Local Plan Flood Risk Sequential and Exception Tests Technical Paper

Introduction

1.1. The approach to the management of flood risk associated with the Draft Local Plan spatial strategy and site allocations is detailed in this technical note. the Draft Local Plan and Strategic Flood Risk Assessments (SFRAs), will help to ensure that the communities within the borough are less vulnerable to flooding, including as a result of climate change. The Council is the Lead Local Flood Authority for the borough; on-going working with key partners including the Environment Agency will also be key to making the borough more resilient to flooding now and in the future.

1.2. The Council has applied the borough-wide sequential test for flood risk to the spatial strategy set out in the Draft Local Plan. Application of the sequential test has demonstrated that the sustainable development locations, designated industrial locations and the Thamesmead and Abbey Wood Opportunity Area pass the sequential test, because there are no other suitable locations for development in the borough in areas of lower flood risk for the amount of growth proposed in the Bexley Draft Local Plan.

1.3. The Bexley SFRA supports the amount of growth proposed in the Draft Local Plan. The SFRA Level 1 provides an evidence base to support spatial planning decisions at a borough-wide scale, including application of the sequential test, which has informed the spatial approach to growth identified through the spatial strategy of the Draft Local Plan. These locations are defined in Policy SP1 and illustrated on the Key Diagram [Figure 1] and identified on the **submission policies map**.

1.4. It also facilitates the application of the exception test for sites located in areas that have passed the sequential test (e.g. within flood zone 1 or sustainable development locations in flood zones 2 and 3a). The SFRA Level 2 applies a sequential approach within the sustainable development locations, and at the site-specific level for sites identified through the site allocations process. It also provides information for windfall sites to establish whether they can be made safe without increasing flood risk elsewhere. The Mayor of London's Thamesmead and Abbey Wood Opportunity Area Planning Framework sets out the flood risks, and approach to addressing flood risk within the Area.

1.5. Development pressure across the London Borough of Bexley (LBB) mean that some development is required in medium-to-high risk flood zones 2 or 3a, and areas affected by other sources of flooding. It is important that the allocation of development sites considers flood risk early in the planning process to ensure development is directed towards those sites with lower flood risks. It is therefore necessary for the Council to consider whether potential development sites in flood zones need to and can pass the sequential and exception test.

1.6. The Exception Test has been applied to 24 potential site allocations. The integrated impact assessment of the Draft Local Plan outlines the sustainability benefits for each site. Application of the sequential approach to development within the sustainable development locations has identified that a number of the sites have potential flood risk issues. These flood risks have been considered alongside the wider sustainability benefits to the community for each site. Where the

wider benefits to the community outweigh the flood risks, draft Local Plan policies and allocations ensure that development will be safe throughout its lifetime and will not increase flood risk elsewhere, including allowances for climate change. 23 potential site allocations pass the exception test in principle.

1.7. Further consideration will need to be given at planning application stage, to ensure developments comply with requirements set out in Draft Local Plan policies and site allocations. For 1 site, application of the exception test demonstrates that flood risks associated with the site are not outweighed by the wider benefits to the community, therefore this site fails the exception test.

1.8. This technical paper demonstrates that the Sequential and Exception Testing methodology has been applied in accordance with the requirements of the National Planning Policy Framework (NPPF) in allocating development sites in the Draft Local Plan. The paper demonstrates that the borough's sustainable development locations have passed the sequential test, 23 sites allocated within the Draft Local Plan have passed the exception test, subject to further consideration being given at planning application stage. The paper explains why 1 site failed to pass the exception test.

1.9. This technical paper sets out an overview of the Draft Local Plan spatial strategy to explain why in undertaking the Sequential Test, the area of search for alternative locations in the borough is restricted to the sustainable development locations, and an overview of flood risk in these sustainable development locations.

1.10. The technical paper summarises the Draft Local Plan evidence base that is relevant to the application of the sequential and exception tests. The application of the Sequential and Exception Tests have informed the site allocation process summarised within the site allocation technical paper, and has been informed by the Draft Local Plan, the Strategic Flood Risk Assessment (SFRA) Level 1 and Level 2, and the Draft Local Plan Integrated Impact Assessment (IIA), including Sustainability Appraisal (SA).

1.11. This technical paper describes the borough-wide approach to the Sequential Test, and the Exception Test methodology applied to the potential site allocations, which has involved screening sites to establish their level of flood risk and wider benefits to the community informed by the Integrated Impact Assessment. Results of the Tests are then presented. Where sites are identified as at potential risk of flooding, an assessment has been undertaken to determine whether the flood risks are outweighed by wider sustainable benefits to the community. Appendix 1 contains the site-by-site Exception Test results.

National Policy and Guidance

1.12. The National Planning Policy Framework (NPPF) and its associated Flood Risk and Coastal Change Planning Practice Guidance (PPG) form the primary source of statutory planning guidance with regard to new development and flood risk for England. These documents explain that a key part of promoting sustainable development is ensuring that where new development has to take place in areas of higher flood risk, it is safe from flooding, and does not itself increase flood risk to others.

1.13. The main approach of the NPPF and PPG with regards to flood risk is to steer new development away from areas of flood risk, as far as possible, through the application of the 'Sequential Test'. Development in areas of higher flood risk should only be permitted where this test has determined that it is required in order to fulfil other local plan policy requirements.

1.14. A further test, the 'Exception Test' has to be satisfied to demonstrate that development in areas of high flood risk has wider sustainability benefits that outweigh flood risk. In addition, the development needs to be safe for its lifetime, without increasing flood risk elsewhere, and where possible, reduce flood risk overall. Paragraph 158 of the NPPF explains that the preparation of a Strategic Flood Risk Assessment provides the evidence base to facilitate the application of these tests.

Local Context

Overview of Bexley's Spatial Strategy

1.15. The Development Plan for the area includes the Bexley Local Plan and the Mayor's London Plan. The London Plan, as the spatial development strategy for London, provides the strategic framework.

1.16. In line with Government guidance, the key spatial objective of a local plan is to set out the broad locations and specific allocation of land for different purposes. The strategic and non-strategic (development management) policies and the spatial land use designations are designed to support the objectives of sustainable development.

1.17. A Plan-led approach, supported by key London Plan and local evidence, has been undertaken. It has identified future housing and economic needs and makes provision for these in the right locations across the borough. In line with the Draft local plan vision and objectives, good growth will be secured by focussing new development in and around the borough's town centres; railway stations; other relatively well-connected areas. Development will also be located within designated industrial areas, making the most of Bexley's riverside location and industrial heritage. These factors have informed Bexley' Draft local plan spatial strategy.

1.18. Bexley is an outer London borough, where the pattern of residential development has the potential for sensitive intensification over time. Bexley has two London Plan Opportunity Areas (OAs) within the Thames Estuary growth corridor. These are areas that have the potential to deliver a substantial amount of the new homes and/or jobs that London needs once the necessary infrastructure is in place. The Thamesmead and Abbey Wood OA is about to benefit from new transport infrastructure, including the Elizabeth Line to Abbey Wood and has a recently adopted planning framework. The Bexley Riverside OA is however unlikely to fulfil its development potential during the Plan period as it is dependent on infrastructure improvements that have not yet been committed.

1.19. Strategic Policy SP1 of the Draft Local Plan outlines the Spatial Strategy for the borough. **Figure 1**(the spatial strategy for the Local Plan) illustrates the Draft Local Plan spatial strategy. Sustainable growth will be achieved by focusing new housing, including accompanying services and facilities, and many of the new jobs, in and around the borough's main town centres and transport hubs, designated industrial locations (specifically for industrial growth and intensification) and the Thamesmead and Abbey Wood London Plan Opportunity Area. These are the borough's sustainable locations for growth.

- The sustainable development locations across the north of the borough are focussed on Erith town centre and the railway stations of Belvedere and Abbey Wood with their new town centre designations, and to a lesser extent around the railway station at Slade Green.

The large designated industrial areas in the north of the borough provide sustainable locations for employment growth.

- Sustainable development locations across the middle of the borough are focussed in and around Bexleyheath and Crayford town centres and areas with good access to public transport. As well as Bexleyheath and Crayford, these locations spread out to Welling and Northumberland Heath, and the railway stations of Bexleyheath, Barnehurst and, to a lesser extent, Falconwood.
- Sustainable development locations in the south of the borough are focussed on Sidcup town centre and its railway station (and accompanying local centre), the local centres of Blackfen and Bexley Village, and around the railway station at Albany Park. The large designated industrial area in the south of the borough at Foots Cray provides a further sustainable location for employment growth.

1.20. This approach to growth is supported by the Integrated Impact Assessment (IIA) of the Draft Local Plan and is likely to contribute positively across a range of IIA objectives, with a few exceptions. In these instances, the assessment recognised that while development might give rise to significant effects, other policies in the Draft Local Plan would mitigate these effects. No likely significant negative effects were identified.

1.21. In light of this, the area of search for alternative options for site allocations has been narrowed down to sustainable development locations as opposed to a search borough wide.

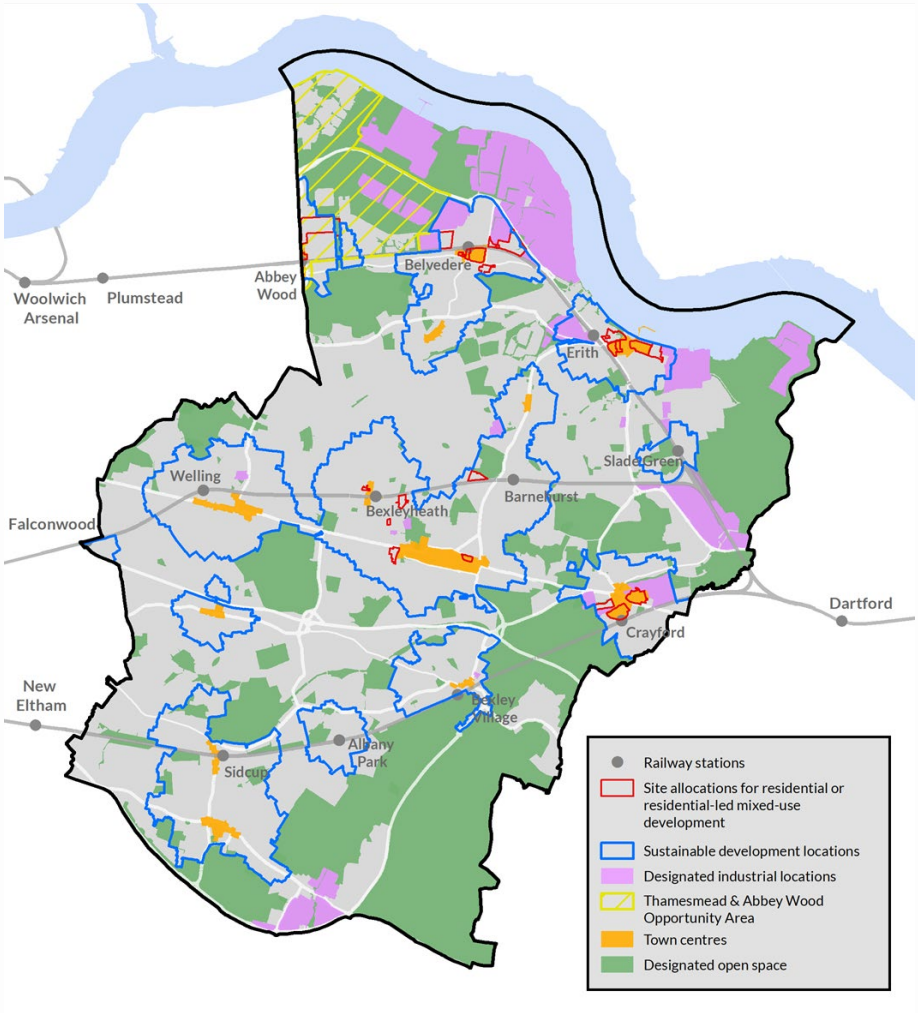


Figure 1: Spatial strategy for the draft local plan

Flood Risk associated with Bexley's Spatial Strategy

1.22. The main rivers in the Borough are the River Thames forming the northern boundary, the Wyncham Stream, River Shuttle and River Cray, with a small network of ordinary watercourses largely in the north of the Borough, around Thamesmead, Erith, Belvedere and Slade Green. Figures 2 and 3 below show the borough-wide flood risks associated tidal, fluvial, and surface water. These two figures incorporate flood risk data from Appendix A of the SFRA Level 1 report.

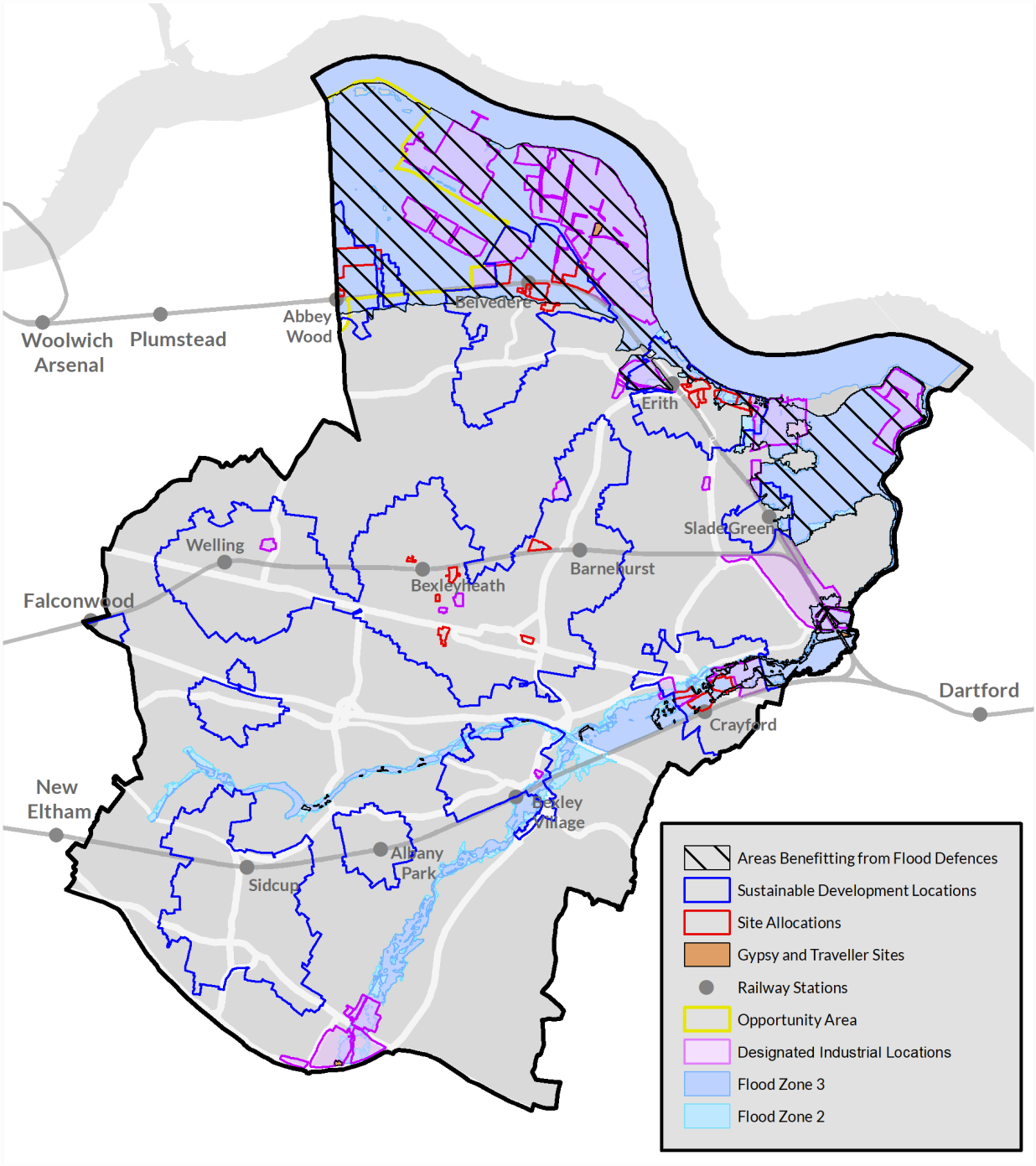


Figure 2: flood map for planning (figure A5 from the SFRA Level 1 Report)

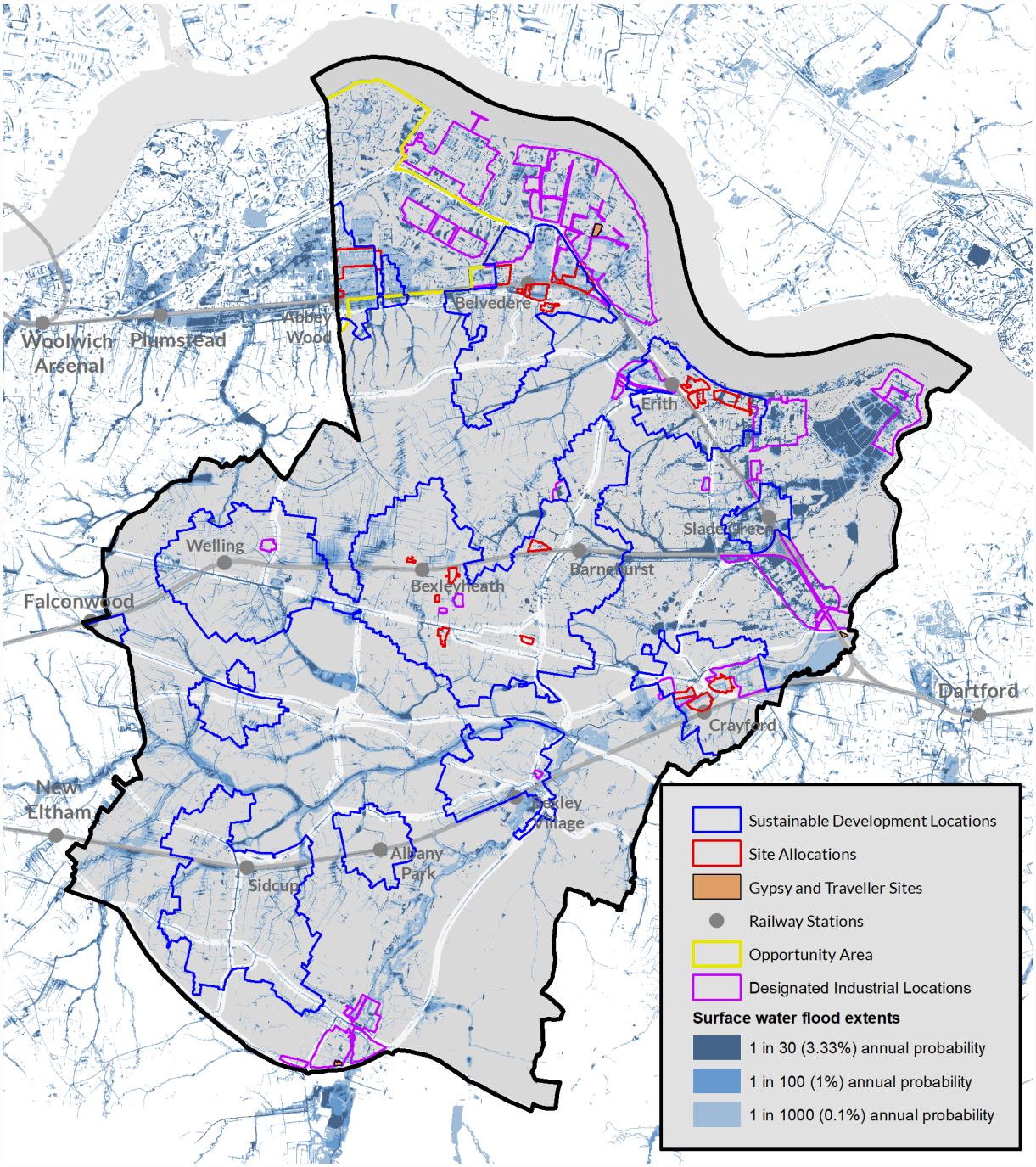


Figure 3: surface water flood extents (figure A10 from the SFRA Level 1 Report)

1.23. Section 2 of the Bexley SFRA Level 2 provides an overview of flood risk in the sustainable development locations. The flood risks have been summarised below:

North Bexley

1.24. In north Bexley, the Thamesmead and Abbey Wood Opportunity Area; parts of the communities of Abbey Wood, Belvedere, Erith and Slade Green; and, the industrial land, are all at residual risk of tidal flooding from the River Thames. The land between the riverbank and the Woolwich to Erith railway line is at risk of residual flooding, should the flood defences along the River Thames be breached or overtopped during a flood event. The southern part of Thames Road Industrial Area is also at risk from fluvial flooding from the River Cray.

1.25. Abbey Wood and Belvedere are at widespread risk of surface water flooding. The industrial land shows extensive but mostly low risk of surface water flooding with pockets of higher risk. Higher surface water flood risk areas are dominant within the Manor Road Industrial Area, Darent Industrial Park, and Thames Road Industrial Area.

1.26. The Environment Agency has undertaken detailed modelling of the unique flood risks associated with the Darent Industrial Estate, where a number of flooding mechanisms influence the frequency and severity of flooding. The Environment Agency have commissioned an Activities Assessment Report into the safe limits of activity on and close to the flood defences at the Darent Industrial Estate, which will shortly be finalised. The Council will continue to work with the Environment Agency and businesses on the Estate to address flood risk.

Central Bexley

1.27. Central Bexley encompasses the communities of Northumberland Heath, Barnehurst, Bexleyheath, Welling and Falconwood. There are no main rivers in these sustainable development locations to pose any fluvial flood risk. There is no risk of tidal flooding due to the absence of tidal rivers or the coast. The main source of flood risk across this area is from surface water. The southern parts of Bexleyheath downstream of Danson Park reservoir are at risk of flooding in the event of a breach.

Crayford

1.28. The corridor around the River Cray is at risk of fluvial flooding. From the Hall Place flood storage area through the town centre, Flood Zone 3 extends approximately 300m to the south of the river and suffered widespread flooding in 1968. Flood Zones 2 and 3 also extend northwards from the river channel in the reach between Hall Place and Crayford Way bridge. A small part of the town centre benefits from defences along the riverbanks and the Hall Place flood storage area. There is also a risk from tidal flooding associated with the River Cray, namely only on its south-eastern bank in the open space east of Maiden Lane, which is designated as functional floodplain; and in the industrial area north of Thames Road (A206), which benefits from defences.

South Bexley

1.29. South Bexley include Bexley Village, Albany Park Sidcup, Blackfen and the Footscray and five arches business areas. They are broadly located between the River Shuttle in the north and the River Cray in the south. Only Bexley Village and the Footscray business areas are exposed to risk of fluvial flood risk since the River Cray passes the Village and goes through the centre of the business area. At its widest, Flood Zone 3 spans approximately 300m and extends on both sides of the river. The main source of flood risk across this broader area is from surface water. The corridor around the River Shuttle downstream of Lamorbey Park reservoir and the corridor along Elmwood Drive in Bexley are at risk of flooding in the event of a breach. There is no risk of tidal flooding due to the absence of tidal rivers or the coast.

Draft Local Plan Evidence

Housing Requirement

1.30. The London Plan, as the strategic development strategy for Greater London, provides a spatial strategy that plans for London's growth in a sustainable way. Because of London's ability to plan strategically, boroughs can rely on the London Plan targets when developing their local plans and are not required to carry out their own housing needs assessment or take account of nationally derived local level need figures. For Bexley, a 10-year target has been set in the London Plan to deliver 6,850 additional homes in the borough by 2031. This includes 3,050 from small sites. The Draft Local Plan makes provision for at least 12,330 net new homes in the plan period.

Site Allocations Technical Paper

1.31. 23 sites satisfied the Councils assessment process, these form the site allocations defined on the submission policies map. Part 2 of the Draft Local Plan sets out the Council's site allocations for residential and residential-led mixed-use development It builds on the policies in Part 1 of the Draft Local Plan, following the spatial strategy set out in Policy SP1, and on the Mayor's London Plan, ensuring that key sites and development areas are planned for in a way that takes into account flood risk constraints of the site and surrounding area.

1.32. The Site Allocations Technical Paper details how the Council's site allocations developed through the local plan process, explaining how sites were chosen and assessed at each stage, and the evidence used. A number of factors or constraints were taken into account, including flood risk, in assessing the suitability of a site for housing development. The site allocations technical paper explains how the Council identified a future supply of land which is suitable, available and achievable for delivery of housing over the plan period.

Strategic Flood Risk Assessment

1.33. The National Planning Policy Framework (NPPF) requires local planning authorities to assess the risk of flooding in their areas through undertaking a Strategic Flood Risk Assessment (SFRA). The SFRA for the London Borough of Bexley supports the borough's long-term growth plans by providing an evidence base to steer planning decisions in a way that ensures new development will be safe from flooding now and in the future.

1.34. The SFRA has been used to inform the development of the Draft Local Plan policies related to flood risk management and the allocation of land for future development. The SFRA Level 1 provides an evidence base to support spatial planning decisions at a borough-wide scale, including application of the sequential test, which has informed the sustainable development locations. The SFRA Level 2 enables the sequential approach to be applied within the sustainable development locations and provides analyses of the sites being considered for allocation enabling the application of the exception test.

1.35. SFRA Level 2 includes a flood screening exercise to enable the sequential approach to potential site allocations. The screening assigns one of the five categories to potential 24 site allocations. These screening categories are discussed in the methodology below.

1.36. The SFRA Level 2 also includes detailed site assessments to bring out the information required by to complete the Exception Test, including guidance for developers. Detailed flood risk assessments are

presented in the form of standardised summary sheets in Appendix B of the level 2 report. A summary sheet was created for each of the 21 sites that were assessed in further detail, after having been screened into either category 1 or category 2. Of these, 20 sites have been allocated in the Draft Local Plan following application of the sequential test.

Integrated Impact Assessment

1.37. The Draft Local Plan Integrated Impact Assessment (IIA) incorporates the Sustainability Appraisal. The IIA sustainability objectives and sub-objectives reflect both the socio-economic and environmental issues which may affect (or be affected by) the draft Local Plan.

1.38. These objectives have been used to assess the effects of the Draft Local Plan options, objectives, policies and sites. The basis for appraising sites against the water integration objective 13 takes into account of flood zones, surface water, and source protection zones, and therefore supports application of the sequential test. The SFRA Level 1 and 2 reports have informed the IIA, ensuring that flood risk is fully taken into account when considering allocation options and in the preparation of plan policies.

1.39. The combined set of 18 sustainability objectives in the IIA also supports the application of the exception test, by demonstrating where development would provide wider sustainability benefits to the community.

1.40. The appraisal of the Draft Local Plan includes 23 proposed housing allocations. Significant positive effects were identified against the water integration objective for 1 site, as it is located wholly within flood zone 1 and at low risk of surface water flooding. The potential for negative effects (pre-mitigation) were identified for 16 sites due to sites being partially or wholly within flood zone 3a or 3b and/or sites at high risk of surface water flooding or situated above source protection zone 1.

1.41. The presentation of the proposed site allocations in the Draft Local Plan includes individual site opportunities, constraints and potential design responses. The IIA report confirms that these requirements are considered to be appropriate to address the potential significant effects identified and the IIA has not identified a need for additional mitigation for specific sites, these requirements will help to ensure that the potential significant effects identified in the IIA will be addressed as sites come forward for development.

1.42. All 23 of the Draft Local Plan sites scored positively against the majority of the sustainability objectives, and overall, the potential for significant positive cumulative effects is identified in relation to the water integration topic because policies seek to mitigate the potential for flood risk. As a number of proposed site allocations are in flood risk zone 3, and the Draft Local Plan identifies the need for development layouts to respond to the risk and to mitigate it, an overall neutral cumulative effect is identified for site allocations.

Testing Methodology

Sequential Test

1.43. The Sequential Test is applied during preparation of a Local Plan to steer the allocation of development sites towards areas of lowest flood risk. The methodology used in this report conforms to the approach in the NPPF, as set out in Diagram 2 of the PPG.

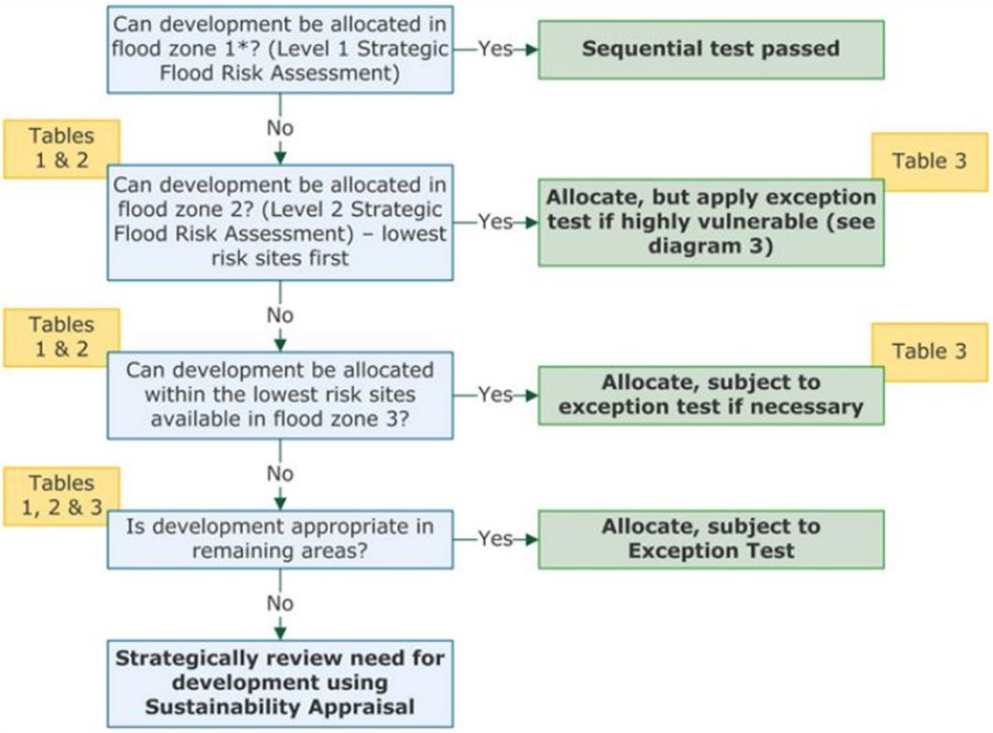


Figure 4: application of the sequential test for Local Plan Preparation (Diagram 2 of the PPG)

1.44. Reference to Tables 1, 2, and 3 in this figure refers to tables in the PPG which provide definitions of Flood Zones (table 1), Flood risk development vulnerability classification (table 2), and Flood Risk Vulnerability and Flood Zone Compatibility matrix (table 3).

1.45. This sequential test has been applied at a borough-wide scale, considering implications of flood risks associated with the Draft Local Plan spatial strategy on the location of development. Paragraph 20 of the PPG on flood risk and coastal change states that *'As some areas at lower flood risk may not be suitable for development for various reasons and therefore out of consideration, the Sequential Test should be applied to the whole local planning authority area to increase the possibilities of accommodating development which is not exposed to flood risk.'*

Exception Test

1.46. Where it has been demonstrated that a site has passed the sequential test, a further test, the 'Exception Test' has to be satisfied. The methodology used in this report conforms to the approach in the NPPF, as set out in Diagram 3 of the PPG.

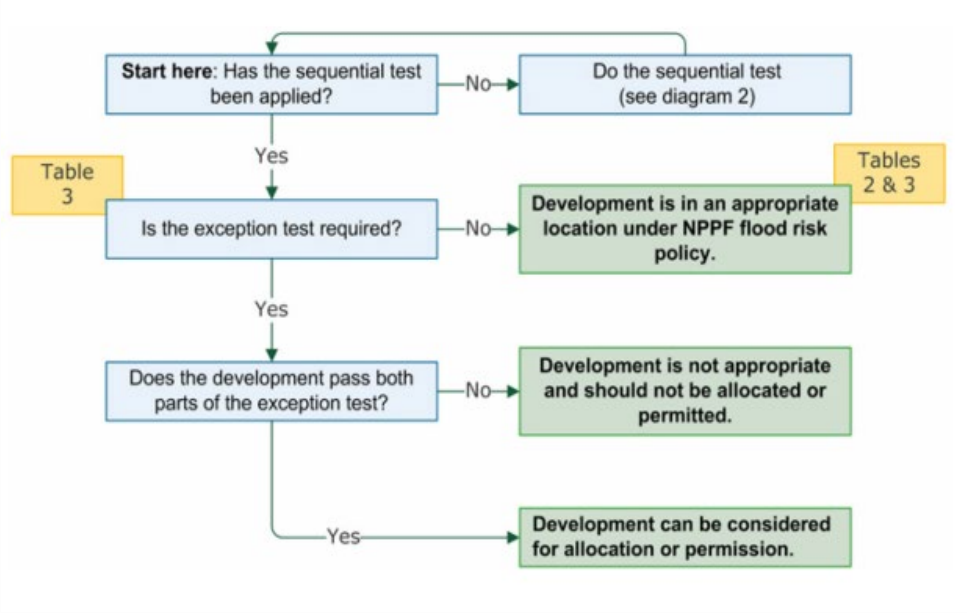


Figure 5: Diagram 3: Application of the Exception Test to Local Plan Preparation

1.47. The potential site allocations fall into one of the five vulnerability classes defined in table 2 of the PPG. Buildings used for dwelling houses are classified as 'More Vulnerable'. The mixed use allocations will also fall into the 'More Vulnerable' class even though shops, restaurants, office space, and similar non-residential developments alone are classified as 'Less Vulnerable'. Gypsy and traveller pitches would be classified as 'highly vulnerable' . Table 3 of the PPG guidance combines the information in Tables 1 and 2 of the guidance to provide flood risk vulnerability and flood zone 'compatibility' matrix as shown in Table 3 below.

Table 1: Flood Risk Vulnerability and Flood Zone 'Compatibility' where: ✓ indicates Development is appropriate, and ✗ indicates Development should not be permitted. The full table is provided in the NPPF.

Flood Zones	Highly vulnerable (Caravans intended for permanent residential use)	More vulnerable (residential, mixed use)	Less vulnerable (Buildings used for shops, general industry, storage and distribution)
Zone 1	✓	✓	✓
Zone 2	Exception Test required	✓	✓
Zone 3a	✗	Exception Test required	✓
Zone 3b	✗	✗	✗

1.48. In order to pass the first part of the exception test, it must be demonstrated that development in areas of high flood risk have wider sustainability benefits that outweigh flood risk. The Integrated Impact Assessment of the Draft Local Plan site allocations has been used to facilitate the first part of the exception test. Where a site has scored negatively for water integration objective, the IIA has been used to determine whether other sustainability objectives will be achieved. Where other sustainability objectives have scored positively, the sustainability benefits have been weighed up against flood risks to determine if the site allocation passed the first part of the Exception Test in principle.

1.49. The updated Level 2 SFRA screened 24 potential site allocations against sources of flood risk information presented in the Level 1 SFRA report. This has enabled the Council to apply the sequential approach at the site-specific level for sites identified through the site allocations process within the sustainable development locations. The elements of flood risk used for screening included area exceeding 1 ha, Flood Zone 2 or 3 present, Future Flood Zone 3 present, any mapped risk of surface water flooding, any mapped risk of flooding from reservoir failure, site wholly or partially within a Critical Drainage Area, and Historical flooding recorded at site.

1.50. Sites were screened to fall into one of the following categories:

1.51. **Category 1:** Development at the site requires a site-specific FRA, as the site is at risk of fluvial or tidal flooding, or at risk of reservoir flooding. A more detailed assessment was undertaken and is described in Section 3. Advisory commentary is provided in the screening table (Table 2.3 and Appendix A of the SFRA Level 2), and a detailed summary sheet for each site in category 1 is available in Appendix B of the SFRA Level 2.

1.52. **Category 2:** Development at the site requires a site-specific FRA due to exceeding medium or high risk of surface water flooding, or there are records of historic flooding. A more detailed assessment was undertaken and is described in Section 3. Advisory commentary is provided in the screening table (Table 2.3 and Appendix A of the SFRA Level 2), and a detailed summary sheet for each site in category 2 is available in Appendix B of the SFRA Level 2.

1.53. **Category 3:** Development at the site requires a site-specific FRA, as the site lies within an area with critical drainage problems. Advisory commentary is provided in the screening table (Table 2.3 and Appendix A of the SFRA Level 2).

1.54. **Category 4:** Development at site requires a site-specific FRA, solely due to the site area exceeding 1ha. The site is at low risk of surface water flooding only, does not lie within a Critical Drainage Area and there are no records of historic flooding. Advisory commentary is provided in the screening table (Table 2.3 and Appendix A of the SFRA Level 2).

1.55. **Category 5:** Development at site does not require a site-specific FRA, as the site is less than 1 ha in size, there is no risk of flooding from any sources, and the site has not been identified by the LBB as having critical drainage problems. Advisory commentary is provided in the screening table (Table 2.3 of the SFRA Level 2).

1.56. The screening score for each site is included within **Appendix 1**. The full screening methodology and results are set out in the Level 2 SFRA. The outcomes of the flood risk screening exercise has been used to inform the application of the first part of the Exception Test.

1.57. The screening process has identified a number of sites fall into the same screening category. The exception test presented in **Appendix 1** has considered the type and level of flood risks for each site to determine which sites are at greater risk. **Appendix 1** also includes contextual information highlighting the flood risks. The detail behind this contextual information can be found in Appendix B of the SFRA L2 which provide detailed site assessments for individual sites. These risks have been considered alongside the wider sustainability benefits, referring to results of the IIA.

1.58. In order to pass the second part of the exception test, the development needs to be safe for its lifetime, without increasing flood risk elsewhere, and where possible, reduce flood risk overall. The

NPPF explains that the preparation of a Strategic Flood Risk Assessment provides the evidence base to facilitate the application of these tests.

1.59. Application of the Exception test considers how the Draft Local Plan policies and site allocations have addressed the second part of the exception test, with reference to findings of the IIA. Section 4 and Appendix B of the SFRA L2 provide detailed site assessments to bring out the information required to pass the Exception Test, including site-specific recommendations for NPPF compliant development, for those cases when development within higher risk zones is unavoidable.

Results

1.60. The Sequential Test has been applied at a borough-wide scale. The Exception test has then been applied to sites within those areas that have passed the sequential test. The conclusions drawn as a result of these findings determine whether the locations and sites are in suitable locations in terms of flood risk and development use, subject to passing the exception test at planning application stage.

Sequential Test

1.61. The NPPF outlines that new development should be steered towards 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 Level 1 and Level 2 provides the basis for applying this test. Flood risk associated with Bexley's spatial strategy has been described earlier in this report under local context.

1.62. Bexley is a polycentric borough, and the Draft Local Plan seeks to direct development to sustainable locations, around town centres, railway stations and other areas with good public transport, whilst protecting designated areas of open space and the Green Belt. The designated industrial areas are sustainable locations for employment growth. Growth can also be accommodated within the Thamesmead and Abbey Wood London Plan Opportunity Area. **Figure 1** presents the spatial strategy, and the **Local Plan Spatial Strategy Technical Paper** provides more detail on how the spatial strategy was developed.

1.63. Typically, for a Local Plan, reasonable alternatives will include options regarding the amount of growth, the spatial strategy, individual site allocations.

1.64. The potential to consider reasonable alternatives is, however, limited by the London Plan with which the Draft Local Plan must be in conformity. The London Plan contains policies on the scale and location of housing and employment to be provided in the borough, including an allowance for housing development on small sites. For example, Policy H1 of the London Plan states that to ensure housing targets are achieved, boroughs should optimise the potential for housing delivery on all suitable and available brownfield sites through their development plans and planning decisions, especially the following sources of capacity:

- sites with existing or planned public transport access levels (PTALs) 3-6 or which are located within 800m distance of a station or town centre boundary
- mixed-use redevelopment of car parks and low-density retail parks and supermarkets
- housing intensification on other appropriate low-density sites in commercial, leisure and infrastructure uses
- the redevelopment of surplus utilities and public sector owned sites

- small sites (see Policy H2 Small sites)
- industrial sites that have been identified through the processes set out in Policies E4, E5 and E6.

1.65. In consequence, as the London Plan includes an annual housing target for the borough, and spatial direction, it is not reasonable to allocate sites within areas outside of the sustainable locations identified by the Draft Local Plan spatial strategy. Given the flood risks associated with the spatial strategy, not all development in Bexley can be steered to flood zone 1 or flood zone 2. Some development will be necessary in flood zone 3. It is therefore considered that development sites within these sustainable locations pass the sequential test.

1.66. Due to the amount of housing required the sequential test has not considered reasonable alternatives for sites located within the sustainable development locations. There are options in terms of the sites that might be allocated for housing in the Draft Local Plan and the Council has had regard to flood risk along with other elements of the evidence base for the Draft Local Plan in evaluating and selecting sites for allocation.

Small Sites and windfall sites

1.67. For small and windfall sites, section 5 of the SFRA Level 2 provides guidance to steer developers to the relevant information and principles to assess flood risk for windfall sites and site allocations and enabling the Council to establish whether windfall sites are capable of being made safe throughout their lifetime without increasing flood risk elsewhere. Developers should use the information given in the SFRA Level 1 to help decide if a site-based FRA is required.

1.68. Developers will need to take into account the findings this Sequential Test and provide evidence that they have adequately considered other reasonably available sites.

Gypsy and traveller pitches

1.69. Draft Local Plan Policy SP2 sets out the identified need for additional gypsy and traveller accommodation over the Plan period. These levels of need will likely be met through the intensification or extension of existing sites in line with Draft Local Plan policy DP4. There are three existing sites shown on the submission policies map designated for traveller accommodation. Caravans are considered 'highly vulnerable' to flooding.

1.70. The Powerscroft Road, Footscray site is wholly located within flood zone 1. There is an area of surface water flood risk through the eastern part of the site.

1.71. The Willow Walk, Crayford site is shown on the EA flood map for planning as being located within flood zone 3a; however, the detailed modelling produced for the SFRA level 1 indicates no risk of either Tidal or Fluvial flooding. There are also no surface water flood risks associated with the site. There is a risk of flooding from reservoirs with flood depths of 0.3 - 2m. however, the reservoir will be regularly inspected and maintained reducing the risk of it failing.

1.72. The Jenningtree Way, Belvedere site is wholly located within flood zone 3a, however benefits from flood defences, being the Thames Tidal defence. There is a surface water flood risk in the south, the north and through the centre of the site

1.73. Draft Local Plan policy DP4 Gypsy and traveller accommodation, Part 3.b. ensures that any proposal for intensification of an existing site should be of suitable environmental quality to not unduly affect the amenity and health and wellbeing of potential residents. Consequently, intensification provides an opportunity to make existing sites safer for residents and more resilient to flood risk.

Exception Test

1.74. The Exception test needs to robustly demonstrate that the wider sustainability benefits outweigh flood risk, and that the development will be safe throughout its lifetime and will not increase flood risk elsewhere, including allowances for climate change.

1.75. All site allocations are located within the sustainable development locations; the draft Local Plan and the Integrated Impact Assessment of the draft Local Plan demonstrate the wider sustainability benefits to the community within these areas. Each of the policies in the draft local plan have been assessed in the integrated impact assessment as scoring the most positively against the IIA Objectives which include minimising flood risk, where the potential for significant positive effects have been identified.

1.76. Each of the Draft Local Plan sites have also scored positively against the majority of sustainability objectives. Whilst a number of site allocations are in flood risk zone 3 and have scored negatively against the water integration objective, after assessing the policies and allocations together, the IIA has identified an overall a neutral cumulative effect. This demonstrates the sites have wider sustainability benefits. In order to determine whether the sustainability benefits outweigh flood risk for the 24 site allocations, it is also necessary to consider flood risks associated with the sites.

1.77. Out of the 24 sites tested, nine are wholly located in flood zone 1. Only one of these sites falls into screening category 5 with no known risks of flooding from any sources. Two of these sites fall into screening category 3 due to critical drainage problems, and the other six sites fall into screening category 2, where risks of flooding from surface water was identified. Application of the first part of the exception test on these sites demonstrates that the wider sustainability benefits of residential, mixed use town centre and commercial development on all 9 sites outweighs the flood risk.

Erith

1.78. Three sites in Erith are partially within flood zone 3a. However, one of these sites is predominantly located within Flood Zone 1, with only 13% located in flood zones 2 and 3. The other two sites are predominantly within flood zones 2 and 3. All three sites are within an area benefitting from flood defences, being the Thames Tidal defence. These sites have been screened as category 1 sites. Surface water has also been identified as a source of flood risk for all sites. Application of the first part of the exception test on these 3 sites demonstrates that the wider sustainability benefits for residential, mixed use town centre and commercial development outweighs the flood risk.

Belvedere and Abbey Wood

1.79. A further eight sites in Belvedere and Abbey Wood are wholly located within flood zone 3a. These sites are also within an area benefitting from flood defences, being the Thames Tidal defence. These are category 1 sites. Surface water has also been identified as a source of flood risk for all sites and are also potentially at risk of elevated groundwater levels. Application of the first part of the exception test on these 8 sites demonstrates that the wider sustainability benefits for residential, mixed use town centre and commercial development outweighs the flood risk.

Crayford

1.80. There are also four sites in Crayford where over 80% of each site is in Flood Zone 3a. None of these sites benefit from flood defences. These are category 1 sites. One of these sites, the Crayford Greyhound Stadium has failed to pass the exception test. The potential depth fluvial flood water is greater on this site when compared to the other three Crayford sites, plus the site also has a greater surface water flood risk. Therefore, following the conclusions of the exception test, this site is no longer considered appropriate for allocation. By increasing the density of homes on other site allocations located in areas of lower flood risk, it is possible to remove the need for allocating the Greyhound stadium for housing.

1.81. For all four Crayford sites, the source of flood zone risk is fluvial from the river cray, which is situated at a higher level than much of Crayford town centre, because in the past it was relocated from the bottom of the valley to the side of the valley, to provide a head of water to drive a mill. This means that the flooding mechanism is slightly different than for a natural fluvial watercourse – instead of floodwater slowly spreading out across the floodplain, in Crayford water would spill over the right bank and collect at the bottom of the valley. This will potentially result in deep, rapid onset flooding in areas where the ground level is lowest. It is also possible that overtopping of the right bank could lead to erosion, increasing the rate at which water spills from the river into the floodplain. The potential for deep, rapid onset flooding of sites in this location leads to a greater risk compared with other sites with a similar probability of flooding but where onset would be more gradual.

1.82. For the Greyhound site, the present-day maximum 1 in 100 AEP flood depth is 1.98m, rising to 2.25m in the future. This is greater than the other three Crayford site allocations.

1.83. In addition, detailed surface water modelling indicates that for the 1% AEP event now and into the future the centre of the greyhound site is at risk of surface water flooding, with hazard predicted to be moderate to high and depths predicted to reach up to 1.2m potentially. The other three Crayford sites contain some surface water flood risk; however, the risks to these sites are minimal, with the Sainsbury's and tower Retail containing small and shallow areas of surface water flood risk of up to 0.3m in depth and low hazard; and minimal risk across the Electrobase site.

1.84. Other sources of flooding for the Crayford sites are similar. There is a risk of reservoir flooding from the Danson Park Reservoir, Bexleyheath. It is predicted to flood up to a potential depth of 2m; however, the reservoir will be regularly inspected and maintained reducing the risk of it failing. The area is also potentially at risk of elevated groundwater levels.

1.85. The Exception Test also requires that development will be safe throughout its lifetime and will not increase flood risk elsewhere, including allowances for climate change. Draft Local Plan site allocations have responded to the Level 2 SFRA recommendations for each site, ensuring design responses take into account flood risks. This is further supported by Draft Local Plan policies. Policy criteria to manage flood risk have been included within the relevant Draft Local Plan and site allocation polices. These include the requirement for a site-specific flood risk assessment (FRA) to ensure the proposed development itself will be safe from flooding over its lifetime and will not cause flooding elsewhere, and specific guidance in each site allocation to direct applicants on what flood risk measures should be taken into account. The site allocations, would therefore in principle pass the Exception Test. Nevertheless, it will be necessary for developers to fully address the exception

test at planning application stage to the satisfaction of the local planning authority, taking account of any advice from the Environment Agency, and informed by a site-specific Flood Risk Assessment.

1.86. For site allocations in Crayford, it is particularly important that developers address the rate of onset of flooding and the effect this would have on the safety of occupants of a site, informed by site specific FRAs.

Appendix 1: table showing site-by-site flood risk exception test

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
SA16	MS15	BXH02 Bexleyheath Town Centre East, Broadway, Bexleyheath	0.81	Bexleyheath Major Town Centre	Yes, site within a sustainable development location	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 1	No	5	The site has no known risk of flooding from any sources, and the site has not been identified as having critical drainage problems.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable
SA18	MS22	BXH04 Buildbase Bexleyheath, Pickford Lane, Bexleyheath	0.302	Bexleyheath Station and Local Centre	Yes, site within a sustainable development location	residential development, with commercial frontage retained	More Vulnerable	Flood Zone 1	No	3	The site lies within an area identified as having critical drainage problems.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable
SA19	MS18	BXH05 Pepper's Builders Merchants, Rowan Road, Bexleyheath	0.282	Bexleyheath Station and Local Centre	Yes, site within a sustainable development location	residential development	More Vulnerable	Flood Zone 1	No	3	The site lies within an area identified as having critical drainage problems.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable
SA6	AS56	BEL04 Land adjacent Woodside School, Halt Robin Road, Belvedere	1.32	Belvedere Station and District Centre	Yes, site within a sustainable development location	residential development	More Vulnerable	Flood Zone 1	No	2	Fluvial/Tidal - The site is in Flood Zone 1 and therefore not at risk from either fluvial or tidal flooding. Surface Water - The site is within a critical drainage area. Detailed modelling of the Marsh Dikes suggests an area of surface water flooding through the centre of the site, with some isolated flooding predicted in the western edge of the site. Other sources of flooding - There is no known flood risk from other sources.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable
SA11	MS38	ERI02 Pier Road West, Bexley Road, Pier Road and Queen Street, Erith	1.391	Erith Station and District Centre	Yes, site within a sustainable development location	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 1	No	2	Fluvial/Tidal - The site is in Flood Zone 1 and therefore not at risk from either fluvial or tidal flooding. Surface Water - The site is within a critical drainage area. Isolated areas of surface water ponding are predicted across the site. The areas they cover are small but potentially deep. There is an area of surface water flooding just outside the site on the road in the	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											southeast corner with hazard moderate to high and depths of up to 0.6m. Other sources of flooding - There is no known flood risk from other sources.		
SA12	MS37	ERI03 Pier Road East, Bexley Road and Pier Road, Erith	0.841	Erith Station and District Centre	Yes, site within a sustainable development location	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 1	No	2	Fluvial/Tidal - The site is in Flood Zone 1 and therefore not at risk from either fluvial or tidal flooding. Surface Water - The site is within a critical drainage area. Detailed modelling indicates that for more frequent events (3.33% and 1% AEP) now and into the future the centre of the site is at risk of surface water flooding, with hazard predicted to be low to moderate and depths predicted to reach up to 0.6m potentially. Other sources of flooding - There is no known flood risk from other sources.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable
SA15	MS12	BXH01 Former Bexley CCG Offices, Erith Road, Barnehurst	1.85	Barnehurst Station	Yes, site within a sustainable development location	residential development	More Vulnerable	Flood Zone 1	No	2	Fluvial/Tidal - The site is in Flood Zone 1 and therefore not at risk from either fluvial or tidal flooding. Surface Water - The site is within a critical drainage area. Detailed modelling predicts an area of surface water ponding in the northerly point of the site, with a surface water flow route located through the centre of the site along an existing road. Depths are predicted to be shallow (up to 0.3m) and hazard is low. Other sources of flooding - There is no known flood risk from other sources.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
SA17	MS17	BXH03 EDF Energy Site, Broadway, Bexleyheath	1.482	Bexleyheath Major Town Centre	Yes, site within a sustainable development location	residential development with limited commercial uses	More Vulnerable	Flood Zone 1	No	2	Fluvial/Tidal - The site is in Flood Zone 1 and therefore not at risk from either fluvial or tidal flooding. Surface Water - The site is within a critical drainage area. The EA RoFfSW map indicates two areas of surface water flooding across the site. There is an area of ponding along the central roadway which currently runs through the site. Additionally, a surface water flow route is shown along the south-eastern boundary flowing north. For more frequent events (3.33% and 1% AEP) depths are predicted to be up to 0.9m, with hazard predicted to be high in places. Other sources of flooding - There is no known flood risk from other sources.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable
SA20	MS54	BXH06 Land behind Belvedere Road, Bexleyheath	1.344	Bexleyheath Station and Local Centre	Yes, site within a sustainable development location	residential development	More Vulnerable	Flood Zone 1	No	2	Fluvial/Tidal - The site is in Flood Zone 1 and therefore not at risk from either fluvial or tidal flooding. Surface Water - The site is within a critical drainage area. The EA RoFfSW flood map indicates surface water flooding in the Northwest portion of the site in 3.33% AEP events and above. Max depths are predicted to be up to 0.3m in events of 3.33% AEP and less, with an associated flood hazard of Low. The anticipated depths increase up to 0.6m depth for events of 1% AEP and greater, with an associated peak hazard of Moderate-High.	Not Applicable, Development is in an appropriate location under NPPF flood risk policy.	Not Applicable

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											Other sources of flooding - There is no known flood risk from other sources.		
SA10	MS36	ERI01 Erith Western Gateway, Saltford Close, Erith	3	Erith Station and District Centre	Yes, site within a sustainable development location	residential-led mixed-use development., including estate regeneration	More Vulnerable	Flood Zone 3a (10%) Flood Zone 2 (3%) Flood Zone 1 (86%)	Yes	1	Fluvial/Tidal - The EA Flood Zone map shows the vast majority of the site (86.6%) lies within Flood Zone 1, with the remainder in Flood Zone 2 (2.8%) and Flood Zone 3a (10.6%). The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. A portion of the site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the North-West portion of the site is anticipated to flood up to 4m deep under present day conditions and up to 5m in future conditions (2115). Owing to the deep water, the hazard classification for this area of the site is primarily Extreme. The majority of the site is predicted to be unimpacted however. Surface Water - The site is within a critical drainage area. Detailed modelling only predicts small, isolated areas of shallow low hazard surface water ponding in the south east of the site in the future 1% AEP event. The EA RoFfSW predicts	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA24), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability) and 8 (economic competitiveness and employment). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is partly in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints, indicative design responses and also directs the developer other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											a broader extent in the north corner of the site. Other sources of flooding - There is no known flood risk from other sources.		
SA14	MS39	ERI05 Morrisons Erith, James Watt Way, Erith	3.19	Erith Station and District Centre	Yes, site within a sustainable development location	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 3a (33%) Flood Zone 2 (55%) Flood Zone 1 (12%)	Yes	1	Fluvial/Tidal - The EA Flood Zone map shows the majority of the site (55.2%) is situated within Flood Zone 2, with the remainder in Flood Zone 3a (32.5%) and Flood Zone 1 (12.2%). The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 1m deep in the North-East and corner of the site under present day conditions, and up to 2m in future conditions (2115). The majority of the site is anticipated to be unimpacted under present day conditions with pockets of Low-Significant hazard in the North-East corner and West portions of the site. Under future conditions however, the majority of the site is anticipated to be subject to Significant hazard with pockets of Extreme hazard.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA19), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability) and 8 (economic competitiveness and employment). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints, indicative design responses and also directs the developer other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											Surface Water - The site is within a critical drainage area. Detailed modelling indicates that for more frequent events (3.33% and 1% AEP) now and into the future there is a band of flooding across site, with hazard predicted to be high in places and depths predicted to reach up to 0.6m. Other sources of flooding - There is no known flood risk from other sources.		
SA13	MS40	ERI04 Erith Riverside, Wheatley Terrace Road, Erith	2.62	Erith Station and District Centre	Yes, site within a sustainable development location	residential development	More Vulnerable	Flood Zone 3a (61%) Flood Zone 2 (13%) Flood Zone 1 (26%)	Yes	1	Fluvial/Tidal - The EA Flood Zone map shows the majority of the site (61%) lies within Flood Zone 3a, with the remainder in Flood Zone 2 (13%) and Flood Zone 1 (26%). The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 1.5m deep in the South-East and North-East portions of the site under present day conditions and up to 2m in future conditions (2115). The Northern portion of the site is subject to Significant-Extreme hazard.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA45), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints, indicative design responses and also directs the developer other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											Surface Water - The site is within a critical drainage area. Detailed modelling only predicts isolated areas of moderate hazard surface water ponding in the south east and north west of the site in the future 1% AEP event, with depths predicted to be up to 0.6m. Other sources of flooding - There is no known flood risk from other sources.	for developers to fully address the exception test at planning application stage.	
SA1	MS48	ABW01 Felixstowe Road Car Park, Felixstowe Road, Abbey Wood	0.545	Abbey Wood Station and Local Centre	Yes, site within a sustainable development location.	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames and is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences. However, there remains a residual risk associated with a breach in these defences. In the case of a breach, the site is anticipated to flood up to 1.5m deep under present day conditions and up to 2m in future conditions (2115). The majority of the site is subject to Significant hazard, with isolated pockets of Extreme hazard anticipated under future conditions. Surface Water - The site is within a critical drainage area. Detailed combined modelling of the Marsh Dikes suggests an area of surface water flooding in the eastern half of the site in 3.33% AEP and 1% AEP events, with a flow route along an adjacent road along the western edge of the site. The region of flood risk expands to cover the majority of the site in events greater than 1% AEP.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA19), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability), 6 (connectivity) and 8 (economic competitiveness and employment). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk opportunities and constraints, and also directs the developer other guidance on risk of flooding within the SFRA Level 2.	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											Other sources of flooding - The area is also potentially at risk of elevated groundwater levels.	The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	
SA2	MS49	ABW02 Lesnes Estate and Coraline Walk	11.07	Thamesmead and Abbey wood OA	Yes, site within a sustainable development location.	residential-led estate regeneration	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames and is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences. However, there remains a residual risk associated with a breach in these defences. In the case of a breach, the site is anticipated to flood up to 1.5m deep under present day conditions and up to 2m in future conditions (2115). The majority of the site is subject to Significant hazard, with isolated pockets of Extreme hazard anticipated in the North and North-East portions of the site under future conditions. Surface Water - The site is within a critical drainage area. Detailed modelling of the Marsh Dikes suggests a strip of surface water flooding across the northern half of the site in the 1% AEP event. In the 0.1% AEP event the flood risk expands to cover the majority of the site. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA18), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability), 6 (connectivity), 9 (education and skills) and 16 (geology and soils). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints, design approach and indicative design response. the site allocation also directs the developer other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
SA3	MS23	BEL01 ASDA and B&Q Belvedere, Lower Road, Belvedere	3.315	Belvedere Station and District Centre	Yes, site within a sustainable development location.	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The entire site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 2m deep under present day conditions and up to 3m in future conditions (2115). The majority of the site is subject to Significant hazard, with isolated pockets of Extreme hazard. Surface Water - The site is within a critical drainage area. Detailed combined modelling of the Marsh Dikes indicates southern portion of the site is at high risk of surface water flooding in the more frequent 3.33% event. Additional regions of risk are anticipated in the north west and north east corners of the site in events of 1% AEP and greater. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA22), with significant positive effects identified in relation to IIA objectives 1 (infrastructure), 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability), 8 (economic competitiveness and employment), and 9 (education and skills). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints, design approach and indicative design response. The site allocation also directs the developer to other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	Yes, development can be considered for allocation
SA4	MS24	BEL02 Station Road East, Station Road, Belvedere	0.63	Belvedere Station and District Centre	Yes, site within a sustainable development location.	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA48), with significant positive	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											The entire site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 2m deep under present day conditions and up to 3m in future conditions (2115). The majority of the site is subject to Significant hazard, with isolated pockets of Extreme hazard. Surface Water - The site is within a critical drainage area. Detailed combined modelling of the Marsh Dikes indicates northern and central portions of the site are at high risk of surface water flooding in the more frequent 3.33% and 1% AEP events. Significant risk is anticipated in the central portion of the site in events greater than 1% AEP. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability) and 8 (economic competitiveness and employment). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints and directs the developer to other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	
SA5	MS26	BEL03 Station Road West, Station Road, Belvedere	0.304	Belvedere Station and District Centre	Yes, site within a sustainable development location.	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The entire site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However,	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA21), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities) and 8 (economic competitiveness and	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 0.75m deep under present day conditions and up to 2m in future conditions (2115). The majority of the site is subject to Significant hazard under present day conditions, extending to the entire site under future conditions. Surface Water - The site is within a critical drainage area. Detailed combined modelling of the Marsh Dikes indicates a strip of high risk of surface water flooding along the north, west and southern boundaries of the site in the more frequent 3.33% and 1% AEP events. In the 0.1% AEP event the flood risk expands to include the centre of the site. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	employment). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints and directs the developer to other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	
SA7	MS27	BEL05 Belvedere Gas Holders, Yarnton Way, Belvedere	3.48	Belvedere Station and District Centre	Yes, site within a sustainable development location.	residential development and green and open space	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The EA Flood Zone map shows the site is 100% within Flood Zone 3a. The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The entire site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA43), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities) and 4 (housing supply, quality, choice and affordability). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 3m deep under present day conditions and up to 3.5m in future conditions (2115). The majority of the site is subject to Significant hazard, with isolated pockets of Extreme hazard increasing in extent under future conditions. Surface Water - The site is within a critical drainage area. Detailed combined modelling of the Marsh Dikes suggests isolated areas of surface water flooding across the site in the more frequent 3.33% and 1% AEP events. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints and directs the developer to other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	
SA8	MS28	BEL06 Monarch Works, Station Road North, Belvedere	0.63	Belvedere Station and District Centre	Yes, site within a sustainable development location.	residential development	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The entire site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 2m deep under present day	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA36), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities) and 4 (housing supply, quality, choice and affordability) and 9 (education and skills). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect.	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											conditions and up to 2.5m in future conditions (2115). The majority of the site is subject to Extreme hazard. Surface Water - Detailed combined modelling of the Marsh Dikes indicates southern half of the site is at high risk of surface water flooding in the more frequent 3.33% and 1% AEP events. In the 0.1% AEP event the flood risk expands to cover the entire site. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk constraints and directs the developer to other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	
SA9	MS29	BEL07 Crabtree Manorway South, Belvedere	5.971	Belvedere Station and District Centre	Yes, site within a sustainable development location.	residential development	More Vulnerable	Flood Zone 3a (100%)	Yes	1	Fluvial/Tidal - The source of risk is tidal flooding from the River Thames. There is no risk of fluvial flooding. The entire site is shown as being an area benefitting from defences as it is protected by the Thames Tidal defences to a SOP of 0.1%AEP. However, there remains a residual risk associated with a breach in these defences. The peak flood level associated with a breach in the defences will increase with climate change. In the case of a breach, the site is anticipated to flood up to 2.5m deep under present day conditions and future conditions (2115). The majority of the site is subject to extreme hazard. Surface Water - The site is within a critical drainage area. Detailed combined modelling of the Marsh Dikes suggests isolated areas of surface water flooding across the site in the	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA44), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities) and 4 (housing supply, quality, choice and affordability), 9 (education and skills) and 16 (geology and soils). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk opportunities and constraints and directs the	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											more frequent 3.33% and 1% AEP events. In the 0.1% AEP event the flood risk expands to cover the majority of the southeast and northern portions of the site. Other sources of flooding - This area is shown to be potentially at risk of elevated groundwater levels.	developer to other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage.	
SA22	AS58	CRA02 Tower Retail Park, Tower Park Road, Crayford	3.45	Crayford Station and District Centre	Yes, site within a sustainable development location.	residential-led, mixed-use town centre development with town centre uses	More Vulnerable	Flood Zone 3a (98%) Flood Zone 2 (2%)	Yes	1	Fluvial/Tidal - The present day maximum 1 in 100 AEP flood depth is 0.68m, rising to 0.98m in the future. The source of flood zone risk is fluvial from the river cray and River Wansunt. The River Cray is situated at a higher level than much of Crayford town centre. This means that the flooding mechanism is slightly different than for a natural fluvial watercourse – instead of floodwater slowly spreading out across the floodplain, in Crayford water would spill over the right bank and collect at the bottom of the valley. This will potentially result in deep, rapid onset flooding in areas where the ground level is lowest. It is also possible that overtopping of the right bank could lead to erosion, increasing the rate at which water spills from the river into the floodplain. The potential for deep, rapid onset flooding of sites in this location leads to a greater risk compared with other sites with a similar probability of flooding but where onset would be more gradual. Surface Water - Modelling indicates multiple shallow	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA64), with significant positive effects identified in relation to IIA objectives 1 (infrastructure), 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability) 8 (economic competitiveness and employment) and 9 (education and skills). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk opportunities, constraints and indicative design response to water management. The site allocation also directs the developer other guidance on risk of flooding within the SFRA Level 2.	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											surface water flow paths across the site, with the more detailed modelling flood maps indicating pockets of shallow ponding on site with depths up to 0.3m and low hazard. Other sources of flooding - The site is at risk of reservoir flooding from the Danson Park Reservoir, Bexleyheath. It is predicted to flood up to a potential depth of 2m; however, the reservoir will be regularly inspected and maintained reducing the risk of it failing. The area is also potentially at risk of elevated groundwater levels.	The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage. In site specific FRAs, developers will have to consider the rate of onset of flooding and the effect this would have on the safety of occupants of a site.	
SA23	MS32	CRA03 Sainsbury's Crayford, Stadium Way, Crayford	3.69	Crayford Station and District Centre	Yes, site within a sustainable development location.	residential-led, mixed-use town centre development	More Vulnerable	Flood Zone 3a (98%) Flood Zone 2 (1%) Flood Zone 1 (1%)	Yes	1	Fluvial/Tidal - The present day maximum 1 in 100 AEP flood depth is 0.83m, rising to 1.15m in the future. The source of flood zone risk is fluvial from the river cray, which is situated at a higher level than much of Crayford town centre. This means that the flooding mechanism is slightly different than for a natural fluvial watercourse – instead of floodwater slowly spreading out across the floodplain, in Crayford water would spill over the right bank and collect at the bottom of the valley. This will potentially result in deep, rapid onset flooding in areas where the ground level is lowest. It is also possible that overtopping of the right bank could lead to erosion, increasing the rate at which water spills from the river into the floodplain.	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA32), with significant positive effects identified in relation to IIA objectives 1 (infrastructure), 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability) 8 (economic competitiveness and employment) and 9 (education and skills). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific	Yes, development can be considered for allocation

Draft Local Plan Ref	Site ID	Site Name/Address	Site Area	Sustainable Development Location	Sequential test passed (PPG Diagram 2)	type of development	Development vulnerability (PPG table 2)	Flood Zone	Exception Test required? (PPG table 3)	Flood Risk Screening Category (SFRA level 2)	Flood risk contextual commentary (SFRA level 2)	Exception Test	Does the development pass both parts of the exception test? (PPG Diagram 3)
											The potential for deep, rapid onset flooding of sites in this location leads to a greater risk compared with other sites with a similar probability of flooding but where onset would be more gradual. Surface Water - Detailed modelling only predicts isolated areas of surface water ponding across the site in the future 1% AEP event. The areas they cover are small and shallow up to 0.3m in depth and low hazard. A broader extent is predicted across the north east boundary of the site. Other sources of flooding - The site is at risk of reservoir flooding from the Danson Park Reservoir, Bexleyheath. It is predicted to flood up to a potential depth of 2m; however, the reservoir will be regularly inspected and maintained reducing the risk of it failing. The area is also potentially at risk of elevated groundwater levels.	details on flood risk opportunities, constraints and indicative design response to water management. The site allocation also directs the developer other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage. In site specific FRAs, developers will have to consider the rate of onset of flooding and the effect this would have on the safety of occupants of a site.	
SA21	MS34	CRA01 Former Electrobase/Wheatsheaf Works, Maxim Road, Crayford	1.744	Crayford Station and District Centre	Yes, site within a sustainable development location.	residential development and the creation of an enhanced riverside environment	More Vulnerable	Flood Zone 3a (97%) Flood Zone 2 (3%)	Yes	1	Fluvial/Tidal - The present day maximum 1 in 100 AEP flood depth is 1.84m, rising to 1.94m in the future. The source of flood zone risk is fluvial from the river cray, which is situated at a higher level than much of Crayford town centre. This means that the flooding mechanism is slightly different than for a natural fluvial watercourse – instead of floodwater slowly spreading out across the floodplain, in Crayford water would spill over the right bank	The site is located in a sustainable development location, scoring positively against the majority of objectives in the IIA (IIA site ref.SA33), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability) and 9 (education and skills). The IIA identifies potential for significant positive cumulative effects in relation to flood risk because policies seek to mitigate the potential for flood risk. However, as the site is in flood	Yes, development can be considered for allocation

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											and collect at the bottom of the valley. This will potentially result in deep, rapid onset flooding in areas where the ground level is lowest. It is also possible that overtopping of the right bank could lead to erosion, increasing the rate at which water spills from the river into the floodplain. The potential for deep, rapid onset flooding of sites in this location leads to a greater risk compared with other sites with a similar probability of flooding but where onset would be more gradual. Surface Water - Detailed flood modelling indicates that surface water flood risk across the site is minimal; with are flow routes across the site. Other sources of flooding - The site is at risk of reservoir flooding from the Danson Park Reservoir, Bexleyheath. It is predicted to flood up to a potential depth of 2m; however, the reservoir will be regularly inspected and maintained reducing the risk of it failing. The area is also potentially at risk of elevated groundwater levels.	zone 3 there is an overall a neutral cumulative effect. The Draft Local Plan includes specific policies, including DP32 (flood risk management) to ensure development proposals demonstrate they are safe and do not increase flood risk. The site allocation includes site specific details on flood risk opportunities, constraints and indicative design response to water management. The site allocation also directs the developer other guidance on risk of flooding within the SFRA Level 2. The site allocation passes the exception test in principle. Nevertheless, it will be necessary for developers to fully address the exception test at planning application stage. In site specific FRAs, developers will have to consider the rate of onset of flooding and the effect this would have on the safety of occupants of a site.	
N/A	MS33	CRA04 Crayford Greyhound Stadium, Stadium Way, Crayford	1.66	Crayford Station and District Centre	Yes, site within a sustainable development location.	Residential development	More Vulnerable	Flood Zone 3a (87%) Flood Zone 2 (5%) Flood Zone 1 (8%)	Yes	1	Fluvial/Tidal - The present day maximum 1 in 100 AEP flood depth is 1.98m, rising to 2.25m in the future. The source of flood zone risk is fluvial from the River Cray, which is situated at a higher level than much of Crayford town centre. This means that the flooding mechanism is slightly different than for a	The site is located in a sustainable development location, scoring positively against five of the eighteen objectives in the IIA (IIA site ref.SA49), with significant positive effects identified in relation to IIA objectives 3 (health and health inequalities), 4 (housing supply, quality, choice and affordability).	No, development is not appropriate and should not be allocated

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											natural fluvial watercourse – instead of floodwater slowly spreading out across the floodplain, in Crayford water would spill over the right bank and collect at the bottom of the valley. This will potentially result in deep, rapid onset flooding in areas where the ground level is lowest. It is also possible that overtopping of the right bank could lead to erosion, increasing the rate at which water spills from the river into the floodplain. The potential for deep, rapid onset flooding of sites in this location leads to a greater risk compared with other sites with a similar probability of flooding but where onset would be more gradual. Surface Water - Detailed modelling indicates that for the 1% AEP event now and into the future the centre of the site is at risk of surface water flooding, with hazard predicted to be moderate to high and depths predicted to reach up to 1.2m potentially. Other sources of flooding - The site is at risk of reservoir flooding from the Danson Park Reservoir, Bexleyheath. It is predicted to flood up to a potential depth of 2m; however, the reservoir will be regularly inspected and maintained reducing the risk of it failing. The area is also potentially at risk of elevated groundwater levels.	However, flood risks described in the contextual commentary column show that for the Greyhound site, the present-day maximum 1 in 100 AEP flood depth is 1.98m, rising to 2.25m in the future. This is greater than the other three Crayford site allocations. In addition, detailed surface water modelling indicates that for the 1% AEP event now and into the future the centre of the greyhound site is at risk of surface water flooding, with hazard predicted to be moderate to high and depths predicted to reach up to 1.2m potentially. The other three Crayford sites contain some surface water flood risk; however, the risks to these sites are minimal, with the Sainsbury's and tower Retail containing small and shallow areas of surface water flood risk of up to 0.3m in depth and low hazard; and minimal risk across the Electrobase site. Review of site capacities has also found that there is sufficient capacity available to accommodate more residential development within other potential site allocations at lower flood risk. Given the flood risks associated with this site, it is concluded that the wider sustainability benefits do not outweigh the flood risks. As such, this site fails the exception test.	