North London Waste Plan

Flood Risk Sequential Test

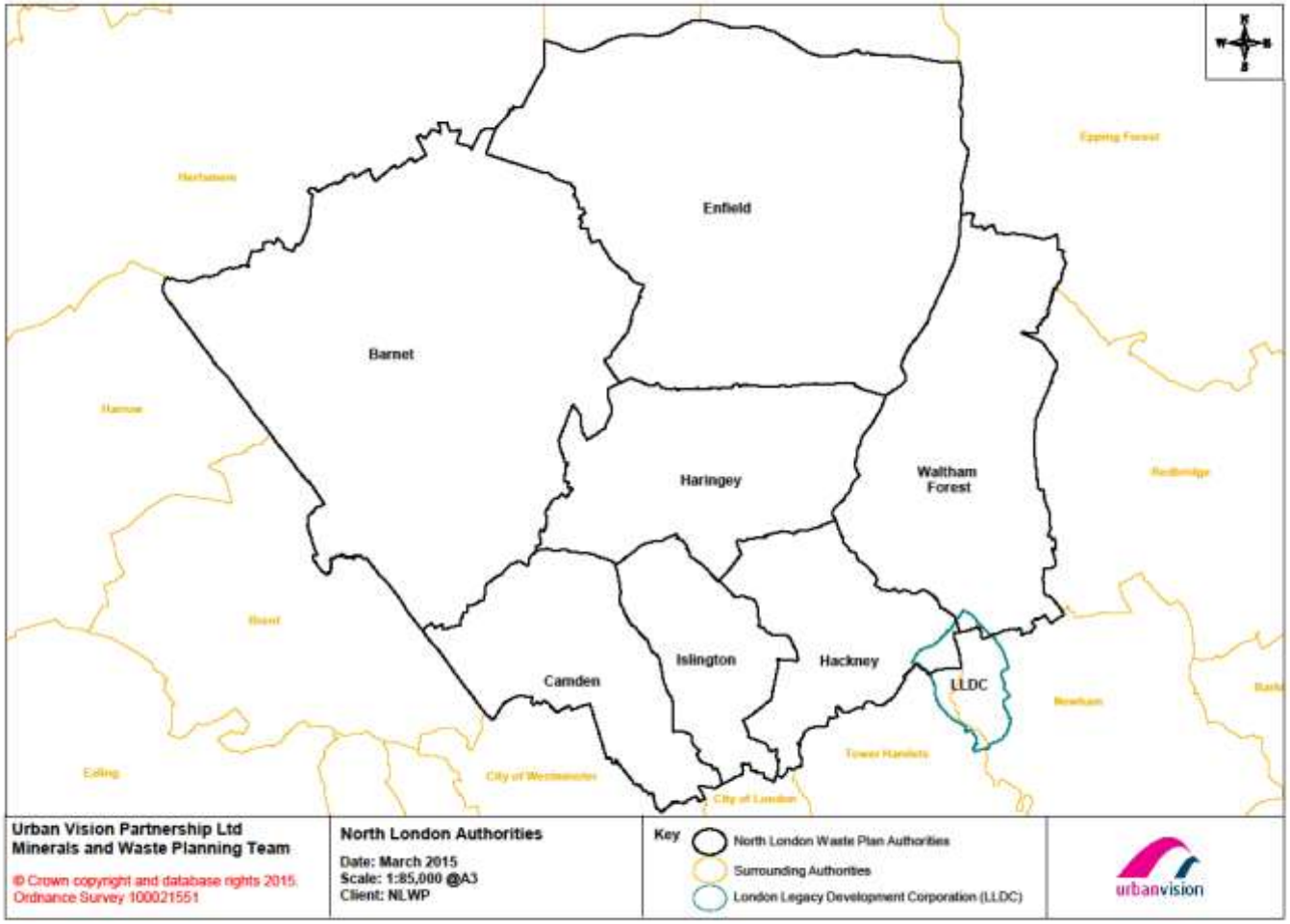
October 2019

Version Control

Version	Issue date	Notes / Amendments
V1.0	May 2016	Initial draft for issue
V2.0	October 2018	Update to document text to reflect updated information. Inclusion of climate change section. Revision of Site Areas. Revision of Appendix A and Appendix B to reflect change in site areas.
V3.0	June 2019	Revision of Site Areas. Updates to Appendix A.
V4.0	August 2019	Update Table 5 text to reflect latest flood map data. Minor updates to document text for consistency. Updated all figures in Appendix A to use latest flood map data and show sites area outline. Updated Appendix A table text to reflect updated figures. Updated table text for Appendix B to reflect latest flood map data.
V.5.0	September 2019	Updated to include version control. Section added to address Environment Agency comments (3.25-28, 3.40-46 & 4.5) Added Sequential flood risk ranking to Appendix B
V6.0	October 2019	Update following meeting with Environment Agency and comments from wider NLWP team. Update Appendix A and B and some language to use consistent terminology across other documents.

Contents

Figure 1: North London Plan Area



1. Introduction

1.1 The seven North London Boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest are working together to produce the North London Waste Plan (the 'NLWP'). Figure 1 shows the North London Waste Plan area. The NLWP will cover the period 2017 to 2035 and, once adopted, it will form part of the statutory Development Plan for these areas. The NLWP is identified in the Local Development Scheme for each of the Boroughs.

1.2 The NLWP will set out the planning framework for the management of North London's waste. The purpose of the plan is to ensure there will be adequate provision of suitable land to accommodate waste management facilities of the right type, in the right place and at the right time up to 2035 to manage this waste. It will set out the waste management needs of North London and demonstrate how these needs will be met during the plan period. It will identify suitable locations for waste management facilities and include the development management policies against which planning applications for waste development will be determined.

1.3 The (NLWP) will sit within the suite of local planning policy documents of each of the London Boroughs and will also facilitate the delivery of the Joint Municipal Waste Management Strategy (JMWMS) prepared by the North London Waste Authority (NLWA). Each of the seven Boroughs has an adopted Local Plan in place containing an overarching policy on sustainable waste management. Each of these policies provides the local strategic policy for the development of the NLWP, and this document will provide the planning framework alongside detailed guidance for waste development across the seven Boroughs.

1.4 This report supports the Proposed Submission Plan (Regulation 19) following consideration of responses received to the consultation on the draft NLWP (Regulation 18) which took place from 30th July – 30th September 2015. It provides an overview of the flood risk issues for the NLWP area, alongside a summary of both national and local policy requirements in relation to flood risk. Following this, the document applies a Sequential test to the proposed site areas identified in the NLWP to establish whether it would be possible for this development to be directed to locations with a lower risk of flooding and, where relevant, also apply the Exception test to these proposed allocations.

2. Background

2.1 Nationally flooding has become an increasingly important subject as there has been a rise in the number of flood events. The National Planning Policy Framework (NPPF) (July 2018) sets outs the national policy for new development and flood risk. When producing development plans, consideration needs to the given to present and future flood risk.

2.2 The Framework states that the appropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. Where development is necessary in flood risk areas, it can be permitted provided it is made safe without increasing flood risk elsewhere.

2.3 Areas which may experience river or coastal flooding are identified on the Environment Agency's (EA's) Flood Map. There are four types of flood risk zone for river and coastal flooding, as summarised below. It should be noted that these refer to probability of flooding from rivers and the sea, but ignore the presence of flood defences.

- **Flood Risk Zone 1** - low probability of flooding (less than a 1 in 1000 year/0.1% risk of river or sea flooding);
- **Flood Risk Zone 2** - medium probability of flooding (between 1 in 100 year/1.0% chance and 1 in 1000 year/0.1% chance of river flooding);
- **Flood Risk Zone 3a** - high probability of flooding (greater than 1 in 100 year/1.0% or greater chance of river flooding); and
- **Flood Risk Zone 3b** - Functional Floodplain – this zone comprises land where water has to flow or be stored in times of flooding.

2.4 It should however be noted that these flood zones are based on probability not risk, with risk being the combination of the probability of flooding with the potential impact of any flood event (e.g. what might be flooded, the depth of flooding etc). Furthermore, there are other forms of flooding which these maps do not show, for example surface water and groundwater flooding, where the North London Strategic Flood Risk Assessment (SFRA) and EA's maps provide further information.

2.5 The NPPF sets out that a Sequential Test for flooding is required when deciding which land is to be allocated in the Local Plan. The aim of the Sequential Test is to guide development to areas with the lowest probability of flooding. Therefore, preference is given to the allocation of development that is within Flood Zone 1 (FZ 1), as this would represent the lowest probability of flooding from fluvial and/or tidal sources. If the quantum of development cannot be accommodated within these areas, reasonably available site areas within Flood Zone 2 (FZ 2) can be considered (with an Exception Test applied where required). Only where there are no reasonably available site areas with lesser flood risk should site areas within Flood Zone 3 (FZ 3a and 3b) be considered (with an Exception Test applied where required).

2.6 This Sequential Test is informed by information contained within the Borough's Strategic Flood Risk Assessments (SFRA) and Surface Water Management Plans which take into account all the sources of flooding within the boroughs. If, after the application of the Sequential Test it is not possible or consistent with the wider sustainability objectives of the Local Plan for

development to be located in areas where there is a lower probability of flooding, the NPPF sets out that an Exception Test can be applied where necessary. The Exception Test for site areas applies if the site area satisfies the following:

- The development provides wider sustainability benefits to the community that outweigh flood risk informed by the SFRA;
- A site specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing the flood risk elsewhere and where possible, will reduce flood risk overall.

2.7 The site specific flood risk assessment would be set out as a Level 2 SFRA and site specific plans would need to be provided, with the information illustrating the variation of flooding and likely performance of flood risk management infrastructure necessary to ensure that development would be safe for its lifetime.

What is the Sequential Test?

2.8 The Sequential Test is, in effect, a sieving process for potential development site areas which focuses on flood risk and if, required its mitigation. If flood risk avoidance was the sole consideration in the selection of development site areas this would mean all development opportunities that are in Flood Zone 1 would be allocated before those in Flood Zone 2 and site areas in Flood Zone 2 before those in Flood Zone 3 until sufficient land is found. Other sources of flood risk also need to be considered, for example a Flood Zone 1 site area may still have risk of surface water flooding.

2.9 The test takes a hierarchical approach to flood risk management of avoidance wherever possible. The NPPF paragraph 158 states that:

'The aim of the sequential test is to steer new development to areas with the lowest risk of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding. The strategic flood risk assessment will provide the basis for applying this test. The sequential approach should be used in areas known to be at risk now or in the future from any form of flooding.'

2.10 The National Planning Practice Guidance (NPPG) which supplements the NPPF provides further guidance on the application of the Sequential Test. The North London Level 1 SFRA (2008) and the Level 2 SFRA's and Surface Water Management Plans prepared by the Boroughs were used as a basis for undertaking the Sequential Test. Further to this, the EA's online mapping tool 'What's in your backyard' was used to provide a more up to date assessment of flood risk.

What is the Exception Test?

2.11 Having completed the Sequential Test, the Exception Test aims to provide a method of managing flood risk whilst still allowing necessary development to occur in the interests of sustainable development.

2.12 Paragraph 160 of the NPPF allows the application of the Exception Test by a LPA where following application of the Sequential Test it is not possible, consistent with wider sustainability objectives, for the development to be located in zones with a lower risk of flooding. The Exception Test therefore provides a method of managing flood risk while still allowing for development to occur.

2.13 There are two elements to the Exception Test as set out below. For the exception test to be passed it should be demonstrated that:

- the development would provide wider sustainability benefits to the community that outweigh the flood risk; and
- the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Flood Risk Vulnerability Classification

2.14 The NPPG sets out flood risk vulnerability classifications for various land uses as per Table 1 below. The classification acknowledges that not all land uses have the same vulnerability to flooding. Some land uses, such as residential developments, are more vulnerable to the potential loss of life and damage to personal property and possessions than retail or office developments for example.

2.15 By way of example, the table shows that within Flood Zone 1 all land uses are acceptable as flood risk is not considered to be a significant constraint to development. However, a flood risk assessment will be required on site areas 1ha+ which will need to consider other potential sources of flood risk, such as surface water. In Flood Zone 3a, potentially suitable land uses are water compatible (e.g. minerals development) and less vulnerable (e.g. employment uses). More vulnerable uses (e.g. residential) and essential infrastructure uses (e.g. transport infrastructure) should only be permitted in this zone if the Exception Test is passed. Highly vulnerable development (e.g. caravans) should not be permitted in this zone.

Table 1: Flood Risk Vulnerability Classification (NPPG March 2014-paragraph 067 Ref ID 7-066-20140306)

Flood Risk Vulnerability and Flood Zone compatibility	**Essential Infrastructure e.g. Transport and Utility Infrastructure**	**Water Compatible e.g. open space, docks, marinas and wharves**	**Highly Vulnerable e.g. Police Stations, mobile homes and emergency dispersal points**	**More Vulnerable e.g. Hospitals, residential institutions and buildings used for dwelling houses**	**Less Vulnerable e.g. offices, industry and storage or distribution**
Flood Risk Zone 1 – low probability	Yes	Yes	Yes	Yes	Yes
Flood Risk Zone 2 – medium probability	Yes	Yes	Exception Test	Yes	Yes
Flood Risk Zone 3a – high probability	Exception Test Required	Yes	No	Exception Test Required	Yes
Flood Risk Zone 3b – the Functional Flood Plain	Exception Test Required	Yes	No	No	No

3. The Sequential Test

Overview of Flood Risk in the Borough's

North London Strategic Flood Risk Assessment (Level 1) (2008)

3.1 A level one SFRA for North London was produced to support the preparation of the previous version of the NLWP. This SFRA was published in 2008 and identified areas within each of the seven Borough's that could potentially be at risk from flooding, taking into account known sources of flooding and the likely impacts of climate change. The study considers the risk of flooding from a range of sources, including fluvial flooding from watercourse such as the River Lee, the Silk Stream and Dollis Brook.

3.2 The SFRA (2008) used data from a variety of sources including mapping and topographic data, Thames Water data, clean water supply data, historical data, flood modelling and other drainage strategies.

3.3 Most of the designated main rivers have been mapped and modelled under section 105 of the Water Resources Act 1991. The 'Hydrology and Mapping Study' (2007) undertaken by Halcrow Group Ltd used ISIS and hydraulic modelling software to model the River Lee catchment. In addition, the Holyhill Brook and the upstream end of Turkey Brook, Salmons Brook above the Hounsden Gutter confluence were also modelled in JFLOW. The River Brent Mapping Study report completed by Jacobs in 2007 determined flood levels using ISIS hydraulic model divided into two models for manageability.

3.4 The SFRA provides a review of all flood sources for each of the seven Boroughs'. A summary of the findings has been set out below and maps for each borough are provided on the NWLP website[1].

Summary for Barnet

3.5 The primary source of flood risk to the LB Barnet was found to be from fluvial flooding from Dollis Brook, Silk Stream, Pymmes Brook and their associated tributaries. The Brent Reservoir is considered to present a low risk to Barent. It is anticipated that the Flood Risk Management Plans and associated inundation mapping will provide a more accurate appraisal and assessment of flood risk presented by the reservoir. Surface water flooding in Barnet presents a low to moderate risk to the borough while sewer flooding is also noted for being low risk. Areas with historical sewer flooding are low but this assessment is based on limited information from Thames Water. Groundwater flooding was found to be a relatively low risk.

Summary for Camden

3.6 Camden has a particularly high risk of flooding from sewer and surface water flooding, while fluvial flood risk remains low due to the lack of watercourses. Surface water flooding zones are in need of further investigation within Camden due to the high level of risk and historic

[1] http://www.nlwp.net/documents/sfra_maps.html

precedent. Groundwater flooding was found to be a relatively low risk. The two small reservoirs on Hampstead Heath are considered to present a low risk to Camden.

Summary for Enfield

3.7 The primary source of flood risk to Enfield Borough was found to be from fluvial flooding, with the Lower Lee, Pymmes Brook, Salmons Brook and tributaries providing the highest flood risk. The King George V and William Girling reservoirs do pose a risk to the downstream properties. The risks from sewer and surface water flooding are generally low across the Borough with a small number sewer flood risk zones. Groundwater flooding was found to be a relatively low risk.

Summary for Hackney

3.8 The primary source of flood risk to Hackney Borough was found to be from fluvial flooding, with the Lower Lee provides the highest flood risk. The Stoke Newington East and West reservoirs do pose a limited risk to the downstream properties. Sewer and surface water flooding is generally low except in the north of the borough. Groundwater flooding was found to be a relatively low risk.

Summary for Haringey

3.9 The primary source of flood risk to Haringey is fluvial flooding, with the Lower Lee, Moselle Brook and Stonebridge Brook providing the highest flood risk. While the New River poses a limited flood risk as it is flow is controlled by pumping stations demand. The risk of sewers flooding is generally low across the Borough with a small number sewer flood risk zones. Groundwater flooding was found to be a relatively low risk.

Summary for Islington

3.10 The LB of Islington has a particularly high risk of flooding from sewer and surface water flooding, while fluvial flood risk remains low due to the lack of watercourses. The borough has a moderate risk of flooding from sewer and surface water flooding that has been identified from a variety of sources. Groundwater flooding was found to be a relatively low risk.

Summary for Waltham Forest

3.11 The primary source of flood risk to Waltham Forest Borough was found to be from fluvial flooding, with the Lower Lee, Pymmes Brook, Salmons Brook and Silk Stream providing the highest flood risk. Surface water and sewer flooding poses a moderate flood risk to the borough. The reservoirs do pose a risk to the downstream properties. Groundwater flooding was assessed to be a low risk.

Strategic Flood Risk Assessment (Level 2)

3.12 Of the seven Boroughs Haringey, Hackney, Enfield and Waltham Forest have prepared Level 2 SFRAs in support of the development of their Development Plan Documents. The principle objective of the Level 2 SFRAs is to facilitate application of the Sequential Test and Exception

Test by providing a more detailed study of the nature of flood hazard, taking account of the presence of flood risk management measures such as flood defences.

3.13 The Boroughs of Camden and Islington have not prepared a Level 2 SFRA as their respective planning areas comprise solely Flood Zone 1. Both have completed updated Level 1 SFRAs.

3.14 The Borough of Barnet has not completed a Level 2 SFRA, instead preparing an updated Level 1 SFRA including Level 2 SFRA Screening.

Surface Water Management Plans

3.15 All the seven Boroughs have prepared Surface Water and Flood Risk Management Plans. These plans outline the preferred surface water management strategy for the Borough's and include consideration of flooding from sewers, drains, groundwater and runoff from land, small watercourses and ditches that occurs as a result of heavy rainfall. The SWMP's build upon previous work undertaken at part of the Drain London Tier 1 package of works and have been undertaken following a four phase approach; Phase 1 – Preparation; Phase 2 – Risk Assessment; Phase 3 – Options; and Phase 4 – Implementation and Review.

The Sequential Test Methodology

3.16 The application of the Sequential Test in this report has been undertaken to conform to the approach in the National Planning Practice Guidance. It has drawn upon the findings of the Level 1 SFRA prepared in 2008 and a review of best available data. Whilst the SFRA was written in the context of previous flood risk planning guidance, Planning Policy Guidance 25 (PPG25), the approach adopted in these evidence based documents is considered to be largely consistent with the guidance contained within the NPPF. Consideration has also been given to the Level 2 SFRA's prepared by Haringey, Hackney, Enfield and Waltham Forest.

Climate Change

3.17 The EA provide guidance on climate change allowances[2] (February 2016); outlining when and how to use climate change allowances in flood risk assessments and strategic flood risk assessments.

3.18 The NPPF sets out how the planning system should minimise vulnerability and provide resilience to the impacts of climate change.

3.19 The climate change allowances are predictions of anticipated change for:

- Peak flow by river basin district
- Peak rainfall intensity
- Sea level rise
- Offshore wind speed and extreme wave height

[2] https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Last accessed: 10th October 2018

3.20 For the purposes of this Sequential Test, sea level rise and offshore wind speed and extreme wave height are not within the scope of site area assessments (Appendix A and B).

3.21 The peak river flow allowances show anticipated changes to peak flow by river basin district. The range of allowances for the Thames region is highlighted in table 2 below:

Table 2: Peak river flow allowances by river basin district (use 1961 to 1990 baseline)

River Basin district	Allowance category	Total potential change anticipated for the '2020s' (2015 to 2039)	Total potential change anticipated for the '2050s' (2040 to 2069)	Total potential change anticipated for the '2080s' (2070 to 2115)
Thames	Upper end	25%	35%	70%
	Higher central	15%	25%	35%
	Central	10%	15%	25%

3.22 At each site area the flood zone is considered, along with the appropriate flood risk vulnerability classification (as described in 3.16) to decide which allowances applies to the development.

3.23 Increased rainfall affects river levels and land and urban drainage systems. Table 3 shows anticipated changes in extreme rainfall intensity in small and urban catchments.

Table 3: Peak rainfall intensity allowance in small and urban catchments (use 1961 to 1990 baseline)

Applies all across England	Total potential change anticipated for the '2020s' (2015 to 2039)	Total potential change anticipated for the '2050s' (2040 to 2069)	Total potential change anticipated for the '2080s' (2070 to 2115)
Upper end	10%	20%	40%
Central	5%	10%	20%

3.24 For flood risk assessments and strategic flood risk assessments, assess both the central and upper end rainfall allowances to understand the range of impact.

This assessment

3.25 For this assessment it has been assumed that all site areas are to be used for waste transfer and processing of non-hazardous and are therefore considered to be 'less vulnerable' in accordance with national planning guidance Table 2: "Flood risk vulnerability classification". It has been assumed that all site areas have a development life of 100 years. Therefore, according to current guidance[3] the following uplift factors are relevant:

3.26 The table below sets out the relevant climate change allowances for 'less vulnerable' development located in each Flood Zone, along with the required model simulation needed to provide this evidence and the current availably of this data.

[3] https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Table 4 Availability of Climate change data

Flood Zone	Relevant climate change allowances for 'Less vulnerable' development	Model simulations required	Availability
Flood Zone 1	Central allowance	0.1% AEP event + 25%	Not available anywhere in study area
Flood Zone 2	Central allowance	0.1% AEP event + 25%	Not available anywhere in study area
Flood Zone 3a	Central and Higher Central to assess a range of allowances	1% AEP event + 25% 1% AEP event + 35%	Partial, incomplete availably across study area
Flood Zone 3b	Not permitted	None	N/A

3.27 From review of this summary it is clear that a consistent source of data compliant with current climate change guidance is not available across the plan area to enable a consistent approach to the assessment of the impact of climate change for all site areas within the Sequential Test. To this end it has been proposed to undertake the Sequential test using the 20% climate change allowance results that are uniformly available across the plan area. This is considered acceptable at a Strategic level, provided the current climate change allowances are used to assess flood risk in a site-specific flood risk assessment at the time of individual site applications are progressed. To further support this a sensitivity assessment has been undertaken to consider the effect of using the 0.1% AEP event as a proxy to the 1% AEP event.

3.28 This information has been used to sequentially rank the site areas in priority order for development based on flood risk (Appendix B).

Waste Proposals and Flood Zone Compatibility

3.29 The table below extrapolates the relevant categories from the NPPG to make it easier to reference how the assessment will take place:

Table 5: Flood zone compatibility

Vulnerability	Description	1	2	3a	3b
Highly Vulnerable	Installations requiring hazardous substances consent	✓	Exceptions Test Required	x	x
More Vulnerable	Landfill and sites used for waste management facilities for hazardous waste.	✓	✓	Exceptions Test Required	x
Less Vulnerable	Waste treatment (except landfill and hazardous waste facilities).	✓	✓	✓	x

Site Areas and Flood Zones

3.30 The proposed submission NLWP identifies areas to meet future waste needs. An extensive site and area search and selection process has been undertaken, full details of which are set out in the evidence base document, Sites and Areas Report.

3.31 The proposed submission Plan identifies 13 areas to be considered for future waste facilities. Details of the proposed areas are set out in the table below:

Table 6: Proposed Area Flood Zones

Site Area Ref	Site Area Name	Flood Zone	Vulnerability Classification	Exception Test Required
Barnet				
A02-BA	Oakleigh Road	FZ1	Less Vulnerable	No
A03-BA	Brunswick Business Park	FZ1	Less Vulnerable	No
A04-BA	Mill Hill Industrial Estate	FZ1	Less Vulnerable	No
A05-BA	Connaught Business Centre	FZ1, FZ2 and FZ3a	Less Vulnerable	No
Enfield				
A12-EN	Eley's Estate	FZ1, FZ2, FZ3a and FZ3b	Less Vulnerable	No
Hackney				
A15-HC	Millfields LSIS	FZ1, FZ2 and FZ3a	Less Vulnerable	No
Haringey				
A19-HR	Brantwood Road	FZ1 and FZ2	Less Vulnerable	No
A21-HR	North East Tottenham	FZ1 and FZ2	Less Vulnerable	No
A22-HR	Friern Barnet Sewage Works/Pinkham Way	FZ1, FZ2 and FZ3a	Less Vulnerable	No
Waltham Forest				
A24-WF	Argall Avenue	FZ1, FZ2, FZ3a and FZ3b	Less Vulnerable	No
LLDC				
LLDC1-HC	Bartip Street	FZ1, FZ2 and FZ3a	Less Vulnerable	No
LLDC2-HC	Chapman Road LSIS (formerly Palace Close SIL)	FZ1, FZ2 and FZ3a	Less Vulnerable	No
LLDC3-WF	Bus Depot, Temple Mill Lane	FZ2 and FZ3a	Less Vulnerable	No

Areas in Flood Zone 1

3.32 Three of all the proposed areas fall entirely within Flood Zone 1 (found in Barnet) and are considered to be at low risk of flooding from rivers or sea. Consequently the principle of development these site areas for waste management facilities would pass the Sequential Test in relation to fluvial flooding. However, in accordance with national guidance, there is a need to consider the susceptibility of site areas to other sources of flood risk, for example, a site area which is entirely located within Flood Zone 1 may be prone to surface water flooding.

3.33 As documented in the table in Appendix B, all areas are at least partially susceptible to surface water flooding. It is expected that any applicant would provide detail of the use of sustainable urban drainage systems (SuDS) and be aware of this vulnerability on site area. However, this is something that would be taken into account in more detail through the planning application process where the individual Borough's Drainage team and the EA would be consulted to outline site specific issues and

resolutions. Further information for each site area can be found in the Sustainability Appraisal 2018 (SA).

3.34 Risk of flooding from reservoirs is provided in Appendix B.

3.35 Whilst not forming part of the formal element of this Sequential Test, it is appropriate at this juncture to recognise that the SWMP's for each of the seven Borough's identify certain locations as 'Critical Drainage Areas'. Such areas are recognised as being sensitive to an increase in the rate of surface water runoff and/or volume from new development and there are generally known local flooding problems associated with these areas. Where site areas are for major development and lie within a Critical Drainage Area, this itself will trigger further investigation of flood risk, undertaken through a site-specific FRA.

Proposed Areas in Flood Zone 2 and Flood Zone 3

3.36 Ten of the areas are at an increased risk of flooding, with eight partially containing Flood Zone 3.

3.37 More detailed area profiles have been prepared for each of these increased flood risk areas and can be found within Appendix A of this report. Each of the areas has been assessed against the Flood Zone and the vulnerability classification of the proposed use.

3.38 This assessment has shown that all of the areas which are considered suitable for waste management facilities located within Flood Zones 2 and 3 comprise "less vulnerable" development in the context of the NPPG, and do not fall to be considered under the "exception test". They therefore pass the Sequential Test and may be considered further as areas for allocation in the NLWP.

3.39 Following EA guidance on climate change allowances, the range of allowances are determined by the flood risk vulnerability classification and the flood zone. In this case, the waste management facilities are "less vulnerable" developments, therefore will use the central allowance for site areas allocated in Flood Zone 2; and the central and higher central to assess the range of allowances for Flood Zone 3a. Any site area in Flood Zone 3b should not be permitted.

Sequential assessment

3.40 Not all of the required development can be located within the available area of Flood Zone 1, therefore development in Flood Zone 2 is appropriate. Not all the development can be located exclusively within the available areas of Flood Zone 1 or 2 therefore

development in Flood Zone 3a is appropriate. Development in Flood Zone 3b is not appropriate.

3.41 Within the lifetime of the development there is potential for areas currently within Flood Zone 1 to become within the future equivalent of Flood Zone 2[4]; there is potential for areas currently within Flood Zone 2 to become within the future equivalent of Flood Zone 3a[5]; there is potential for areas currently within Flood Zone 3a to become within the future equivalent of Flood Zone 3b[6].

3.42 As the sequential review of site areas finds that it is necessary and appropriate to site less vulnerable development within the current Flood Zone 1, 2 and 3a it is considered that the increase in percentage of site areas that may be within Flood Zone 2 or 3a in the future as a result of climate change does not undermine the conclusions of the Sequential Test.

3.43 In regard to 'less vulnerable' development there is no national policy differentiation between land that is currently in Flood Zone 3a and that will remain so as a result of climate change and land that that is currently in Flood Zone 3a which will become Flood Zone 3b as a result of climate change. However, for the purposes of the North London Waste Plan it is recommend that such local policy be established to require all site areas, as part of their site-specific flood risk assessment to consider the impact of climate change on the 0.1%, 1.0% and 20% AEP undefended and defended flood events.

3.44 It is recognised that within a non-hazardous waste site that has an overall classification of 'less vulnerable' there are different specific areas of operation that may have differing tolerances for compatibility with flood water based on how impactful flooding of that area or operation would be to the site and to the wider environment. Therefore, it is important to consider at the site layout planning stage the layout of the site and how differing parts of the site area may be impacted by flooding now and in the future.

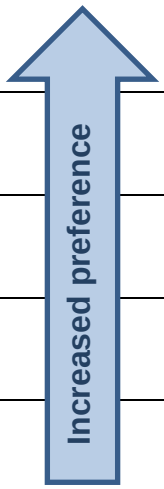
3.45 To this end individual planning applications should demonstrate, including allowances for climate change:

- how site layout planning has been applied to locate the least water compatible operations in the least hazardous areas of the site area,
- how the development will be safe for the lifetime of the development,
- how they will not have an impact on flood risk to 3rd party land.

[4] Noting that Flood Zone 2 is based on the present day undefended 0.1% AEP event
[5] Noting that Flood Zone 3a is based on the present day undefended 1% AEP event
[6] Noting that Flood Zone 3b defined in the individual borough SFRAs.

3.46 The table below sets out how layout planning should consider the differing operational areas within a ‘Less Vulnerable’ development when choosing where to locate water sensitive operations.

Table 7 Site layout planning within Less Vulnerable development, where to locate water sensitive operations

	Preference	Area
Most preferred		Currently in Flood Zone 1 and estimated to remain so in 2080 including allowances for climate change
		Currently in Flood Zone 1 but estimated become Flood Zone 2 in 2080 including allowances for climate change
		Currently in Flood Zone 2 and estimated to remain so in 2080 including allowances for climate change
		Currently in Flood Zone 3 but estimated become Flood Zone 3a in 2080 including allowances for climate change
Least preferred but acceptable		Currently in Flood Zone 3a and estimated to remain so in 2080 including allowances for climate change
No development		Currently in Flood Zone 3a but estimated become Flood Zone 3b in 2080 including allowances for climate change
No development – not appropriate		Currently in Flood Zone 3b and estimated to remain so in 2080 including allowances for climate change

4. Conclusion

4.1 The NPPF sets out the Government's policy on development and flood risk. It requires planning authorities to avoid inappropriate development in areas at risk of flooding by steering new development to areas of lowest risk. To ensure that this approach is embedded within the plan preparation process, the NPPF stipulates that planning authorities identifying land for development in their Local Plan's, should apply a Sequential Test to demonstrate that there are no reasonably available site areas in areas with a lower probability of flooding that would be appropriate to the type of development or land use proposed.

4.2 It is proposed to include 13 areas in the draft NLWP (Regulation 19). This report has sought to examine whether these areas are suitable locations for waste management facilities, based upon the level of flood risk present at each site area, and whether there are any available site areas at a lower risk of flooding that would be appropriate for the development proposed. No other available site areas, beyond the 13 listed herein have been identified.

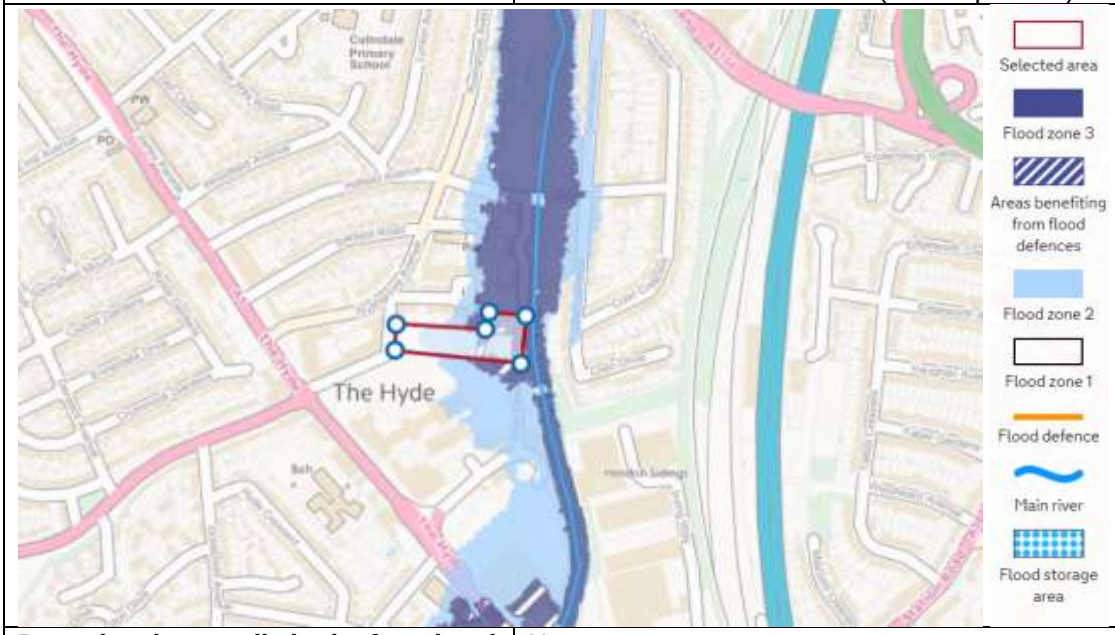
4.3 This assessment only considers prospective non-hazardous waste management facilities comprise which are classed as "less vulnerable" development in the context of the NPPG.

4.4 Three of the proposed development site areas are located entirely within Flood Zone 1 and are therefore considered to be at a low risk of flooding from rivers. The remaining areas fall partially or entirely within Flood Zones 2 and 3a. Site areas have been ranked with a Sequential preference in Appendix B.

4.5 The Sequential Test has been applied to these areas. It has been shown that not all of the required development can be located within the available area of Flood Zone 1, therefore development in Flood Zone 2 is appropriate. Not all the development can be located exclusively within the available areas of Flood Zone 1 or 2 therefore development in Flood Zone 3a is appropriate.

4.6 This assessment has shown how the Sequential Test has been applied to the proposed development and the conclusion of assessment is twofold, firstly to conclude that it is necessary and appropriate to locate the proposed development in Flood Zone 1, 2 and 3a, and secondly that due to the proposed use consideration under the "Exception Test" is not required. They therefore pass the Sequential Test and may be considered further as areas for allocation in the NLWP.

Appendix A: Site Area Assessments (Sites Areas in Flood Zones 2 and 3)

Name of Site Area: Connaught Business Centre	
Site Area Reference	A05-BA
Borough	Barnet
Area	0.9 ha
Proposed Use	(A) Recycling, (E) Waste transfer
Flood Zone	The northern and eastern parts of the site area fall within FZ3, with the latter area benefitting from flood defences. The central part of the site area falls within FZ2. The western end is FZ1 (see map below)
	
Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – the majority of the site area may be susceptible surface water flooding and parts from reservoir flooding

Conclusion: The site area falls partially within Flood Zones 2 and 3. It is therefore considered that the site area would be suitable for the proposed "Less Vulnerable" developments and should pass the sequential test. The exception test would not be applicable.

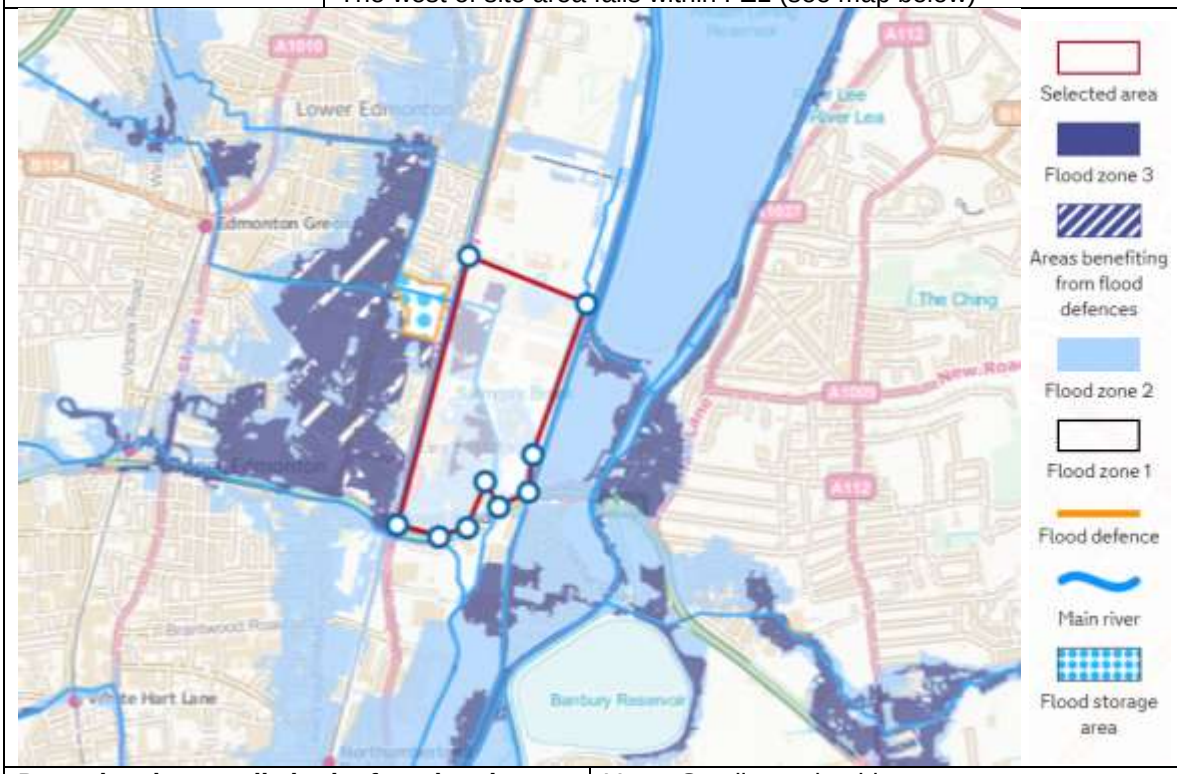
The site area is shown to flood from the Silk Stream in the 1% AEP event (without defences) and this will increase in the future to cover approximately half the site area. The Silk Stream benefits from upstream storage scheme and a site-specific flood risk assessment should consider how much this benefits the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) and higher central (35% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

For any proposed development which involves an increase in built footprint within the modelled extent of the 1 in 100 chance in any year flood event, taking the impacts of climate change into account, or where the footprint has been moved into a deeper area of floodplain than the existing built footprint, floodplain compensation will need to be provided on a volume-for-volume and level-for-level basis.

Name of Site Area: Eley's Estate	
Site Area Reference	A12-EN
Borough	Enfield
Area	26.1 ha
Proposed Use	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (C) Integrated resource recovery facilities / resource parks, (D) Waste treatment facility (including thermal treatment, anaerobic digestion, pyrolysis / gasification, mechanical biological treatment), (E) Waste transfer
Flood Zone	The land south and west of Salmon's brook is largely within FZ2 and 3. The west of site area falls within FZ1 (see map below)



Does the site area lie in the functional floodplain (Zone 3b)	Yes – Small area beside watercourse on eastern boundary, approx. 0.09ha. (Total site area is 26.1ha).
Is the proposed use acceptable in this Flood Zone	Yes providing that development does not take place on the part of the site area that lies within the functional floodplain.
Is the site area considered to be at risk from other forms of flooding	Yes – parts of the site area may be susceptible to surface water flooding and the whole site area may be affected by reservoir flooding

Conclusion: The western part of this large 26.1ha site area is largely Flood Zone 1 with areas to the east falling in to Flood Zone 2 and 3a and 3b (watercourse crosses site area). It is considered that the proposed "Less Vulnerable" developments be located on the Flood Zone 1 and 2 parts of the site area preferentially and that the site area should pass the sequential test. The exception test would not be applicable. However, development should be avoided on the part of the site area which lies within the functional floodplain.

The site area is shown to flood from the Salmons Brook in the 1% AEP event (without defences) and this will increase in the future to cover approximately one third of the site area. The Salmons Brook benefits from upstream flood alleviation scheme and a site-specific flood risk assessment should consider how much this benefits the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) and higher central (35% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

For any proposed development which involves an increase in built footprint within the modelled extent of the 1 in 100 chance in any year flood event, taking the impacts of climate change into account, or where the footprint has been moved into a deeper area of floodplain than the existing built footprint, floodplain compensation will need to be provided on a volume-for-volume and level-for-level basis.

Name of Site Area: Millfields LSIS	
Site Area Reference	A15-HC
Borough	Hackney
Area	1.48 ha
Proposed Use	(C) Integrated resource recovery facilities / resource parks
Flood Zone	FZ1, partial FZ2 on eastern and western boundaries and partial FZ3 (benefitting from flood defences) in south west corner (see map below)

Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – parts of the site area may be susceptible to surface water flooding and the whole site area is at risk of reservoir flooding

Conclusion: The site area is largely Flood Zone 1 with part of the periphery falling within Flood Zones 2 and 3. The small part of the site area within Flood Zone 3 is found to be within an area benefiting from defences. It is therefore considered that the majority of the proposed development on site area could be accommodated within the Flood Zone 1 part of the site area and the site area would be suitable for the proposed "Less Vulnerable" developments and should pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the River Lea in the 1% AEP event (without defences) and this will increase in the future to cover the outer perimeter of the site area. The River Lea benefits from defences and a site-specific flood risk assessment should consider how much these benefit the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) and higher central (35% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

For any proposed development which involves an increase in built footprint within the modelled extent of the 1 in 100 chance in any year flood event, taking the impacts of climate change into account, or where the footprint has been moved into a deeper area of floodplain than the existing

built footprint, floodplain compensation will need to be provided on a volume-for-volume and level-for-level basis.

Name of Site Area: Brantwood Road (SIL 3), N17 0DX	
Site Area Reference	A19-HR
Borough	Haringey
Area	16.9 ha
Proposed Use	(A) Recycling, (D) Waste treatment facility (including thermal treatment, anaerobic digestion, pyrolysis / gasification, mechanical biological treatment), (E) Waste transfer
Flood Zone	Mostly FZ1, the eastern part of the site area is within FZ2 (see map below)

Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – parts of the site area may be susceptible to surface water flooding and the whole site area may be affected by reservoir flooding

Conclusion: The site area is largely Flood Zone 1 with the western most part of the site area falling partially within Flood Zone 2. The site area is considered suitable for the proposed "Less Vulnerable" developments. It is therefore considered that the site area should pass the sequential test. The exception test would not be applicable. Note that the site area may also be suitable for "More Vulnerable" developments, as this would pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the Pymmes Brook in the 0.1% AEP event (without defences) and this will increase with the future 1% AEP event to cover approximately one quarter of the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

Name of Site Area: North East Tottenham (SIL 12), Garmen Rd, N17 0UN	
Site Area Reference	A21-HR
Borough	Haringey
Area	15.32 ha
Proposed Use	(A) Recycling, (D) Waste treatment facility (including thermal treatment, anaerobic digestion, pyrolysis / gasification, mechanical biological treatment), (E) Waste transfer
Flood Zone	The majority of the site area is within FZ2, FZ1 to the west (see map below)

Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – parts of the site area may be susceptible to surface water flooding and the whole site area may be affected by reservoir flooding

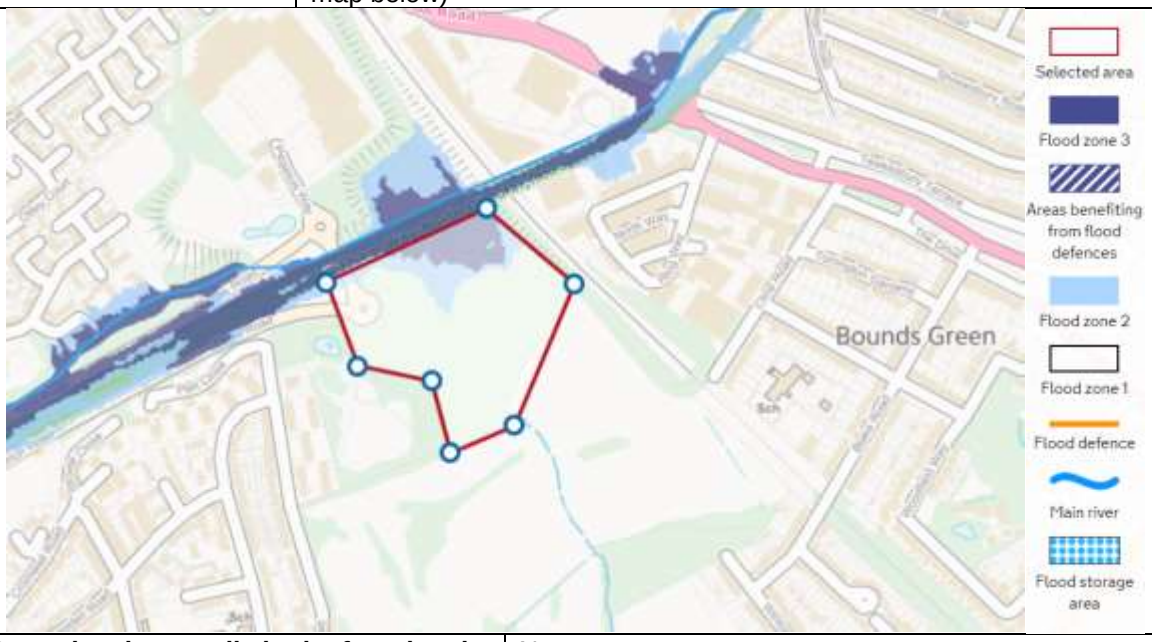
Conclusion: The site is split between Flood Zone 1 and Flood Zone 2 and would be suitable for the proposed "Less Vulnerable" developments. It is therefore considered that the site area should pass the sequential test. The exception test would not be applicable. Note that the site area may also be suitable for "More Vulnerable" developments, as this would pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the Pymmes Brook in the 0.1% AEP event (without defences) and this will increase with the future with 1% AEP event to cover approximately one fifth of the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

Name of Site Area: Friern Barnet Sewage Works/Pinkham Way	
Site Area Reference	A22-HR
Borough	Haringey
Area	5.95 ha
Proposed Use	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (E) Waste transfer
Flood Zone	Mostly in FZ1. The north east part of the site area lies in FZ2 and 3 (see map below)



Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – the majority of the site area may be susceptible to surface water flooding

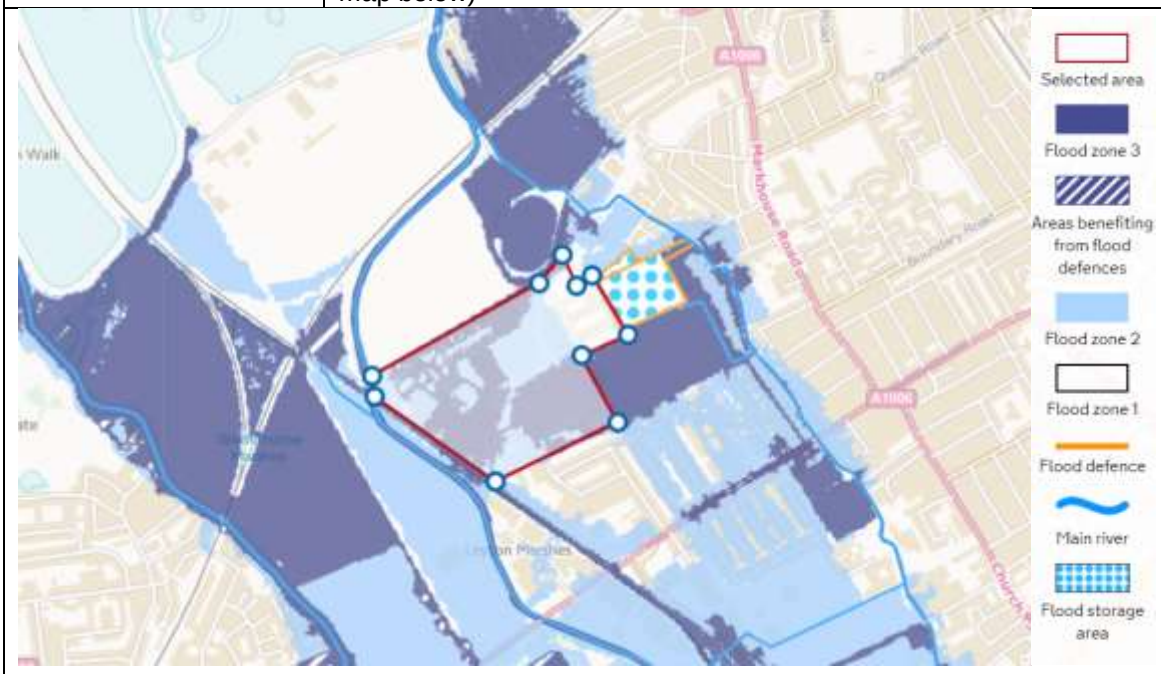
Conclusion: The site area is largely within Flood Zone 1 with a small area to the north of the site area falling partially within Flood Zones 2 and 3. It is considered that the site area would be suitable for the proposed "Less Vulnerable" developments. It is therefore considered that the site area should pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the Bounds Green Brook in the 1% AEP event (without defences) and this will potentially increase with the future with 1% AEP event covering a greater extent of the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

Name of Site Area: Argall Avenue	
Site Area Reference	A24-WF
Borough	Waltham Forest
Area	26.91
Proposed Use	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (E) Waste transfer
Flood Zone	The majority of the site area comprises a mix of FZ2 and 3. The north eastern side of the site area is in FZ1. Small area of FZ3b in east (see map below)



Does the site area lie in the functional floodplain (Zone 3b)	Yes
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – parts of the site area may be susceptible to surface water flooding and the whole site area may be affected by reservoir flooding

Conclusion: The site area falls partially within Flood Zone 1, Flood Zone 2 and Flood Zone 3. It is considered that the site area would be suitable for the proposed "Less Vulnerable" developments and should pass the sequential test, however it may be sequentially less preferable than other site areas listed based on the proportions of Flood Zone 1, 2 and 3. The exception test would not be applicable.
However, development should be avoided on the part of the site area which lies within the functional floodplain.

The site area is shown to flood from the River Lee and Dagenham Brook in the 1% AEP event (without defences) and this will potentially increase with the future with 1% AEP event covering a greater extent of the site area.

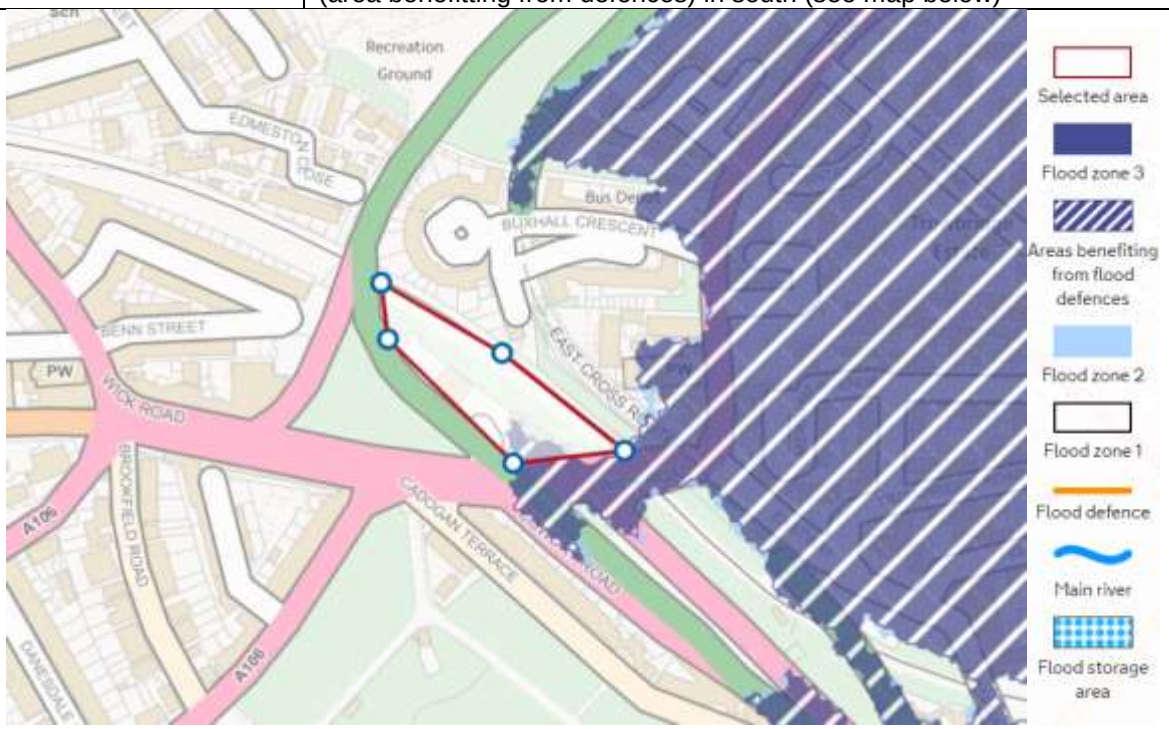
A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) and higher central (35% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

For any proposed development which involves an increase in built footprint within the modelled extent of the 1 in 100 chance in any year flood event, taking the impacts of climate change into

account, or where the footprint has been moved into a deeper area of floodplain than the existing built footprint, floodplain compensation will need to be provided on a volume-for-volume and level-for-level basis.

Name of Site Area: Bartrip Street LSIS, E9 5DH	
Site Area Reference	LLDC1-HC
Borough	Hackney
Area	0.6 ha
Proposed Use	(A) Recycling, (E) Waste transfer
Flood Zone	The majority of the site area is FZ1. However, there is an area of FZ3 (area benefitting from defences) in south (see map below)



Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – parts of the site area may be susceptible surface water flooding and parts from reservoir flooding.

Conclusion: The site area is largely within Flood Zone 1 with the southern most part falling partially within Flood Zones 2 and 3, noting that the Flood Zone 3 is within an area benefiting from defence. The site area would be suitable for the proposed "Less Vulnerable" developments. It is therefore considered that the site area should pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the River Lea / Lee Navigation in the 1% AEP event (without defences) and this will potentially increase with the future with 1% AEP event covering a greater extent of the site. The River Lea / Lee Navigation benefits from defences and a site-specific flood risk assessment should consider how much these benefit the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

Part of the site area benefits from existing flood defences.

Name of Site Area: Palace Close SIL, E9 5DW	
Site Area Reference	LLDC2-HC
Borough	Hackney
Area	0.33 ha
Proposed Use	(A) Recycling, (E) Waste transfer
Flood Zone	The majority of the site area is in FZ3 and benefitting from flood defences. The north of the site area is in FZ1 (see map below)

Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – site area may be susceptible surface water flooding and flooding from reservoirs.

Conclusion: The site area falls partially within Flood Zone 1 and 2 but is largely in Flood Zone 3, noting that this is within an area benefiting from defences. The site area would be suitable for the proposed "Less Vulnerable" developments, however it may be sequentially less preferable than other site areas listed based on the proportions of Flood Zone 1, 2 and 3 and the residual risk to the site area. It is therefore considered that the site area should pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the River Lea / Lee Navigation in the 1% AEP event (without defences) and this will potentially increase with the future with 1% AEP event covering a greater extent of the site area. The River Lea / Lee Navigation benefits from defences and a site-specific flood risk assessment should consider how much these benefit the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

The majority of the site area benefits from existing flood defences.

Name of Site Area: Bus Depot, Temple Mill Lane	
Site Area Reference	LLDC3-WF
Borough	Waltham Forest
Area	2.1 ha
Proposed Use	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (E) Waste transfer
Flood Zone	The majority of the site area lies in FZ2. However, there is a small area in the centre and a small area in the south east which lies in FZ3 (see map below)

Does the site area lie in the functional floodplain (Zone 3b)	No
Is the proposed use acceptable in this Flood Zone	Yes
Is the site area considered to be at risk from other forms of flooding	Yes – the site area may be susceptible surface water flooding and flooding from reservoirs.

Conclusion: The site area is largely Flood Zone 2 with a small area of Flood Zone3. It is therefore considered that the site area would be suitable for the proposed "Less Vulnerable" developments and should pass the sequential test. The exception test would not be applicable.

The site area is shown to flood from the River Lee and Dagenham Brook in the 1% AEP event (without defences) and this will potentially increase with the future with 1% AEP event covering a greater extent of the site area.

A flood risk assessment would be required for any redevelopment. This will need to incorporate the following climate change allowances into the assessment:

- Use central (25% increase from 2070 to 2115) and higher central (35% increase from 2070 to 2115) for peak river flow.
- Use central (20% increase from 2070 to 2115) and upper end (40% increase from 2070 to 2115) for peak rainfall intensity.

For any proposed development which involves an increase in built footprint within the modelled extent of the 1 in 100 chance in any year flood event, taking the impacts of climate change into account, or where the footprint has been moved into a deeper area of floodplain than the existing built footprint, floodplain compensation will need to be provided on a volume-for-volume and level-for-level basis.

Appendix B: Flood Risk Vulnerability Classification

Site Area Reference	Site Area Name	Area (ha)	Potential Uses	Flood Zone Classification				Vulnerability Classification	Is the site area susceptible Surface Water Flooding?	Is the site area within a Critical drainage Area?	Is the site area known to be at risk of flooding from canal breach?	Is the site are known to be at risk of flooding from a reservoir?	Sequential Flood risk ranking
				1	2	3a	3b						
A02-BA	Oakleigh Road, N11 1HJ	0.99	(A) Recycling, (C) Integrated resource recovery facilities / resource parks, (E) Waste transfer	✓				Less Vulnerable	Yes in parts	Yes	No information at time of printing	No	#1
A03-BA	Brunswick Industrial Park, N11 1JL	3.9	(A) Recycling, (E) Waste transfer	✓				Less Vulnerable	Yes in parts	Yes	No information at time of printing	No	#2
A04-BA	Mill Hill Industrial Estate, NW7 2HU	0.9	(A) Recycling, (E) Waste transfer	✓				Less Vulnerable	Yes	Yes	No information at time of printing	No	#3
A05-BA	Connaught Business Centre, NW9 6JL	0.9	(A) Recycling, (E) Waste transfer	✓	✓	✓*		Less Vulnerable	Yes	No	No information at time of printing	No	#11
A12-EN	Eley's Estate, N18 3BB	26.1	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (C) Integrated resource recovery facilities / resource parks, (D) Waste treatment facility	✓	✓	✓	✓	Less Vulnerable	Yes in parts	No	No information at time of printing	Yes – the site area lies adjacent to the King George and William Girling Reservoirs	#10

			(including thermal treatment, anaerobic digestion, pyrolysis / gasification, mechanical biological treatment), (E) Waste transfer										
A15-HC	Millfields LSIS, E5 0AL	1.48	(C) Integrated resource recovery facilities / resource parks	✓	✓	✓*		Less Vulnerable	Yes in parts	No	No information at time of printing	Yes – the site area lies downstream of the Lee Valley Reservoir Chain	#5
A19-HR	Brantwood Road (SIL 3), N17 0DX	16.9	(A) Recycling, (D) Waste treatment facility (including thermal treatment, anaerobic digestion, pyrolysis / gasification, mechanical biological treatment), (E) Waste transfer	✓	✓			Less Vulnerable	Yes in parts	No	No information at time of printing	Yes – the site area is in close proximity of Banbury, King George and William Girling Reservoirs	#6
A21-HR	North East Tottenham (SIL 12), Garmen Rd, N17 0UN	15.32	(A) Recycling, (D) Waste treatment facility (including thermal treatment, anaerobic digestion, pyrolysis / gasification, mechanical biological	✓	✓			Less Vulnerable	Yes in parts	No	No information at time of printing	Yes – the site area is in close proximity of Banbury, King George and William Girling Reservoirs	#9

			treatment), (E) Waste transfer										
A22-HR	Friern Barnet Sewage Works (LEA 4), N10 2EY (Land Ownership NLWA)	5.95	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (E) Waste transfer	✓	✓	✓		Less Vulnerable	Yes	No	No information at time of printing	No	#8
A24-WF	Argall Avenue, E10 7QE	26.91	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (E) Waste transfer	✓	✓	✓	✓	Less Vulnerable	Yes in parts	No	No information at time of printing	Yes – the site area lies downstream of the Lee Valley Reservoir Chain	#13
LLDC1-HC	Bartrip Street LSIS, E9 5DH	0.6	(A) Recycling, (E) Waste transfer	✓	✓	✓*		Less Vulnerable	Yes in parts	Yes	No information at time of printing	Yes – the site area lies downstream of the Lee Valley Reservoir Chain	#4
LLDC2-HC	Palace Close SIL, E9 5DW	0.33	(A) Recycling, (E) Waste transfer	✓	✓	✓*		Less Vulnerable	Yes in parts	No	No information at time of printing	Yes – the site area lies downstream of the Lee Valley Reservoir Chain	#7
LLDC3-WF	Bus Depot, Temple Mills Lane, E10 5PB	2.1	(A) Recycling, (B) Composting (including indoor / in-vessel composting), (E) Waste transfer		✓	✓		Less Vulnerable	Yes	No	No information at time of printing	Yes – the site area lies downstream of the Lee Valley Reservoir Chain	#12

*Site area is partially within Flood Zone 3 but this is entirely within an area benefiting from defences.