

**Croydon Local Plan: Strategic  
Policies (Partial Review) and Detailed  
Policies and Proposals evidence base**

**Technical Paper – Environment and  
Climate Change**

**2016**

# Contents

<b>1. Introduction .....</b>	<b>3</b>
<b>2. Where we are now.....</b>	<b>4</b>
National Planning Policy.....	4
The London Plan .....	4
Local Planning Policy .....	4
Issues .....	5
<b>3. SP6: Environment and Climate Change .....</b>	<b>6</b>
Energy and carbon dioxide reduction.....	6
How the policy works/key evidence .....	6
Sustainable design and construction .....	6
How the policy works/key evidence .....	7
Flooding, urban blue corridors and water management .....	7
How the policy works/key evidence .....	8
<b>4. DM24: Sustainable Design and Construction .....</b>	<b>8</b>
How the policy works/key evidence .....	9
<b>5. DM25: Land Contamination .....</b>	<b>10</b>
How the policy works/key evidence .....	10
<b>6. DM26: Sustainable Drainage Systems and Reducing Flood Risk .....</b>	<b>10</b>
How the policy works/key evidence .....	11

# 1. Introduction

1.1. This technical note aims to set out and discusses the policy context and evidence that have informed the preparation of policies SP6 in the Croydon Local Plan: Strategic Policies - Partial Review (Proposed Submission) and DM24, DM25, DM26 in the Croydon Local Plan: Detailed Policies and Proposals. The evidence has informed the preparation of Chapter 8 Environment and Climate Change in the Proposed Submission Croydon Local Plan: Detailed Policies and Proposals (Proposed Submission).

1.2. Section 2 of this note states the relevant policy (national, regional and local). Sections 3 to 6 state the proposed policies and an explanation of how the supporting evidence has been used to inform the policy with reference to the policy context. For further information on individual pieces of evidence it is recommended that you look at the evidence documents themselves which can be found at:

[www.croydon.gov.uk/planningandregeneration/framework/lpevidence](http://www.croydon.gov.uk/planningandregeneration/framework/lpevidence).

## 2. Where we are now

### National Planning Policy

2.1 The National Planning Policy Framework (NPPF) sets out how planning plays a key role in reducing greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change and in supporting the delivery of renewable and low carbon energy and associated infrastructure.

2.2 To support low-carbon development, local planning authorities should plan for new development in locations and ways which reduce greenhouse gas emissions and when setting any local requirement for a building's sustainability do so in a way consistent with the Government's policies on carbon reduction and adopt nationally described standards.

2.3 Local plans should have policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed.

2.4 Paragraph 100 of the NPPF sets out how inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. Local Plans should be supported by a Strategic Flood Risk Assessment and should contain policies to manage flood risk from all sources.

2.5 Paragraph 120 states that to prevent unacceptable risks from pollution and land instability, planning policies should ensure that new development is appropriate for its location. The effects of pollution on health, the natural environment or general amenity should be taken into account.

2.6 Planning policies should mitigate and reduce to a minimum, the impacts on health arising from noise from new development. Policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites.

### The London Plan

2.7 The London Plan sets out a requirement for the highest standards of sustainable design and construction to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime.

2.8 Development proposals must comply with the flood risk assessment and management requirements set out in the NPPF. When preparing Local Plans, boroughs should use Strategic Flood Risk Assessments to identify areas where particular flood risk issues exist and develop actions and policy approaches aimed at reducing these risks. Sustainable drainage systems should be used unless there are practical reasons for not doing so and should aim to achieve greenfield run-off rates in line with the London Plan drainage hierarchy.

2.9 Local Plans should encourage the remediation of contaminated sites and set out policy to deal with contamination. Development proposals should minimise increased exposure to existing poor air quality and make provisions to address local problems of air quality, particularly in Air Quality Management Areas.

### Local Planning Policy

2.10 There are four strategic objectives set out the Croydon Local Plan: Strategic Objectives that are relevant to the Environment and Climate Change topic:

***Strategic Objective 5: Ensure that high quality new development both integrates, respects and enhances the borough's natural environment and built heritage.***

**Strategic Objective 9:** *Ensure the responsible use of land and natural resources and management of waste to mitigate and adapt to climate change.*

**Strategic Objective 10:** *Improve the quality and accessibility of green space and nature, whilst protecting and enhancing biodiversity.*

**Strategic Objective 11:** *Tackle flood risk by making space for water and utilising sustainable urban drainage systems.*

2.11 The Local Plan: Strategic Policies states the Council will seek high standards of sustainable design and construction from new development to assist in meeting local and national CO<sub>2</sub> targets and requiring developments to positively contribute to improving air, land, noise and water quality by minimising pollution.

2.12 The Council, as a Lead Local Flood Authority, will work to reduce flood risk, protect groundwater and aquifers and minimise the impact of all forms of flooding in the borough.

## Issues

2.13 The majority of the borough is defined as Flood Zone 1 Low Probability of flooding from rivers. Approximately 1.7% is defined as Flood Zone 2 Medium Probability, and less than 0.5% is defined as Flood Zone 3a High Probability and Flood Zone 3b Functional Floodplain respectively.

2.14 Flood Zone 3a associated with the River Wandle extends across the western part of Wandle Park and the industrial area up to Factory Lane. Flood Zone 2 extends further to the north and west across the A23 Purley Way and up to the borough boundary. The open channel section of the River Wandle through Wandle Park is designated Flood Zone 3b Functional Floodplain.

2.15 The floodplain associated with the Norbury Brook is approximately 100m wide along the majority of its open channel sections. Areas within the recreation ground and Norbury Park are designated Flood Zone 3b Functional Floodplain. The floodplain associated with the Caterham Bourne in the south east of the borough is approximately 30m wide, increasing to approximately 100m wide along the Brighton Road. There is a small portion of Flood Zone 2 and 3 in the north east of the borough associated with the Chaffinch Brook.

2.16 There have been recent significant flood events in the borough associated with the Caterham Bourne. High ground water levels resulted in floodwaters receding very slowly. There are also incidents within the last 60 years where the Norbury Brook has experienced overtopping in open sections and surcharging of manholes and culverts in culverted sections.

2.17 There are numerous records of flooding along the Brighton Road located in a topographic depression along the route of a former water course but are recorded as surface water or sewer flooding rather than fluvial flooding as the watercourse has been culverted.

2.18 The Merstham Bourne has caused flooding to residents' gardens in 2014 and similarly a drainage ditch running behind Wharfedale Gardens in Norbury flooded gardens in the area. Alongside the Norbury Brook there have been problems with flooding at Heavers Meadow allotments. Problems associated with a drainage ditch in Park Hill Park in recent years have led to flooding threatening the main London to Brighton railway line.

2.19 The most notable recent surface water flood event occurred in 2007 where intense rainfall resulted in flash flooding and the capacity of the existing drainage system was exceeded in numerous locations throughout the borough. Purley suffered some of the worst flooding to properties and the transport network.

### 3. SP6: Environment and Climate Change

3.1 Policy SP6 (Environment and Climate Change) of the Croydon Local Plan: Strategic Policies (Proposed Submission) is primarily retained as adopted, however parts of it have been amended to require new homes to achieve the National Technical Standards (2015) or the Mayor of London's Supplementary Planning Guidance (2015) or equivalent.

#### Energy and carbon dioxide reduction

##### Energy and carbon dioxide (CO<sub>2</sub>) reduction

**SP6.2** The Council will ensure that future development makes the fullest contribution to minimising carbon dioxide emissions in accordance with the London Plan energy hierarchy (use less energy, supply energy efficiently and use renewable energy), to assist in meeting local, **London Plan** and national CO<sub>2</sub> reduction targets. The Council will promote the development of district energy networks where opportunities exist due to high heat density<sup>1</sup> or an increase in heat density brought about by new development. This will be achieved by:

- a) Requiring high density<sup>2</sup> residential developments of 20 or more units to incorporate site wide communal heating systems
- b) Requiring major development<sup>3</sup> to be enabled for district energy connection<sup>4</sup> unless demonstrated not to be feasible or financially viable to do so.

#### How the policy works/key evidence

3.2 The policy supports reduced per capita carbon emissions through the built environment (i.e. through supporting delivery of renewable or low carbon energy technologies and also energy efficiency through sustainable design and construction).

3.3 The Sustainable Design and Construction Evidence Base<sup>5</sup> and District Energy Feasibility Study<sup>6</sup> highlights that there is significant potential, in the form of high heat densities, for district energy. National planning policy and the London Plan support the development of district energy as a cost effective means of achieving low (and zero) carbon development in urban areas. The national technical standards (2015) for new housing and the London Plan set minimum levels for CO<sub>2</sub> reduction. Policy SP6.2 has been updated to include the London Plan target to reduce CO<sub>2</sub> emissions by 60% by 2025 and low/zero carbon energy generation.

#### Sustainable design and construction

##### Sustainable design and construction

**SP6.3** The Council will seek high standards of sustainable design and construction from new development, conversion and refurbishment to assist in meeting local and national CO<sub>2</sub> reduction targets. This will be achieved by:

- a) **Requiring new-build residential development of fewer than 10 units to achieve the national technical standard for energy efficiency in new homes (2015). This is set at a minimum of 19% CO<sub>2</sub> reduction beyond**

<sup>1</sup> 55 residential units or 1,000 m<sup>2</sup> commercial development per hectare

<sup>2</sup> 55 residential units per hectare for developments of over 100 homes; 75 units per hectare for developments of 20 or more but under 100 homes

<sup>3</sup> 10 or more residential units, a site of 0.5 hectares or more or 1,000 m<sup>2</sup> commercial development

<sup>4</sup> Enablement for district energy connection incorporates provision of a communal heating system operating to defined temperatures with a suitable on site space for associated heat connection plant and pipe connection to the perimeter of the site. Further guidance to be provided in the Croydon Local Plan: Detailed Policies and Proposals DPD.

<sup>5</sup> LBC Sustainable Design and Construction Evidence Base 2010 (page 58-61)

<sup>6</sup> AECOM District Energy Feasibility Study 2009

**the Building Regulations Part L (2013);**

- b) Requiring new-build residential development of 10 units or more to achieve the London Plan requirements or National Technical Standards (2015) for energy performance , whichever the higher standard;**
- c) Requiring all new-build residential development to meet a minimum water efficiency standard of 110 litres/person/day as set out in Building Regulations Part G;**
- d) Requiring conversions and changes of use of existing buildings providing more than 10 new residential units to achieve a minimum of BREEAM Domestic Refurbishment Very Good rating or equivalent;**
- e) Requiring new build non-residential development of 500m<sup>2</sup> and above to achieve a minimum of BREEAM Excellent standard or equivalent;**
- f) Requiring conversions and changes of use to non-residential uses with an internal floor area of 500m<sup>2</sup> and above to achieve a minimum of BREEAM Very Good standard or equivalent;**
- g) Requiring new build, conversions and change of use non-residential development of 1000m<sup>2</sup> and above to achieve a minimum of 35% CO<sub>2</sub> reduction beyond the Building Regulations Part L (2013); and**
- h) Requiring development to positively contribute to improving air, land, noise, and water quality by minimising pollution, with detailed policies to be included in the Croydon Local Plan: Detailed Policies and Proposals DPD.**
- i) Requiring new build development to consider the incorporation of innovative sustainable construction techniques**

## **How the policy works/key evidence**

3.4 Adoption of the National Technical Standards (2015) and London Plan requirements will ensure that new developments achieve high standards of environmental performance which address: energy/water consumption, environmental impact of materials, waste, surface water run-off, pollution, construction management, ecology and occupant health and wellbeing.

3.5 A requirement for major refurbishments and conversions to meet National Technical Standards (2015) and London Plan requirements will ensure that opportunities to modernise and improve Croydon's new and existing buildings are maximised. Overall, this approach will help meet the objectives set out in Croydon's Climate Change mitigation Strategy and Climate Change Adaptation Strategy.

3.6 The number of changes to Policy SP6 and the supporting text reflect a need to report the latest Central Government and London-specific policy context (rather than reflecting a shift in Policy approach on the Council's part). The Sustainability Appraisal (2013) identifies that adding clause (c) in relation to water efficiency is in line with Government's Housing Standards Review, which permits LPAs to set an optional water efficiency target of 110l/p/d where this can be supported by evidence.

## **Flooding, urban blue corridors and water management**

Flooding, urban blue corridors and water management

**SP6.4** The Council, as a Lead Local Flood Authority, will work in partnership with the Environment Agency, community groups, water and highways infrastructure

providers, developers and other Lead Local Flood Authorities to reduce flood risk, protect groundwater and aquifers, and minimise the impact of all forms of flooding in the borough. This will be achieved by:

- a) **Applying the Sequential Test and Exception Test where required;**
- b) Requiring major developments in Flood Zone 1 and all new development within Flood Zones 2 and 3 to provide site specific Flood Risk Assessments proportionate with the degree of flood risk posed to and by the development, taking account of the advice and recommendations within the Council's Strategic Flood Risk Assessment and Surface Water Management Plan;
- c) Requiring all development, including refurbishment and conversions, to utilise sustainable drainage systems (SuDS) to reduce surface water run-off and provide water treatment on site; and
- d) Requiring development proposals to account for possible groundwater contamination in Source Protection Zones 1 and 2.

## How the policy works/key evidence

3.7 Under Policy SP6.4, new development in areas of known flood risk from all sources of flooding will be expected to assess the degree of flood risk posed to and by the development, taking account of the advice and recommendations within the Council's Strategic Flood Risk Assessment.

3.8 The flooding Sequential Test and Exception Test should be applied to planning applications at risk of flooding, which have not been allocated in the Croydon Local Plan: Detailed Policies and Proposals. Sites included in the Detailed Policies and Proposals would still be required to undertake Site Specific Flood Risk Assessments to demonstrate developments will not increase flood risk elsewhere and will be safe for the lifetime of the development.

3.9 The SA (2011) noted some uncertainty in relation to effects of the spatial strategy, particularly in the Croydon Opportunity Area, on flood risk. It also found that Policy SP6 to perform on the basis of its clear support for Sustainable Drainage Systems and policy commitment to a partnership approach (with the Environment Agency, community groups, water and highways infrastructure providers, developers and other Lead Local Flood Authorities) to guard against inappropriate development within flood zones.

3.10 The SA (2015) identifies that the partial review does not reflect a notable shift in policy approach to flood risk management, that the notable added reference in Policy SP6 to the need to apply the sequential test and exception test "where required", equates to a commitment to apply it when determining planning applications at windfall sites (as opposed to sites allocated through CLP2). Useful supporting text has been added to CLP1.1 to clarify the importance of flood risk as an issue, drawing on the 2015 Strategic Flood Risk Assessment (SFRA), and there is added guidance on the applications of SuDS. The SA (2015) states that text is now clear that even development in low flood risk areas must utilise SuDS (in view of the fact that surface water from one area of a catchment may contribute towards enhanced flood risk in another area of that catchment); and that the Level 2 SFRA and SWMP can be used to guide which SuDS will be the most suitable based on site specific considerations.

## 4. DM24: Sustainable Design and Construction

4.1 This section of the technical paper looks at Policy DM24 of the Croydon Local Plan: Detailed Policies and Proposals (Proposed Submission) and sets out the evidence and



methodologies underpinning the proposed policy, and how this relates to the broader policy context.

The Council will promote high standards of development and construction throughout the borough by:

- a) Ensuring that future development, that may be liable to cause or be affected by pollution through air, noise, dust, or vibration, will not be detrimental to the health, safety and amenity of users of the site or surrounding land;
- b) Ensuring that developments are air quality neutral and do not lead to further deterioration of existing poor air quality;
- c) Ensuring mitigation measures are put in place to reduce the adverse impacts to acceptable levels. Where necessary, the Council will set planning conditions to reduce the impact on adjacent land uses to acceptable levels, relative to ambient noise levels and the character of the locality; and
- d) Encourage the use of sustainable and innovative construction materials in buildings.

## How the policy works/key evidence

4.2 The key evidence to inform policy DM24 is:

- Standards and Requirements for Improving Local Air Quality Interim Policy Guidance (2014)
- The Mayor of London's Sustainable Design and Construction Supplementary Planning Guidance (2014)
- The Mayor of London's Control of Dust and Emissions Supplementary Planning Guidance

4.3 The requirements for developments not to cause pollution or be affected by pollution in the form of air, noise, dust or vibration is in accordance with the NPPF or London Plan. The Sustainable Design and Construction Supplementary Planning Guidance sets out the best practice on how this should be considered.

4.4 Croydon, as a borough, is designated as an Air Quality Management Area due to the breaches in the air quality objective for annual average levels of nitrogen dioxide along many of the borough's main roads. Because of this, the borough must produce an action plan to improve air quality. The requirement for developments to be air quality neutral and not lead to further deterioration of existing poor air quality is in accordance with the London Plan.

4.5 The Croydon Local Plan Health Impact Assessment identified that this policy has a positive impact on health and wellbeing, particularly noise and air pollution on the impact on physical health and mental wellbeing, especially amongst vulnerable groups such as children and older persons. To ensure the positive impacts on health and wellbeing are realised, greater reference to health has been included throughout the policy.

4.6 The SA (November 2015) identifies that the policy has a dual focus on: A) mitigating the causes and effects of air, noise, and dust pollution and vibration; and B) requiring all major development proposals seek to reduce carbon dioxide emissions by at least 20 per cent through the use of on-site renewable energy generation. It is also noted that the supporting text to the policy refers to wider issues relevant to these objectives. It states that "Solid wall insulation will also be encouraged in existing developments where planning permission may be required"; if implemented this could significantly reduce heating requirements of the insulated buildings and thus carbon emissions from heating systems. The SA recommended

that the Council consider including this as part of the policy wording, otherwise it will have very limited weight in decision making.

## 5. DM25: Land Contamination

5.1 This section of the technical paper looks at Policy DM25 of the Croydon Local Plan: Detailed Policies and Proposals (Proposed Submission) and sets out the evidence and methodologies underpinning the proposed policy, and how this relates to the broader policy context.

**DM25.1** The Council will permit development proposals located on or near potentially contaminated sites, provided that detailed site investigation is undertaken prior to the start of construction in order to assess:

- a) The nature and extent of contamination; and
- b) The production of landfill gases and the potential risks to human health, adjacent land uses and the local environment.

**DM25.2** Where the assessment identifies unacceptable risks to human health, adjacent land uses or the local environment, site remediation and aftercare measures will be agreed or secured by condition to protect the health of future occupants or users.

**DM25.3** All development proposals on contaminated sites should be accompanied by a full risk assessment, which takes into account existing site conditions.

### How the policy works/key evidence

5.2 The key evidence that informed Policy DM25 is the Environmental Protection Act 1990.

5.3 The Environmental Protection Act 1990 defines contaminated land 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 likely, to be caused

5.4 The requirements for the identification, assessment and remediation of contaminated land are set out in the Act. The requirement for an assessment and remediation are also in accordance with the NPPF and London Plan.

## 6. DM26: Sustainable Drainage Systems and Reducing Flood Risk

6.1 This section of the technical paper looks at Policy DM26 of the Croydon Local Plan: Detailed Policies and Proposals (Proposed Submission) and sets out the evidence and methodologies underpinning the proposed policy, and how this relates to the broader policy context.

**DM26.1** The Council will ensure that development in the borough reduces flood risk and minimises the impact of flooding by:

- a) Steering development to the areas with a lower risk of flooding;
- b) Applying the Sequential Test and Exception Test in accord with Table 8.1; and
- c) Taking account of all sources of flooding from fluvial, surface water, groundwater, sewers, reservoirs and ordinary watercourses.

**DM26.2** In areas at risk of flooding development should be safe for the lifetime of development and should incorporate flood resilience and resistant measures into the design, layout and form of buildings to reduce the level of flood risk both on site and elsewhere.

**DM26.3** Sustainable drainage systems are required in all development and should:

- a) Ensure surface run-off is managed as close to the source as possible;
- b) Accord with the London Plan Sustainable Drainage Hierarchy;
- c) Achieve better than greenfield runoff rates;
- d) Be designed to be multifunctional and incorporate sustainable drainage into landscaping and public realm to provide opportunities to improve amenity and biodiversity;
- e) Achieve improvements in water quality through an sustainable drainage system management train; and
- f) Be designed with consideration of future maintenance.

## How the policy works/key evidence

6.2 The key evidence that informed Policy DM26 is listed below:

- Strategic Flood Risk Assessment (2015)
- Surface Water Management Plan (2011)
- Local Flood Risk Management Strategy (2015)
- Ministerial Statement HCWS161 (2014)

6.3 DM26 Sustainable Drainage Systems and Reducing Flood Risk was drafted in response to a number of consultation responses, including from the Environment Agency, from the Detailed Policies (Preferred and Alternative Options) on the lack of detailed policy to address flood risk in the borough. It is also the Council's responsibility, as the Lead Local Flood Authority, to manage surface water.

6.4 The Strategic Flood Risk Assessment indicates that the majority of the borough (97.8%) is defined as being in Flood Zone 1. 1.7% of the borough is in Flood Zone 2 and less than 0.5% is defined as being Flood Zone 3a and 3b. Whilst the majority of the borough is at low risk of fluvial flooding, the borough has experienced significant flood events from groundwater and surface water.

6.5 The Caterham Bourne has resulted in high ground water levels and in the winter months of 2015 there were significant flood events that lasted several months. There are regular hotspots for groundwater in the north of the borough, including areas around Upper Norwood, Thornton Heath and Ashburton. The geology in the south of the borough increases the vulnerability of groundwater emergence in areas of Kenley, Purley and Coulsdon.

6.6 Croydon has experienced a number of surface water flood events, with the SWMP identifying that Croydon as the 4<sup>th</sup> settlement in England most susceptible to surface water flooding. The LFRMS has identified 420 incidents of surface water flooding occurring across the borough.

6.7 The requirement for developments to undertake a sequential approach to the location of development, apply the Exception Test where necessary and consider all sources of flooding are in accordance with the NPPF.

6.8 The NPPF sets out that all developments where located in an area of flood risk should be safe for the lifetime of the development and should not increase flood risk elsewhere.

6.9 In December 2014 in the Ministerial Statement HCWS161 announced that from the 6<sup>th</sup> April 2015, sustainable drainage systems (SuDS) are required in major developments, unless demonstrated to be inappropriate. The policy applied to all developments over 10 homes and to major commercial development. Although the updated NPPG applies to major developments, due to the risk of surface water flooding in the borough, SuDS are required for all development as developments less than 10 dwellings can also contribute to increased run off in the borough.

6.10 The London Plan requires developments to utilise sustainable drainage systems unless there are practical reasons for not doing so and should aim to achieve greenfield run-off rates, ensuring that surface water is managed as close to the source as possible.

6.11 Surface water flooding has been an issue in Croydon most recently in 2007. The Preliminary Flood Risk Assessment and the Surface Water Management Plan identify areas within Croydon that are particularly prone to surface water flooding; Purley Cross roundabout and Brighton Road; Kenley Lane and Kenley Station; Brighton Road, Coulsdon; Hamsey Green; Purley Oaks Road and Station and Norbury and Thornton Heath.

6.12 The Mayor of London's Sustainable Design and Construction SPG, and London Plan Policy 5.13 state that developers should aim for greenfield runoff rates from their developments. Greenfield runoff rates are defined as the runoff rates from a site, in its natural state, prior to any development,

6.13 The Environment Agency recommend that local authorities seek better than greenfield runoff rates from developments.

6.14 Due to the risk of surface water flooding in the borough with almost 34,000 homes at risk, and Croydon being the 4<sup>th</sup> settlement in England most susceptible to surface water flooding, developments are expected to achieve better than greenfield runoff rates and provide a robust justification if this is not possible.

6.15 The SA (2015) states that the policy should have a significant, direct positive effect on reducing flood risk (by translating NPPF and Planning Practice Guidance wording into local planning policy), including in vulnerable communities, and should also help to reduce water pollution by requiring the incorporation of SuDS in all development (such measures can help to cleanse rainwater runoff, for example by filtering out particulates). The policy DM26.3 stated that all development should include SuDS and should achieve less than greenfield runoff rate. In the SA (2015) report this was considered an ambitious target that may not be feasible or viable to meet on some schemes, for example schemes with little or no outside space within the site boundary. The SA recommended that the Council consider re-wording the policy to ensure that it is sufficiently flexible.

6.16 In addition, the policy supports swales, green roofs, and balancing ponds which can provide significant biodiversity benefits; however, the scope to incorporate such measures (with the exception of green roofs) on dense urban sites may be limited.

Flood Zone	Land uses	Sequential Test	Exception Test	Flood Risk Assessment	What does the evidence say?
1	All uses permitted	Required if identified at risk from other sources of flooding	Not applicable	All major developments and in areas identified at risk from other sources of flood risk	The NPPF states that Local Plans should develop policies to manage flood risk from all sources. It also states a sequential approach should be used to direct development to areas with the lowest risk of flooding. The SFRA, LFRMS and SWMP highlight that Croydon is at significant risk from other sources of flooding, namely surface water and groundwater, in addition to fluvial flooding. A sequential approach that considers all risk of flooding will ensure development is located in areas with the lowest risk of flooding. This will be managed through requiring a Site Specific Flood Risk Assessment where the site is at risk from any source of flooding.
2	Highly vulnerable will only be permitted if Exception Test passed.  More vulnerable and Highly vulnerable uses should set finished flood levels a minimum of 300m above the known or modelled 1% annual probability flood level (1 in 100 year) including climate change	Required for all development unless allocated in the Local Plan	Required for highly vulnerable uses	All development	The NPPF and Technical Guidance sets out the vulnerability of different land uses to flood risk and sets out where they will be permitted. Highly vulnerable uses are only permitted, providing they pass an Exception Test. All sites allocated in the Detailed Policies and Proposals were subject to the Sequential Test as part of the preparation of the SFRA. The SFRA also sets recommends for finished floor levels in order to mitigate flood risk where development is required in Flood Zone 2.

**Table 1 DM26 Sustainable Drainage Systems and Reducing Flood Risk**

3a	<p>Highly vulnerable uses will not be permitted</p> <p>More vulnerable uses should set finished flood levels a minimum of 300m above the known or modelled 1% annual probability flood level (1 in 100 year) including climate change</p> <p>Basement dwellings will not be permitted</p>	Required for all development unless allocated in the Local Plan	Required for essential infrastructure and more vulnerable uses	All development	To ensure the safety of occupiers and due to the high risk of flooding in Flood Zone 3, basement dwellings will not be permitted in Flood Zone 3a. Highly vulnerable uses are not permitted in accordance with the NPPF and Technical Guidance. An Exception Test is required for essential infrastructure and more vulnerable uses.
3b	<p>Water compatible uses will be permitted</p> <p>Highly vulnerable, more vulnerable and less vulnerable uses will not be permitted</p> <p>Basement dwellings will not be permitted</p>	Required for all development unless allocated in the Local Plan	Required for essential infrastructure	All development	<p>The Council was required to define the functional floodplain as part of the SFRA. Zone 3b forms the functional floodplain in the borough.</p> <p>Only water compatible uses will be permitted due to the risk of flooding. Essential infrastructure will be permitted provided that it can pass the Exception Test. This is in accordance with the NPPF and Technical Guidance.</p>