deals with Tackling and Adapting to Climate Change and other Environmental Matters. Policy DM H1 Reducing Carbon Dioxide Emissions states that the council will require the implementation of energy conservation measures.

6.310 The development of the policies was aided by the production of 2 supporting studies: 1 on heat mapping and the assessment of heat network viability in the borough and a second report on the feasibility of renewable energy use. The findings of these studies are outlined further in section 3.

Local Context

6.311 Information from the council's housing stock condition survey suggests that the borough has quite a different profile compared to England and London. For example, the housing stock in H&F is significantly older than in many places, with almost 75% of private sector dwellings concentrated in the pre-1919 age group. This is three times the figure for London. The borough also has a much higher proportion of flats (66%) than is typical across London (46%) or England (19%). However, there are far fewer semi-detached /detached properties, which only make up 3.5% of housing stock in H&F compared to 23% in London as a whole and 31% across England.

6.312 Nearly one fifth of private sector housing does not meet the Government's decent homes standard and in some council wards there are still significant numbers of households (>10%) with no central heating (census, 2001). Fuel poverty is also an issue in the borough as 20% excess winter deaths have been reported compared to a 13% average for London, indicating that cold weather plays a part in causing mortality in the borough.

6.313 Much of the existing housing stock is relatively old, generally quite poorly insulated and not very energy efficient. As new homes and other buildings are constructed in the borough, and existing dwellings are refurbished, they provide the chance to significantly improve the energy performance of the borough's built environment and to reduce carbon dioxide emissions across both the residential and commercial sector.

6.314 The major regeneration areas also offer excellent opportunities to create exemplar low/zero carbon developments, with the introduction of efficient energy systems such as Combined Heat & Power (CHP) units, and heat networks. As well as reducing emissions, constructing energy efficient homes also helps to reduce fuel poverty issues.

Sustainable Energy Policies

6.315 According to the Energy Saving Trust, buildings account for approximately 50% of UK carbon emissions, split fairly equally between residential and non-domestic buildings. In order for the UK and London to meet their carbon dioxide reduction targets, the council, in its role as local planning authority, therefore requires that new developments, particularly major sites, minimise their emissions. The council also needs to ensure that developments keep improving their performance in terms of energy use and emissions so that they comply with the requirement to achieve zero carbon emissions by the target dates of 2016 (residential developments) and 2019 (all other developments).

6.316 Complying with the development plan policies identified in this SPD and implementing the following Sustainable Energy Policies will allow new developments to make their contribution to the UK and London's transition to a low carbon economy.

SPD Sustainability Policy 29

Submission of Detailed Energy Assessment

All planning applications for major developments are required to include an Energy Assessment as part of their supporting information. Smaller developments are also encouraged to include sustainable energy measures where feasible.

6.317 The Energy Assessment should show how the Mayor of London's energy hierarchy has been implemented to achieve the necessary carbon dioxide reduction targets, as outlined in the London Plan. The minimum requirements in terms of information that should be provided are outlined in London Plan policy 5.2. Further guidance is also given in the GLA's SPG on Sustainable Design and Construction: www.london.gov.uk

6.318 Any assessments carried out to determine a development's environmental performance using the Code for Sustainable Homes or BREEAM (or equivalent) must be supplemented with a more detailed Energy

6.319 Assessment in order to show full compliance with the requirements of the Development Plan policies on carbon reduction, with particular attention paid to showing how CO2 emissions will be reduced by implementing energy efficiency measures, the use of communal heat and power systems such as CHP and the integration of on-site renewable energy generation.

6.320 If the Energy Assessment demonstrates that the required CO2 emissions reductions cannot be achieved on-site, the council may require any shortfall to either be provided off-site (e.g. by installing sustainable energy measures elsewhere in the borough) or if this is not feasible, then for a cash in lieu payment to be made which the council will use to secure the required carbon dioxide savings elsewhere.

SPD Sustainability Policy 30

Maximise Energy Efficiency (Be Lean)

Developers should aim to achieve higher energy efficiency levels in new major developments than the minimum Building Regulation requirements. The greater the energy efficiency, the lower the energy consumption and associated emissions. Smaller developments are also encouraged to exceed the requirements, where feasible.

6.321 Using less energy is the 1st step of the energy hierarchy. The Building Regulations drive improvements in the energy performance of buildings by setting minimum standards on the heat loss through the main building fabric and set limits on the amount of energy that should be used for heating, hot water and lighting.

6.322 The potential use of passive design measures should be considered at the earliest design stage for developments to ensure that factors such as site layout, building design and orientation are optimised where possible to help reduce energy demand.

6.323 The Energy Saving Trust (www.energysavingtrust.org.uk) has details of a range of measures that can be implemented in different types of buildings including ways of improving insulation performance, reducing energy use from lighting and utilising energy efficient heating and ventilation systems, including the use of heat recovery to improve reduce energy use and reduce associated emissions. For those developers looking to build an exemplar scheme, consideration could be given to using the 'PassivHaus' standard to guide their development's design in terms of energy efficiency. This standard is very stringent compared to the Building Regulations and current levels of performance expected by the Code for Sustainable Homes. Further details can be found here: www.passivhaus.org.uk.

6.324 For smaller (non-major) new developments and building refurbishments, improving energy efficiency can be a simple and cost-effective way of improving the buildings performance in terms of energy use, helping to reduce emissions and also reducing energy costs. This latter point is important in reducing fuel poverty.

SPD Sustainability Policy 31

Utilise Heat Networks and CHP Systems (Be Clean)

Where possible, new developments should link to existing decentralised energy systems. If this is not possible, the use of Combined Heat and Power systems and communal heating networks should be assessed for major developments and implemented where shown to be feasible.

6.325 The 2nd step in the energy hierarchy is to supply energy efficiently. For many developments, particularly new major schemes, the most significant carbon dioxide savings can be achieved through the use of decentralised energy systems. These produce energy close to where it is used and include communal heating systems with centralised boiler plant or Combined Heat and Power (CHP) units and a heat distribution system. Such systems are more efficient than centralised electricity generation where both heat and energy are wasted in production and transmission.

6.326 If a new development is planned for a site where there is an existing decentralised energy system nearby, then the feasibility of connecting to this system should be explored. Information from the London Heat Map (www.londonheatmap.org.uk) and the borough's Heat Mapping Study (www.lbhf.gov.uk) can be used to identify where this might be feasible.

6.327 The Heat Mapping Study concluded that decentralised energy systems and heat networks are expected to be feasible in the borough's key regeneration areas such as the White City Opportunity Area and the Earls Court and West Kensington Opportunity Area and developers are working on proposals that will provide site wide networks. Where opportunities arise to develop networks that link sites in neighbouring boroughs, these should be explored for their feasibility and detailed in Energy Assessments.

6.328 Smaller scale systems should always be assessed for feasibility in new major developments. A number of factors will determine whether CHP will be appropriate in a development, including the size of the scheme, the mix of electrical and heat energy demand and also the patterns of energy demand.

6.329 However, the use of communal heating systems and heat networks are unlikely to suitable for small-scale developments as they will not be able to provide the required energy demand for this to be an efficient option.

6.330 The GLA is in the process of developing a District Energy Manual which provides guidance on the design and operation of district heating networks. This includes advice on energy centre and pipeline design parameters to encourage compatibility between schemes. The draft manual is available here: www.londonheatmap.org.uk

SPD Sustainability Policy 32

Integrate Renewables where Feasible (Be Green)

The council will expect major developments to include on-site renewable energy generation where this is required to meet the carbon dioxide reduction targets set in policy 5.2 of the London Plan.

6.331 Generally, renewable energy technologies can be divided into those that generate electricity (solar PV panels, wind turbines) and those that generate heat (solar thermal, heat pumps, biomass). Biomass could also generate both if it is powering a CHP system, although this is still regarded as an emerging technology. Where developments integrate CHP systems or connect into heat networks to provide their heat demand, this will reduce the viability of also installing a renewable source of heat. In such circumstances, renewable electricity generation can complement a CHP system, usually in the form of solar PV panels (as wind turbines are generally not suitable for many parts of the borough).

6.332 Some development sites will have limitations that restrict the feasibility of certain renewable technologies. The Energy Assessment submitted with major applications should always include an assessment of the viability of all renewable technologies to assess whether they can be incorporated. Table 1 below provides some general advice on the types of developments and most appropriate locations in the borough for a range of renewable energy technologies. Further information is available in the full report: www.lbhf.gov.uk

6.333 The introduction of the Government's Feed-in Tariff scheme (FITs) and the Renewable Heat Incentive (RHI) supports the installation of renewable energy technologies,

6.334 making them more economically viable. This includes small, householder installations such as roof-mounted PV panels. Further information on the eligibility of installations and the tariffs provided can be found on the DECC website:

Feed-in Tariff Scheme

www.decc.gov.uk

Renewable Heat Incentive

www.decc.gov.uk

6.335 Under specific circumstances, the installation of domestic micro-generation technologies such as those listed above can be carried out as 'permitted development' – i.e. planning permission is not required. Further information on how householders can do this can be found here: www.legislation.gov.uk

Table 1. H&F Renewable Energy Technologies Suitability Assessment

Technology	Most Appropriate Location	Most Appropriate Development Type
Biofuels/ Biomass boilers	• Can be installed on a range of scales in low/high density areas • Areas where fuel can be delivered easily without causing significant impacts	• Retrofitting existing residential and commercial development in lower density settings • Large developments using communal heating systems • Could be adopted for use in CHP systems originally powered by mains gas
Energy from Waste	• Proximity to River Thames for transport of waste (fuel) • Areas where fuel can be delivered easily without causing significant impacts	• Appropriate distance from sensitive residential receptors. Areas of lower density residential development are likely to provide more suitable locations
Ground Source Heat Pumps	• Areas of high density close to anchor tenants	• Areas of high density close to anchor tenants
PV & Solar Heating*	• Areas with lower density buildings • Smaller schemes, in-fill and extensions if south-facing orientation	• Lower density buildings with proportionately large roof areas • Tall buildings not as suitable due to lack of available roof-space, although PV cladding may be feasible for some
Micro wind*	• Areas with consistent, high wind speeds (subject to further investigations) • Areas that are not designated as conservation areas	• All types subject to dealing with potential visual and noise impacts. • However, micro-wind installations are unlikely to be suitable for much of the borough
Air Source Heat Pumps*	• All areas of the borough • Regeneration areas could be used as exemplars to promote use in other parts of the borough	• All types and densities • Installations will need to avoid causing noise and visual impacts

6 Sustainability

7 Transport

Transport

Purpose

7.1 The overall objectives of the SPD are to:

- Establish more detailed guidance on the application of policies within the Core Strategy and DM LP that are concerned with transport policy guidance, namely Core Strategy borough wide strategic policy T1 Transport and DM LP policies DM J1 and DM J6 concerned with transport and accessibility

POLICY GUIDANCE

National Policy

7.2 The National Planning Policy Framework (NPPF) sets out in paragraph 17 Core Planning Principles. Principle 11 relates to transport and states:

- actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, end focus significant development in locations which are or can be made sustainable.

7.3 Section 4 of the NPPF relates to promoting sustainable transport and development proposals should adhere to the paragraphs 32, 34, 35 and 36 in particular where appropriate:

London Plan

7.4 The London Plan recognises that transport is arguably central to achievement of all the objectives set. Chapter 6 of the London Plan sets out policies that support the delivery of the sixth London Plan objective that London should be:

- A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with and efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames, and supports delivery of all the objectives of this Plan.

7.5 Development proposals should adhere to the following transport related policies as appropriate when submitting a planning application:

- Policy 6.1 – Strategic Approach Part A;
- Policy 6.2 – Providing Public Transport Capacity and Safeguard Land for Transport Part A &B;
- Policy 6.3 – Assessing Effects of Development Capacity Parts A,B &C;
- Policy 6.5 – Funding Crossrail & Other Strategically Important Infrastructure Part B & C;
- Policy 6.9 – Cycling Part B;
- Policy 6.10 – Walking Part B;
- Policy 6.12 – Road Network Capacity Part B;
- Policy 6.13 – Parking Part C & D;
- Policy 6.14 – Freight Part B;
- Policy 6.15 – Strategic Rail Freight Interchanges Part A & B;
- Table 6.2 – Car Parking Standards;
- Table 6.3 – Cycle Parking Standards

7 Transport

LOCAL PLAN

7.6 The Core Strategy is the overarching planning policy document and sets out the long term strategic vision for the borough. It highlights the main issues facing the borough and includes strategic policies as to how these issues are addressed within the lifetime of the LDF. The council's core strategy was the subject of examination in early 2011 and was adopted by the council in October 2011. Developments will be expected to comply with the following policy:

- The borough wide strategic Policy T1 – relates specifically to transport

7.7 Applicants should also note paragraphs 10.15 -10.19 of the infrastructure schedule which specifically relate to transport.

7.8 The Development Management Local Plan sets out Hammersmith and Fulham's transport policies in more detail. Developments will be expected to comply with policies DM J1 Transport Assessments and Travel Plans, DM J2 Vehicular Parking Standards and others as appropriate.

LOCAL CONTEXT

7.9 The borough of Hammersmith and Fulham is situated on the western edge of inner London in a strategic location on the transport routes between central London and Heathrow airport. The orientation of the borough is north to south, with most major transport links, both road and rail, carrying through- traffic from east to west across the borough. Some of the busiest road junctions in London are located in the borough at Hammersmith Broadway, Shepherds Bush Green and the borough suffers disproportionately from the effects of through-traffic. North-south transport links in the borough are not as good as east-west links.

7.10 The London Borough of Hammersmith and Fulham's Core Strategy and Development Management Local Plan sets out the council's Transport policies and visions for development. This Supplementary Planning Document (SPD) deals with the council's standards for parking, servicing and highway improvements in new or converted developments. The SPD complements the Core Strategy and DM Local Plan policies and provides guidance on how to implement them.

7.11 The document consists of two parts. The first deals with transport related planning policy matters that will need to be addressed for all relevant planning applications. The second part deals with those elements of development that require consideration under the Highways Act 1980 and other legislation, in addition to planning legislation. Measures will be sought, in connection with development proposals to;

- secure necessary improvements to, and development of, public transport systems and services, including additional stations on the West London line
- ensure that road safety is not compromised and that the free flow of essential traffic is maintained
- minimise vehicle parking demand by controlling the amount of on-site parking provision and by securing the introduction of complementary parking controls and traffic management measures to control off-site parking
- promote the use of rail and water freight transport
- protect residential areas and main shopping streets from the environmental impacts of traffic generated by development proposals.

PART ONE - PLANNING POLICY GUIDANCE

SPD Transport Policy 1

Transport assessments

When applying Development Management Local Plan policy DM J1, the council expects Transport Assessments (TA) and Transport Statements (TS) to be produced in accordance with Transport for London's "Transport Assessment Best Practice" Guidance Document, April 2010. The following table identifies the type of information that will be required to assess whether a proposal meets the threshold for a TA.

7.12 The council expects TA/TS documents to be produced in accordance with Transport for London's "Transport Assessment Best Practice" Guidance Document, April 2010. The TA/TS will contain information on a range of transportation matters and will assist the council in determining what quantum of development is acceptable in transportation terms and how access can be achieved, as far as possible by means other than private car. The table below gives an outline of the likely information that will be required.

Use Class Order	Information to be Included
A1 – A5	• Gross Floor Area (GFA) • Staff Numbers • Number of visitors or customers • Hours of operation • Peak arrival and departure times by mode • Car and cycle parking levels, and car parking • accumulation data • Delivery and servicing requirements and details about how this will be accommodated • Impact of development on the local road network, public transport and on-street parking
B1/B2/B8	• See land (uses A1-5) above, plus: • Land use type • Shift occupation times
C1	• See land (uses A1-5) above, plus: • Number of rooms and beds • Additional facilities eg. Conferences • Catchment area guests
C2	• See land uses (A1-5) above, plus: • Number of beds • Number of consulting rooms • Shift occupation times • Additional facilities
C3	• Number of units • Size of units • Number of units market/affordable housing • Peak arrival and departure times by mode

Use Class Order	Information to be Included
	• Car and cycle parking demand, and car parking accumulation data. • Delivery and servicing requirements and details about how this will be accommodated. • Impacts of development on the local road network, public transport and on-street parking.
D1- non-residential education	• See land use (A1-5) above, uses: • Students numbers and age of students? • Visitors numbers • Additional facilities • Catchment Area
D1/D2	• See land use (A1-5) above, plus: • Patient/visitor numbers
Sui Generis	• To be assessed on the developments own merits

7.13 The level of detail required within the TA/TS will be dependent upon the size/type of scheme. Applicants are encouraged to discuss with the local authority the proposed approach at pre-application stage.

7.14 The applicant will be required to produce a scoping study which describes the proposed approach, discusses the issues likely to influence the proposed development and identifies key measures which will help reduce dependency on the car.

7.15 Other key points that should be included as part of any TA are as follows:

- Highways – determine capacity of existing road links an junctions using existing flows and find reserve capacities available utilising appropriate packages as necessary (such as OSCADY, PICADY, ARCADY, LINSIG TRANSYT, VISSIM and PARAMICS). Giving careful consideration to the objective of restraining traffic and allocating road space made available by restraint policies to 'essential' traffic (including buses, cyclists and pedestrians) determine assignment of peak and off peak vehicular trips to the road network. The assessment should include the commercial vehicles that will be required to service the development.
- Road safety measures – propose local traffic safety environmental improvements for the surrounding area (where appropriate) and test network setting out the assumptions made.
- Identify Mitigation Measures – propose mitigation measures where a development has a negative impact.
- Safety audit – where a proposed development will impact on the local highway network in a manner which could have implications for safety, a safety audit and an agreed safety implementation plan will be required.
- Pollution – at each stage of the traffic assignment modelling the impact of the generated traffic on air pollution and noise should be taken into account where practical.

SPD Transport Policy 2

Travel plans

Travel Plans should be produced in accordance with Development Management LocalPlan policy DM J1 and TfL's guidance on Workplace Travel Planning, Residential Travel Planning and A New Way to Plan. In general, travel plans submitted along with an initial application will be in outline form. However, where the occupant is known or where the application is for the expansion of an existing use, a full travel plan will be required. The Travel Plan will be secured by a Section 106 Agreement in the first instance.

7.16 A travel plan is a long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through an action plan that is regularly reviewed. The travel plan should set achievable and time specific targets, objectives and monitoring requirements. The travel plan should include a series of measures, management and funding details that aim to deliver the stated objectives and targets. Where funding is provided as part of a travel plan a Section 106 Agreement should be provided. In the absence of a Section 106 Agreement a condition should be applied to planning permission.

7.17 Where an outline travel plan is submitted a timetable for implementing an iTrace compatible travel survey and a date that the full travel plan will be completed should be included. The outline travel plan should include the measures that will be in place on completion of the development to encourage sustainable modes of travel for future occupants.

7.18 All travel plans should include appropriate methods of monitoring and enforcement. In general full travel plans should be submitted no later than six months after 90% occupation of the development and the travel plan must be updated and a travel survey submitted at three and five year periods of completion of the development. A full travel plan should include the roles and responsibilities of a travel plan co-ordinator. The contact details of the Travel Plan Co-ordinator should be sent to LBHF and the West Trans Monitoring Officer (Westtranstravelplans@ealing.gov.uk) at least two months prior to the occupation of the development. A named contact or nominated individual is needed in the interim until the appointment of the Travel Plan Co-ordinator. All travel plans should also provide funding for the council to monitor the travel plan to ensure the travel plan is being applied appropriately.

7.19 All education applications will be expected to provide an outline school travel plan as part of the TA, to help reduce the potential negative impact that such developments can have on the road network and provide an appropriate mechanism for supporting individual sustainable journey plans.

7.20 A large amount of material is available on the council's website regarding school travel plans. Advice on travel plans is available from the council's travel plan adviser. TfL has also produced useful guidance for the preparation of school travel plans. The document entitled 'What a school travel plan should contain: a step by step guide to writing your school travel plan document' is available from TfL.

SPD Transport Policy 3

Vehicle parking standards

The council will require any proposed development (new build or change of use) to conform with Development Management Local Plan policy DM J2. In respect of residential conversions, it will normally refuse permission for a residential property to be converted in streets where the level of on-street overnight parking exceeds the notional on-street overnight parking capacity.

7 Transport

7.21 Development Management Local Plan Policy DM J2 has been provided in accordance with the policies and objectives set out within the London Plan, which seek to minimise congestion within the borough. When looking at conversions, the consideration of the number of spaces available on street spaces ensures the council's objective of achieving road traffic restraint and controlling road traffic congestion.

7.22 The notional on-street overnight parking capacity in any street, or part of a street will be calculated as follows:

- The total length of kerb-line will be measured for each side of a street between intersecting street, measuring from the near kerb-line of the intersecting street at each end (or to the "dead-end", if appropriate).
- The following lengths of kerb-line will be identified, immediately prior to (or following) a survey of vehicles parking in the street, and excluded:

  (i) lengths of kerb-line subject to yellow line parking/waiting restrictions in force between 2300 hours and 0700 hours;

  (ii) lengths of kerb-line within 3.5 metres of the kerb-line of an intersecting street;

  (iii) lengths of kerb-line adjacent to a "narrowed" carriageway;

  (iv) lengths of kerb-line which have been "built-out"

  (v) lengths of kerb-line which have been "dropped" to provide crossovers or pedestrian crossing points;

  (vi) lengths of kerb-line adjacent to a "dead-end" of street (normally 3.5 metres from the "dead-end", subject to no double-counting);

  (vii) reserved spaces (i.e. for people with a disability, doctors or diplomats);

  (viii) "zig-zag" markings at pelican/zebra pedestrian crossings;

  (ix) within 15 metres of traffic signals; and

  (x) other lengths of kerb-line not available overnight kerb-side parking, including temporary obstructions such as road works, which must be specifically identified in the survey results

- the length of kerbside space available for overnight kerbside parking will be calculated by subtracting the lengths of kerb-line identified in bullet point 1(after discounting any "double-counting") from the total length of kerb-line bullet point 2
- the notional on-street overnight parking capacity will be calculated by dividing the length of kerb-side space (in metres), which is available for overnight kerbside parking, by 5.0 – thereby allowing a notional parking space of 5.0 metres per car;
- The street (or identified part of a street) will be surveyed between 0300 hours and 0500 hours on a weekday night (i.e. a night between midday on Monday and midday on Friday) to determine the number of vehicles (excluding two-wheeled vehicles) actually parked at the kerbside. (Such times have been identified as producing the normal maximum on-street overnight car-parking demand).
- The level of on-street overnight parking availability/stress may be identified by expressing the number of vehicles parked as a percentage of the notional capacity.

SPD Transport Policy 4

Parking for conversions

The council will normally limit the extent to which a residential property can be converted to a level of one unit less than the number of floors in the property as it was originally built for residential occupation, and which would be in residential (C3) use following the conversion, in streets where:

- **The level on-street overnight parking leaves less than 20% free notional on-street overnight parking capacity; or**
- **Where the street is classified as a strategic route, London distributor or local access road where the local access road has an essential this through –traffic function in the short to medium term;**
- **Where it is proposed to increase the number of conversions beyond the number permitted by this standard, the additional units created by such conversion will normally only be permitted if sufficient off–street parking spaces are provided to meet the full car parking demand generated by the additional units. Particularly in respect of residential above commercial premises a lower level of parking may be acceptable, subject to the availability of public transport and local services, together with the practicality of meeting the full parking standard. In these circumstances, the council will need to be satisfied that there would be no consequential increase in on-street parking demand in areas of over-night parking stress.**

7.23 Increasing car ownership is intensifying the already severe pressures of on-street parking leading to frequent incidence of congestion and double parking. While the council has no powers for controlling car ownership, it does have responsibility to take account of the impact of increasing car ownership. Moreover research has shown that each additional household contributes directly to an increasing demand for car parking space.

7.24 Further conversions of properties, therefore, in streets where on-street parking is already under stress and there is no opportunity for providing off-street car parking, will generate an increased demand for on-street parking which will impose serious consequential effects on the environment, and particularly on the health and safety of local residential – both directly and also indirectly through the obstruction of emergency/social services vehicles.

7.25 However, in some cases, particularly in respect of residential uses above commercial premises, it is impracticable and impossible to fully meet with the above standards or provide any off street parking at all. The council recognises such constraints and that not all households have a need for private cars, particularly those in central locations such as town centres which are highly accessible by public transport and well served by local services. The need to make use of vacant properties and meet the borough's housing need is so great that it may be acceptable in certain circumstances, to allow lower levels of parking provision or car-free conversions. In such cases, the demand for on-street parking space may need to be restrained through, for example, measures such as the developer undertaking to prevent future tenants or owners of properties from applying for, or obtaining on-street residents parking permits.

7.26 The maximum residential demand for on-street car-parking spaces occurs in the middle of the night. At such times both the operation and the enforcement of on-street parking controls tend to be at a minimum level. Moreover, the council's policy objective in implementing on-street parking controls is to discourage the use of cars, particularly for commuting to work, and not the ownership of a car, except in certain circumstances where conversions would otherwise increase demand for on-street parking to the detriment of existing residential amenity.

SPD Transport Policy 5

Car parking standards

Detailed standards for car parking apply equally to development proposals in respect of new build, extensions and change of use. The standards are related to the various land use.

7.27 If the standard is to be varied as a result of exceptional circumstances, consideration must also be given as to whether the permission should be made personal to a particular occupier (or occupiers) of the premises or be granted on a temporary basis, or be made subject to a condition linking use of any excess parking spaces to occupation by a named user.

7.28 The standard, by controlling the number of car parking spaces available (particularly for cars being used for journeys-to-work), is of critical importance to the council's ability to secure its key transportation policy objective of achieving road traffic restraint and controlling road traffic congestion. For this reason, and because the circumstances in which car parking provision will be considered in future are now very different from the previous circumstances of such consideration, the existence of a level of car parking on the site in excess of the standard will not constitute, in itself, exceptional circumstances. It is recognised, however, that the level of existing car parking provision, in conjunction of other factors, may be a relevant material factor to consider when determining a particular planning application, and may lead to a variation of the standard being permitted in appropriate circumstances.

7.29 In considering exceptional circumstances, wherein it may be permissible to vary the number of car parking spaces from that permitted by the standard, the council will require the following to be satisfied:

a) when exceeding a maximum (or specific) standard, there is a proven need for the additional spaces and that the council's overall policies will not be compromised; and

b) when reducing a specific standard, any lesser provision will not contribute to the creation of unsafe traffic conditions, additional on-street parking stress or other problems of traffic management. The council may take account of the following factors when considering provision in excess of a maximum standard:

7.30 The council may take account of the following factors when considering provision in excess of a maximum (or specific) standard:

(i) the operational needs of a development or of a particular occupier of the premises, namely provision:

- for vehicles required for essential business use; or

- for workers, or visitors, whose journeys require the use of a car (i.e. persons with a disability or workers subject to unsocial hours or to emergency call-out)

(ii) the number and type of job opportunities which will be created.

7.31 The council may take account of the following factors when considering provision of less than a specific standard:

(iii) the characteristics of the site and its surroundings, including:

- the existence of on-street parking controls;

- the opportunity to exclude specific developments (and the future occupiers and tenants) from applying/obtaining an on-street parking permit

- the availability of public off-street car parking (for the use of visitors, clients, customers, etc.)

(iv) the accessibility of the development to/by public transport; and

(v) the opportunity for dual-use of proposed/existing car spaces (i.e. the extent to which spaces, provided as part of a development, will be made available for different users at different times of the day/days of the week or to which spaces, not provided as part of a development, will be made available for users of the development.

SPD Transport Policy 6

Dimensions of Car Parking Spaces

The dimensions of all car parking spaces should enable easy access to and from the vehicle, taking account of needs of users and the constraints of the parking area.

7.32 The minimum size of parking spaces for a private car is 2.5 x 6.0 metres for echelon parking 2.0 x 5.0 metres for standard kerbside parking but these dimensions may need to be increased to take account of building columns, landscaping and available circulation and manoeuvring space. The width of circulation aisles should not normally be less than 6m for 90 degrees parking.

7.33 Parking spaces designated for use by Blue Badge Holders should be 2.4M wide by 4.8M long with a zone 1.2M wide provided between designated spaces and at the rear outside the traffic zone, to enable a disabled driver or passenger to get out of a vehicle and access the boot safely.

7.34 The design of a garage needs to allow not only for the width of the car but also near-side clearance, the opening of the car doors and to accommodate a full range of car sizes. Therefore, single garages must have a minimum length of 5m to ensure that the entire vehicle can be accommodated and a minimum width of 2.7m. However, private garages for wheelchair users should have a minimum width of 4.2 metres and garages designed for lifetime homes should be provided at 3.3 metres.

SPD Transport Policy 7

Housing with reduced parking

Where a residential development provides market and intermediate Housing with zero or reduced parking which is compliant with Development Management Local Plan policy DM J2 and DM J3 or where parking is proposed to be shared with other use classes, a Car Parking Management Plan will be required to be submitted as part of a planning application to demonstrate that the proposed development will not have a detrimental impact on local on-street parking. Where the end user is unknown, an outline Car Parking Management Plan should be provided.

7.35 In order to ensure that there is no detrimental impact on the highway in terms of operation and on-street parking, where parking is reduced a car parking management plan should be provided. This plan should include detailed information as to how spaces will be managed and allocated. A car parking management plan should be secured by condition.

SPD Transport Policy 8

Car Clubs for New Developments

Where appropriate and in accordance with the London Plan the council will encourage car club bays in new developments, especially those with restricted parking. All electric car and car club space should be of an accessible width and length.

7.36 The council will encourage the provision of car clubs in accordance with the Local Plan in order to promote sustainable travel and minimise congestion.

7.37 Payment of a new car club will be sought through the council's planning obligations where the qualifying thresholds are met. The payment will cover the cost of a new vehicle(s) and the cost of amending (if necessary) the existing or the provision of providing a new traffic order to provide a car club bay. The developer should first investigate providing the car club bay on site; on-street should be considered as the last resort.

7.38 The size of development will determine the number of car club bays and these can be provided on a phase by phase basis. The council will annually review the level of car clubs in the borough to ensure sufficient car club provision exists.

SPD Transport Policy 9

Blue badge parking

Blue Badge Parking should be provided in accordance with Development Management Local Plan policy DM J4. Where car parking spaces are provided in non- residential car parks within new development these should ensure that car parking spaces for Blue Badge holders (those holding a personal Blue Badge permit as car drivers or passengers) are provided at a minimum level of at least one space or 4% of the total provided by the development if the development provides 10 or more spaces.

7.39 Development Management Local Plan Policy DM J4 has been provided to ensure that there is access for all to the proposed development.

7.40 The provision of bays should be regularly monitored and reviewed to ensure the level is adequate and that enforcement is effective. Space designated for disabled people should be located on firm level ground and as close as feasible to the accessible entrance to the accessible entrance to the building.

7.41 Car parking spaces for Blue Badge holders should be permanently reserved as close to the principal entrance or entrances to residential blocks and plots as possible.

Car Park Barriers

7.42 Car parks with pay-on-exit barriers that offer free car parking to Blue Badge holders should display signs to indicate where Blue Badge holders can obtain exit tickets. There should also be a staff help service lay-by with an accessible call-facility.

SPD Transport Policy 10

Blue Badge Parking on residential Developments

For all new homes to be built to accessible and adaptable standards in accordance with Development Management Policy DM A4, Blue Badge Holder parking in communal residential car parks should be provided at the rate of one space per 10 dwelling units, positioned close to house plots and to each communal entrance and lift core entrance into the development.

Where a residential development provides fewer car parking spaces than that set out as the maximum number in Development Management Policy DM J2, developers should demonstrate where Blue badge holders - either as residents or when visiting where Blue Badge holders – either as residents or when visiting – can park in order to use the development.

7.43 If the development with no or reduced parking has a large number of Lifetime Homes flats the council will expect developers to provide, or arrange to have marked out off-site, at least two bays for Blue Badge holder visitor use.

7.44 Where Blue Badge holder bays are provided on residential development, they should not be sold off or permanently allocated to particular housing units, so that they can be available for any future residents who are Blue Badge Holders while living in the development. Management of on -site bays should restrict motorists who are not Blue Badge Holders from parking on designated Blue Badge Bays.

7.45 Developments must be easily accessible by public transport in order to ensure inclusive access for all users.

SPD Transport Policy 11

Motorcycle parking

The council will require motorcycle parking facilities in developments that require a Transport Assessment or where car parking is provided. At least four spaces should be provided or at least ten per cent of the total provision of car parking or one space per 600m2 in non-residential developments, whichever is the greater.

7.46 Motorcycle use is increasing and therefore increasing demand for motorcycle parking. If parking facilities are not available this could result in inappropriate parking of motorcycles on-street, which is likely to create hazards to other road users.

SPD Transport Policy 12

Cycling and walking

New development in terms of its design and layout, should provide for direct, convenient, safe and secure facilities for cyclists as appropriate to the nature and scale of the development, together with cycle parking and (other than in the case of residential development) changing facilities.

7.47 The council considers the location of cycle parking is important as it will encourage or discourage cycling. Cycle parking needs to be provided in a safe, secure and accessible location. Therefore, developments providing subterranean parking should also provide at grade level parking.

7.48 The council recognises that some smaller developments may have constraints which would prohibit them from being able to provide the recommended level of Sheffield parking stands. The council encourages and welcomes developers to provide innovative parking solutions providing they are workable. For smaller commercial developments it may be acceptable to accommodate the cycle parking provision on-street.

SPD Transport Policy 13

Cycling Environment Review System

Where developments will have an impact on local cycle facilities and routes a Cycling Environment Review System (CERS) assessment will be required. The CERS and funding should be secured by condition or section 106 agreements.

7.49 A CERS assessment will assess the quality of any cycling environment. The analysis enables objective comparisons of the environment along different routes, so that any impacts, issues or substandard areas can be identified. Developers are expected to provide funding in order to resolve any issues that are raised as part of the CERS assessment.

SPD Transport Policy 14

Mayor's Cycle Hire Scheme

Contribution will be sought from developments located near to the proposed extension of the Barclays cycle hire scheme. Where appropriate land will also be sought and safeguarded to facilitate the delivery of the Mayor's Cycle Hire Scheme.

7.50 The scheme promotes the Mayor's vision or a sustainable transport and low emission transport system within London by actively encouraging cycling. Barclays Cycle Hire is set out in the Mayor's Cycle Strategy (Cycling Revolution London 2010), along with other initiatives, which will bring significant social, environment, health and financial benefits to the capital.

7.51 The expansion of the Barclays Cycle Hire Scheme is in line with the Borough's Local Implementation Plan (LIP2) and borough's objective, which are:

- support sustainable population and employment growth in regeneration areas;
- improve efficiency of roadworks;
- improve quality of streets;
- to improve air quality in the borough; and
- to make it easier for everyone to gain access to transport opportunities;
- control parking space fairly;
- reduce numbers killed and injured

7.52 The Mayor is extending the scheme east and west. Phase 2 has extended the scheme into Tower Hamlets, with a small extension to Westfield White City. This is funded by Westfield and will be implemented in March 2012.

7.53 Phase 3 will extend the scheme to Battersea, Wandsworth and most of Hammersmith and Fulham. TfL are keen to extend the scheme to LBHF as there is a high level of cycling in the borough. It is due to be implemented in the spring 2013.

SPD Transport Policy 15

Cycle Superhighway Scheme

A contribution will be sought from developments located near to the proposed Cycle Superhighway routes.

7.54 There are two BSC schemes proposed within London Borough of Hammersmith and Fulham CS9 which will connect Hounslow to Hype Park and this is due to be launched in 2013. The other scheme is CS10 Park Royal to Hyde Park (A40-Boroughs Roads) and is planned as part of future routes, which are subject to consultation.

7.55 Barclays Cycle Superhighway 9 runs between Hounslow Town Centre terminating at Hyde Park Corner in the city at Westminster. The scheme is proposed to enter LBHF at the junction of Goldhawk Road with King Street and continues along King Street crosses to Talgarth Road near Hammersmith Town Hall and back to Hammersmith Road and Kensington High Street

7.56 All Barclays Cycle Superhighways designs are subject to scheme approval and works approval by TfLs Network Assurance to ensure that they comply with TfL's Network Management Duty under Traffic Management Act 2004.

SPD Transport Policy 16

Walking

The council supports the principles set out in within the Manual for Streets documents and expects the developer to apply these principles to any new scheme.

7.57 The principles are set out below:

- applying a user hierarchy;
- emphasising a collaborative approach;
- recognising the importance of the community function
- promoting an inclusive environment
- reflecting and supporting pedestrian and cyclist desire lines;
- developing masterplans and preparing design codes;
- establishing a clear vision and setting out objectives for schemes;
- a locally appropriate balance should be struck between the needs of different user groups
- creating networks of streets that provides permeability and connectivity;
- moving away from hierarchies of standard road types
- developing street character types;
- encouraging innovation
- using quality audit processes
- designing to keep speed at or below 20mph
- using the minimum of highway design features.

7 Transport

7.58 The council encourages the design and layout of new development to facilitate direct, convenient and safe walking routes to town centres and local neighbourhoods, and to schools, local shops and services and public transport facilities.

7.59 The safety and convenience of pedestrians will be a prime consideration and whilst the council welcomes shared surface schemes as part of any proposal the scheme will be required to be demonstrated that conflicts between vehicles and pedestrians will be minimal and speeds of vehicles will be controlled and that the needs of disabled people are fully taken into account in the design of the schemes.

7.60 Within residential development areas of communal open space should be readily accessible from every dwelling by a safe pedestrian route.

7.61 In all developments where residential accommodation exists (or is to be provided) above ground floor retail or business premises, pedestrian access to those residential units shall either be provided or be retained to the street frontage of the building unless physically impractical. Where such access cannot be achieved and pedestrian access is only practicable form the side or rear, the access as provided shall be exclusive to the residential occupiers of the building.

SPD Transport Policy 17

Pedestrian Environment Review System

Where developments will have an impact on local pedestrian facilities and routes a Pedestrian Environment Review System (PERS) assessment will be required and if deemed necessary a pedestrian comfort level assessment as part of any PERS assessment. The PERS and funding should be secured by condition or section 106 agreement.

7.62 A PERS assessment will assess the quality of any walking environment. The analysis enables objective comparisons of the environment along different routes, so that any impacts, issues or substandard areas can be identified. Developers are expected to provide funding in order to resolve any issues that are raised as part of the PERS assessment.

SPD Transport Policy 18

Riverside walk

The council considers that development located next to the riverside should explore opportunities to improve provision of, and accessibility to, the riverside walk for pedestrians and cyclists.

7.63 The council's Core Strategy policy RTC1 states that "the council will work with its partner organisations to enhance and increase access to as well as use of The Waterways in the borough, namely the River Thames and the Grand Union Canal."

7.64 RTC1 also states that "ensuring the provision, or improvement and greening of the Thames Path National Trail (the Riverside Walk) in all riverside developments and canal side tow path along the Grand Union Canal"

7.65 Development of sites that include part of the route will be required to incorporate construction or enhancement of the section of the route concerned. In cases where development having a functional relationship with the river is proposed, the requirement will be to provide or enhance the Riverside Walk to the maximum extent compatible with the functional use of the river, or to make arrangements for the construction or enhancement of the walk on an alternative route.

7.66 The walk should generally be at least 6m wide and should be accessible to cyclists if this can be achieved, but the safety of pedestrians and other river users needs to be considered. Developers should also consider the London Plan's Blue Ribbon Network and the Thames Strategy Kew to Chelsea as part of any proposals.

7.67 Development proposals on sites extending to the river edge will be required to ensure that safe access to and from the foreshore is maintained or, where appropriate enhanced.

SPD Transport Policy 19

Borough road network

The council requires all development to adhere to the guidance within the Development Management Local Plan policy DM J6

7.68 The council has a duty under the Traffic Management Act 2004 to do all that is reasonably practicable to manage the road network effectively to secure the expeditious movement of traffic. In order to coordinate works and other activities on the highway, and to minimise disruption to the road network, developers or their contractors need to notify the council's Network Manager of any proposed works or events on the highway and obtain any consents or licences from the council, TfL or the Highways Agency as necessary.

7.69 It is important for proposed developments to be appropriate in scale and function for the for the road on which they front and the road network.

SPD Transport Policy 20

Public transport

The council will require, as a condition of granting planning permission, that where appropriate development proposals make full provision for appropriate access by coaches and taxis which should not impinge on existing bus servicing arrangements or road safety in the vicinity.

7.70 The council will normally permit coaches and taxis to take advantage of bus priority measures in the borough unless there are circumstances in which bus priority would be adversely disadvantaged. In addition the council will seek developments to accommodate the necessary coach and taxi parking off-street, where appropriate.

7.71 The council will press for improved accessibility of taxis and coaches for wheelchair users.

7.72 Development in connection with the use of the River Thames and Grand Union canal for the operation of public transport services will be welcomed, particularly between central London, Chelsea Harbour, South Fulham and Hammersmith. The inclusion in appropriate development proposals of facilities that improve managed access for pedestrians and cyclists to the Grand Union canal will also be welcomed.

7 Transport

SPD Transport Policy 21

Regeneration areas

Where the development is located in a regeneration area, the council will expect the development to adhere to the transport objectives and visions of the Supplementary Planning Document for that area as well as the provisions of this SPD.

7.73 There are five regeneration areas located within the borough and these comprise:

- White City;
- Hammersmith Town Centre and Riverside;
- Fulham Regeneration Area (including Earls Court and West Kensington);
- South Fulham Riverside; and
- Park Royal.

7.74 For each of the regeneration areas the council has set out the overall strategy, vision for the area, the proposals for sites of strategic importance and objectives. Information for each regeneration area is included within the Core Strategy and the White City, Riverside, Earls Court and West Kensington and South Fulham Riverside Opportunity Areas have individual Supplementary Planning Documents. Developers should adhere to the guidance included within these documents. Any development within these areas will be assessed on the basis of these SPDs as well as other policy documents.

SPD Transport Policy 22

Access for all

The needs of disabled people in getting to and from a building or development as pedestrians, public transport users, motorists, and car passengers must be taken into account in the design of individual developments.

7.75 A key planning objective is to ensure that housing, jobs, shopping and other services are accessible by a range of transport modes and that new developments connect satisfactorily with surrounding areas to facilitate safe and inclusive access for all users

Bus or Taxi

7.76 Bus stops and taxi ranks provided as part of the development should be accessible for disabled people and located as close to main building entrances as possible, in accordance with the Disability Discrimination Act 1995 (as amended).

Train or Tube

7.77 Developments should consider accessible routes from bus stops and stations. Any that incorporate transport interchanges and stations should reflect inclusive transport design so that facilities are both accessible and usable by disabled people.

River Transport

7.78 Where access is provided by boat, the development should be located a short distance from the point of exit to facilitate access for disabled people. Main piers and ramps for public use should be wheelchair accessible.

Access by Car

7.79 Despite improvements to public transport, some disabled people still require the use of private cars as a means of access, either on-site, or on-street nearby. Where relevant to a proposed development, the needs of other groups such as older people, parents with children, and of doctors and care workers should be considered.

7.80 In off-street car parks, space should be provided for Blue Badge Holders as close as possible to the facilities, preferably within 50 metres, with level or ramped access, and under cover if necessary. Where it is not possible to provide designated parking spaces close to the development, a setting down point for disabled people should be provided on firm and level ground, close to the principal entrance to the building.

Footways and Footpaths

7.81 Footways (or pavements) are the part of a highway adjacent to the carriageway for pedestrian use. A footpath has no adjacent carriageway.

7.82 Both footways and footpaths should facilitate ease of access to and from the development. These should be well lit, and clearly signposted with level surfacing to provide easy and safe access for disabled people.

Kerbs and Crossings

7.83 Level or flush access is essential for the majority of wheelchair users and must be provided at all zebra and controlled crossing and at other places used by pedestrians. Footways at dropped kerb crossings should be of sufficient width to allow easy passage for disabled people passing by who are not crossing the road.

Signage and Information

7.84 Signs and information leading people to the development must be in forms that can be easily used by disabled people. Signs must be clear and placed at appropriate heights to take into account the needs of visually impaired people and wheelchair users.

SPD Transport Policy 23

Moving around a development

Developers should ensure that disabled people do not need to walk long distances to access buildings and facilities and should provide plenty of appropriately placed and designed seating. The needs of particular disabled groups, for example those with learning difficulties need to be taken into account when considering arrangements for moving around a development. When considering potential barriers to inclusive access the council will expect developers to consider:

- **getting to and from a development**
- **moving around a development**
- **signage and information**
- **surfacing materials**

Street Furniture

7.85 When proposals are of a size and nature that require street furniture to be incorporated, it must be positioned to take into account the needs of disabled people. For example, signs, poles, bollards, seats and litter bins should be provided at appropriate heights and positioned to leave appropriate footway widths to facilities access for people in wheelchairs and visually impaired people.

Landscaped areas and routes around buildings

7.86 The design of landscaping should be designed to allow good visibility for those in wheelchairs so as not to impair their personal safety.

7.87 Where route are provided around buildings these should not contain steps, stairs, turnstiles, revolving doors, escalators or other features which form a barrier to disabled people unless suitable alternatives are provided.

Shopfronts, Signage and Information

7.88 Shopfront, fascias, signs and information for getting to and from a building or development, and within a building or development, must be in forms that can be easily used by disabled people. Signs must be clear and placed at appropriate heights to take into account the needs of visually impaired people and those who use wheelchairs.

7.89 Development will not be permitted unless, in terms of its design and layout it would facilitate ease of access by disabled people and other with impaired mobility, to and from public transport facilities and car parking areas that directly serve the development, to town centres and local neighbourhoods, and to schools, local shops and services.

7.90 Proposals to enable ease of access to public transport services and facilities will be welcomed and encouraged.

7.91 The council recognises its responsibility in implementing good street and interchange arrangements to public transport services from the street and may seek support and funding to ensure that bus stops, particularly in the vicinity of the new development, provide access for accessible bus services to meet the needs of disabled people and to ensure the kerbsides can be kept clear for buses to service such stops. The council may propose physical alterations to the highway or footway, such as the introduction of bus boarders, which will improve accessibility to wheel chair users and step free access to allow accessibility to and from train stations.

7.92 High quality and inclusive design should apply to all development including individual buildings, public and private spaces and wider area development scheme. This creates an environment that functions well and is accessible to everyone. Instead of arranging separate facilities for disabled people, inclusive design will remove barriers, and will provide facilities and buildings that are accessible for all people regardless of disability, age or gender.

7.93 The council expects all developers to take access issues onto consideration when submitting planning applications and to provide developments that are inclusive in design. Where surfaces are to be used by vehicles as well as pedestrians, comfort space zones or routes should be clearly delineated as the part that is mainly for pedestrians, as recommended in Department of Transport Local Transport Note 1/11 and other best practice guidance.

PERMISSION FOR WORKS OVER OR ON THE HIGHWAY

SPD Transport Policy 24

Works on the public highway

The developer will be required to pay for any works that the council or TfL in their capacity as highway authority has the power to carry out and that are necessary as a result of new development.

7.94 The council will normally undertake the works on the highway in order to ensure that the works are undertaken to the council's adoptable standards and in order to ensure the disruption to the road network is minimal.

7.95 Payment will be secured either by means of an agreement under section 278 of the Highways Act 1980 or a Planning Obligation under section 106 of the Town and County Planning Act 1990. Consideration may also be given to the need to adopt new works as public highway. Permission for work on the TLRN must be sought from TfL. Works on the strategic road network are also subject to approval by TfL.

SPD Transport Policy 25

Permanent stopping up or diversion

The permanent stopping up or diversion of the highway as part of a development, requires the permission of the Highway Authority in the form a 'Stopping Up Order' under Section 247 of the Town and Country Planning Act (as amended) to be obtained, in addition to planning permission. This may be subject to a local enquiry. If so, the Developer would be expected to meet any costs relating to this enquiry.

7.96 The council requires stopping up and diversions to be provided in accordance with national planning law.

SPD Transport Policy 26

Temporary closures

Where a temporary closure is needed, for example while construction works take place, a traffic order is required.

7.97 The council will normally seek a traffic order while a temporary closure is in place in order to control vehicle and pedestrian activity along a length of public highway. This is required to ensure the safe of the highway and minimise disruption.

SPD Transport Policy 27

Vertical Clearances

The minimum vertical clearance required for a new construction over, or within 1m of the carriageway is 5.3m. Over the rest of the footway (i.e. the part of the footway more than 1m form the carriageway), the minimum clearance is 2.3m for awnings and 2.6m for solid structures. Buildings and structures that overhang the public highway require a licence.

7.98 The council will require developments to adhere to the minimum vertical clearances to ensure solid structures and awnings are an appropriate distance from the footway for pedestrian safety.

SPD Transport Policy 28

Reducing the impact of new development on the highway

The council requires that all new developments that have the potential to have a detrimental impact during the construction phase will require a Construction Logistics Plan.

7.99 Construction of developments of all scales can have a serious impact on parking availability, traffic flow, road safety, residential amenity and pedestrian convenience if not properly managed. For this reason the council requires that all new developments that have the potential to have a detrimental impact to submit a Construction Logistics Plan. This plan should be based upon the TfL document 'Building a better future for freight: Construction Logistics Plans' and include:

- Routeing of vehicles;
- Access arrangements to the site
- The estimated number of vehicles per day/week
- Details of the vehicle holding area
- Details of the vehicle call up procedure; and
- Details of any diversion, disruption or other abnormal use of the public highway.

7.100 The council will apply a condition to the planning consent to ensure that Construction Logistics Plan are submitted and approved before planning permissions are implemented. The Construction Logistics Plan will be secured by condition or Section 106 agreement depending on the scale of the development.

7.101 In order to reduce the impact of construction on the local road network the council will seek to ensure that where sites are located adjacent to the borough's waterways or railways full use is made of water/rail transport for the transport of construction and waste materials.

7.102 The council supports and requires that drivers of the construction vehicles to undertake cycle awareness training to ensure the safety of all road users.

7.103 The council support the London Boroughs' Transport Scheme (LBTS) night-time and weekend ban on lorries above 16.5 tonnes (GVW) and will support all appropriate measures to ensure the effective operation and enforcement of the LBTS ban.

7.104 The council will also promote local area bans on heavy lorries, in appropriate circumstances and operate an overnight ban on-street lorry (and coach) parking within the borough and its active enforcement.

7.105 The council requires operators to obtain a goods vehicles operator's licence for London. Developers wishing to use a vehicle with a gross plated weight of more than 3.5 tonnes, if there is no gross plated weight or an unladen weight of more than 1525kg requires a licence.

SPD Transport Policy 29

Streetscape

Developers should apply the relevant elements of the Streetsmart guide and apply the same principles to the design of forecourts, accesses, service roads and other areas that are next to the highway.

7.106 The council has produced a manual entitled 'Streetsmart' which forms a reference manual of good practice for all concerned with the design and implementation of traffic schemes and the maintenance of the highway. The document consists of two volumes, the first volume sets out the approach to streetscape design and the second sets out details regarding construction. The document is provided to assist developers and statutory undertakers by explaining the policies and standards adopted by the council on such matters as:

- Ground surfaces, materials, workmanship, treatment of paving, carriageways and kerbs, restoration of historic paving;
- Street furniture, in particular to protect listed elements, reduce clutter and minimise the cost and time of maintenance;
- Specific guidance regarding materials specific to conservation areas; town centres, The Riverside Walk and the character of residential neighbourhoods across the borough; and
- Maintenance including stringent enforcement of existing controls.

7.107 Volume two of the Streetsmart guide unlike volume one undergoes a review every year to ensure the details and standards of best practice remain up to date. These reviews are published in January of every new year. Copies can be obtained at a cost of £25 by contacting the council.

7.108 Where changes are proposed to the TLRN reference should be made to TfL's Streetscape guidance

7.109 Any works that are proposed to the highway should be undertaken by the council at the applicant's expense. Funding should be secured by section 106 agreement or section 278 agreement.

SPD Transport Policy 30

Forecourt parking and vehicle crossovers

The council will resist planning applications for parking on forecourts and front gardens together with associated footways crossovers, where:

- **the road to which access is required has a night time on-street parking stress of 80% or more;**
- **would endanger the safety of pedestrians or cyclists;**
- **Would be out of character with the streetscape; or**
- **narrow pavements would create an uneven surface for pedestrians and cyclists to negotiate.**

7.110 The creation of forecourt parking can result in the loss of on-street parking. This increases the potential for on-street parking stress which can result in double parking and obstructions of the highway. This has a serious consequential effect on the health and safety of local residents, both directly and indirectly through the obstruction of emergency /social service vehicles. The maintenance of a safe and attractive environment for pedestrian and cyclists is also of primary importance and vehicular access to properties via footway crossover conflicts with these aims.Forecourt parking and vehicle crossovers are likely to resisted on the TRLN and Strategic Road Network.

- The council also has the following requirements;
- the area on which the vehicle is to be parked must be of a minimum size of 6.0 metres in length by 2.4 metres in width;
- the vehicular access to this area must not involve any manoeuvres causing danger to the public;
- garden gates must not open onto the public footway
- proposed crossovers and forecourts to be located a minimum of 10 metres from road junctions junctions, road bends, pedestrian crossings or bus stops/bus stop cage markings.

7.111 For drainage and safety reasons, crossovers are usually built with a crossfall towards the road which has a gradient with limits of 1 in 30 and 1 in 40. This is done to minimise any difference in level between the private land and crossover at the boundary it is the responsibility of the occupier to any additional alterations to the level of their private land to match the crossover area. No surface water shall be permitted to drain onto the public highway and appropriate surface water drainage needs to be provided (see Section 6).

SPD Transport Policy 31

Kerbs and pedestrian crossings

All kerbs and pedestrian crossings should be designed to allow for accessibility and inclusivity

7.112 At all designated crossing points on roads or other vehicle carriageways, where practicable:

- the kerb must be ramped flush to the carriageway and where possible, the ramp should be located away from where there is a steep road camber and have a kerb ramp that is at least 1.2M long
- the crossing should be identifiable to visually impaired pedestrians by the use of tactile paving where appropriate;

- dropped kerbs must be located directly opposite one another and preferably at a right angle to the carriageway;
- the detailed design and materials must be agreed. The requirements of each site will be determined according to need, streetscape and road safety considerations.

TABLES AND CHAIRS

7.113 Class A3 uses involve the sale of food and/or drink for consumption on the premises or the sale of hot food for consumption off the premises.

SPD Transport Policy 32

Tables and chairs

The placing of tables and chairs outside premises on the public highway will normally require planning permission because it will involve a change in the use of the land on which they are placed. The use of a private forecourt for purposes which are ancillary to the main use of the building itself will not normally require planning permission.

7.114 The placing of tables and chairs outside premises on the public highway will normally require planning permission because it will involve a change in the use of the land on which they are placed. For the purposes of planning legislation, the use of a private forecourt for purposes which are ancillary to the main use of the building itself will not normally require planning permission.

7.115 Under the Highway Act 1980 it is an offence for a person who is not the holder of a consent and temporary licence to place of tables and chairs on the highway.

7.116 When considering the grant of a licence for tables and chairs the council will also take into account the impact on residential amenity, and the importance of maintaining a free and unobstructed passage along the highway, including any risk to public safety. In order to ensure that residential and other amenity is protected, and to minimise noise and disturbance, conditions may be imposed on the grant of a temporary consent or licence. These can include amongst other things:

- the hours during which the areas may be used;
- the times when tables and chairs and other items must be removed to the agreed place of storage;
- cleaning the street area to an acceptable standard before and after the placement of the tables and chairs.

7.117 It is essential in all cases that an absolute minimum width of 1.8metres of unobstructed highway to the line of any fixed infrastructure e.g. streetlights, litter bins etc. is kept free for safe and convenient pedestrian movement and to include those who use wheelchairs and people with mobility and visual impairment. Where there are heavy pedestrian flows, even over very short periods or in concentrated bursts, widths of 3.5 metres will be required.

7.118 In streets with very high traffic flows a greater distance will be required to avoid pedestrians having to be too close to the traffic and also to protect all users of the footway from the effects of traffic. The footways in major shopping streets need to be kept unobstructed and such streets may be unsuitable for tables and chairs.

7.119 It is not considered generally practical to provide tables and chairs within a depth of less than 1.5 metres from the building line allowing for space to reach the table. Applications for tables and chairs in particular types of location will be considered as follows:

- in fully pedestrianised streets a minimum clear path 2.3 metres wide for pedestrians must be maintained 0.9 of a metre either side of the centre line. Where the street is wider than 5.4 metres the depth provided for tables and chairs should not exceed 1/3 of the width of the street on each side. If access is required for emergency vehicles, the clear width between tables and chairs on either side should be increased to 5.1 metres to allow pedestrians to stand clear to the emergency vehicles' path
- in streets with a carriageway and footways provided an absolute minimum of 1.8 metres is kept clear. Footways are provided primarily for the convenience and safety of pedestrians. Where footway widths exceed 3.6 metres, the area considered should not exceed ½ the available footway width
- as part of an overall environment improvement scheme, subject to the same considerations listed above.

7.120 In or adjoining public space areas given planning permission for pavement or café use and to have, loose or moveable furniture should be confined a rail, planter or other form of visual guarding. The lower part of the guarding is rigid enough to be detectable with a long cane somewhere within a zone stretching between 150mm and 300mm above ground as in SPD Design Policy 8 Public and Open Space Areas.

7.121 Following the expiry of consent, an application for renewal of consent must be made

7.122 Failure to comply with all relevant legislation will result in the council revoking licences.

SPD Transport Policy 33

Mechanical parking solutions

Where mechanical parking solutions including car stackers, turntables and lifts are proposed as a means of maximising the space available for off-street car parking, the council will require certain criteria to be met as appropriate.

7.123 Mechanical parking solutions including car stackers, turntables and lifts are frequently suggested as a means of maximising the space available for off-street car parking. The council accepts the principle of mechanical solutions in new developments. However, developers should consider the following points:

- accesses should be positioned at least 5m from the back edge of the footway;
- where accessed directly from the highway, then each parking space must be independently accessible;
- where accessed within an off-street car park, and the spaces are not independently accessible, there must be adequate circulation space to allow vehicles to wait without blocking the free flow of traffic either within the car park or on the highway;
- the council may impose a condition relating to the maintenance of the mechanical parking on the grant of any planning permission; and
- where there will be impact on the local highway network a Road Safety Audit will be required.

7.124 The council will require the developer to set out the maintenance requirements of the parking solution and costs of maintaining a mechanical parking solution should be set out and secure by condition or a section 106 agreement.

SPD Transport Policy 34

Servicing

The council will seek off-street servicing for all new development and will resist its loss in existing developments.

7.125 Adequate space for loading, unloading and waiting of goods vehicles must be provided, normally within the development site. The provision should be one lorry space for every 500 sqm of gross floorspace, unless the developer can satisfy the council that the design of development is such that lesser level of provision will be adequate to meet the full potential demand for servicing which may reasonably be anticipated. Consideration will also need to be given to the need for garaging commercial vehicles on the premises.

7.126 The council will also require that areas set aside for servicing arrangements are designed/arranged in such a manner as to discourage their use for car parking and may require the incorporation of specific measures to prevent the parking of cars in areas not designated for that purpose.

7.127 In accordance with Transport for London's Guidance "A New Way to Plan" delivery and servicing arrangements for a development must be set out within the Travel Plan. Monitoring of servicing and deliveries should also be included as part of the Travel Plan.

SPD Transport Policy 35

Advertising

Planning applications for advertising should adhere to the policies set out in Development Management Local Plan policy DM G8 Advertisements and supporting design SPDs. In respect of visual impact the council will also consider issues of public safety.

7.128 The council will normally refuse consent for any advertisements which would be displayed where public safety would be compromised.

7.129 Free standing hoardings will be unacceptable on major traffic routes or at important road junctions where there display is liable to be prejudicial to public safety. Signs should not flash or move and that the luminance does not exceed levels set out in the 'Technical Reports of the Institute of Lighting Engineers.'

SPD Transport Policy 36

New Street Furniture including Broadband cabinets

The proposed locations for new street furniture will only be acceptable if there is anappropriate clear and unobstructed width of footway.

7.130 An absolute minimum width of 1.2 metres of clear and unobstructed footway will be applied in appropriate locations. However, other local criteria such as footfall, land use, local desire lines, and where people including those in wheelchairs or using wider double buggies will need to pass others,

for example, may dictate a wider pathway. Street furniture should be provided in accordance with the H&F Streetsmart guidance and should also be appropriately protected against graffiti and fly posting and be regularly maintained.

7.131 If a manhole is required, it should be covered with anti skid surfacing if the on the carriageway and with a non slip surface on the footway.

7.132 A scaled drawing showing the proposed location for the Street furniture as well as the dimensions should be provided.

8 Glossary

Above Ordnance Datum – (also abbreviated to 'AOD') see Ordnance Datum.

Acoustic lobby - inner and outer acoustic doors, designed to prevent both sets of doors opening at the same time to prevent escape of internal noise

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Air Quality Assessment – An assessment of the impact of a development on the levels of certain pollutants in the local area and potential for exposure to those pollutants.

Air Quality Management Area (AQMA) – An area where air quality objectives are likely to be exceeded. Declared by way of an order issued under Section 83(1) of the Environment Act 1995.

Air Quality Objectives – Air quality targets to be achieved locally as set out in the Air Quality Regulations 2000 and subsequent Regulations. Objectives are expressed as pollution concentrations over certain exposure periods, which should be achieved by a specified target date. Some objectives are based upon long term exposure (e.g. annual averages), with some based on short term objectives. Objectives only apply where a member of the public may be exposed to pollution over the relevant averaging time.

Air Source Heat Pump – A heating and cooling system that uses outside air as its heat source and heat sink. In domestic heating use, an ASHP absorbs heat from outside air and releases it inside during winter, and can often do the converse in summer.

Archaeological interest - An interest in carrying out an expert investigation at some point in the future into the evidence a heritage asset may hold of past human activity. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them. These heritage assets are part of a record of the past that begins with traces of early humans and continues to be created and destroyed.

Architectural and artistic interest - These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skill, like sculpture.

ATTrBUTE. A travel plan building, evaluation and scoring tool, developed by TfL

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8 Glossary

"A" weighting - frequency weighting that has been developed to imitate the ear's varying sensitivity to sound of different frequencies.

Biodiversity - The term 'Biological Diversity' or 'Biodiversity' is generally described as the variety of life on earth, and includes all species of plants and animals and the natural systems that support them. The Convention on Biological Diversity (1992), to which the UK is a party defines 'Biological Diversity' as:

'The variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.' **(10)**

Importantly, the term Biodiversity' incorporates all species and habitats, both rare and common, and also seeks to ensure the protection of genetic diversity. This is particularly relevant in the current context where even once common species such as the House Sparrow and Starling are declining rapidly and the rate of species loss and extinctions are at unprecedented levels.

Blue Badge. Blue parking badges allow cars carrying disabled people to be parked near shops, stations and other facilities, and in LBF controlled parking zones and meter parking bays. Blue Badges can only be issued to people who meet the eligibility criteria. They can be used in any car the badge holder is driving or is a passenger in.

Borehole: A hole drilled in the ground in order to take samples and to allow gas and water monitoring.

BREEAM – The Building Research Establishment Environmental Assessment Method (BREEAM) is an industry measure of energy and environmental performance of non-residential buildings. There are 5 ratings as follows: Pass, Good, Very Good, excellent and Outstanding.

Brownfield Site: A site that has been generally abandoned or underused where redevelopment is complicated by actual or perceived environmental contamination. Only a small proportion of Brownfield sites will meet the definition of contaminated land

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Brown Roof – A roof that has a layer of soil or other material providing a habitat or growing medium for plants and/or wildlife. It may also include additional layers such as a root barrier and drainage and irrigation systems.

Carbon Dioxide: A constituent of landfill gas. It is heavier than air and will asphyxiate if present in sufficient concentrations.

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10 Convention on Biological Diversity, opened for signature 5 June 1992 (entered into force 29 December 1993)

Car Clubs, also known as Community Car Pooling .Car club schemes are aimed at sharing the ownership and use of cars. Owning a car is expensive, but individual journeys are relatively cheap. Once a car is acquired it is also acts as a disincentive to using public transport. Community car sharing schemes are one solution which has proved very successful in Europe and is now being looked at in trials in Britain. The principle is different from conventional car hire in that the cars are kept locally and can be used at short notice and for short periods of time. Community Car Pooling Schemes ensure that cars are available when people really need them, but reduce unnecessary use and pressure for parking spaces.

Carplus promotes and supports the development of car clubs and car sharing schemes. Carplus aims to create a national network of services in the UK, which will complement the most sustainable transport modes.

Code for Sustainable Homes – The Government's national standard for measuring the environmental performance of new residential development. Credits are awarded for energy, water, drainage, materials, waste, pollution, management, health and well being and site ecology. There are 6 ratings with level 1 being the lowest level of performance and level 6 representing the highest (zero carbon).

Competent Person: The competent person would normally be expected to be a chartered member of an appropriate professional body (such as the Institution of Civil Engineers, Geological Society of London , Institution of Environmental Management) and also have relevant experience of investigating contaminated sites or who holds the Specialist in Land Condition (SiLC) qualification administered by the Institute of Environmental Management

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Community Infrastructure Levy (CIL). The discretionary charge on development which Local Planning Authorities will be empowered to make in order to fund local infrastructure requirements.

Conservation - The process of maintaining and managing change to a heritage asset in a way that sustains and where appropriate enhances its significance.

Contaminated Land: Any land where the actual or suspected presence of substances in, on or under the land may cause risks to people, property, human activities or the environment, regardless of whether or not the land meets the statutory definition in Part 2A of the EPA 1990*.

*The following definition of Contaminated Land is not used in this document other than where Part 2A of the EPA 1990 is specifically referenced:

Contaminated land is defined in Section 78 A (2) of the Environmental Protection Act 1990 as

"any land which appears to the local Authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:-

a) significant harm is being caused or there is a significant possibility of such harm being caused; or

b) pollution of controlled waters is being, or is likely to be caused."

Contaminated Land Register: The public register maintained by the enforcing Authority under the provisions of 78R of the Environmental Protection Act 1990 of the particulars relating to contaminated land. The Register contains details of land that has been identified by the Local Authority, which is giving rise to significant harm or polluting controlled water. It also includes details of any enforcement action being undertaken by the Authority.

Controlled Waters: Defined in Section 104 of the Water Resources Act 1991 and includes territorial and coastal water, inland fresh waters, and ground waters.

Considerate Contractors Scheme – A scheme designed to ensure that construction and routine maintenance activities progress without making life unpleasant for people who live and work nearby.

Combined Heat & Power (CHP)/Combined Cooling Heat & Power (CCHP) – The simultaneous generation of usable heat and power (usually electricity) in a single process, thereby reducing wasted heat and putting to use heat that would normally be wasted to the atmosphere, rivers or seas. CHP is an efficient form of decentralised energy supply providing heating and electricity at the same time. CHP's overall fuel efficiency can be around 70-90% of the input fuel, depending on heat load; much better than most power stations which are only up to around 40-50% efficient.

Community Heating – Distribution of steam/hot water through a pipe network to heat a large area of commercial, industrial or residential buildings or for industrial processes. The steam/hot water is supplied from a central source (e.g. a combined heat and power plant).

Ctr - a correction value added to the DnT,w value for dwellings and some other applications to place greater importance on the lower frequency values

Current Use: Any use which is currently being made, or is likely to be made, of the land and which is consistent with any existing planning permission (or otherwise lawful under town and planning legislation)

dB - decibel, the unit to measure sound

Decentralised Energy – Power generation in the UK is still largely centralised with large power stations generating electricity which is distributed over large distances via the National Grid. Generating power on a smaller scale and closer to the end user (i.e. decentralised), is much more energy efficient and can generate potential cost savings for users. Decentralised energy generation using CHP or renewable energy technologies can help significantly reduce carbon dioxide emissions.

Demolition Protocol – A resource efficiency model showing how the production of demolition material can be linked to its subsequent specification and procurement as a high value material in new builds.

Designated heritage asset - A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated as such under the relevant legislation.

DnT,w+Ctr - airborne values representing the weighted, standardised level difference between a source room and receiver room

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Drainage Hierarchy – The London Plan outlines the following drainage hierarchy for SuDS measures:

1. store rainwater for later use;
2. use infiltration techniques, such as porous surfaces in non-clay areas;
3. attenuate rainwater in ponds or open water features for gradual release;
4. attenuate rainwater by storing in tanks or sealed water features for gradual release;
5. discharge rainwater direct to a watercourse;
6. discharge rainwater to a surface water sewer/drain; and
7. discharge rainwater to the combined sewer.

Ecological networks: These link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment.

Embodied Energy – The total life cycle energy used in the collection, manufacture, transportation, assembly, recycling and disposal of a given material or product.

Energy Assessment – A report evaluating the energy use of a proposed development which shows how it has been designed to reduce carbon emissions in line with the council's Development Plan policies on tackling climate change. The assessment should show how energy efficiency measures, including passive design and low and zero carbon technologies such as decentralised communal energy systems and renewable energy generation will be implemented to reduce energy use and minimise CO2 emissions.

European site: means candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas (for advice on statutory obligations affecting biodiversity and geological conservation, see Circular 06/2005).

Exceedence – Concentrations of a specified air pollutant greater than the appropriate Air Quality Objective.

Exception Test – The 3 stage assessment required for some development types in high flood risk areas to determine whether or not the negative implications of developing in a flood risk area can be balanced against the potential positive contributions to sustainable development that new development can bring. The Exception Test should not be used as a means of supporting inappropriate development.

Exclusion Zone is an area where people are not allowed to go or where they are not allowed to do a particular thing, for example in this case the exclusion zone is the area in which the council are seeking to restrict the amount of takeaway establishments.

Flood Resilient Design – Can include measures such as putting living accommodation on the first floor, using flood-proof materials, incorporating non-return valves to stop surcharges from sewers entering properties, integration of flood barriers etc.

Flood Risk Assessment – Flood Risk Assessments (FRA) are required when a planning application is submitted. This requirement is set out in the Government's policy on development and flood risk as stated in paragraphs 10-13 of Planning Policy Statement 25.

FSC – Forestry Stewardship council – certifies timber from renewable sources that are managed according to sustainable environmental standards.

Green corridors: Extensive contiguous areas of trees and open space which straddle or run along the major road, rail and river/canal routes into London. They may be narrow, often only the ‘unused’ margins of development, but they are of value as habitats for wildlife and plants and local landscape features and because they may link nature conservation areas. Certain transport routes such as the Thames and the Grand Union Canal also act as corridors for animals and plants in the same way as green corridors. However, these have been designated as nature conservation areas because of their greater nature conservation importance and are not shown as green corridors.

Green infrastructure: The multifunctional, interdependent network of open and green spaces and green features (e.g. green roofs). It includes the Blue Ribbon Network but excludes the hard-surfaced public realm. This network lies within the urban environment and the urban fringe, connecting to the surrounding countryside. It provides multiple benefits for people and wildlife including: flood management; urban cooling; improving physical and mental health; green transport links (walking and cycling routes); ecological connectivity; and food growing. Green and open spaces of all sizes can be part of green infrastructure provided they contribute to the functioning of the network as a whole. See also Urban Greening.

Greenfield Run-off – The surface water run-off from a site before development. A typical greenfield run-off rate is considered to be 5l/s/ha.

Green Roof – A green roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems. See the GLA's 'Living Roofs and Walls' report: www.london.gov.uk/sites/default/files/uploads/living-roofs.pdf for further information.

Ground Gas: Gas that is produced by the biodegradation of organic material. The gas contains principally a mixture of methane gas and carbon dioxide. Other gases in trace concentrations are also present.

Ground Source Heat Pump – A heat pump that removes heat from the earth or ground water in cold weather and transfers it to the house through an underground piping system. The process can be reversed in warm weather to transfer heat into the ground.

Ground Water – Water within soils and rock layers.

Guideline Values/ SGVs: Generic criteria for concentrations of contaminants designed to be protective of specified receptors in a range of conditions. Soil Guideline Values (SGVs) relate to chronic risks to human health and are derived from the CLEA model for various land use scenarios.

Harm: Defined in Section 78 A (4) of the Environmental Protection Act 1990 as

"harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property."

Hazard: A substance, feature or situation that has the potential to cause harm, either directly or indirectly, to the environment, including humans (construction workers and site users and occupiers), soil, water, air, flora and fauna, buildings and commercial assets. They may be chemical, biological or physical.

Headspace: The vapour mixture trapped above a solid or liquid in a sealed vessel.

Heritage asset - A building, monument, site, place, area or landscape (including an archaeological priority area) positively identified as having a degree of significance meriting consideration in planning decisions. Heritage assets are the valued components of the historic environment. They include designated heritage assets (as defined in the NPPF) and assets identified by the council during the process of decision-making or through the plan-making process (including local listing).

Heat Network – A heat network distributes heat to several users, just as an electricity grid distributes power. The heat energy produced and recycled by CHP plants during electricity generation can be distributed to local homes and businesses via a heat network. Recycling heat in this way has an important role to play in the reduction of carbon dioxide emissions.

Hot Food Takeaway shops have been classified as falling within Class A5 of the Town and country Planning Use Classes Order. Establishments whose primary business is for the sale of hot food for consumption off the premises, fall within this A5 Class.

Highway. The highway is a way over which the public have the right to pass and re-pass. Public Highway is a highway that is maintained at public expense (i.e. by the highway authority). Highways not maintainable at the public expense are nonetheless highways. A highway may also be a waterway or a navigable river.

- Carriageway – part of a highway over which the public have a right of way for vehicles;
- Footway – part of a highway over which the public have the right of way on foot only.

International, national and local sites of importance for biodiversity: All Sites of Special Scientific Interest, Special Areas of Conservation, Special Protection Areas, and Ramsar sites, Local Sites and natural habitats (as identified in the Natural Environment and Rural Communities Act 2006 section 41 list) and areas identified for habitat restoration and creation.

Intrusive Investigations: An investigation of land (for example by exploratory excavations), which involves actions going beyond simple visual inspection of the land, limited sampling or assessment of documentary information.

iTrace. iTrace is centralised software package adopted by all London Boroughs and other authorities nationally that inter alia, allows easier assessment of Travel Plans and monitoring of their efficacy, provides template documents and easier sharing of information between Travel Plan authors in order to encourage the spread of best practice.

Impermeable Membrane or Barrier: Used to describe materials, natural or synthetic, which prevent the passage of liquids or gases. Landfill gas Barriers and membranes are used to prevent gases migrating or entering properties thereby ensuring the building is safe.

In situ: Unexcavated, remaining in the subsurface.

LA90 - the A-weighted noise level exceeded for 90% of the time period, used as a measure of background noise

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LAmax - the A weighted maximum noise level that was recorded during a monitoring period

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Landfill Site: An area of land, depression or former quarry which has been or is being infilled with waste materials.

Land Affected by Contamination: See 'Contaminated Land' definition above

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Living Roof – See 'Brown Roof' and/or 'Green Roof'.

LnTw - weighted standardized impact sound pressure level of impact sound transmitted between rooms

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Major Development – As defined in the London Plan, major developments are defined as:

- For dwellings: where 10 or more are to be constructed (or if number not given, area is more than 0.5 hectares);
- For all other uses: where the floor area will be 1000 sq metres or more (or the site area is 1 hectare or more).

The site area is that directly involved in some aspect of the development. Floor space is defined as the sum of floor area within the building measured externally to the external wall faces at each level. Basement car parks, rooftop plant rooms, caretakers' flats etc should be included in the floor space figure.

Methane Gas: A constituent of landfill/ground gas. It is flammable and explosive at concentration between 5-15% vol/vol.

Network Management Duty. As part of the Traffic Management Act 2004 local authorities were given the legal responsibility for the Network Management Duty. The objectives of this duty must be to: Make sure that traffic flows freely on our road network, and help traffic on the road networks of other authorities to flow freely.

NO2 – Nitrogen dioxide

NOx – Nitrogen oxides. NOx includes both nitric oxide (NO) and nitrogen dioxide (NO2). Most pollution sources emit NOx primarily in the form of NO. However, this can react and convert to NO2 in the atmosphere.

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems

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Open Space – All land that is predominantly undeveloped other than by buildings or structures that are ancillary to the open space use. A broad range of open space types are included – whether in public/private ownership with unrestricted/limited public access.

Ordnance Datum – (also abbreviated to 'OD') is the mean level of the sea (at Newlyn in Cornwall) from which heights above sea level are taken.

Owner: Defined in Section 78 A (9) of the Environmental Protection Act 1990 as

"a person (other than a mortgagee not in possession) who, whether in his own right or a trustee for any other person, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled if it were so to let."

Passive Solar Design – This refers to the use of solar energy for the heating and lighting of buildings. Using this approach, the building itself or some part of it can take advantage of the heat/light energy provided by the sun.

Parks for the purposes of this SPD are those parks identified as metropolitan open land, district parks or local parks within Core Strategy Appendix 2 – Open Space hierarchy.

Pathway: One or more routes or means by, or through, which a receptor:

(a) is being exposed to, or affected by, a

contaminant, or

(b) could be so exposed or affected.

Permit Free. A restriction that removes the eligibility of residents within permit-free developments to have Residents' Parking Permits.

Photovoltaic (PV) Cell – Converts solar energy directly into electricity. Interconnected cells are encapsulated into a sealed module that produces a voltage.

PM10 – Fine particulate matter with a diameter of less than 10 microns.

Pollutant Linkage: The relationship between a contaminant, a pathway and a receptor.

Pollution of Controlled Waters: Defined in Section 78 A(9) of the Environmental Protection Act 1990 as:-

"the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter."

Possibility of Significant Harm: A measure of the probability, or frequency, of occurrence of circumstances, which would lead to significant, harm being caused.

Potentially contaminated land sites: Sites identified (while undertaking desk studies/site investigations) as being, or having been, subject to a land use that may give rise to contamination.

Priority habitats and species: The England Biodiversity List under section 41 of the Natural Environment and Rural Communities Act 2006 provides details of all Species and Habitats of Principal Importance.

Protected and Priority species and habitats: In the United Kingdom, legislation exists to provide protection for species and/or habitats if these are categorised as being:

a) a 'European Protected Species' as identified in the Conservation of Habitats and Species Regulations 2010, which transposes the European Union's Habitats Directive[(11)] into UK law; or

b) a nationally 'Protected Species' as listed in the Schedules of the Wildlife and Countryside Protection Act 1981 (as amended); or

c) a Priority Species' and/or 'Priority Habitats' as identified under section 41 of the Natural Environment and Rural Communities Act 2006 Act 2006, and/or the UK Biodiversity Action Plan (UK BAP).

Public Transport Accessibility Level (PTAL). PTAL provides a methodology for assessing the relative ease of access to a location to the public transport network. PTAL 1 is 'very poor' with PTAL 6 being 'excellent'.

11 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

Qualitative Risk Assessment: The evaluation of risk associated with potential source-pathway-receptor linkages by consideration of the hazard severity combined with the probability of occurrence expressed using non-numerical terminology (e.g. high, medium, low).

Quantitative Risk Assessment: The estimation of risk based on modelling of contaminant fate and transport and exposure assessment using site-specific criteria and expressed using numerical terminology (e.g. increased risk of 1 in 105).

Rain Garden – A planted depression that allows rainwater runoff from impermeable areas like roofs, driveways etc to be diverted from the sewer and to be used for irrigation.

Rainwater Harvesting – Collecting water from roofs via traditional guttering and through down pipes to a storage tank. It can then be used for a variety of uses such as watering gardens.

Ramsar sites: Ramsar sites are wetlands of international importance, designated under the Ramsar Convention.

Receptor: "a living organism, a group of living organisms, an ecological system or a piece of property which is being, or could be harmed, by a contaminant, or controlled waters which are being, or could be, polluted by a contaminant."

Reclaimed Material – Material re-used in its existing state, without need for processing or energy intensive alteration.

Renewable and Low-Carbon Energy – Includes energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass. Low-carbon technologies are those that can help reduce carbon emissions.

Renewable and/or low-carbon energy supplies include:

• biomass and energy crops;

• CHP/CCHP (and micro-CHP);

• waste heat that would otherwise be generated directly or indirectly from fossil fuel;

• energy-from-waste;

• ground/air source heating and cooling;

• hydro;

• solar thermal and photovoltaic generation; and

• wind generation

Remediation: A remediation action falling within the definition of Section 78 A (7) the

Environmental Protection Act 1990 is:

"doing any works, the carrying out of any operations or the taking of any steps in relation to any land or waters for the purpose of:-

a) preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land, or

b) of restoring the land or waters to their former state."

Remediation Notice: Defined in Section 78E(6) of the Environmental Protection Act 1990 as a notice specifying what appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified. It is the mechanism by which the Local Authority or the Environment Agency can ensure that land is remediated if it poses a risk of significant harm or pollution of controlled waters.

Remediation Scheme: The complete set or sequence of remediation actions (preferable to one or more significant pollutant linkages) to be carried out with respect to the relevant land or waters.

Remediation Statement: Defined in Section 78H(7) as a statement prepared and published by the responsible person detailing the remediation actions which are being, have been, or are expected to be done as well as the periods within which these things are being done.

Return Period – A statistical measurement denoting the average recurrence interval over an extended period of time between particular events such as storms or flooding.

Risk: Is the combination of

a) the probability, or frequency,. of an occurrence of a defined hazard (for example, exposure to property of a substance with potential to cause harm); and

b) the magnitude (including the seriousness) of the consequences.

Sensitive Use: Housing, schools, hospitals, children’s play areas, nurseries, allotments, etc.

Sequential Test – In relation to flooding, 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.

Significant Harm: Any harm which is determined to be significant in accordance with the statutory guidance in Chapter A of DETR Circular 01/2006.

Site Investigation: This term is used to describe the process of carrying out investigations on land to determine whether there is contamination present. The investigation is carried out in several stages. These stage are typically a desk study to assess historical land use, intrusive investigation using trial pits and boreholes, sampling of materials, assessment of risk, and preparation of remediation proposal.

Site reconnaissance/ walkover survey: A site walkover survey to inspect the land, its use, layout and condition.

Sky Glow - the illumination of the night sky, most commonly caused by artificial light that emits light pollution

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Sound Limiter - a device that monitors amplified sound and limits the maximum sound level that can be generated by sound equipment

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Solar Water Heating – Solar water heating systems consist of a series of tubes inside an insulated box, typically mounted on the roof. The tubes absorb the sun's heat and transfer that heat to water or another liquid flowing through the tubes to heat water to be used in the home.

Special Areas of Conservation: Areas which have been given special protection under the European Union's Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

Special Protection Areas: Special Protection Areas are areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within European Union countries. They are European designated sites, classified under the 'Birds Directive 1979' which provides enhanced protection given by the Site of Special Scientific Interest status all Special Protection Areas also hold.

Special Site: Is defined by Section 78A(3) of the Environmental Protection Act 1990 as

"any contaminated land

a) which has been designated as such by virtue of Section 78C(7) or

b) whose designation as such has been terminated by the appropriate Agency under Section 78Q(4)

The effect of the designation of contaminated land as a special site is that the Environment Agency, rather than the local Authority, becomes the enforcing Authority for the land."

Strategic Flood Risk Assessment – A study to assess the risk to an area or site from flooding, now and in the future, and to assess the impact that any changes or developments on the site or area will have on flood risk to the site and elsewhere. It may also identify, particularly at more local levels, how to manage those changes to ensure that flood risk is not increased.

Substance: Is defined in Section 78A(9) of the Environmental Protection Act 1990 as:-

"any natural or artificial substance, whether In solid or liquid form or in the form of a gas or vapour."

Supplementary Planning Document (SPD) does not form part of the statutory plan. It can take the form of design guides or area development briefs, or supplement other specific policies in the plan. However, it must be consistent with national and regional planning guidance, as well as policies set out in the adopted plan. An SPD is a material planning consideration.

Surface Water – Rainwater lying on the surface or within surface water drains/sewers.

Surface waters/ hydrology: Water present above ground associated with freshwater resources, i.e. rivers, streams and lakes. Hydrology is the study of the distribution, conservation and use of water.

Sustainable Construction – The use of design and construction methods and materials that are resource efficient and that will not compromise the health or well-being of the environment or the building occupants, builders, the general public or future generations.

Sustainable Development – Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable Drainage Systems (SuDS) – An alternative approach to the traditional ways of managing rainwater runoff from buildings and other surfaces. SuDS covers the whole range of sustainable approaches to surface drainage management including: source control measures including rainwater recycling and drainage; infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities; filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns; filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide

storage if needed; and basins and ponds to hold excess water after rain and allow controlled discharge that avoids flooding. SuDS can reduce the total amount, flow and rate at which surface water runs directly to stormwater systems or to rivers and other water courses.

Swale – Grassed depressions which lead surface water overland from the drained surface to a storage or discharge system, typically using the green space of a roadside margin. Compared to a conventional ditch, a swale is shallow and relatively wide, providing temporary storage, conveyance, treatment and the possibility of infiltration under suitable conditions.

Tonal noise - a tone at one or more specific frequencies, generally more noticeable and more annoying than non-tonal noise of the same level

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Transport Assessment. A transport assessment is a comprehensive review of all the potential transport impacts of a proposed development or redevelopment, with an agreed plan to mitigate any adverse consequence.

Trial Pits: Trenches dug into land to check what is below the surface and allow samples to be taken for analysis.

Transport Statement. A transport statement to support the smaller scale developments where the traffic impact is limited in both volume and area impact. It should set out the issues relating to a proposed development site (existing conditions) and details of the development proposals (proposed development).

Travel Plans. Travel Plans are aimed at helping employees to use alternatives to driving to work – for example public transport, walking and cycling. Green travel plans also address business' transport use and cover travel in the course of business. Travel plans can make a major contribution to easing congestion, especially during the peak periods.

TRAVL. A software package allowing access to a range of travel surveys carried out for developments across London

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Validation: Confirmation of the likely performance of a particular remedial approach, for example supporting evidence of verified performance on other sites.

Verification: The process of demonstrating that the risk has been reduced to meet remediation criteria and objectives based on a quantitative assessment of remediation performance.

Verification Plan: A plan that sets out the requirements for gathering data to demonstrate that remediation meets the remediation objectives and criteria.

Veteran tree - A tree which, because of its great age, size or condition is of exceptional value culturally, in the landscape or for wildlife. The term veteran tree is one that is not capable of precise definition but it encompasses trees defined by three guiding Policies:

- trees of interest biologically, aesthetically or culturally because of their age;
- trees in the ancient stage of their life;
- trees that are old relative to others of the same species.

Listed below are characteristic features of veteran trees. The more the tree has, the stronger the indication that it is a veteran:

- Girth large for the tree species concerned
- Major trunk cavities or progressive hollowing
- Naturally forming water pools
- Decay holes
- Physical damage to trunk
- Bark loss
- Large quantity of dead wood in the canopy
- Sap runs
- Crevices in the bark, under branches or on the root plate sheltered from direct rainfall
- Fungal fruiting bodies (e.g. from heart rotting species)
- High number of interdependent wildlife species
- Epiphytic plants
- An ‘old’ look
- High aesthetic interest

Volatilisation: The conversion of a chemical substance from a liquid or solid sate to a gaseous or vapour state by the application of heat, by reducing pressure, or by a combination of these processes.

Waste: Any substance or object which the producer or the person in possession of it discards or intends or is required to discard. (A producer is anyone whose activities produce waste or who carries out pre-processing, mixing or other operations resulting in a change in its nature or composition)

Whole Life Impacts – Assesses the impacts of a product or operation on the environment throughout its life – e.g. from production and manufacture, operational and maintenance, through to final demolition/disposal.

Index

Index

V

W