Wokingham Borough Council

Sequential and Exception test

Wokingham Borough Local Plan Update: Proposed Submission Plan (Regulation 19)

September 2024

WOKINGHAM
BOROUGH COUNCIL

Contents

Tables

Figures

1. Introduction and background

Introduction

1.1 The purpose of this report is to demonstrate how the Sequential and Exception Tests have been undertaken and applied to inform the selection of sites for allocation in the Proposed Submission (Regulation 19) Wokingham Borough Local Plan Update 2023 – 2040 (LPU).

1.2 The LPU sets out the long term land use strategy for managing development to 2040 including the provision of housing, employment and infrastructure. The Proposed Submission LPU includes allocations of land to support that strategy.

1.3 This report has been prepared using information from the Level 1 Strategic Flood Risk Assessment (SFRA) and Level 2 SFRA both prepared by JBA consulting in 2023.

Background

National Policy and Guidance

1.4 The National Planning Policy Framework (NPPF, 2023) states that all plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. To do this the Sequential Test should be applied and then, if necessary, the Exception Test. Where the Exception Test is required, both it and the Sequential Test need to be satisfied.

1.5 The aim of the Sequential Test is to steer new development to areas with the lowest risk of flooding from any source. 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 SFRA provides the basis for applying this test. The sequential approach should be used in areas known to be at risk from any form of flooding now or in the future.

1.6 The NPPF states that where planning applications come forward on sites allocated in the development plan through the Sequential Test, applicants need not apply the Sequential Test again.

1.7 The Planning Practice Guidance (PPG) on Flood Risk and Coastal Change advises local planning authorities on how to take account of and address the risks associated with

flooding and climate change. This includes guidance on applying the Sequential Test in the preparation of a Local Plan.

1.8 The approach set out in national policy and the PPG is designed to ensure that if there are better sites in terms of flood risk, or a proposed development cannot be made safe, it should not be permitted. The approach can be summarised as:

- **Assess flood risk:** local planning authorities to undertake a **SFRA** to fully understand the flood risk.

- **Avoid flood risk:** In plan-making, local planning authorities are expected to apply a sequential approach to site selection so that development is, as far as reasonably possible, located where the risk of flooding (from all sources) is lowest, taking account of climate change and vulnerability of future uses to flood risk. This involves the application of the **'Sequential Test'** and, if needed, the **'Exception Test'** to local plans.

- **Manage and mitigate flood risk:**

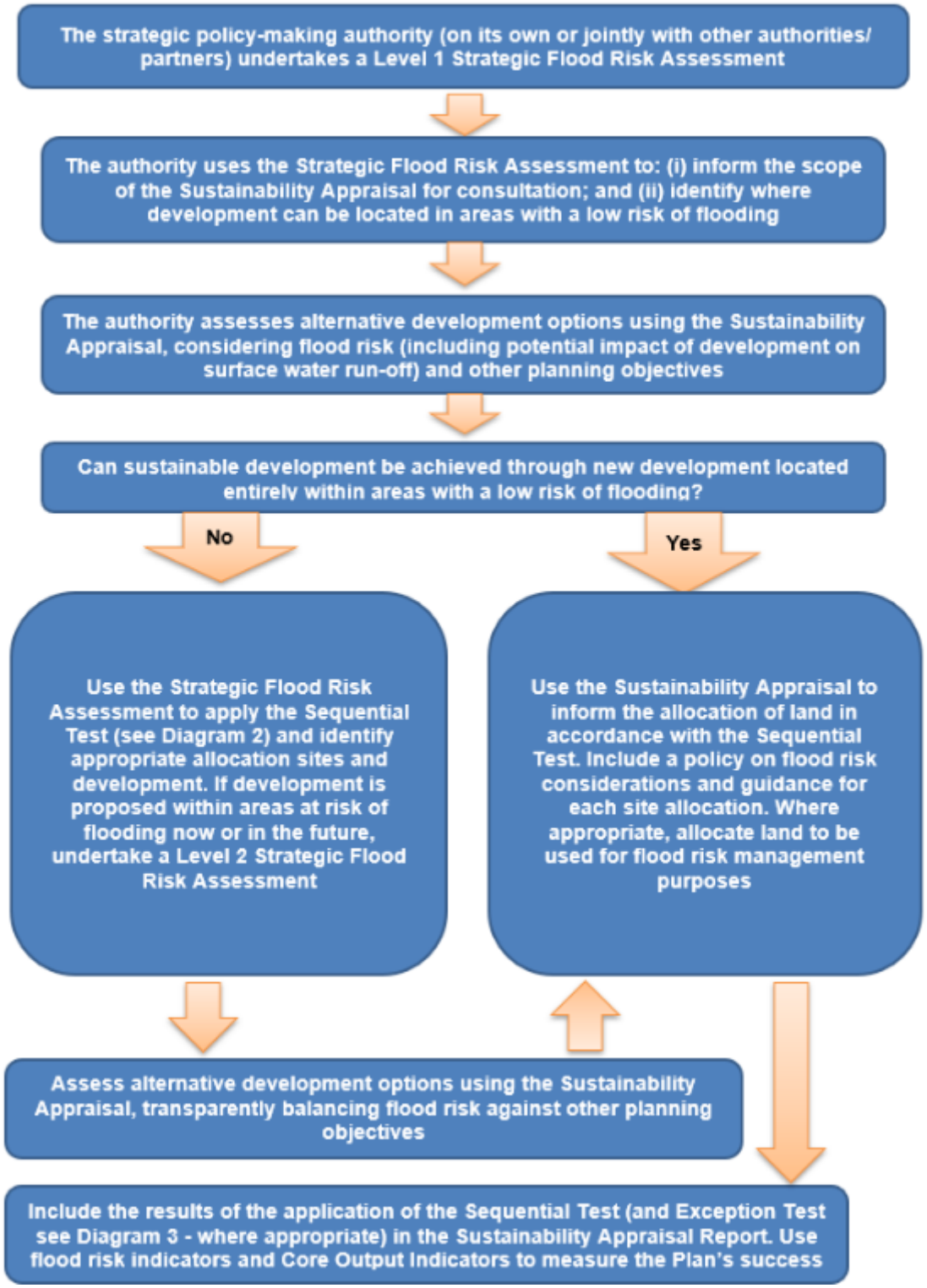
    - Where development needs to be in locations where there is a risk of flooding as alternative sites are not available, ensure development is appropriately flood resilient and resistant, safe for its users for the development's lifetime, and will not increase flood risk overall.

    - Seek flood risk management opportunities (e.g. safeguarding land), and to reduce the causes and impacts of flooding (e.g. through the use of sustainable drainage in development).

1.9 Diagrams 1 to 3 of the guidance[1] summarise how flood risk should be into account in the preparation of Local Plans; and show how the Sequential Test and Exception Test are applied to Local Plan preparation. These are reproduced in the figures below:

[1] PPG Reference ID: 7-007-20220825; 7-026-20220825; and 7-033-20220825

Figure 1: taking flood risk into account in the preparation of strategic policies

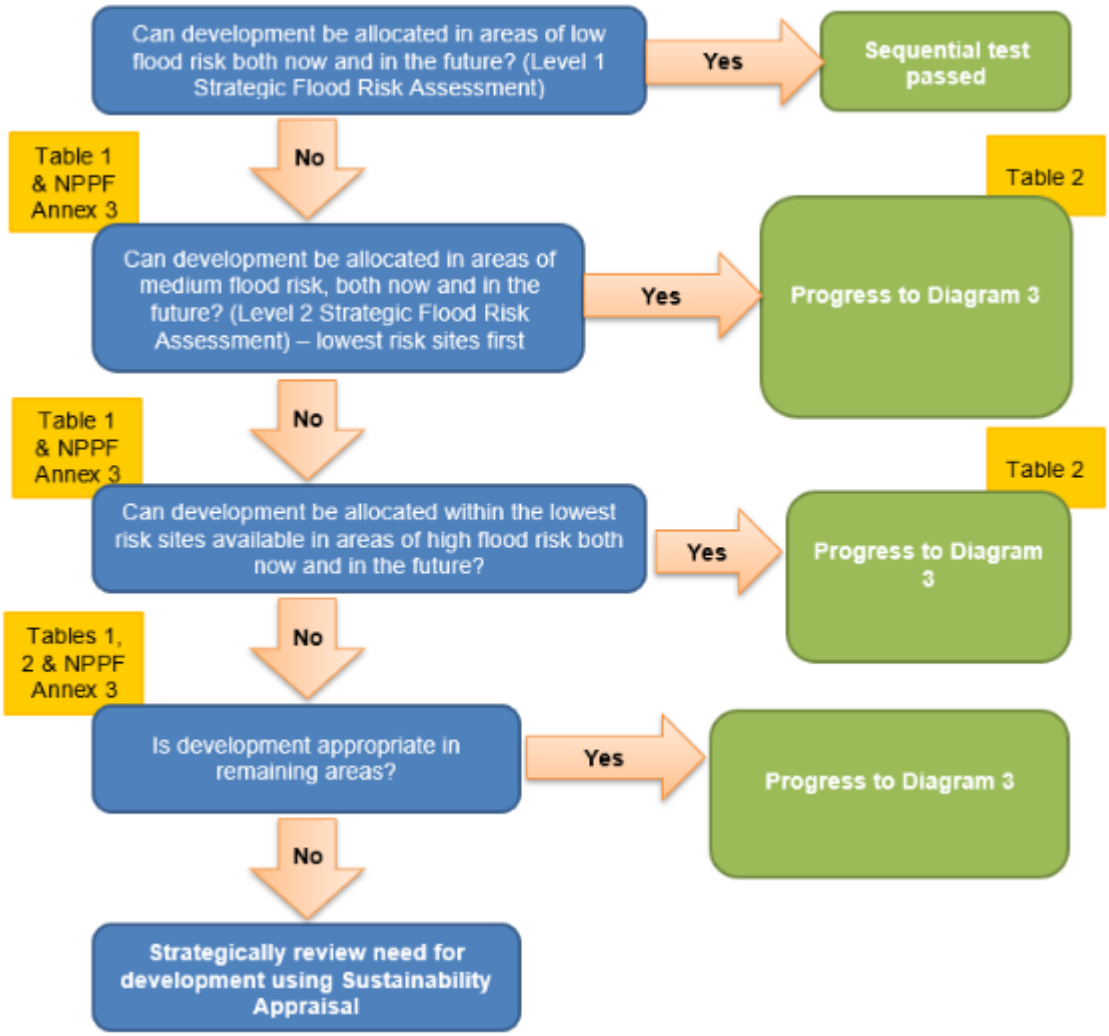


1.10 When allocating land in a Local Plan, local planning authorities should seek to steer new development to the areas with the lowest probability of flooding and should apply the Sequential Test to show that there are no reasonably available sites at a lower risk of flooding that are appropriate for the proposed development. The PPG[2] states that the application of the sequential approach in the plan-making process will help to ensure that development is steered to the lowest risk areas, where it is compatible with sustainable development objectives to do so, and developers do not waste resources promoting proposals which would fail to satisfy the test.

1.11 It is important that assessments of flood risk probability and vulnerability are consistently applied across all areas. Other forms of flooding, for example surface water, and groundwater should therefore be treated consistently with river and tidal flooding.

1.12 The PPG identifies the methodology for Local Plan preparation in relation to the sequential test as set out in Figure 2:

Figure 2: Application of the Sequential Test of Local Plan preparation



[2] PPG reference ID: D: 7-023-20220825

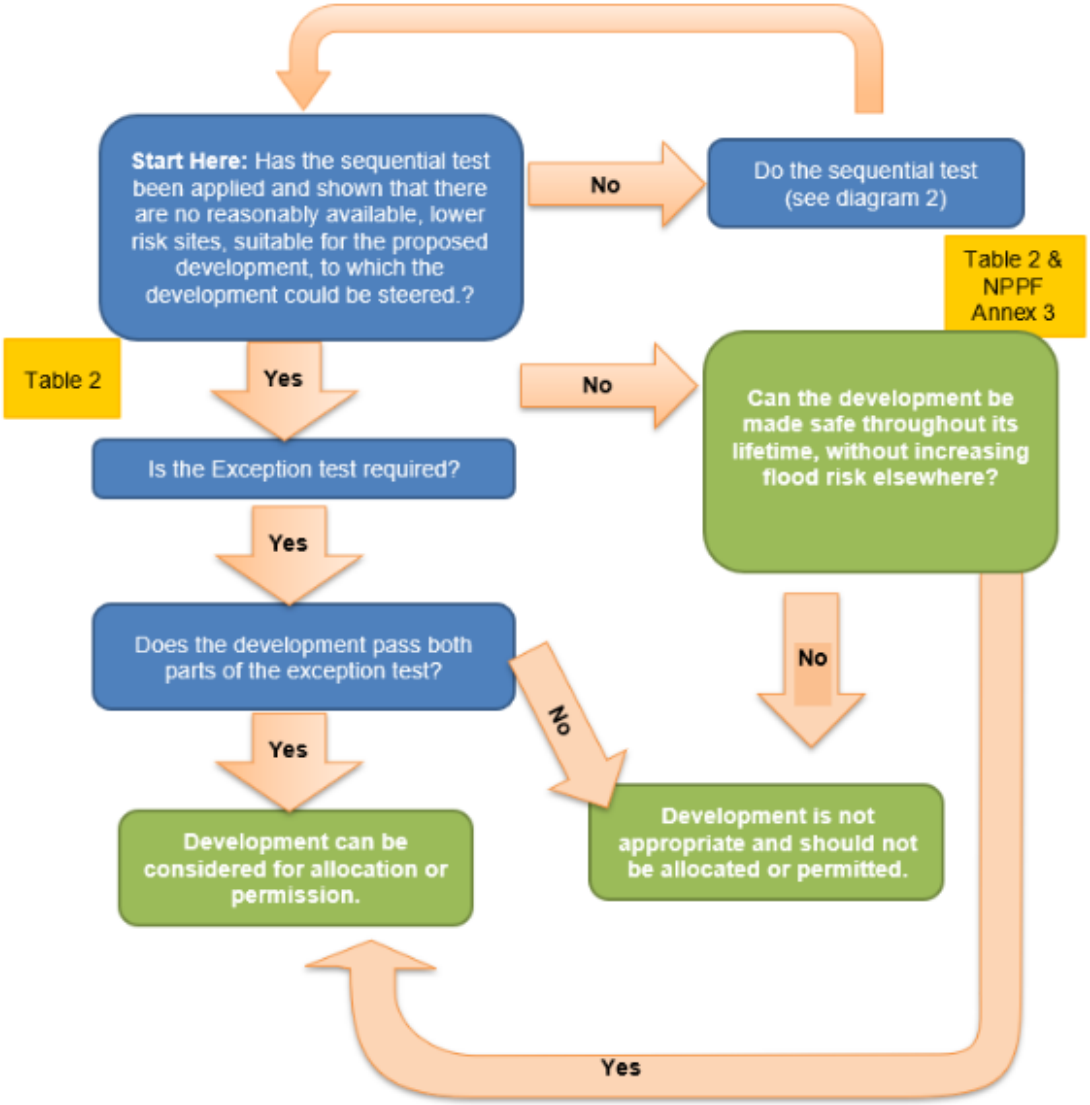
1.13 Following the application of the Sequential Test, if it is not possible to allocate land for development on areas with a lower probability of flooding, an Exception Test may have to be applied. The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available. There are two parts of the test, both of which must be passed for development to be allocated or permitted:

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

1.14 The PPG[3] sets out that it would only be appropriate to move onto the Exception Test in these cases where, accounting for wider sustainable development objectives, application of relevant local and national policies would provide a clear reason for refusing development in any alternative locations identified.

[3] PPG Reference ID: 7-031-20220825

Figure 3: Application of the Exception Test to Local Plan preparation



Flood risk in Wokingham Borough

1.15 The SFRA forms an important part of the evidence base for the LPU. It takes account of all the potential sources of flood risk across the whole plan area and sources of flood risk outside the borough that may have implications within it. The impacts of climate change and cumulative impacts are also considered.

1.16 The SFRA is split into two parts: Level 1 and Level 2 SFRA. The Level 1 SFRA (2023) provides the context (including statutory requirements and guidance) and the methodology used to ascertain the flood risk relevant to Wokingham Borough. It has considered all sources of flooding including fluvial, surface water, groundwater, sewers and reservoirs affecting the borough. An overview of flood risk in the borough is

provided in the following paragraphs, with more detail available in the published Level 1 SFRA report[4].

1.17 The primary fluvial flood risk is along the River Thames, River Loddon, River Blackwater, Emm Brook, Foudry Brook, and their main tributaries. The fluvial flood extents cover the majority of the western and northern border of the borough and split the area through the centre along the path of the River Loddon, which flows in a north-easterly direction through the borough.

1.18 Regarding surface water, the Risk of Flooding from Surface Water map shows a number of prominent overland flow routes that largely follow the topography of the watercourses. There are some areas where there are additional flow paths and areas of ponding, for example where water is impounded at road or rail embankments and in low-lying areas. There are also considerable flow routes following the roads through the main urban areas of Wokingham, Earley and Lower Earley, and Finchampstead which, alongside isolated areas of ponding, may affect many properties across these settlements.

1.19 In terms of sewer flooding, South East Water provides water supply services to the east side of the Borough whilst Thames Water provides water services to the west side of the Borough and sewerage services across the entirety of the Borough. Details of historic sewer flooding across the Borough has been provided by Thames Water which has informed the Strategic Flood Risk Assessment (SFRA).

1.20 The Areas Susceptible to Groundwater Flooding map shows that in general, areas with greater than 50% susceptibility to groundwater flooding are along the main flow routes of the River Thames, River Loddon, River Blackwater, and Foudry Brook. The JBA groundwater emergence map emulates this, with similar areas experiencing emergence levels within 0.5m of the surface, with the addition of the south east of the Borough. The Risk of Flooding due to Surface Water map suggests that any groundwater emerging in these areas is likely to follow the low-lying topography and path of the River Thames, River Loddon, River Blackwater, Emm Brook, and Foudry Brook.

1.21 There is a potential risk of flooding from reservoirs both within Wokingham Borough and those outside. The level and standard of inspection and maintenance required under the Reservoirs Act means that the risk of flooding from reservoirs is low. However, there is a residual risk of a reservoir breach, and this risk should be considered in any site-specific FRAs (where relevant).

[4] Available here: https://www.wokingham.gov.uk/sites/wokingham/files/2024-05/WBC%20Level%201%20SFRA%202023%20-%20Main%20report.pdf

1.22 A Level 2 SFRA was commissioned to provide further detail on the flood risk (including flood hazards and depths, actual flood risk and residual flood risk to sites) for sites which had been initially assessed as potentially suitable for development and which had been screened through the SFRA process as having potential flood risk. Further information relating to the site screening process is set out at section 5.1 of the Level 2 SFRA (2023)[5].

1.23 The Level 2 SFRA (2023) provides thorough recommendations on: requirements to be addressed by site-specific flood risk assessments; guidance for site design and making development safe from flooding; and requirements for SuDS, surface water management and groundwater monitoring. It therefore provides information to apply the Exception Test.

Development needs

1.24 National planning policy advises that the minimum number of homes needed should be informed by a standard method set out in national guidance. This standard method results in a housing need of 748 dwellings per annum from 1 April 2024. The calculation for the previous year was 795 dwellings. The resulting housing need over the plan period 1 April 2023 to 31 March 2040 is 12,763 dwellings.

1.25 Planning commitments, including completions since 1 April 2023, are a source of supply to help meet the identified housing need. In addition, national planning policy allows account to be taken of development that can be anticipated from unidentified sites (windfall). Taking this into account, land has already been identified to provide 8,124 dwellings over the plan period[6]. Comparing housing need and supply, the shortfall in identified supply is 4,639 dwellings which the Local Plan Update must enable.

1.26 In relation to Gypsy and Traveller need, Policy H9 sets out that provision will be made for a minimum 86 pitches in the period 1 April 2023 to 31 March 2040.

1.27 In relation to employment need, the minimum need for industrial and office floorspace in the plan period is 56,000sqm.

1.28 The NPPF requires plans to provide a strategy which, as a minimum, seeks to meet the area's objectively assessed needs. In order to achieve this, and to deliver a plan that addresses the three pillars of sustainability (economic, social and environmental), development allocations will need to come forward in areas which are subject to some

[5] Available at: https://www.wokingham.gov.uk/sites/wokingham/files/2024-05/WBC%20Level%202%20SFRA%202023%20-%20Main%20report.pdf

[6] This excludes the Wokingham town centre broad area allowance of 200 dwellings as sites capable of contributing this figure are included in Table 4a

flood risk based on the land that has been promoted and is therefore available for future development.

Sustainability Appraisal

1.29 The 'Sustainability Appraisal (SA) of the Wokingham Local Plan Update (LPU) – September 2024'[7] is the document produced in support of the LPU which considers the environmental, economic and social effects of an emerging local plan to allow decisions to be made that minimise adverse effects and maximise the positives.

1.30 Taking into account site allocation policies and mitigation, the SA considers the potential impact of the emerging plan and alternatives on all sustainability objectives. It concludes an overall neutral effect from the spatial strategy and policies within the plan as regards flood risk.

1.31 The SA is a key document that helps demonstrate how the first element of the Exception Test – that development will provide wider sustainability benefits to the community that outweigh flood risk – is satisfied. This report should be read in conjunction with the SA.

[7] Available at: https://www.wokingham.gov.uk/planning-policy/evidence-studies

2. The Sequential Test and Exception Test methodology

Sequential Test Method

2.1 Given the nature of flood risk within Wokingham Borough, it is particularly important that the Sequential Test and Exception Test considers all sources of flooding, in line with national planning policy.

2.2 For this purpose of the Sequential Test, for a site to be at low risk of flooding, it meets all of the following conditions:

- Site is within Flood Zone 1
- Site is not within Flood Zone 3 plus climate change (this is taken as Higher Central Climate Change allowance based on the SFRA where the higher central allowance is based on the 70th percentile)
- Less than 10% of the site is at risk of surface water flooding in the 1 in 1000 year event
- Less than 10% of the site is within highest risk category in JBA Groundwater map (groundwater is <0.025m below the surface in the 1 in 100 year event)
- Less than 75% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface in the 1 in 100-year event)
- Site is not within an area highlighted on the Historic Flood Map
- Site is not at risk of reservoir flooding
- Site does not contain a Main River

2.3 The Council accepts that low levels of surface water and groundwater risk can be mitigated through appropriate design as part of the planning process and therefore the above criteria (such as up to 10% of the site at risk in the 1 in 1000-year event for surface water) have been chosen in collaboration with LLFA to identify those where other sources of flooding are not likely to represent a significant constraint to development. These criteria are consistent with those that have been used in other recently adopted plans[8] and are therefore informed by recent and local best practice.

2.4 With regard to groundwater, sites with less than 10% of their area at a level of between 0 and 0.025m below ground or with less than 75% of their area at a level of between 0.025m and 0.5m below ground have been considered low risk. Whilst not considered to be a significant constraint to development, this will still need to be satisfactorily addressed in any development scheme and developers should consult with the council at an early stage to ensure adequate assessment is undertaken.

[8] For example, the Bracknell Forest Local Plan (2024)

2.5 For reservoir flooding, the SFRA mapping shows “wet day” and “dry day” reservoir inundation extents. The “wet day” extent is a reservoir breach at the same time as a 0.1% AEP river flood (as this is a likely time when a reservoir might fail) and the dry day shows the failure just from the water retained by the dam. The “wet day” extent is therefore a greater extent, and any sites covered by this extent will not be considered low risk.

2.6 In drafting the above criteria, the decision has been made that where a site includes an ordinary watercourse, this does not automatically mean that site cannot be considered at low risk of flooding. The reason for this is that, on the recommendation of the LLFA, the nature of flood risk in the borough is such that ordinary watercourses are prevalent and provide a useful and suitable means to effectively manage drainage as part of developments. Therefore, a site with an ordinary watercourse in it may be easier to manage drainage than sites without, especially within sites where infiltration is not achievable.

2.7 The Sequential Test exercise has taken a proportionate approach to the assessment of sites. Approximately 370 sites have been promoted to the Council for consideration. These sites have been considered through the Housing and Economic Land Availability Assessment (HELAA)[9]. The HELAA methodology includes an initial suitability sift to omit sites from detailed assessment where, taking account of national policy and designations, it is clear that a site is unsuitable for development. This ensures a proportionate and, efficient approach. Where sites are significantly constrained by one or more of the following, they have been removed from detailed assessment through the HELAA:

- Functional flood plain.
- Special Area of Conservation (SAC).
- Special Protection Area (SPA).
- Within 400m of the Thames Basin Heaths SPA.
- RAMSAR.
- Site of Special Scientific Interest (SSSI).
- Suitable Alternative Natural Greenspace (SANG).
- Ancient woodland.
- Notified safety zones.

2.8 Where a site is partially constrained by one of the above criteria, such as the functional flood plain, a planning judgement is made as to whether the remaining unaffected area provides a reasonable and practical developable area.

[9] Available at: https://www.wokingham.gov.uk/planning-policy/evidence-studies

2.9 Excluding sites from the Sequential Test which are subject to these constraints is consistent with the PPG, which recognises that wider sustainability objectives and relevant local and national policies provide a clear reason for refusing development at locations which may otherwise be subject to low flood risk.

2.10 Sites are also excluded from the HELAA where they fall below minimum development capacity thresholds. Where such sites are located within existing settlements, they have been considered through the Sequential Test as potential windfall developments (Table 4a).

2.11 Additionally, sites which have subsequently gained planning consent are also removed from detailed assessment in the HELAA. Some of these sites have only outline consent, or have full permission but have yet to commence, and are retained as allocations in the Proposed Submission plan. For completeness, these sites are included in the Sequential Test.

2.12 As a result of the screening exercises described above, a remaining 171 sites (some of which have been logically grouped together where joint delivery is achievable and desirable) have been considered in detail through the Sequential Test.

Exception Test Method

2.13 The Level 1 SFRA (2023), Section 3.2.5, explains in more detail the requirements of the sequential test:

"It will not always be possible for all new development to be located on land that is not at risk from flooding. To further inform whether land should be allocated, or Planning Permission granted, a greater understanding of the scale and nature of the flood risks is required. In these instances, the exception test will be required.

The exception test should only be applied following the application of the sequential test. It applies in the following instances:

- *'More vulnerable' development in Flood Zone 3a*
- *'Essential infrastructure' in Flood Zone 3a or 3b*
- *'Highly vulnerable' development in Flood Zone 2*
- *Any development where a higher risk of surface water has been identified (surface water Zone B) and the site does not clearly show that development can be achieved away from the flood risk.*

'Highly vulnerable' development should not be permitted within Flood Zone 3a or Flood Zone 3b. 'More vulnerable' and 'Less vulnerable' development should not be permitted within Flood Zone 3b.

Figure 3-3 summarises the exception test.

For sites proposed for allocation within the Local Plan, the LPA should use the information in this SFRA to inform the exception test. At the planning application stage, the developer must design the site such that it is appropriately flood resistant and resilient in line with the recommendations in national and local planning policy and supporting guidance and those set out in this SFRA. This should demonstrate that the site will still pass the flood risk element of the exception test based on the detailed site level analysis.

For developments that have not been allocated in the Local Plan, developers must undertake the exception test and present this information to the LPA for approval. The Level 1 SFRA can be used to scope the flooding issues that a site-specific FRA should investigate in more detail to inform the exception test for windfall sites.

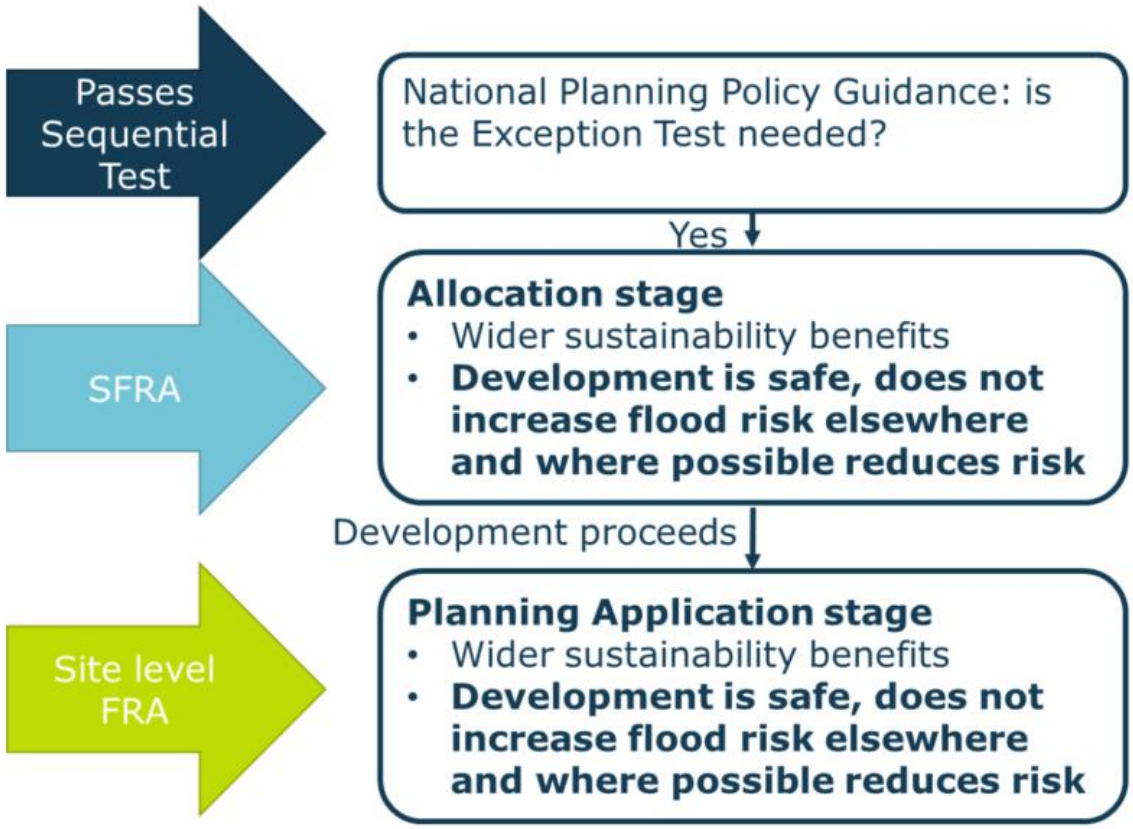


Figure 4: The Exception Test *(Figure 3.3. of the SFRA)*

There are two parts to demonstrating a development passes the exception test:

1. *Demonstrating that the development would provide wider sustainability benefits to the community that outweigh the flood risk.*

At the stage of allocating development sites, LPAs should consider wider sustainability objectives, such as those set out in Local Plan Sustainability Appraisals. These generally

consider matters such as biodiversity, green infrastructure, historic environment, climate change adaptation, flood risk, green energy, pollution, health, transport etc.

The LPA should consider the sustainability issues the development will address and how far doing so will outweigh the flood risk concerns for the site, e.g. by facilitating wider regeneration of an area, providing community facilities, infrastructure that benefits the wider area etc.

2. *Demonstrating that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.*

In circumstances where the potential effects of proposed development are material a Level 2 SFRA is likely to be needed to inform the exception test for strategic allocations to provide evidence that the principle of development can be supported. At the planning application stage, a site-specific FRA will be needed. Both will need to consider the actual and residual risk and how this will be managed over the lifetime of the development."

2.14 The information contained within the SA and HELAA has been used to determine whether sites pass the first part of the Exception Test. The information contained in the Level 2 SFRA (2023) has informed assessment of the second part of the Exception Test. This has been summarised in each assessment in the following section, but this report should be read in conjunction with the SA, HELAA, Level 2 SFRA, and the detailed allocation policies and development guidelines in the Proposed Submission Local Plan Update.

3. Findings of the Sequential Test and Exception Test

3.1 As set out above, the Sequential Test has been applied to all sites that have been promoted through the local plan process across the whole local planning authority area, with the exception of those sites that have been omitted from detailed assessment due to significant environmental constraints.

3.2 Some sites that are proposed for allocation benefit from permission or resolution to grant at September 2024 and are therefore included in the base commitment figures of 8,124 dwellings (see paragraph 1.25). These sites are included in the tables within this section for completeness, but their contribution is not included in the supply totals to avoid double counting.

3.3 A series of tables have been produced, which are summarised and explained in Table A below:

Table A – Summary of Sequential Test results tables

Table number and title	Proposed for allocation (Y/N)	Overview
Table 1a: Sites in Flood Zone 1, and at low risk of flooding from all other sources (immediately pass the sequential test), that are proposed for allocation	Yes	Eight sites immediately pass the sequential test and are proposed for allocation for a total of 468 dwellings (including 17 Gypsy and Traveller pitches).
Table 1b: Sites in Flood Zone 1, and at low risk of flooding from all other sources (immediately pass the sequential test), that are not proposed for allocation	No	A further 30 sites that immediately pass the sequential test are not proposed for allocation. Table 1b summarises the reasons why they are omitted. These include: sites in less sustainable locations; landscape and heritage sensitivities; sites located in the Green Belt[10]; sites located within DEPZ; and sites located mainly outside of the borough.
Table 1c: Sites in Flood Zone 1 and at risk of flooding from other sources (not immediately passed the	Yes	Nineteen sites within flood zone 1 are at risk of other sources of flooding (such as surface water and/or groundwater flood risk), did not immediately pass the sequential test and are

[10] Sites located outside of the Green Belt but do not immediately pass the sequential test are preferred over Green Belt sites where development can be located sequentially. This approach has been taken as the Plan is required to fully demonstrate that all reasonable alternatives have been examined prior to concluding that exceptional circumstances exist by national policy (NPPF Para 146).

sequential test), that are proposed for allocation		proposed for allocation. The Sequential Test for these sites is set out in paragraphs 3.7 – 3.9 and a summary of reasons for why they are proposed for allocation at Table 1c. Of the 19 sites in this category: • Three are located within the defined settlement of Wokingham, the borough's most sustainable settlement. • A further five sites are located close / adjacent to the settlement of Wokingham • Two are located at or near to Winnersh (another tier 1 settlement in the settlement hierarchy) • Two sites are within the Arborfield SDL; • One site is located within the defined village of Ruscombe • Three have been granted planning permission at smaller settlements • Two more are Gypsy and Traveller sites in countryside but appropriately related to settlements; and • One comprises a PDL redevelopment. These 19 sites comprise a total of 799 dwellings of which 438 dwellings represents new supply through allocation (including 28 Gypsy and Traveller pitches) and 361 dwellings are existing commitments. This takes the total proposed new supply in flood zone 1 (Tables 1a and 1c) to 906 dwellings (468+438), including 45 Gypsy and Traveller pitches.
Table 1c(i): Exception test for sites in Flood Zone 1 and at risk of flooding from other sources (not immediately passed the sequential test), that are proposed for allocation	Yes	Table 1c(i) provides an Exception Test for those sites where the Level 2 SFRA (2023) recommends this is required. All of these sites are found to pass the Sequential Test and the Exception Test.
Table 1d: Sites in Flood Zone 1 and at risk of flooding from other sources (not immediately passed the sequential test), that are not proposed for allocation	No	Sixty sites are within flood zone 1 but are at risk of other sources of flooding (such as surface water and/or groundwater flood risk), do not immediately pass the sequential test and are not proposed for allocation. Table 1d summarises the reasons why they are omitted, including: sites located in the countryside with poor relationship to

		the settlement; access constraints; landscape sensitivity; ecological value; heritage sensitivities; extent/nature of flood risk from other sources; and sites located in the Green Belt.
Table 2a: Sites in Flood Zone 2 (not immediately passed the sequential test), that are proposed for allocation	Yes	Three sites are proposed for allocation in flood zone 2. One of these sites is for SANG which is a water compatible use. The other two sites are for housing, one of which is previously developed land, and the other is an extension to an existing Strategic Development Location. These sites are proposed for allocation for 33ha SANG, and 250 dwellings (191 and 59 dwellings respectively). The two residential proposals in this category are demonstrated to pass the Sequential Test and Exception Test. As a water compatible use, the proposed SANG site is not required to satisfy these tests.
Table 2b: Sites in Flood Zone 2 (not immediately passed the sequential test), that are not proposed for allocation	No	Three sites are partially located in flood zone 2 (but not in flood zone 3) that are not proposed for allocation. Table 2b summarises the reasons why they are omitted, including: sites in less sustainable locations; landscape sensitivities; ecological sensitivities.
Table 3a: Sites in Flood Zone 3 (not immediately passed the sequential test), that are proposed for allocation	Yes	Nine sites are partially located in flood zone 3 and comprise a total of 4,956 dwellings of which 4,515 dwellings represents new supply through allocation (including 29 Gypsy and Traveller pitches) and 441 dwellings are existing commitments. The commitments arise from three of these sites benefitting from outline planning permission for their promoted use, which is 441 dwellings plus a 70 bed care home. Development is sequentially located within these consented sites to avoid the flood risk. The development guidelines for each site requires development to be excluded from the areas at highest fluvial flood risk and to appropriately address or mitigate other types of flood risk on site. The allocation of these sites will help to provide a mix of sites, including small and medium sizes. The allocation of these sites also helps ensure that the plan delivers sustainable development, taking account of all three pillars of sustainability defined in the NPPF. The development has been demonstrated to pass the

		Exception Test for allocation for residential use. The sites within this table are required to ensure the overall requirement for 4,639 new homes is met. They also ensure that 74 of the identified need for 86 Gypsy and Traveller pitches are met (the remainder to be met by windfall).
Table 3b: Sites in Flood Zone 3 (not immediately passed the sequential test), that are not proposed for allocation	No	Twenty-five sites are partially located in flood zone 3 that are not proposed for allocation. Table 3b summarises the reasons why they are omitted, including: sites located in the countryside with poor relationship to the settlement; access constraints; landscape sensitivity; ecological value; heritage sensitivities; extent/nature of flood risk from other sources; and sites located in the Green Belt; sites located within DEPZ.
Table 4a: Potential windfall sites that are not proposed for allocation but lie within the defined settlement boundary and could come forward under the current policy framework OR sites assessed as potentially suitable for development but not proposed for allocation	No	Table 4a sets out sites that have potential to come forward as windfall development. Residential sites that are not proposed for allocation – largely due to their size being too small to deliver a minimum of 10 dwellings – but are nonetheless within defined settlements limits within the LPU and so could therefore come forward under the policy framework, are included in this table. Likewise, sites which have been assessed as suitable or potentially suitable in the HELAA but are not proposed for allocation due to lack of demonstrable deliverability at this stage, are included in table 4a. This table includes a number of potentially suitable sites within Wokingham town centre which are capable of coming forward in the plan period and contribution to the Wokingham town centre broad area windfall allowance.

3.4 As set out in Section 1, taking account of existing commitments, there is a need for the LPU to enable new land to provide for a minimum of 4,639 dwellings, 86 Gypsy and Traveller pitches, and 56,000sqm employment floorspace.

3.5 The Proposed Submission Plan Policies SS11 – SS14 propose sites for allocation that are capable of delivering 5,671 homes during the plan period. In addition, a windfall allowance of 200 dwellings from the Wokingham town centre broad area can reasonably be anticipated. The identified land supply is sufficient to provide a reasonable buffer for delays in delivery of sites or their non-implementation. The buffer also helps to reduce

the risk of having to identify further sites should the examination process disagree with the council's assessment. The sites selected offer a range of site sizes, in accordance with the NPPF.

3.6 For sites that are proposed for allocation where there is some flood risk, the Level 2 SFRA identifies guidance within each specific site assessment on 'Requirements for drainage control and impact mitigation' and 'Requirements and guidance for site specific Flood Risk Assessment' which includes guidance on design and making development safe. The Proposed Submission LPU mandates these requirements to be met for each of these sites.

Table 1a: Sites in Flood Zone 1, and at low risk of flooding from all other sources (immediately pass the sequential test), that are proposed for allocation

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Quantum of development proposed
5BA013	Woodlands Farm	FZ1	0%	0%	Yes	Sequential test passed	15 pitches
5BA032	24 Barkham Ride	FZ1	0%	0%	Yes	Sequential test passed	30
5CV002	Land west of Park Lane, Charvil	FZ1	0%	0%	Yes	Sequential test passed	61
5FI024	Hillside (Formerly Jovike), Lower Wokingham Road	FZ1	0%	0%	Yes	Sequential test passed	15
5RU007	Land to the rear of 9-17 Northbury Lane	FZ1	0%	0%	Yes	Sequential test passed	12
5SH031	Rustlings', 'The Spring' and land to the rear of 'Cushendall', Shinfield Road	FZ1	0%	0%	Yes	Sequential test passed	10
5SO001	Land at Sonning Farm	FZ1	0%	0%	Yes	Sequential test passed	25

N/A	Arborfield Studios – optimising development density[11]	FZ1	0%	0%	Yes	Sequential test passed	300 (including 2 pitches)
							468 (total)

[11] The site part of an existing allocation in the adopted Core Strategy local plan and which benefits from planning permission. The principle of development is therefore clearly established. The additional capacity reflects an opportunity for increased development density within the extent of the permitted development, which is also previously developed land. The additional capacity if reflected here for completeness.

Table 1b: Sites in Flood Zone 1, and at low risk of flooding from all other sources (immediately pass the sequential test), that are not proposed for allocation

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5AR008	Land to the south of School Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5AR009	Land north of School Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5AR012	Land at Ducks Nest Farm and Chamberlain's Farm	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5AR013	Land to the rear of the Copse, Eversley Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5AR026	Land at Baird Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern, with the site representing a valuable green buffer. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Whole site covered by area TPO. • Appeal for promoted use dismissed in March 2022.
5BA018	Land at Highland Avenue	FZ1	0%	0%	Yes	Sequential test passed	• The site is safeguarded by the adopted Central and Eastern Berkshire Joint Minerals and Waste Plan for metal recycling and end of life vehicles - proposals for alternative uses would not be appropriate.
5CV005	Land to the rear of Oaktree Cottage	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
							• Poor sustainability in terms of access to services and facilities.
5FI046	Land east of Wokingham Road and south of Duke's Ride (Derby Field)	FZ1	0%	0%	Yes	Sequential test passed	• The site is primarily located within the administrative area of Bracknell Forest Council and is allocated for housing within that authority's local plan. The small section within Wokingham Borough has a satisfactory relationship to the existing settlement pattern, however the site acts as incidental space relating to the adjoining allocation.
5HU019	Land to the south of Units 1-12 Beech Court, Wokingham Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern. • Poor sustainability in terms of access to services and facilities and workforce for the promoted employment use. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5HU024	Land to the north of London Road and east of the A329M	FZ1	0%	0%	Yes	Sequential test passed	• Proposed for SANG which is a water compatible use and considered potentially suitable for the promoted use. • Notwithstanding, the SANG promotion was intended to mitigate the impact of residential development to the east in Bracknell Forest which has not come forward. Additionally, access arrangements outside of the promotion are unclear. Therefore, achievability is unknown.
5SH018	Lane End Villas	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern. • An appeal related to the promoted development was dismissed in February 2022.
5SH022	Land at the Manor, Church Lane	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and considerable landscape harm given the site's prominent position on a slope.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5SH035	Land at Highlands, Basingstoke Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form, pattern and landscape character. • Site located within Detailed Emergency Planning Zone around AWE Burghfield. Development inappropriate in terms of impact on AWE Burghfield. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Employment development would likely unacceptably increase in the number of people working in the area. • Loss of BMV agricultural land. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5SH062	Shinfield Glebe	FZ2	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • The site is located adjacent to the DEPZ, and development might require an extension to the DEPZ. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Residential development adjacent to the DEPZ would likely increase in the number of people living in the area. No information is available to demonstrate that the proposed development could be safely accommodated. Under the precautionary principle, an impact must be assumed.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5SO002	Land east of Garde Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Loss of BMV agricultural land. • Landscape sensitivities.
5SO007	Land adjacent to Model Farm Cottages, Bath Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • An appeal related to the promoted development was dismissed in August 2017.
5SO009	Thatched Cottage	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Potential harm to a number of designated and non-designated heritage assets close by.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5SO010	Old Redingensians Sports Ground	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Development reliant on re-provision of the rugby club which is not demonstrably deliverable.
5SW009	Land adjacent to Applegarth Basingstoke Road	FZ1	0%	0%	Yes	Sequential test passed	• Poor sustainability in terms of access to services and facilities. • Ancient woodland adjacent to the site, which would require an appropriate buffer, which may affect the quantum of development achievable. • Potential loss of BMV agricultural land. • Site within a proposed Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5SW013	Land adjoining Lambs Farm Business Park	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form. • Poor sustainability in terms of access to services and facilities. • Site located within Detailed Emergency Planning Zone around AWE Burghfield. Development inappropriate in terms of impact on AWE Burghfield. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Employment development would likely unacceptably increase the number of people working in the area. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5SW021	Land at Swallowfield	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Loss of BMV agricultural land. • Landscape sensitivities. • Development would potentially result in harm to the setting of a designated heritage asset, as per the conclusion of an appeal Inspector considering an appeal related to this site plus adjoining land.
5SW023	Land at Wyvols Court Farm	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Landscape sensitivities. • Potential loss of BMV agricultural land. • Potential harm to the setting of a designated heritage asset.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5WA004	Land to the south of Bath Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.
5WA012	Land south of Braybrooke Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Development would result in substantial loss of tree coverage, harmful to ecology and character. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.
5WI017	Holmewood House	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5WI020	Land at Home Farm, Sindlesham	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5WI022	Land north of Sadlers Lane	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5WK022	Land close to Junction of Bearwood Road and Highlands Avenue	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The whole site comprises woodland, the majority of this comprises Ancient Woodland and the whole site is covered by a woodland TPO. The loss of which would be harmful to character and biodiversity.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Low risk of flooding from all sources?	Conclusion	Summary of reasons for not allocating the site
5WK028, 5WK032, 5WK034, 5WK039	Land at Blagrove Lane	FZ1	0%	0%	Yes	Sequential test passed	• Although sites potentially developable, alternative sites preferred in the strategy.
5WK044	Land at Limmerhill Road	FZ1	0%	0%	Yes	Sequential test passed	• Inappropriate relationship to established settlement form and pattern and landscape character, including the potential to cause coalescence between settlements. • Potential loss of BMV agricultural land. • Landscape sensitivities.

Table 1c: Sites in Flood Zone 1 and at risk of flooding from other sources (not immediately passed the sequential test), that are proposed for allocation

3.7 Land to deliver a minimum 4,639 new dwellings need to be identified within the LPU to 2040. Sites which immediately pass the Sequential Test (i.e. in FZ1 and at low risk of all other sources of flooding) have been considered and can accommodate 468 additional dwellings (Table 1a). The remaining sites which immediately pass the Sequential Test (Table 1b) are not considered to be suitable for development due to other planning constraints, or their deliverability is uncertain at this stage. After these sites have been considered, there is a remaining need for at least 4,171 dwellings.

3.8 There is a need for a minimum 86 new Gypsy and Traveller pitches to be delivered within the local plan period. Sites for this use which immediately pass the Sequential Test (i.e. in FZ1 and at low risk of all other sources of flooding) have been considered and can accommodate 17 pitches (Table 1a[12]). Only one site which immediately passes the Sequential Test (Table 1b) has been promoted for this use, and is not considered to be suitable for development (site 5SO007). After these sites have been considered, there remains a need for 69 pitches.

3.9 As set out above sites which are sequentially preferable in terms of flood risk do not have sufficient capacity to meet development needs in full. As a result, sites included in Table 1c are also required where a sequential approach to development has been taken to ensure areas of flood risk are avoided. This requirement is secured through the development guidelines in the Proposed Submission Plan. Therefore, all sites in Table 1c pass the sequential test. In most cases, the Exception test is not required. For those sites where the Level 2 SFRA advises the Exception test is required, this is set out in more detail in Table 1c i).

[12] Site 5BA013 and 2 pitches as part of the Arborfield Studios development.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5BA036	High Barn Farm	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Yes	No	Sequential test: passed Exception test: N/A	While there are some constraints, such as potential BMV agricultural land and narrow access road, the context of the site is considered suitable for Gypsy and Traveller pitches, being within reasonable proximity to the Arborfield Green major development. The site is at low risk of flooding other than potential groundwater flooding.	20 pitches

[13] Sites denoted with * either benefit from planning permission or resolution to grant and are factored into commitments data. They are omitted from the total at the end of the table but retained to demonstrate how they perform in the sequential approach.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5FI003	31 and 33 Barkham Ride	FZ1	0%	0%	12% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	No	Sequential test: passed Exception test: N/A	The site adjoins the settlement boundary of Finchampstead North. The land benefits from resolution to grant planning permission for 80 dwellings (references 223528 and 230791) and therefore the principle of development is established.	80*
5FI004	Greenacres Farm	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between	Yes	No	Sequential test: passed Exception test: N/A	The site is previously developed land which is on the edge of an existing settlement. Development is proposed on the	100

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
					0.025m and 0.5m below the surface).				PDL area only. Minor areas of surface water ponding (less than 10% of the site in the 1 in 1000 year event) exist. This would partly lie outside of the developable area. Other areas lie within part of the PDL area where there are opportunities through SuDS to better manage this than the existing built use.	
5FI028	Westwood Yard, Sheerlands Road	FZ1	0%	0%	12% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	No	Sequential test: passed Exception test: N/A	The site lies adjacent to the settlement of Arborfield Garrison and within the SDL boundary,	10

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
									therefore representing a logical addition to an existing strategic allocation. There is a surface water flow path across the northern boundary of the site, but access would be from the south, and so this can be avoided.	

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5FI032	Honey Suckle Lodge, Commonfield Lane	FZ1	0%	0%	14% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approx 84% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 86% of the site is at risk from reservoir flooding in the wet day event and 73% in the dry day event.	Yes	No	Sequential test: passed Exception test: N/A	The site would comprise a modest extension to an existing Gypsy and Traveller site. Only a modest area of the site is affected by surface water flood risk which can be avoided through site layout. While the majority of the site is subject to reservoir flood risk, the likelihood of flooding is very low.	4 pitches

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5HU051	Land north of London Road and east of A329(M)	FZ1	0%	0%	>99% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Yes	No	Sequential test: passed Exception test: N/A	The land benefits from resolution to grant planning permission for 45 dwellings (reference 232026) and therefore the principle of development is established.	45*

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5RU008	Land between 39-53 New Road	FZ1	0%	0%	17% of the site is at risk of surface water flooding in the 1 in 1000 year event. >99% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Yes	No	Sequential test: passed Exception test: N/A	The site is located within the defined settlement of Ruscombe where development is acceptable in principle.	20

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5SO005, 5SO008	Sonning Golf Club (aka Land east of Pound Lane, Sonning)	FZ1	0%	0%	16% of the site is at risk of surface water flooding in the 1 in 1000 year event	Yes	Yes	Sequential test: passed. Exception test: The principle of development has been established by outline planning consent (223458) and therefore the Exception test is satisfied.	The site benefits from outline planning consent for up to 50 dwellings (223458).	50*
5SW019	Land west of Trowes Lane	FZ1	0%	0%	57% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Yes	No	Sequential test: passed Exception test: N/A	The site benefits from full planning consent for 81 dwellings (230422).	81*

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WI009, 5WI019	Land west of Old Forest Road, Winnersh	FZ1	0%	0%	18% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	Yes	Sequential test passed Exception test: passed (see Table 1c i)	The site is sustainably located adjacent to the settlement of Wokingham with access to services and facilities to meet daily needs.	50
5WI011	Wheatsheaf Close	FZ1	0%	0%	18% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and	Yes	No	Sequential test: passed Exception test: N/A	This is an existing allocation in the current development plan. The site continues to provide an opportunity for housing broadly in line with the preferred spatial strategy.	24

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
					0.5m below the surface).					
5WI012, 5WI021	Land rear of the Bulldog garage and BP garage, Winnersh	FZ1	0%	0%	22% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	Yes	Sequential test passed Exception test: passed (see Table 1c i)	The site is sustainably located adjacent to the settlement of Wokingham with access to services and facilities to meet daily needs. The site would partly utilise previously developed land.	34

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WI014	69 King Street Lane	FZ1	0%	0%	37% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Yes	Yes	Sequential test: passed. Exception test: The principle of development has been established by outline planning consent (231094) and therefore the Exception test is satisfied.	The site benefits from resolution to grant outline planning consent for up to 28 dwellings (231094).	28*

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WK011	Land south of London Road (Western Field)	FZ1	0%	0%	Approximately 92% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Yes	No	Sequential test: passed Exception test: N/A	The site is located adjacent to built and planned development in Bracknell Forest, and would represent a logical rounding off of the settlement. Constraints, including noise are capable of being mitigated.	12
5WK023	Rosery Cottage and 171 Evendons Lane	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Yes	No	Sequential test: passed Exception test: N/A	The site benefits from resolution to grant outline planning consent for a 64 bed care home (35 dwelling equivalents) (231351).	35*

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WK029	Station Industrial Estate, Oxford Road	FZ1	0%	0%	27% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	No	Sequential test: passed Exception test: N/A	The site is sustainably located within the settlement of Wokingham and adjacent to a train station, with access to a wide range of services and facilities to meet daily needs. Whilst it would lead to a loss of land in use for employment, it presents an opportunity for placemaking and environmental improvements of previously developed land.	40

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WK042	Woodside Caravan Park, Blagrove Lane	FZ1	0%	0%	37% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	Yes	Sequential test passed Exception test: passed (see Table 1c i)	Whilst subject to a moderate degree of surface water flood risk, the site represents an expansion of an existing Gypsy and Traveller site in a sustainable location.	4 pitches

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WK046	Land at the north corner of Wellington Road and Station Road, Wokingham	FZ1	0%	0%	10% of the site is at risk of surface water flooding in the 1 in 1000 year event. 10% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). The remaining 90% of the site is within the second highest risk category in (groundwater is between 0.025m and 0.5m below the surface).	Yes	No	Sequential test: passed Exception test: N/A	The site is sustainably located within the defined settlement of Wokingham and close to a train station, with access to a wide range of services and facilities to meet daily needs. It would allow for the redevelopment of previously developed land.	20

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Sequential test required	Exception test required	Conclusion	Summary of reasons for allocating the site	Quantum of development proposed[13]
5WK054	WBC council offices, Shute End, Wokingham	FZ1	0%	0%	11% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Yes	No	Sequential test: passed Exception test: N/A	The site is sustainably located within the settlement of Wokingham and close to a train station, with access to a wide range of services and facilities to meet daily needs. It would allow for the redevelopment of previously developed land.	100
										438 (total excluding commitments)

Table 1c(i): Exception test for sites in Flood Zone 1 and at risk of flooding from other sources (not immediately passed the sequential test), that are proposed for allocation

5WI009 and 5WI019 – Land on the north-west Side of Old Forest Road
EXCEPTION TEST
The exception test is not required on the basis of fluvial flood risk, given 'more vulnerable' development is acceptable in Flood Zone 1. However, the Level 2 SFRA recommends that the exception test is required for this site because the site is located in an area at high risk of surface water flooding.
<u>Does the development provide wider sustainability benefits to the community that outweigh flood risk?</u> The site has been subject to GIS analysis in the Sustainability Appraisal where it scored positively for a wide range of indicators. The site is located adjacent to the most sustainable settlement in the borough (Wokingham) within easy walking distance of services and facilities to meet daily needs. Whilst constraints are present, these are considered capable of being addressed within a development. The site contributes towards the spatial strategy of directing development towards the more sustainable settlements in the borough. The SFRA identifies 'Opportunities for wider sustainability benefits and integrated flood risk management. This identifies a number of opportunities, which include: "*Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity, and biodiversity. This could provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be discussed with relevant stakeholders (Local Planning Authority, Lead Local Flood Authority, and Environment Agency) at an early stage to understand possible constraints*." <u>Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?</u>

The majority of the site (82%) is not affected by surface water flood risk. Surface water flow paths in the 1 in 1000 year event impact only on the developable area in the eastern part of the site, and there will be opportunities to retain and integrate existing flow paths with blue/green infrastructure and onsite public open space and SuDS.

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates areas close as possible to pre-development greenfield rates.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.

Additionally, the key messages from the Level 2 SFRA are that development on site is likely to be able to proceed if:

- Development is steered away from the surface water flow paths, and any additional surface water ponding, and these flow paths be incorporated and considered within the development site.
- A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the area identified to be at risk of surface water flooding.
- Safe access and egress can be demonstrated in the 1% AEP plus 40% climate change surface water event. This includes measures to reduce flood risk along these routes such as raising access, but not displacing floodwater elsewhere. A site-

specific assessment will need to interrogate in more detail the localised depths, velocities, and hazard of surrounding roads to ensure safe access and egress can be achieved.

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- That surface water corridors within the site are left free of development.
- Demonstrate that safe access and egress is achievable during surface water flood events for both residents and emergency vehicles.

Conclusion

The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

5WI012 and 5WI021 – Land rear of the Bulldog garage and BP garage, Winnersh

EXCEPTION TEST

The exception test is not required on the basis of fluvial flood risk, given 'more vulnerable' development is acceptable in Flood Zone 1. However, the Level 2 SFRA recommends that the exception test is required for this site because the it is located in an area partially at high risk of surface water flooding.

Does the development provide wider sustainability benefits to the community that outweigh flood risk?

The site has been subject to GIS analysis in the Sustainability Appraisal where it scored positively for a wide range of indicators.

The site is located partly within and adjacent to the most sustainable settlement in the borough (Wokingham) within easy walking distance of services and facilities to meet daily needs. Whilst constraints are present, these are considered capable of being addressed within a development. The site contributes towards the spatial strategy of directing development towards the more sustainable settlements in the borough.

The SFRA identifies 'Opportunities for wider sustainability benefits and integrated flood risk management. This identifies a number of opportunities, which include: "*Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity, and biodiversity. This could provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be discussed with relevant stakeholders (Local Planning Authority, Lead Local Flood Authority, and Environment Agency) at an early stage to understand possible constraints.*"

Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?

The majority of the site (78%) is not affected by surface water flood risk, and the areas at risk are contained to the western and eastern edges of the site, allowing for a central developable area.

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates areas close as possible to pre-development greenfield rates.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.

Additionally, the key messages from the Level 2 SFRA are that development on site is likely to be able to proceed if:

- Development is steered away from the large surface water flow path through the west of the site and any additional surface water ponding.
- A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the area identified to be at risk of surface water flooding.
- Safe access and egress can be demonstrated in the 1% AEP plus 40% climate change surface water event. This includes measures to reduce flood risk along these routes such as raising access, but not displacing floodwater elsewhere.
- A site-specific FRA demonstrates that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties.
- If flood mitigation measures are implemented then they are tested to check that they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another).
- The developer reviews the suitability of the Emm Brook model to inform this site and carries out any further modelling work deemed necessary.

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- That surface water corridors within the site are left free of development.
- Demonstrate that safe access and egress is achievable during surface water flood events for both residents and emergency vehicles.

Conclusion
The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

5WK042 – Woodside Caravan Park, Blagrove Lane
EXCEPTION TEST
The exception test is not required on the basis of fluvial flood risk, given 'highly vulnerable' development is acceptable in Flood Zone 1. However, the Level 2 SFRA recommends that the exception test is required for this site because the site is located in an area at high risk of surface water flooding.
Does the development provide wider sustainability benefits to the community that outweigh flood risk? The site has been subject to GIS analysis in the Sustainability Appraisal where it scored positively for a wide range of indicators. The site is an existing 3 pitch Gypsy and Traveller site located close to the most sustainable settlement in the borough (Wokingham) within walking and cycling distance of services and facilities to meet daily needs. Whilst constraints are present, these are considered capable of being addressed within a development. The site contributes towards the spatial strategy of directing development towards the more sustainable settlements in the borough and would make more efficient use of the land by accommodating additional pitches within, and through modest extension of, an existing site. The allocation would also meet social needs by allowing existing family members to remain at the site as the children grow older and form their own households. The SFRA identifies 'Opportunities for wider sustainability benefits and integrated flood risk management. This identifies a number of opportunities, which include: "*Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity and biodiversity. This could provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be discussed with relevant stakeholders (Local Planning Authority, Lead Local Flood Authority, and Environment Agency) at an early stage to understand possible constraints*." Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall? In the 1 in 1000 surface water flood event a significant flow path forms to the north-west of the site. It is noted that 3 pitches already exist at this site, located partly within this flow path. It would be expected that new accommodation on site would be steered away from this flow path. As regards the existing pitches, the nature of mobile homes is that they are elevated from the

ground, whilst touring caravans are capable of being parked outside of this area of flood risk. The proposed allocation may allow for some flexibility to rearrange the site to better reduce this flood risk to the existing lawful pitches.

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates areas close as possible to pre-development greenfield rates.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.
- Development buffers should be incorporated either side of the ordinary watercourses on the site and opportunities should be taken to provide environmental enhancements and where feasible reduce the risk of flooding on or off the site from all sources.

Additionally, the key messages from the Level 2 SFRA are that development on site may be able to proceed if:

- Development is steered away from the surface water flow path through the north of the site.

- A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the area identified to be at risk of surface water flooding where possible.
- Safe access and egress can be demonstrated in the 1% AEP plus 40% climate change surface water event. The existing access road is impacted by considerable surface waterflooding during the 1% AEP plus 40% climate change event, so a site-specific assessment will need to interrogate in more detail the localised depths, velocities and hazard of surrounding roads to ensure safe access and egress can be achieved.
- A site-specific FRA demonstrates that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties.
- If flood mitigation measures are implemented then they are tested to check that they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another)

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- That new pitches are steered away from surface water corridors within the site.
- Demonstrate that safe access and egress is achievable during surface water flood events for both residents and emergency vehicles.

Conclusion

The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

Table 1d: Sites in Flood Zone 1 and at risk of flooding from other sources (not immediately passed the sequential test), that are not proposed for allocation

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5AR007	Land to the North of School Road	FZ1	0%	0%	10% of the site is at risk of surface water flooding in the 1 in 1000 year event. A minor portion (<1%) of the site is at risk from reservoir flooding in the wet day event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5AR010	Land south of School Roal	FZ1	0%	0%	10% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5AR018	Targetts Farm, Eversley Road	FZ1	0%	0%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5AR021	Langley Pond Farm Livery Stables	FZ1	0%	0%	42% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5AR028	Land at Highfield Park	FZ1	0%	0%	15% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Loss of specialist accommodation (Gypsy and Traveller pitches). • Potential loss of BMV agricultural land.
5BA002	Land at Barkham Manor	FZ1	0%	0%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5BA004	The Bungalow, Edneys Hill	FZ1	0%	0%	18% of the site is at risk of surface water flooding in the 1 in 1000 year event. Additionally, 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Large part of the site covered by area TPO. • Potential loss of BMV agricultural land.
5BA017	Land adjacent to Coppid Hill House, Barkham Road	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5BA019	Wren's Nest Stables, Barkham Road	FZ1	0%	0%	11% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5BA025	29 Bearwood Road	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5BA027	Land to the rear of 178 Bearwood Road	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Large part of the site covered by woodland TPO.
5BA030	Land off Langley Common Road	FZ1	0%	0%	14% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5BA031	Land at Barkham Manor Farm	FZ1	0%	0%	10% of the site is at risk of surface water flooding in the 1 in 1000 year event. A minor portion (<1%) of the site is at risk from reservoir flooding in the wet day event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5EA003	Land at Meldreth Way	FZ1	0%	0%	40% of the site is at risk of surface water flooding in the 1 in 1000 year event	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site proposed to be designated as Local Green Space.
5FI001	Tintagel Farm, Sandhurst Road	FZ1	0%	0%	31% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Highways safety concerns with access to the site, as well as harmful character impact from likely tree removal.
5FI002	Heartwood Lodge, Sandhurst Road	FZ1	0%	0%	14% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The site is covered by the woodland TPO and, whilst it has been cleared, there is a Woodland Restocking Notice in place.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5FI005	Silverstock Manor	FZ1	0%	0%	16% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• For residential dwellings, inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site surrounded by Local Wildlife Site. • Site falls within a Green Gap identified in Finchampstead Neighbourhood Development Plan and development would conflict with the purpose of this designation. • For Gypsy and Traveller use, while the site provides an opportunity to utilise previously developed land within a reasonable distance of settlements, it is considered to have greater landscape sensitivities and biodiversity impacts than other reasonable options.
5FI009	Land at Sandhurst Road	FZ1	0%	0%	28% of the site is at risk of surface water flooding in the 1 in 1000 year event. The vast majority of the site is within the second highest risk category in JBA Groundwater map (groundwater is between	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
					0.025m and 0.5m below the surface).		• Woodland TPO covers a large part of the site which would inhibit development.
5FI010	Land to the east of Finchampstead Road	FZ1	0%	0%	36% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site is designated as part of a Green Wedge in the adopted Finchampstead Neighbourhood Development Plan and the proposed development is likely to conflict with the purpose of this designation. • TPOs covering the site which would inhibit development.
5FI012	Land opposite Hall Farm, Lower Sandhurst Road	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
							• Appeal for promoted use dismissed in August 2017
5FI013	Land to the west of Finchampstead, Longwater Lane	FZ1	0%	0%	27% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approx 40% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). The remaining approx 60% is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.
5FI019	Land to the rear of 267 and 273 Finchampstead Road	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site is designated as part of a Green Wedge in the adopted Finchampstead Neighbourhood Plan and the proposed

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
							development is likely to conflict with the purpose of this designation. • Woodland TPO covering the majority of the site which would inhibit development.
5FI021	Land to the rear of 76 and 80a Reading Road	FZ1	0%	0%	Approximately 85% of the a site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.
5FI027	Land lying to the rear of 115-137 Nash Grove Lane	FZ1	0%	0%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Poor sustainability in terms of access to services and facilities. • Issues regarding how the site might be configured for promoted Gypsy and Traveller use without unacceptably impacting key characteristics and neighbouring uses.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5FI030	Bluebell Farm, Commonfield Lane	FZ1	0%	0%	10% of the site is at risk of surface water flooding in the 1 in 1000 year event. >99% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface) with the remainder being within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 42% of the site is at risk from reservoir flooding in the wet day event and 13% in the dry day event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.
5FI038	Land at Finchampstead Road, Wokingham	FZ1	0%	0%	24% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5FI041	Land west of Finchampstead Road	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site is designated as part of a Green Wedge in the adopted Finchampstead Neighbourhood Plan and the proposed development is likely to conflict with the purpose of this designation. • TPOs covering the site which would inhibit development.
5FI054	Land at Blackcroft Farm, Farley Hill	FZ1	0%	0%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	Employment use: • Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Landscape sensitivites.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU004	Land at Broadcommon Road	FZ1	0%	0%	10% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). A Main river adjoins and partly covers the site.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by. • Landscape sensitivities.
5HU005	Land at the Phoenix, Nelson's Lane	FZ1	0%	0%	35% of the site is at risk of surface water flooding in the 1 in 1000 year event. Main River partly covers the site.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities
5HU006	Land on the north side of Orchard Road	FZ1	0%	0%	100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 21% of the site is highlighted on the Historic Flood Map.	Sequential test required	• Poor sustainability in terms of access to services and facilities. • Potential harm to a number of designated and non-designated heritage assets close by

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU008	Land off Lodge Road	FZ1	0%	0%	55% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). A Main river adjoins and partly covers the site.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by. • An appeal related to the promoted development was dismissed in January 2020.
5HU016	Land on the east side of Lodge Road	FZ1	0%	0%	100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 28% of the site is highlighted on the Historic Flood Map. A Main river adjoins and partly covers the site.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by. • An application proposing large scale residential development was dismissed at appeal in March 2023.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU025	Hedgerley Stables	FZ1	0%	0%	47% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.
5HU026	Hedgerley Stables	FZ1	0%	0%	34% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.
5HU027	Walden Acres	FZ1	0%	0%	19% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approx 85% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). A Main river partly covers the site.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU031	Land south-west Broadwater Lane	FZ1	0%	0%	100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by.
5HU052	Land at the rear of Vine cottage	FZ1	0%	0%	19% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Sequential test required	• Poor sustainability in terms of access to services and facilities. • Site comprises the curtilage of Grade II Listed Building - development would result in harm to a designated heritage asset and its setting. • Potential loss of a proposed Local Wildlife Site
5HU054	Poppies Farm	FZ1	0%	0%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SO003	Land north of Thames Street	FZ1	0%	0%	Approximately 77% of the a site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Landscape sensitivities. • Site within the Conservation Area (CA) and the site's openness recognised for its contribution to the CA.
5SO004	Land west of Milestone Avenue	FZ1	0%	0%	100% of the a site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Loss of BMV agricultural land. • Landscape sensitivities.
5SW002	Land at Basingstoke Road	FZ1	0%	0%	11% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SW011	Land at Bull Lane	FZ1	0%	0%	1% of the site is highlighted on the Historic Flood Map.	Sequential test required	• Poor sustainability in terms of access to services and facilities. • Landscape sensitivities. • Potential loss of BMV agricultural land.
5SW020	Land north of Part Lane, Riseley	FZ1	0%	0%	15% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Landscape sensitivities. • Potential loss of BMV agricultural land. • Potential harm to adjacent designated heritage assets. • TPO woodland and TPO trees on site which are likely to affect suitable access.
5TW012	Loddon Nursery	FZ1	0%	0%	100% of the a site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5TW013	Land opposite 136 - 144 Wargrave Road	FZ1	0%	0%	100% of the a site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.
5WA002	Hare Hatch Sheeplands	FZ1	0%	0%	22% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.
5WA003	Primrose Nursery, London Road	FZ1	0%	0%	80% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WA005, 5WA010	Land west of Wargrave Road and north of the A4 New Bath Road / Sheeplands Farm, New Bath Road	FZ1	0%	0%	Approximately 94% of the a site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Loss of BMV agricultural land. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.
5WA007	Primrose Nursery, London Road	FZ1	0%	0%	80% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.
5WA008	Hare hatch Garden Centre, Floral Mile, hare hatch.	FZ1	0%	0%	18% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WI007	Home Farm, Bearwood Road	FZ1	0%	0%	15% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character, including the potential to cause coalescence between settlements • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5WK037	Land east of Finchampstead Road	FZ1	0%	0%	>99% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Likely to result in significant and severe impacts on the local highway network, resulting in highway safety concerns, as per dismissed appeal relating to the promoted development in August 2020. • Potential loss of BMV agricultural land. • Landscape sensitivities.
5WK055	Rubra I, Rubra II and Alba House, Mulberry Business Park, Fishponds Lane, Wokingham	FZ1	0%	0%	32% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	• Whilst the site provides an opportunity for development which broadly conforms to the existing settlement form and landscape character, overall it is considered unsuitable due to the loss of employment floorspace in and area designated for employment use and an unsuitable lower quality environment.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WW001	Land between Pinewood Villas and St Michael's Cottages, Old Wokingham Road	FZ1	0%	0%	19% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approximately 95% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • The whole site comprises woodland, all of which is covered by a woodland TPO. The loss of which would be harmful to character and biodiversity. • Landscape sensitivities.
5WW002	Pinewood, Nine Mile Ride	FZ1	0%	0%	33% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of TPO trees which contribute to the strong wooded character of the area. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WW011	Heathlands Garden Centre, Heathlands	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site comprises, in part, allotments the loss of which would need to be compensated elsewhere.
5WW014	Land at Heathlands, Nine Mile Ride	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.
5WW021	Land adjacent to St Sebastians Memorial hall	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Comparatively poor sustainability in terms of access to services and facilities. • Potential loss of TPO trees which contribute to the strong wooded character of the area. • Landscape sensitivities.

Site	**Address**	**Flood Zones**	**Flood Zone 2**	**FZ 3 + Higher Central CC**	**Risk of flooding from other sources**	**Conclusion**	**Summary of reasons for not allocating the site**
5WW028	Land at Brookfield Farm	FZ1	0%	0%	Approximately 37% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Lack of sustainable access to workforce. • Landscape sensitivities.

Table 2a: Sites in Flood Zone 2 (not immediately passed the sequential test), that are proposed for allocation.

3.10 A minimum 4,639 dwellings new dwellings need to be delivered within the LPU to the 31 March 2040. Sites which immediately pass the Sequential Test (i.e. in FZ1 and at low risk of all other sources of flooding) and those which have passed a more detailed Sequential Test (and where relevant, Exception Test) following more detailed consideration are shown to be able to accommodate 906 dwellings (Table 1a,1c, and 1c(i)). The remaining sites which are located within FZ1 but which do not immediately pass the Sequential Test (Table 1d) are not considered to be suitable for development due to other planning constraints, or their deliverability is uncertain at this stage. After these sites have been considered, there is a remaining need for at least 3,733 dwellings. It is therefore necessary to turn to sites within FZ2.

3.11 There is a need for a minimum 86 new Gypsy and Traveller pitches to be delivered within the local plan period. Sites for this use which immediately pass the Sequential Test (i.e. in FZ1 and at low risk of all other sources of flooding) have been considered and can accommodate 17 pitches (Table 1a). Those which have passed a more detailed Sequential Test (and where relevant, Exception Test) following more detailed consideration are shown to be able to accommodate 28 pitches. After these sites have been considered, there remains a need for 41 pitches.

5BA035 – Mortimer Lodge Farm and Brook Farm
SEQUENTIAL TEST
What is the flood risk?
<u>Summary based on available data from Level 1 Strategic Flood Risk Assessment (SFRA):</u> • Fluvial flood risk: Flood Zone 2 (17%); and Flood Zone 1 (83%) • Surface water flooding: 31% of the site is as risk of surface water flooding in the 1 in 1000 year event; 11% in the 1 in 100 year event; and 7% in the 1 in 30 year event. • Groundwater flooding: Low risk • Historic flooding: None recorded

• Reservoir flooding: No. • Main Rivers present: No, but an Ordinary Watercourse runs through the site
What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for Suitable Alternative Natural Greenspace (SANG). SANG is water-compatible land use.
What is the need for development?
8ha of SANG land is required per 1,000 new occupants within the 400m – 5km zone of the Thames Basin Heaths Special Protection Area (TBH SPA). The proposals would comprise strategic SANG to mitigate most impacts of the development proposed in the local plan, except for those strategic scale sites which will be providing their own on site SANG.
Potential alternative sites at lower risk of flooding to meet the need:
Given the proposed allocation relates to a water compatible use, there is no requirement for sites of lower flood risk to be considered. Notwithstanding, the site is located within 5km of the TBH SPA, and therefore would allow for the direct provision of SANG within the zone where it is needed for mitigation purposes. The proposed site would also form a significant extension to an existing successful SANG, to provide improved and expanded provision in the area.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
N/A – given the proposed use would not involve built development and the use is water compatible.
Suitability of development on site:
Part of the site is currently in FZ3 where water compatible development, as proposed, is suitable.
Conclusion:

The Sequential Test is satisfied.
EXCEPTION TEST
The Exception Test is not required for the proposed development

5SH025 – Land north of Arborfield Road, Shinfield
SEQUENTIAL TEST
What is the flood risk?
<u>Summary based on Level 1 Strategic Flood Risk Assessment (SFRA)[14]:</u> • Fluvial flood risk: Flood Zone 2 (21%); and Flood Zone 1 (79%) • Surface water flooding: low risk (7% of the site is as risk of surface water flooding in the 1 in 1000 year event; 1% in the 1 in 100 year event; and <1% in the 1 in 30 year event. • Groundwater flooding: Low risk • Historic flooding: 17% of the site is highlighted on the Historic Flood Map • Reservoir flooding: 19% of the site is at risk from reservoir flooding in the wet day event. • Main Rivers present: No, but an Ordinary Watercourse runs through the site <u>Impacts of climate change:</u> • Flood Zone 3 + Higher Central Climate Change allowance covers 20% of the site
What are the proposed uses?

[14] NB – this assessment reflects the area of the site proposed for allocation rather than the promoted area assessed in the SFRA Level 1 Appendix G, the northern half of which has new been built out.

Proposed allocation in the Proposed Submission LPU for 191 dwellings. Residential is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period. A shortfall exists against minimum housing need of 3,733 dwellings.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
The site contains a moderate area of flood zone 2 along its eastern boundary as well as potential reservoir flooding, which broadly corresponds with this area of flood zone 2. Additionally, there are modest areas of surface water flooding in the south eastern, central and western parts of the site. Development can be steered away from these areas of flooding, and a considerable developable area would remain. Beyond the site, a considerable surface water flow path along Arborfield Road exists to the south and significant issues to the east of the site which may impede access. These would need to be considered further through a detailed site specific Flood Risk Assessment. Notwithstanding, there are likely to be opportunities to access the site through the development to the north, which has been designed to facilitate through access to the southern parcel. Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site: • That development is steered towards Flood Zone 1 and avoids areas potentially susceptible to reservoir flooding

- That surface water corridors within the site are left free of development.
- Demonstrate that safe access and egress is achievable during surface water flood events for both residents and emergency vehicles. This may include consideration of an access route through the development to the north.

The implementation of the above guidelines ensures that a sequential approach has been taken by reducing the developable area to avoid the areas at flood risk.

Proposed Submission LPU Policies FD1 'Development and flood risk (from all sources)' and FD2: 'Sustainable drainage' provide further control measures for development on sites where flood risk is present.

Suitability of development on site:

Part of the site is currently in FZ2, where residential development is considered acceptable if there are no reasonably available sites which are sequentially preferable.

Conclusion:

The development passes the sequential test for allocation for residential use, because there is a need to identify a sufficient supply of dwellings to meet needs.

This proposed allocation supports the need to identify a sufficient supply and mix of sites, including small and medium sites for sites to maintain a supply of housing. It also helps ensure allocations are distributed towards the more sustainable settlements in the borough. Only a modest part of the site is at risk of fluvial flooding (21% of the site is within FZ 2, 20% of the site is within Flood Zone 3 higher central climate change) and a sequential approach to development can be undertaken as demonstrated above.

EXCEPTION TEST

The Exception Test is not required under the NPPF, but it must be shown that the development will be safe for its lifetime and the risk can be managed through a sequential approach to design.

Risk can be managed through further detailed assessment (including monitoring) and a sequential design approach in line with the requirements set out in the development guidelines for the site, and flood risk policies in the plan to ensure development is safe for its lifetime.

5WK045 – Land at Bridge Retail Park

SEQUENTIAL TEST

What is the flood risk?

Summary based on Level 1 Strategic Flood Risk Assessment (SFRA):

- Fluvial flood risk: Flood Zone 2 (25%); and Flood Zone 1 (75%)
- Surface water flooding: low risk (36% of the site is as risk of surface water flooding in the 1 in 1000 year event; 6% in the 1 in 100 year event; and 2% in the 1 in 30 year event.
- Groundwater flooding: Low risk
- Historic flooding: 25% of the site is highlighted on the Historic Flood Map
- Reservoir flooding: 30% of the site is at risk from reservoir flooding in the wet day event and 7% in the dry day event.
- Main Rivers present: No, but the Emm Brook is located within 20m to the south of the site.

Impacts of climate change:

Increased storm intensities due to climate change may increase the extent, depth, velocity, hazard, and frequency of both fluvial and surface water flooding.

Fluvial

- The 1% AEP plus 25% climate change scenario (higher central allowance) was available to assess climate change from Emm Brook.

- In the 1% AEP plus 25% climate change event, the fluvial flood extent is not shown to affect the site. The fluvial flood risk is shown to remain mostly confined to the channel of Emm Brook to the south border of the site and shows the same extent as Flood Zone 3a (1% AEP event)

Surface water

- The latest climate change allowances have been applied to the RoFSW map to indicate the impact on pluvial flood risk.
- The surface water coverage in the 1% AEP event is confined to the southeast corner of the site. Whereas in the 1% AEP plus 40% climate change event there are additional surface water paths which form along the northern and western borders of the site channel by the existing buildings on the site. The surface water extent in the 1% AEP plus 40% climate change event is considerably larger than the 1% AEP event. In the 1% AEP plus 40% climate change event the surface water encroaches a lot further into the site from the southeast corner than in the 1% AEP event.

What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for 59 dwellings. Residential is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period. A shortfall exists against minimum housing need of 3,733 dwellings.

If need remains, are there opportunities to avoid, manage and mitigate flood risk?
The site is previously developed land, comprising two large retail units and associated carparking space. The southern part of the site contains an area of flood zone 2, covering a quarter of the whole site area. Potential for reservoir flooding in this southern part of the site slightly more extensive than flood zone 2 in the wet day event. In all modelled events, there is a risk of surface water flooding in the southern part of the site. In the 1 in 1000 event, additional areas of pooling are shown along the west and north boundaries of the site. Surface water flood risk on the site is shown to be affected by the existing development, with areas of pooling around the buildings in the north and south. It is likely to be possible to reduce site runoff by maximising the permeable surfaces on site using a combination of permeable surfacing and increasing the level of soft landscaping on site. The key messages from the Level 2 SFRA are that development on site may be able to proceed if: • Development is steered away from the southern area of the site as this is affected by fluvial flooding. • A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the areas identified to be at risk from both fluvial and surface water flooding. However, this may be constricted by the small size of the site. • Safe access and egress can be demonstrated in both the fluvial and surface water plus climate change events. This includes measures to reduce flood risk along these routes such as raising access, but not displacing floodwater elsewhere. • A site-specific FRA demonstrates that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties. • If any flood mitigation measures implemented are tested to check they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another). • The developer reviews the suitability of the Emm Brook model to inform this site and carries out any further modelling work deemed necessary.

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- That development is steered towards Flood Zone 1 and avoids areas potentially susceptible to reservoir and surface water flooding.
- That rainwater harvesting techniques are incorporated into site design.
- Demonstrate that safe access and egress is achievable during surface water flood events for both residents and emergency vehicles.

The implementation of the above guidelines ensures that a sequential approach has been taken by reducing the developable area to avoid the areas at flood risk.

Proposed Submission LPU Policies FD1 'Development and flood risk (from all sources)' and FD2: 'Sustainable drainage' provide further control measures for development on sites where flood risk is present.

Suitability of development on site:

Part of the site is currently in FZ2, where residential development is considered acceptable if there are no reasonably available sites which are sequentially preferable.

Conclusion:

The site passes the sequential test for allocation for residential use, because there is a need to identify a sufficient supply of dwellings to meet needs.

This proposed allocation supports the need to identify a sufficient supply and mix of sites, including small and medium sites, for sites to maintain a supply of housing. It also helps ensure allocations are distributed towards the more sustainable settlements in the borough. Whilst the site is subject to flood risk from multiple sources, development would enable the redevelopment of previously developed land with associated opportunities for flood betterment compared to the existing use. A sequential approach to development can be taken, so that development is located outside of FZ 2.

EXCEPTION TEST
The exception test is not required on the basis of fluvial flood risk, given 'more vulnerable' development is acceptable in Flood Zone 2. However, the Level 2 SFRA recommends that the exception test is required for this site because parts of the site are at a significant risk from surface water flooding.
<u>Does the development provide wider sustainability benefits to the community that outweigh flood risk?</u> The site has been subject to GIS analysis in the Sustainability Appraisal where it scored positively for a wide range of indicators. The site comprises previously developed land, with large areas of hard standing for the two retail units on site. Development would provide opportunities for flood betterment at the site, including opportunities to incorporate source control techniques such as green roofs, permeable surfaces and increased landscaping. The site is located within the development limits of the most sustainable settlement in the borough, within easy walking distance of a wide range of services and facilities to meet daily needs. The site also has easy access to a range of sustainable transport modes, and so development of the site provides a genuine opportunity to contribute towards climate change ambitions of reducing car usage as compared to other available sites. <u>Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?</u> The Level 2 SFRA provides the following guidance for site design and making development safe: • The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures

can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).

- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates are as close as possible to pre-development greenfield rates.
- Development should be steered outside of the appropriate 1% AEP plus appropriate allowance for climate change flood extent (plus an additional buffer where appropriate).
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.
- Opportunities should be explored at the earliest possible stage to reduce flood risk (from all sources) on and off the site.

Residential development is a 'more vulnerable' use. A sequential approach has been taken to the site, including by requiring development to be guided towards Flood Zone 1, which comprises 75% of the site, outside of Flood Zones 2. The L2 SFRA sets out measures within the 'Requirements and guidance for site specific Flood Risk Assessment' section for the site, as replicated above. These must be implemented to ensure that development will be safe for its lifetime.

Additionally, the key messages from the Level 2 SFRA are that development on site may be able to proceed if those key messages are adhered to (see above).

Conclusion

The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

Table 2b: Sites in Flood Zone 2 (not immediately passed the sequential test), that are not proposed for allocation.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5FI047	Land at Longwater Road	FZ1 FZ2	<1%	0%	14% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approx 67% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site lies within the Blackwater Valley BOA. • Potential loss of BMV agricultural land. • Site covered by an area TPO which would inhibit development.
5HU055	Wind in the Willows (Land adjacent to Cartref Farm)	FZ1 FZ2	62%	6%	100% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is highlighted on the Historic Flood Map. A Main river bounds and partly covers the site.	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities.

5WK038	Woodcray Manor, Finchampstead Road	FZ1 FZ2	<1%	0%	12% of the site is at risk of surface water flooding in the 1 in 1000 year event.>99% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Landscape sensitivities. • Site partly located within the Thames Basin BOA. • TPO trees located on boundary of site which would inhibit appropriate access.

Table 3a: Sites in Flood Zone 3 (not immediately passed the sequential test), that are proposed for allocation

3.12 A minimum 4,639 additional new dwellings need to be delivered within the LPU to the 31 March 2040. Sites within FZ1 and FZ2 are shown to be able to accommodate 1,156 dwellings (Table 1a, 1c and 2a). The remaining sites which are located within FZ1 or 2 are not considered to be suitable for development due to other planning constraints, or their deliverability is uncertain at this stage. After these sites have been considered, there is a remaining need for at least 3,483 dwellings. It is therefore necessary to turn to sites within FZ3.

3.13 None of the sites within FZ2 are proposed for Gypsy and Traveller pitches, and so there remains a need for 41 pitches as set out at paragraph 3.11.

5AR011, 5AR014, 5AR015, 5AR025, 5AR029, 5AR030, 5AR032, 5SH049, 5WI001, 5WI002, 5WI015, 5WI018: Loddon Valley Garden Village promotion
SEQUENTIAL TEST
What is the flood risk?

Summary based on Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA):

- Fluvial flood risk: Flood Zone 3b (29%); Flood Zone 3a (32%); Flood Zone 2 (35%); and Flood Zone 1 (65%)
- Surface water flooding: 29% of the site at risk of surface water flooding in the 1 in 1000 year event; 11% in the 1 in 100 year event; and 6% in the 1 in 30 year event.
- Groundwater flooding: Low risk.
- Historic flooding: 32% of the site is highlighted on the Historic Flood Map.
- Reservoir flooding: 43% of the site is at risk from reservoir flooding in the wet day event and 17% in the dry day event.
- Main Rivers present: The River Loddon and the Barkham Brook both run through the site.

Impacts of climate change identified in the Level 2 SFRA:

Increased storm intensities due to climate change may increase the extent, depth, velocity, hazard, and frequency of both fluvial and surface water flooding.

Fluvial

- Flood Zone 3 + Higher Central Climate Change allowance covers 33% of the site
- The central (1% AEP plus 14% event) and the higher central (1% AEP plus 23% event) uplifts have been used to assess the impacts of climate change at this site.
- Detailed hydraulic modelling of the River Loddon shows the central climate change extent bisecting the site, flowing from south-west to north-east. The modelled extents measures 891m, at the southern border of the site, and 636m at the northern border.
- The River Loddon is most sensitive to climate change around the M4 raised motorway, with extents increasing by up to 75m to the west and 25m to the east in the higher central climate change event.

Surface Water

- The latest climate change allowances have been applied to the RoFSW map to indicate the impact on surface water flood risk. The River Loddon and Barkham Brook channel surface water through the areas of lower topography, as do the smaller field drainage features.
- Where the River Loddon splits into three bands to the south of the site, surface water extents in the south measure 30m on the western path through Shinfield Grange Conference Centre and Shinfield Studios, 90m on the central path following small unnamed watercourses into The Swamp and other waterbodies, and 106m on the eastern path following the River Loddon.
- Towards the north of the site, where surface water is channelled by the lower topography of the River Loddon, extents measure up to 188m wide. Additionally, ponding on 240m occurs to the west of the Loddon on an area of green space.
- This site is extremely sensitive to climate change in the 1% AEP plus 40% climate change event, particularly in the south of the site, where extents increase by up to 140m.

What are the proposed uses?

Proposed allocation in the Proposed Submission LPU for a sustainable mixed use settlement based on Garden Village principles. Development to comprise: 3,930 dwellings (of which 2,700 are deliverable within the plan period); 20 Gypsy and Traveller pitches; around 100,000m^2 research and development floorspace or equivalent trip generating activity within use class E(g); two three-form entry primary schools; one eight-form entry secondary school; one district centre providing a range of services to include retail, leisure, employment, cultural, and health uses; open space including a multifunctional country park.

Gypsy and Traveller pitches are a highly vulnerable use. Residential and non-residential uses for educational establishments are more vulnerable uses. Economic uses are less vulnerable uses and the open spaces is a water-compatible use.

What is the need for development?

Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040. Gypsy and Traveller need: A minimum 86 new pitches need to be delivered from 1 Apil 2023 to the 31 March 2040. Employment need: a minimum 56,000sqm floorspace across office and industrial from 1 April 2023 to 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period (including 45 Gypsy and Traveller pitches). Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings (including 45 Gypsy and Traveller pitches) in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings and a shortfall of 41 Gypsy and Traveller pitches. The Garden Village allocation helps to provide a sufficient supply of homes to meet identified needs. While moderate areas of the site are covered by Flood Zones 2 and 3, and Flood Zone 3 plus higher central climate change allowance, given the site's very large scale, significant areas are within Flood Zone 1. The area in Flood Zone 1 is capable of accommodating the vast majority of the proposed development (with the exception of modest areas of employment use in Flood Zone 2, where it is acceptable as a less vulnerable use) at a density that ensures high quality design and placemaking. Consequently, a sequential approach to development can be undertaken as demonstrated below. The inclusion of land within the site boundary within Flood Zones 2 and 3 provides opportunities for significant biodiversity net gain through the site, as well as the delivery of a large country park which would provide strategic social and environmental benefits. The nature of the country park around the River Loddon provides opportunities for localised flood betterment downstream, which would not otherwise be possible. Around half of the site is located within an existing Biodiversity Opportunity Area (BOA) where new habitats can be created and restored. Further, the inclusion of land within the site within Flood Zone 2 and 3 allows for the delivery of essential supporting infrastructure, which might otherwise be more difficult to deliver.

If need remains, are there opportunities to avoid, manage and mitigate flood risk?
The area at risk of fluvial and surface water flooding is largely through the centre of the site, channelled by the lower topography of the River Loddon, which flows from south-west to north-east through the site. Fluvial and surface water flood risk is also present around the Barkham Brook which flows south-east to north-west, where it discharges into the River Loddon. Additional surface water channels are also present outside of these main rivers, largely corresponding with drainage features and other unnamed watercourses within the site, flowing towards areas of lower topography. Areas of potential groundwater flood risk are located in the north-east, north central, and west parts of the site, largely where no development is proposed. There are a number reservoirs which are channelled by the River Loddon in the wet day flood scenario and reduced number by the Barkham Brook. The extent of consequences of a breach in the wet day event are greater than Flood Zone 2. A sequential approach has been taken through the masterplanning of the site to avoid the areas at of higher flood risk. No development with a classification of more vulnerable is proposed within Flood Zone 2. The Level 2 SFRA provides guidance on the requirements for a site specific Flood Risk Assessment. The key messages from the Level 2 SFRA are that development on site is likely to be able to proceed if: • The area of the site located in Flood Zone 3a and 3b, immediately surrounding the River Loddon and Barkham Brook remains undeveloped. • Development is steered away from surface water flow paths, particularly towards the south and south-west of the site. A carefully considered and integrated flood resilient and sustainable drainage design is put forward, to carefully consider, manage and mitigate existing flood risk both to and from the site. • Safe access and egress can be demonstrated in the 1% AEP plus climate change surface water and fluvial events. This includes measures to reduce flood risk along these routes such as raising access, but not displacing floodwater elsewhere. At present, safe access and egress cannot be demonstrated in the 1% AEP plus 40% climate change surface water event. Additionally, safe access and egress can only be demonstrated in the 1%

AEP plus 23% climate change fluvial event when accessing the site from the north via Shinfield Eastern Relief Road, and from the South via Mole Road.

- A site-specific FRA demonstrates that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties.
- If flood mitigation measures are implemented then they are tested to check that they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another).

It is noted that the strategic policy requirement for this site to provide Gypsy and Traveller pitches has not been reflected in the SFRA, given the promoted uses for the site did not include pitches. Gypsy and Traveller pitches are a highly vulnerable use.

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- To ensure new buildings (except for compatible uses) are located, wherever possible, outside of areas of higher flood risk, by placing the most vulnerable development in the lowest areas of flood risk.
- Create a continuous high-quality, safe, attractive, accessible and multifunctional green and blue infrastructure network designed and planned in from the outset. The new garden village will be structured around a coordinated and comprehensive landscape-led approach drawing on the recreational and ecological opportunities of the River Loddon and Barkham Brook and their tributaries by utilising their role and function in natural flood management and biodiversity enhancement; and the landscape attributes and characteristics of the River Loddon Valued Landscape and Barkham and Bearwood Valued Landscape. Accessibility to and along watercourses should be increased as part of the provision of continuous, high-quality and attractive and accessible open space and ecological networks, where possible, linking to those beyond the garden village.
- Address the potential changes associated with climate change and flood risk, providing safe access and egress, taking account potential increases in severity and frequency of flooding, and ensure buildings and homes are designed to be safe for the intended lifetime. A comprehensive and integrated site-wide sustainable drainage network must be provided that makes use of the existing topography and natural features of the site. All

opportunities should be further explored to achieve flood betterment, reducing risk within and beyond the garden village.

The implementation of the above guidelines ensures that a sequential approach has been taken by reducing the developable area to avoid the areas at flood risk.

Proposed Submission LPU Policies FD1 'Development and flood risk (from all sources)' and FD2: 'Sustainable drainage' provide further control measures for development on sites where flood risk is present.

Suitability of development on site:

Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable and where Gypsy and Traveller development would not be suitable.

Conclusion:

The development passes the sequential test for allocation because there is a need to identify a sufficient supply of dwellings and employment floorspace to meet needs. In line with the preferred spatial strategy, a strategic site is required to help meet development needs.

Given the scale of the site, a significant area of land is located within FZ1 and areas with low risk of flooding, and this area is capable of accommodating the proposed quantum of development. The Proposed-Submission LPU requires development to both reduce and minimise flood risk on site; in particular by sequentially locating development within the site. There are also opportunities to manage flood risk at the site, and provide localised betterment downstream.

EXCEPTION TEST

Part of the site is currently in FZ3, where an Exception Test would be required for more vulnerable development to be considered suitable and where highly vulnerable (i.e. Gypsy and Traveller) development would not be suitable.

<u>Does the development provide wider sustainability benefits to the community that outweigh flood risk?</u>

The development has been appraised within the SA. It scored particularly positively in terms of the following objectives, which are defined by the SA as follows:

- Accessibility – improve accessibility to services, amenities and facilities in particular by safe walking and cycling routes; raise educational attainment, skills and training opportunities
- Economy – ensure high and stable levels of employment; encourage 'smart' economic growth; maintain a buoyant and competitive economy with a range of jobs without adversely affecting the quality of life
- Transport - Reduce road congestion on the local and strategic road network (SRN), and minimise air pollution and greenhouse gas emissions from transport, by improving carefully locating new development, minimising the need to travel and supporting 'sustainable transport' modes including safe walking and cycling routes and public transport
- Biodiversity - Conserve and enhance biodiversity, including wildlife and river corridors and networks and to maximise opportunities for building in beneficial features for biodiversity including limiting the impact of climate change.

The scale of the site is such that it will be a holistically planned, well designed, and sustainable new community. There will be a comprehensive package of infrastructure, including services and facilities (such as schools, shops, health) that future residents will need in their day-to-day lives. It will provide homes in proximity to jobs, with the location incorporating the existing Thames Valley Science and Innovation Park, a location which includes a mix of science and technology, film studios, educational and health uses. In providing new homes in proximity to key job locations, it is not assumed that all residents would work in the immediate area, but the approach provides a clear opportunity to reduce travel compared to other approaches. Significant employment is also planned as part of the development, providing economic sustainability benefits and further potential for trip containment within the development.

An integral element of the garden village is the creation of a country park along the River Loddon Valley, an area currently without public access. This will facilitate public access along the river corridor and to open space in the wider area. The river corridor provides a significant opportunity for comprehensive habitat management, restoration and enhancement, improving biodiversity.

The site contributes towards providing housing through strategic, infrastructure rich development, which reflects preferences expressed on the approach to growth through Regulation 18 consultations. The development would provide a greater level of infrastructure, and performs well in terms of sustainability objectives in the Sustainability Appraisal.

The SFRA identifies 'Opportunities for wider sustainability benefits and integrated flood risk management. This identifies a number of opportunities, which include: "*Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity, and biodiversity. This could include a blue-green corridor along the River Loddon and Barkham Brook and around areas of surface water ponding. This could provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be discussed with relevant stakeholders (Local Planning Authority, Lead Local Flood Authority, and Environment Agency) at an early stage to understand possible constraints.*"

Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates are as close as possible to pre-development greenfield rates.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.

- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.
- Opportunities should be explored at the earliest possible stage to reduce flood risk (from all sources) on and off the site.

Residential development is a 'more vulnerable' use, and acceptable in Flood Zone 1 and 2 without the Exception Test being required. Gypsy and Traveller development is 'highly vulnerable' and only acceptable in Flood Zone 1 without the Exception Test being required. The indicative developable residential area, and associated community facilities (such as schools, shops, health uses), variously comprising 'more vulnerable' or 'less vulnerable' uses, is located within Flood Zone 1, outside of Flood Zones 2 and 3.

Employment development is a 'less vulnerable' use. The majority of the developable area for this use is within Flood Zone 1 with a modest amount in FZ2 where 'less vulnerable' uses are acceptable in accordance national policy and guidance without the need for the exception test. Essential road infrastructure is proposed to cross the River Loddon and associated flood plain to link the site internally and with Lower Earley Way to the north[15]. The proposed road infrastructure is likely to have flood betterment impacts downstream by allowing water to be held back.

A sequential approach has been taken, including by reducing the developable area to avoid the areas at higher risk of flooding. The L2 SFRA sets out measures within the 'Requirements and guidance for site specific Flood Risk Assessment' section for the site, including as replicated above. These must be implemented to ensure that development will be safe for its lifetime.

The key messages from the Level 2 SFRA are that development on site is likely to be able to proceed (see above).

[15] See Duty to Cooperate Statement detailing engagement on this matter with the Environment Agency: ADD LINK

This site has unique opportunities for flood betterment, given the delivery of a regional scale country park. There is a policy requirement to consider and take opportunities as appropriate to improve the management of flood risk and reduce the risk of flooding to areas beyond the garden village.

Conclusion

The development has been demonstrated to pass the exception test for allocation for mixed use garden village as it offers notable wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

5BA010 – Barkham Square

SEQUENTIAL TEST

What is the flood risk?

Summary based on Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA):

- Fluvial flood risk: Flood Zone 3b (2%); Flood Zone 3a (2%); Flood Zone 2 (6%); and Flood Zone 1 (94%)
- Surface water flooding: 12% of the site at risk of surface water flooding in the 1 in 1000 year event; 5% in the 1 in 100 year event; and 3% in the 1 in 30 year event.
- Groundwater flooding: low risk
- Historic flooding: the site is not highlighted on the Historic Flood Map.
- Reservoir flooding: 8% of the site is at risk from reservoir flooding in the wet day event and 5% in the dry day event.
- Main Rivers present: None, Barkham Brook Ordinary Watercourse bisects the site flowing broadly from south to north.

Impacts of climate change identified in the Level 2 SFRA:

Increased storm intensities due to climate change may increase the extent, depth, velocity, hazard, and frequency of both fluvial and surface water flooding.

Fluvial

- In the absence of detailed modelling, the Flood Map for Planning Flood Zone 2 can be used as an indicative 1% AEP plus climate change flood extent. Flood Zone 2 shows fluvial flood risk bisecting the centre of the site following Barkham Brook, which flows from south to north. Flood Zone 2 extends up to approximately 75m wide across the Brook.
- The flow path following Barkham Brook is very sensitive to climate change. In Flood Zone 2, the flow path following Barkham Brook extends over 1km further upstream than in Flood Zone 3a, and is particularly wider on the right bank, likely due to the surrounding topography.

Surface Water

- The latest climate change allowances have been applied to the RoFSW map to indicate the impact on pluvial flood risk.
- The immediate floodplain of Barkham Brook is at surface water flood risk at all available climate change return periods and mainly follows Barkham Brook, bisecting the site flowing south to north. In the 1% AEP plus 40% climate change event the flow path extends up to 75m wide across the Brook. Two small tributaries on the right bank approximately 15m wide also act as surface water flow paths.
- An additional 20m wide surface water flow path flows south-west to north-east through the north of the site, joining Barkham Brook downstream of the site.
- Although no additional surface water flow paths emerge in the 1%AEP plus climate change, the existing paths are quite sensitive. Along Barkham Brook, the paths extend by up to an additional 4 to 14m. Similarly, flow paths along the drain in the north of the site extend by up to 16m in the upstream.

What are the proposed uses?

Proposed allocation in the Proposed Submission LPU for 600 dwellings (including elderly accommodation and 3 Gypsy and Traveller pitches), and SANG. Gypsy and Traveller pitches are a highly vulnerable use. Residential (including elderly accommodation) is a more vulnerable use while SANG is a water compatible use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040. Gypsy and Traveller need: A minimum 86 new pitches need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period (including 45 Gypsy and Traveller pitches). Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings (including 45 Gypsy and Traveller pitches) in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings and a shortfall of 41 Gypsy and Traveller pitches.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
The area at risk of fluvial, surface water and reservoir is largely through the centre of the site, channelled by the Barkham Brook. Other minor areas of surface water flood risk extend into the western and eastern parts of the site in the 1 in 1000 year event. Only the western half of the site is proposed for development, with SANG to be located on the eastern half. Access will be from the north west from Langley Common Road, with connectivity to the south into the existing SDL – both of which would avoid areas of flood risk. The key messages from the Level 2 SFRA are that development is likely to be able to proceed if: • The area of the site located in Flood Zone 3a, immediately surrounding Barkham Brook, is left undeveloped.

- Development is steered away from the additional surface water flow path in the north-west of the site, and the small flow paths in the south-east of the site that join Barkham Brook and these flow paths be incorporated and considered within the development site.
- In the absence of detailed hydraulic modelling, development should not be placed within the fluvial flood extents.
- A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the area identified to be at risk of surface water flooding in the eastern part of the site.
- Safe access and egress can be demonstrated in the 1% AEP plus 40% climate change surface water event. This includes measures to reduce flood risk along these routes such as raising access, but not displacing floodwater elsewhere.
- A site-specific FRA demonstrates that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties.
- If flood mitigation measures are implemented then they are tested to check that they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another).

The Proposed Submission LPU proposes built development on the western part of the site only with no built development east of Barkham Brook. The eastern half will deliver SANG / open space.

Having considered the advice within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- Residential development to be contained on the western side of the Barkham Brook within defined development limits only and development to avoid FZ2 and area of potential reservoir flood risk.
- That surface water corridors are left free of development.

The implementation of the above guidelines ensures that a sequential approach has been taken by reducing the developable area to avoid the areas at flood risk.

Proposed Submission LPU Policies FD1 'Development and flood risk (from all sources)' and FD2: 'Sustainable drainage' provide further control measures for development on sites where flood risk is present.
Suitability of development on site:
Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable and where Gypsy and Traveller development would not be suitable.
Conclusion:
The development passes the sequential test for allocation for residential use, because there is a need to identify a sufficient supply of dwellings to meet needs. This proposed allocation supports the need to identify a sufficient supply and mix of sites. It also helps ensure development can come forward which broadly conforms with the existing spatial strategy of focussing the majority of growth at strategic development locations that are supported by appropriate infrastructure. Only a small part of the site is at risk of fluvial flooding (6% of the site is within Flood Zone 2, 2% within Flood Zones 3a and 3b, and 0% of the site is within Flood Zone 3 higher central climate change) and a sequential approach to development can be undertaken as demonstrated above.
EXCEPTION TEST
The Exception Test is required under the NPPF because 'More Vulnerable' development is proposed in a site that lies partly within Flood Zone 3a and where highly vulnerable (i.e. Gypsy and Traveller) development would not be suitable.
<u>Does the development provide wider sustainability benefits to the community that outweigh flood risk?</u> The site has been appraised within the SA as one of 9 potentially 'smaller strategic options' for growth. It was one of 3 of these 9 options that were progressed for further detailed consideration due to being a reasonable growth option. It

scored particularly positively in terms of the following objectives, when compared to other alternative 'smaller strategic' developments:

- Communities
- Historic Environment
- Housing
- Land soil and natural resources

The SFRA identifies 'Opportunities for wider sustainability benefits and integrated flood risk management. This identifies a number of opportunities, which include: "*Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity and biodiversity. This could include a blue-green corridor along Barkham Brook and around areas of surface water ponding. This could provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be discussed with relevant stakeholders (Local Planning Authority, Lead Local Flood Authority, and Environment Agency) at an early stage to understand possible constraints.*"

The southern boundary of the site mostly adjoins the existing settlement boundary of Arborfield Garrison SDL, with the remainder adjoining recent residential development. The SDL has facilities including a secondary and primary school, with a planned district centre which would meet daily needs. Whilst constraints are present, these are capable of being addressed within a development. The site contributes towards the spatial strategy of directing development towards the more sustainable settlements in the borough.

In addition, the proposal provides accommodation to assist with meeting the needs of an aging population, and therefore carries the potential for social sustainability benefits.

Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates are as close as possible to pre-development greenfield rates.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.
- Opportunities should be explored at the earliest possible stage to reduce flood risk (from all sources) on and off the site.
- A detailed hydraulic model of Barkham Brook may be required at FRA stage to accurately represent the risk from these watercourses.

Residential development is a 'more vulnerable' use. A sequential approach has been taken to the site, including by requiring development to be guided towards Flood Zone 1, which comprises 94% of the site, outside of Flood Zones 2 and 3. The L2 SFRA sets out measures within the 'Requirements and guidance for site specific Flood Risk Assessment' section for the site, including as replicated above. These must be implemented to ensure that development will be safe for its lifetime.

Additionally, the key messages from the Level 2 SFRA are that development on site is likely to be able to proceed (see above).

Conclusion

The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

5SH023 and 5SH027 – Land east and west of Hyde End Road

SEQUENTIAL TEST

What is the flood risk?

Summary based on Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA):

- Fluvial flood risk: Flood Zone 3b (1%); Flood Zone 3a (1%); Flood Zone 2 (3%); and Flood Zone 1 (97%)
- Surface water flooding: 24% of the site at risk of surface water flooding in the 1 in 1000 year event; 5% in the 1 in 100 year event; and 1% in the 1 in 30 year event.
- Groundwater flooding: 52% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).
- Historic flooding: 2% of the site is highlighted on the Historic Flood Map.
- Reservoir flooding: 6% of the site is at risk from reservoir flooding in the wet day event.
- Main Rivers present: None.

Impacts of climate change identified in the Level 2 SFRA:

Increased storm intensities due to climate change may increase the extent, depth, velocity, hazard, and frequency of both fluvial and surface water flooding.

Fluvial

- Flood Zone 3 + Higher Central Climate Change allowance covers 3% of the site
- 1% AEP plus 14% climate change uplift shows very little change in extent, with marginal increases onto the site.
- 1% AEP plus 14% climate change uplift shows increases in depth of around 0.2m at the south east area of the site.
- 1% AEP plus 14% climate change uplift shows no significant increase in velocity.
- 1% AEP plus 23% climate change uplift shows increases in extent, onto the site in the south-eastern corner.
- 1% AEP plus 14% climate change uplift shows increases in depth of around 0.3m at the southeast area of the site.
- 1% AEP plus 23% climate change uplift shows no significant increase in velocity of around 0.2m/s.
- There are no hazard grids available for either climate change uplift.

Surface Water

- 3.33% AEP plus 35% climate change uplift shows additional flooding in the far north corner to the far eastern corner on the far eastern side of the site and the northern corner of the western part of the site.
- 3.33% AEP plus 35% climate change uplift shows no significant increase in depth in previously inundated areas.
- 33% AEP plus 35% climate change uplift shows an increase of velocity from 0.25, to up to 0.5m/s2 in the south-eastern part of the site.
- 3.33% AEP plus 35% climate change uplift shows no significant increase in hazard.
- 1% AEP plus 40% climate change shows additional flooding in the northern part of the site, and there is pooling of surface water in the south-western area of the site, in addition to flooding in the southeastern corner of the site.
- 1% AEP plus 40% climate change uplift shows increases from 0.15m, to up to 0.3m in the north-eastern part of the site.
- 1% AEP plus 40% climate change uplift shows no significant increase in velocity.
- 1% AEP plus 40% climate change uplift for the hazard index shows increases from dangerous for some too dangerous for most.

What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for 175 dwellings. Residential is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period. Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
The site comprises two parcels of land to the west and east of Hyde End Road. The area at risk of fluvial and reservoir flooding is to the east of the eastern parcel of the site. This parcel would be accessed from Hyde End Road to the west and access to the western parcel would be unaffected by fluvial or reservoir flooding. Surface water flooding in the 1 in 1000 year event primarily covers the northern sections of both the western and eastern parcels. An additional modest area of the western parcel is covered, as well as small pockets on the eastern parcel. The development guidelines within the LPU specify that the surface water corridors within the site should be left free of development. Groundwater flooding is a risk across the site, with the eastern area being shown to have groundwater levels within 0.025m of the surface. In the western parcel and the western most parts of the eastern parcel groundwater levels are shown to be within 0.025 – 0.5m of the surface.

The key messages from the Level 2 SFRA are that development on site is likely to be able to proceed if:

- The area of the site located in Flood Zone 3b is left undeveloped.
- Mitigation measures are put in place due to the susceptibility of the site from groundwater flooding.
- Development is steered away from the western site and the most northerly part of the east site due to the risk of surface water flooding.
- A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the areas identified to be at risk of surface water flooding across the site.
- Safe access and egress can be demonstrated in the 1% AEP plus 40% climate change fluvial and 1% AEP plus 40% climate change surface water events.
- Any flood mitigation measures implemented are tested to check they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another).

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- That development be contained within Flood Zone 1 and avoids areas potentially susceptible to reservoir flooding
- That surface water corridors within the western and eastern parcels of the site are left free of development
- That appropriate groundwater monitoring is carried out over the winter months (1 October – 31 March) to inform site development and sewerage

The implementation of the above guidelines ensures that a sequential approach has been taken by reducing the developable area to avoid the areas at flood risk.

Proposed Submission LPU Policies FD1 ‘Development and flood risk (from all sources)’ and FD2: ‘Sustainable drainage’ provide further control measures for development on sites where flood risk is present.

Suitability of development on site:
Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable.
Conclusion:
The development passes the sequential test for allocation for residential use, because there is a need to identify a sufficient supply of dwellings to meet needs. This proposed allocation supports the need to identify a sufficient supply and mix of sites, including small and medium sites for sites to maintain a supply of housing. It also helps ensure allocations are distributed towards the more sustainable settlements in the borough. Only a small part of the site is at risk of fluvial flooding (3% of the site is within FZ 2, 1% within Flood Zones 3a and 3b, and 3% of the site is within Flood Zone 3 higher central climate change) and a sequential approach to development can be undertaken as demonstrated above.
EXCEPTION TEST
The Exception Test is required under the NPPF because 'More Vulnerable' development is proposed in a site that lies partly within Flood Zone 3a.
<u>Does the development provide wider sustainability benefits to the community that outweigh flood risk?</u> The site has been subject to GIS analysis in the Sustainability Appraisal where it scored positively for a range of indicators. The SFRA identifies 'Opportunities for wider sustainability benefits and integrated flood risk management. This identifies a number of opportunities, which include that: "*Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity and biodiversity. This could provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be*

discussed with relevant stakeholders (Local Planning Authority, Lead Local Flood Authority, and Environment Agency) at an early stage to understand possible constraints."

Both the eastern and western parts of the site partly adjoin and are partly located within the existing settlement boundary of Shinfield, which, within the district centre, has or is planned to have services and facilities to meet daily needs. Whilst constraints are present, these are considered capable of being addressed within a development. The site contributes towards the spatial strategy of directing development towards the more sustainable settlements in the borough.

<u>Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?</u>

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates are
- as close as possible to pre-development greenfield rates.
- Development should be steered away from the appropriate 1% AEP plus appropriate allowance for climate change flood extent.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.

- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.
- Opportunities should be explored at the earliest possible stage to reduce flood risk (from all sources) on and off the site.
- A detailed hydraulic model of the unnamed watercourses within and bordering the site may be required at FRA stage to accurately represent the risk from these watercourses.

Residential development is a 'more vulnerable' use. A sequential approach has been taken to the site, including by requiring development to be guided towards Flood Zone 1, which comprises 97% of the site, outside of Flood Zones 2 and 3. The L2 SFRA sets out measures within the 'Requirements and guidance for site specific Flood Risk Assessment' section for the site, as replicated above. These must be implemented to ensure that development will be safe for its lifetime.

Additionally, the key messages from the Level 2 SFRA are that development on site is likely to be able to proceed (see above).

Conclusion
The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

5TW005, 5TW009, 5TW010 – Land at Bridge Farm
SEQUENTIAL TEST
What is the flood risk?

Summary based on Level 1 Strategic Flood Risk Assessment (SFRA):

- Fluvial flood risk: Flood Zone 3b (23%); Flood Zone 3a (18%); Flood Zone 2 (25%); and Flood Zone 1 (75%)
- Surface water flooding: 11% of the site is as risk of surface water flooding in the 1 in 1000 year event; 5% in the 1 in 100 year event; and <1% in the 1 in 30 year event.
- Groundwater flooding: Approximately 19% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). The remaining approx 81% is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).
- Historic flooding: 15% of the site is highlighted on the Historic Flood Map.
- Reservoir flooding: 29% of the site is at risk from reservoir flooding in the wet day event.
- Main Rivers present: The River Loddon forms the western boundary of the site.

NB: Site approved for the proposed development, as supported by a site specific Flood Risk Assessment, prior to the Level 2 SFRA being produced.

What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for 200 dwellings. Residential is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period. Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings.

This proposed allocation benefits from outline planning permission for 200 dwellings (granted 5 July 2023, reference 212720). The principle of residential development has been established for the site.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
Yes – the approved outline application was accompanied by an FRA which confirms that all properties within the site will be located outside of the 1 in 1000-year plus climate change flood extent which is as shown on the submitted illustrative masterplan and illustrative land use plan, and all finished floor levels will be set 300mm above the maximum modelled flood level of 35.53m AOD. The Environment Agency raised no objection to the application, subject to appropriate conditions, noting that a sequential approach had been undertaken and confirming that the proposed development can be delivered within Flood Zone 1. Paragraph 94 – 105 of the planning committee report[16] for this application address Flooding and Drainage. Notwithstanding the permission that exists, having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site: • That development be contained within Flood Zone 1 and avoids areas potentially susceptible to reservoir flooding and surface water flooding • Groundwater monitoring is carried out in accordance with the Flood Risk Assessment (FRA) that supported outline consent 212720
Suitability of development on site:
Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable.
Conclusion:

[16] Available at: https://publicaccess.wokingham.gov.uk/PublicAccess_Live/Document/ViewDocument?id=30BF1B366F8A49F2A25472EFD4DDB279

The site has been found to be acceptable for development in principle through an outline planning permission. The proposed allocation is retained in the Proposed Submission LPU for completeness.
EXCEPTION TEST
The Exception Test would ordinarily be required under the NPPF because 'More Vulnerable' development is proposed in a site that lies partly within Flood Zone 3a. However, the proposed development was granted outline permission on 5 July 2023, which included a sites specific FRA, that has been reviewed and endorsed by the Environment Agency. The principle of development has been established. The Exception Test has therefore been satisfied.
Conclusion
The Exception Test has been satisfied.

5WI006 – Land off Poplar Lane and Watmore Lane, Winnersh
SEQUENTIAL TEST
What is the flood risk?
<u>Summary based on Level 1 Strategic Flood Risk Assessment (SFRA):</u> • Fluvial flood risk: Flood Zone 3b (3%); Flood Zone 3a (3%); Flood Zone 2 (3%); and Flood Zone 1 (97%) • Surface water flooding: 12% of the site is as risk of surface water flooding in the 1 in 1000 year event; 1% in the 1 in 100 year event; and <1% in the 1 in 30 year event. • Groundwater flooding: Approximately 43% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). • Historic flooding: 25% of the site is highlighted on the Historic Flood Map. • Reservoir flooding: 9% of the site is at risk from reservoir flooding in the wet day event and <1% in the dry day event.

- Main Rivers present: The Emm Brook forms the north eastern boundary of the site.

NB: Site was considered at Level 2 SFRA stage along with sites 5WI004 and 5WI010. Site 5WI010 was subsequently withdrawn from promotion and the remainer of site outside of 5WI006 has been knocked out of detailed HELAA assessment due largely comprising functional floodplain. The Level 2 SFRA outputs for this site are now superseded by the planning permission

What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for 111 dwellings. Residential is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period. Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings. This proposed allocation benefits from outline planning permission for up to 234, with no more than 111 dwellings to be delivered until a second vehicle and pedestrian access is secured (granted 6 March 2024, reference 230208). The principle of residential development has been established for the site.

If need remains, are there opportunities to avoid, manage and mitigate flood risk?
Yes – the approved outline application was accompanied by an FRA and surface water drainage strategy which confirms that all properties within the site will be located in Flood Zone 1. The Environment Agency did not comment on the application but raised no objection to a similar previous application at the site. Paragraph 99 – 104 of the officers report[17] for this application address Flooding and Drainage. Notwithstanding the permission that exists, having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site: • That development be contained within Flood Zone 1 and avoids areas potentially susceptible to reservoir flooding and surface water flooding • That appropriate groundwater monitoring is carried out over the winter months (1 October – 31 March) to inform site development and sewerage • Development to comply with the requirements of Policy FD3: River corridors and watercourses
Suitability of development on site:
Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable.
Conclusion:
The site has been found to be acceptable for development in principle through an outline planning permission. The proposed allocation is retained in the Proposed Submission LPU for completeness.

[17] Available at: https://publicaccess.wokingham.gov.uk/PublicAccess_Live/Document/ViewDocument?id=A7AD01EEE63D4C2297D154D816A40887

EXCEPTION TEST
The Exception Test would ordinarily be required under the NPPF because 'More Vulnerable' development is proposed in a site that lies partly within Flood Zone 3a. However, the proposed development was granted outline permission on 5 July 2023, which included a sites specific FRA, that has been reviewed and endorsed by the Council. The principle of development has been established. The Exception Test has therefore been satisfied.
Conclusion
The Exception Test has been satisfied.

5WI008 – Winnersh Plant Hire
SEQUENTIAL TEST
What is the flood risk?
<u>Summary based on Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA):</u> • Fluvial flood risk: Flood Zone 3b (0%); Flood Zone 3a (21%); Flood Zone 2 (73%); and Flood Zone 1 (27%) • Surface water flooding: 55% of the site at risk of surface water flooding in the 1 in 1000 year event; 13% in the 1 in 100 year event; and <1% in the 1 in 30 year event. • Groundwater flooding: 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface) • Historic flooding: 64% of the site is highlighted on the Historic Flood Map. • Reservoir flooding: 97% of the site is at risk from reservoir flooding in the wet day event. • Main Rivers present: None <u>Impacts of climate change identified in the Level 2 SFRA:</u>

Increased storm intensities due to climate change may increase the extent, depth, velocity, hazard, and frequency of both fluvial and surface water flooding.

Fluvial

- Flood Zone 3 + Higher Central Climate Change allowance covers 77% of the site
- Between the 1% AEP and 1% AEP plus 14% (central allowance) and 23% (higher central allowance) events there is a significant increase in fluvial flood risk across the site.
- The 1% AEP event only impacts the south and western border of the site but the 1% AEP plus 14% climate change extent also covers the north of the site. There is then a slightly further increase in extent for the 1% AEP plus 23% climate change event.
- This shows that fluvial flood risk across the site is highly sensitive to the effects of climate change.

Surface Water

- The latest climate change allowances have been applied to the RoFSW map to indicate the impact on pluvial flood risk.
- In the 1% AEP plus 40% climate change event, the extent of surface water ponding across the site is significantly larger than that of the 1% AEP event. Flood depths are below 0.6m and the velocity remains below 0.3m/s

What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for 60 dwellings. Residential is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have

been considered and shown to be able to provide 906 dwellings during the plan period. Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings.

If need remains, are there opportunities to avoid, manage and mitigate flood risk?

A sequential approach has been taken to reduce the developable area to avoid the areas of highest flood risk.

The key messages from the Level 2 SFA are that if development is to proceed, the following will need to be addressed:

- A carefully considered and integrated flood resilient and sustainable design is put forward. To ensure that the proposed development is safe from flooding for its lifetime.
- Safe access and egress will need to be demonstrated in the 1% AEP plus 40% climate change surface water event and 1% AEP plus climate change fluvial flood event. All surrounding roads in the vicinity of the site are inundated in the fluvial and surface water climate change events, so detailed modelling should be undertaken, and a site-specific flood risk assessment will need to assess the depth, velocity and hazard of surrounding roads to ensure safe access and egress can be achieved. Where alterations to the site are proposed in order to achieve safe access and egress, this will need to be demonstrated without displacing flood risk elsewhere.
- A site-specific FRA should demonstrate that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties.
- Surface water discharge rates should not exceed pre-development discharge rates for the site and should be designed to be as close to greenfield runoff rates as reasonably practical in consultation with the LLFA.
- Due to the significant areas of flooding both on and surrounding the site, betterment will need to be considered an incorporated into the site design to reduce the flood risk to the site and surrounding area.

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- No development to be located within Flood Zone 3a present on the site
- Blue roofs and rainwater re-harvesting should be incorporated into the design of dwellings on site
- That detailed modelling is undertaken to demonstrate the appropriate climate change flood outline and to ensure residential development is steered away from that area.
- Development to address the potential changes associated with climate change and be designed to be safe for the intended lifetime

The implementation of the above guidelines ensures that a sequential approach has been taken by reducing the developable area to avoid the areas at flood risk.

Proposed Submission LPU Policies FD1 'Development and flood risk (from all sources)' and FD2: 'Sustainable drainage' provide further control measures for development on sites where flood risk is present.

Suitability of development on site:

Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable.

Conclusion:

The development passes the sequential test for allocation for residential use, because there is a need to identify a sufficient supply of dwellings to meet needs.

This proposed allocation supports the need to identify a sufficient supply and mix of sites, including small and medium sites for sites to maintain a supply of housing. It also helps ensure allocations are distributed towards the more sustainable settlements in the borough. Whilst the site is subject to flood risk from multiple sources, development would enable the redevelopment of previously developed land with associated potential for flood betterment compared to the existing use. A sequential approach to development can be taken, so that development is located outside of FZ 3.

EXCEPTION TEST
The Exception Test is required under the NPPF because 'More Vulnerable' development is proposed in a site that lies partly within Flood Zone 3a.
<u>Does the development provide wider sustainability benefits to the community that outweigh flood risk?</u> The site has been subject to GIS analysis in the Sustainability Appraisal where it scored positively for a wide range of indicators. The site comprises previously developed land. Development has the potential to provide opportunities for flood betterment at the site, including opportunities to incorporate source control techniques such as green roofs, permeable surfaces and increased landscaping. The site is located within the development limits of one of the more sustainable settlements in the borough, with very good access to sustainable transport modes. <u>Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?</u> The Level 2 SFRA provides the following guidance for site design and making development safe: • The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG). • The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral

surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates areas close as possible to pre-development greenfield rates.

- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.

Residential development is a 'more vulnerable' use. A sequential approach has been taken to the site, including by requiring development to be guided outside of Flood Zone 3. The L2 SFRA sets out measures within the 'Requirements and guidance for site specific Flood Risk Assessment' section for the site, as replicated above. These must be implemented to ensure that development will be safe for its lifetime.

Development proposals at the site must address the potential changes associated with climate change and be designed to be safe for the intended lifetime. The provisions for safe access and egress must also address the potential increase in severity and frequency of flooding.

Conclusion
The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

5WK051 – Land east of Toutley Depot
SEQUENTIAL TEST
What is the flood risk?
Summary based on Level 1 Strategic Flood Risk Assessment (SFRA): • Fluvial flood risk: Flood Zone 3b (2%); Flood Zone 3a (2%); Flood Zone 2 (2%); and Flood Zone 1 (98%) • Surface water flooding: 27% of the site is as risk of surface water flooding in the 1 in 1000 year event; 13% in the 1 in 100 year event; and 6% in the 1 in 30 year event. • Groundwater flooding: Low risk • Historic flooding: 16% of the site is highlighted on the Historic Flood Map. • Reservoir flooding: 29% of the site is at risk from reservoir flooding in the wet day event. • Main Rivers present: No, but an Ordinary Watercourse (the Ashridge Stream adjoins the southern boundary of the site. *NB: Site approved for the proposed development, as supported by a site specific Flood Risk Assessment, prior to the Level 2 SFRA being produced.*
What are the proposed uses?
Proposed allocation in the Proposed Submission LPU for 130 dwellings plus a 70 bed care home. Residential (including care homes) is a more vulnerable use.
What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have

been considered and shown to be able to provide 906 dwellings during the plan period. Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings. This proposed allocation benefits from outline planning permission for 130 dwellings plus 70 bed care home (granted 19 December 2022, reference 211777). The principle of development has been established for the site.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
Yes – the approved outline application was accompanied by an FRA which confirms that all properties within the site will be located within Flood Zone 1 and also confirmed that there would be no net increase in surface water run off as a result of the development. Whilst some supporting infrastructure would be located within areas at risk of flooding, the Environment Agency raised no objection to the application, subject to appropriate conditions. Paragraph 66 – 70 of the planning committee report[18] for this application address Flooding and Drainage.
Suitability of development on site:
Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable.
Conclusion:
The site has been found to be acceptable for development in principle through an outline planning permission. The proposed allocation is retained in the Proposed Submission LPU for completeness.
EXCEPTION TEST

[18] Available at: https://publicaccess.wokingham.gov.uk/PublicAccess_Live/Document/ViewDocument?id=CC8F137B067C11EC9BA23024A97F8E42

The Exception Test would ordinarily be required under the NPPF because 'More Vulnerable' development is proposed in a site that lies partly within Flood Zone 3a. However, the proposed development was granted outline permission on 19 December 2022. The principle of development has been established. The Exception Test has therefore been satisfied.
Conclusion
The Exception Test has been satisfied.

5WW006 – Grays Farm
SEQUENTIAL TEST
What is the flood risk?
<u>Summary based on Level 1 Strategic Flood Risk Assessment (SFRA):</u> • Fluvial flood risk: Flood Zone 3b (4%); Flood Zone 3a (4%); Flood Zone 2 (5%); and Flood Zone 1 (95%) • Surface water flooding: 9% of the site is as risk of surface water flooding in the 1 in 1000 year event; 4% in the 1 in 100 year event; and 2% in the 1 in 30 year event. • Groundwater flooding: Low risk • Historic flooding: 13% of the site is highlighted on the Historic Flood Map. • Reservoir flooding: No. • Main Rivers present: No, but an Ordinary Watercourse (the Emm Brook) adjoins the eastern boundary of the site.
What are the proposed uses?

Proposed allocation in the Proposed Submission LPU for a sports hub as part of the South Wokingham Strategic Development Location. Outdoor sports and recreation (including essential facilities such as changing rooms) are water-compatible development.
What is the need for development?
Borough standards equate to 1.44 ha of outdoor sports facilities per 1,000 population.
Potential alternative sites at lower risk of flooding to meet the need:
Given the proposed allocation relates to a water compatible use, there is no requirement for sites of lower flood risk to be considered. Development for the proposed use would serve the planned South Wokingham Strategic Development Location as well as wider need arising from Wokingham town and beyond, in a location that is accessible to these populations.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
Changing rooms associated with the sports hub are considered water compatible in national policy, but a precautionary principle can be applied to steer any required built development away from areas of flood risk. Policy SS12 of the Proposed Submission LPU which allocates the site requires that the siting, form, design and landscaping of development "*Locates new buildings outside areas of flood risk, with development planned for sequentially, by placing the most vulnerable development in the lowest areas of flood risk*". A site specific FRA will be required to support a future application for the development of this site.
Suitability of development on site:
Part of the site is currently in FZ3, where water compatible development, as proposed, is suitable.
Conclusion:
The Sequential Test is satisfied.

EXCEPTION TEST
The Exception Test is not required for the proposed development

5WW017, 5WW026, 5WW030, 5WW031 – South Wokingham Strategic Development Location extension

SEQUENTIAL TEST

What is the flood risk?

Summary based on Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA) (including adjustments made to incorporate site (5WW031):

- Fluvial flood risk: Flood Zone 3b (4%); Flood Zone 3a (4%); Flood Zone 2 (5%); and Flood Zone 1 (95%)
- Surface water flooding: 19% of the site at risk of surface water flooding in the 1 in 1000 year event; 8% in the 1 in 100 year event; and 5% in the 1 in 30 year event.
- Groundwater flooding: majority of the site is at no risk of groundwater flooding based on JBA Groundwater map.
- Historic flooding: the site is not highlighted on the Historic Flood Map.
- Reservoir flooding: the site is not shown to be at risk of reservoir flooding.
- Main Rivers present: None. The Emm Brook ordinary watercourse runs through the southern part of the site and an unnamed water course joins the Emm Brook in the south east part of the site.

Impacts of climate change identified in the Level 2 SFRA:

Increased storm intensities due to climate change may increase the extent, depth, velocity, hazard, and frequency of both fluvial and surface water flooding.

Fluvial

- In the absence of detailed hydraulic modelling, the Environment Agency's Flood Map for Planning Flood Zone 2 has been used as a proxy to assess the potential impacts of climate change on the site.
- Flood Zone 2 shows a slightly larger extent than Flood Zone 3a along the southern border of the site showing the site has slight susceptibility to increased flood risk with climate change.

Surface Water

- The latest climate change allowances have been applied to the RoFSW map to indicate the impact on pluvial flood risk.
- Between the 3.3% AEP and 3.3% AEP plus 35% climate change scenarios, the main surface water risk remains in the same location channelled along Emm Brook flowing west along the south border of the site. Within the 3.3% AEP plus 35% climate change scenario, there are additional areas of surface water pooling within the site and the areas of pooling present in the 3.3% AEP scenario have increased in extent. The areas of surface water pooling located within the site near the southwest corner have increased in extent and joined the flow path along the south border in the 3.3% AEP scenario plus 35% climate change scenario.
- In the 3.3% AEP plus 35% climate change scenario, the maximum depths in the surface water flow path channelled along Emm Brook are 0.9m, with water velocities up to 1.66m/s.
- Between the 1% AEP and 1% AEP plus 40% climate change scenarios, the main surface water risk remains in the same location channelled along Emm Brook flowing west along the south border of the site. Within the 1% AEP plus 40% climate change scenario, there are additional areas of surface water pooling within the site and the areas of pooling present in the 1% AEP scenario have increased in extent.
- In the 1% AEP plus 40% climate change scenario the maximum flood depths in the surface water flow path channelled along Emm Brook are 1.3m, with water velocities up to 1.8m/s and a maximum hazard classification of 'Danger for all'.
- The increase in surface water flow path extents and the additional areas of surface water pooling suggest that the existing areas of surface water risk are sensitive to increases with climate change.

What are the proposed uses?

Proposed allocation in the Proposed Submission LPU for sustainable extension to the existing planned South Wokingham Strategic Development Location. Development will comprise around 1,100 dwellings; 5 Gypsy and Traveller pitches; a one-form entry primary school; one local centre providing a range of services and facilities; open space including SANG.

Gypsy and Traveller pitches are a highly vulnerable use. Residential and non-residential uses for educational establishments are more vulnerable uses. Shops and comparable services are a less vulnerable uses. Open spaces is a water-compatible use.

What is the need for development?
Housing need: A minimum 4,639 additional new dwellings need to be delivered from 1 Apil 2023 to the 31 March 2040. Gypsy and Traveller need: A minimum 86 new pitches need to be delivered from 1 Apil 2023 to the 31 March 2040.
Potential alternative sites at lower risk of flooding to meet the need:
For housing development, sites which immediately pass the Sequential Test (i.e. in FZ 1 and at low risk of all other sources of flooding) (Table 1a), and sites that are in FZ 1 but are at risk from other forms of flooding (Table 1c) have been considered and shown to be able to provide 906 dwellings during the plan period (including 45 Gypsy and Traveller pitches). Sites within FZ 2 have been considered, and are shown to be able to provide a further 250 dwellings. This equates to a total of 1,156 dwellings (including 45 Gypsy and Traveller pitches) in sequentially more preferable locations than this site. A shortfall exists against minimum housing need of 3,483 dwellings and a shortfall of 41 Gypsy and Traveller pitches.
If need remains, are there opportunities to avoid, manage and mitigate flood risk?
The area at risk of fluvial flooding is located around the Emm Brook which flows through the southern part of the site. Access is proposed from Old Wokingham Road to the east and Easthampstead Road to the west, and would therefore be unaffected by fluvial flooding. A small parcel of housing is proposed to the south of the Emm Brook with bridged access over the ordinary watercourse. Surface water flood risk largely corresponds with the watercourses present in the site, with other areas of pooling across the site. No other forms of flood risk affect the site. A sequential approach has been taken to the masterplanning of the site to avoid areas of fluvial and surface water flood risk, with an undeveloped buffer around the watercourses. The inclusion within the site boundary of areas at risk of

fluvial and surface water flood risk provides significant benefits for biodiversity, recreation, and natural flood management to be incorporated into the development proposals. The key messages from the Level 2 SFRA are that development on site is likely to be able to proceed if:

- Development is steered away from the south border of the site as this is affected by both fluvial flooding and surface water flooding.
- A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with development to be steered away from the areas identified to be at risk from both fluvial and surface water flooding, particularly along the southern border and south east corner of the site.
- Safe access and egress can be demonstrated in the 1% AEP plus 40% climate change surface water event. This includes measures to reduce flood risk along these routes such as raising access, but not displacing floodwater elsewhere. A detailed hydraulic model of Emm Brook along the southern border of the site and the unnamed watercourses within the site may be required at FRA stage to accurately represent the risk from these watercourses.
- A site-specific FRA demonstrates that the site is not at an increased risk of flooding in the future and that development of the site does not increase the risk of surface water flooding on the site and to neighbouring properties.
- If any flood mitigation measures implemented are tested to check they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage will be required in another).
- The developer reviews the suitability of the Emm Brook model to inform this site and carries out any further modelling work deemed necessary.

It is noted that the strategic policy requirement for this site to provide Gypsy and Traveller pitches has not been reflected in the SFRA, given the promoted uses for the site did not include pitches. Gypsy and Traveller pitches are a highly vulnerable use.

Having considered the advice contained within the SFRA, the following development guidelines are proposed in the LPU in relation to the site:

- To provide a continuous, connected and multi-functional network of green and blue infrastructure, with high quality, safe and accessible open space, to include SuDS, SANG and sports provision, which are connected and integrated into the wider network and take advantage of the corridor of the Emm Brook and its tributaries and their role in flood water attenuation and potential for enhanced biodiversity.
- Provide a continuous high-quality, safe, attractive and accessible open space network along the course of the Emm Brook and its tributaries, drawing on their recreational and ecological opportunities, incorporating natural flood management, and providing access to the waterside for recreation. The linear form of this corridor should provide an ecological buffer along the watercourse and improve its accessibility for recreation.
- Address the potential changes associated with climate change and flood risk, providing safe access and egress, taking account potential increases in severity and frequency of flooding, and ensure buildings and homes are designed to be safe for the intended lifetime. A comprehensive and integrated site-wide sustainable drainage network must be provided that makes use of the existing topography and natural features of the site. All opportunities should be further explored to achieve flood betterment, reducing risk within and beyond the development.

Proposed Submission LPU Policies FD1 'Development and flood risk (from all sources)' and FD2: 'Sustainable drainage' provide further control measures for development on sites where flood risk is present.

Suitability of development on site:

Part of the site is currently in FZ3, where an Exception Test would be required for residential development to be considered suitable and where Gypsy and Traveller development would not be suitable.

Conclusion:

The development passes the sequential test for allocation for residential use, because there is a need to identify a sufficient supply of dwellings to meet needs.

This proposed allocation supports the need to identify a sufficient supply and mix of sites. It also helps ensure development can come forward which broadly conforms with the existing spatial strategy of focussing the majority of

growth at strategic development locations that are supported by appropriate infrastructure. Only a small part of the site is at risk of fluvial flooding (5% of the site is within FZ 2, 4% within Flood Zones 3a and 3b, and 0% of the site is within Flood Zone 3 higher central climate change) and a sequential approach to development can be undertaken as demonstrated above.

EXCEPTION TEST

Part of the site is currently in FZ3, where an Exception Test would be required for more vulnerable development to be considered suitable and where highly vulnerable (i.e. Gypsy and Traveller) development would not be suitable.

Does the development provide wider sustainability benefits to the community that outweigh flood risk?

The site has been appraised within the SA as one of 9 potentially 'smaller strategic options' for growth. It was one of 3 of these 9 options that were progressed for further detailed consideration due to being a reasonable growth option. It scored particularly positively in terms of the following objectives, when compared to other alternative 'smaller strategic' developments:

- Air quality
- Biodiversity
- Communities
- Housing
- Transport

The north western part of the site adjoins the existing settlement boundary of Wokingham (where the planned South Wokingham SDL extension will be coming forward). The SDL has or will have facilities which would meet daily needs including primary schools, day-to-day retail facilities, and a sports hub, , with nearby Wokingham town offering a wide range of other facilities. Whilst constraints are present, these are considered capable of being addressed within a development. The site contributes towards the spatial strategy of directing development towards the more sustainable settlements in the borough and enabling the delivery of large scale, infrastructure rich, development.

The presence of watercourses within the site, while a constraint in terms of flood risk, also provides considerable benefits in terms of providing a high quality, safe, attractive and accessible open space network along the course of the Emm Brook. This provides recreational and ecological opportunities, including the provision of natural flood management, and providing access to the waterside for recreation.

Will the development be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will it reduce flood risk overall?

The Level 2 SFRA provides the following guidance for site design and making development safe:

- The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG).
- The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes. A drainage strategy should help inform site layout and design to ensure runoff rates areas close as possible to pre-development greenfield rates.
- Arrangements for safe access and egress will need to be provided for the 1% AEP fluvial and rainfall events with an appropriate allowance for climate change, considering depth, velocity, and hazard. Design and access arrangements will need to incorporate measures, so development and occupants are safe.
- Provisions for safe access and egress should not impact on surface water flow routes or contribute to loss of floodplain storage. Consideration should be given to the siting of access points with respect to areas of surface water flood risk.
- Flood resilience and resistance measures should be implemented where appropriate during the construction phase, e.g. raising of floor levels and use of boundary walls. These measures should be assessed to make sure that flooding is not increased elsewhere.

Residential development is a 'more vulnerable' use, and acceptable in Flood Zone 1 and 2 without the Exception Test being required. Gypsy and Traveller development is 'highly vulnerable' and only acceptable in Flood Zone 1 without the Exception Test being required. A sequential approach has been taken to the site, including by requiring development to be guided towards Flood Zone 1, which comprises 95% of the site, outside of Flood Zones 2 and 3. The L2 SFRA sets out measures within the 'Requirements and guidance for site specific Flood Risk Assessment' section for the site, as replicated above. These must be implemented to ensure that development will be safe for its lifetime. Additionally, the key messages from the Level 2 SFRA are that development on site is likely to be able to proceed (see above).
Conclusion
The site has been demonstrated to pass the exception test for allocation for residential use as it offers wider sustainability benefits and is capable of being made safe for its lifetime. This conclusion has been informed by engagement with the LLFA. Further consultation with the LLFA will be undertaken as proposals develop.

3.14 A minimum 4,639 additional new dwellings need to be delivered within the LPU to the 31 March 2040. Sites within FZ1 and FZ2 are shown to be able to accommodate 1,156 dwellings (Table 1a, 1c and 2a). The remaining sites which are located within FZ1 or 2 are not considered to be suitable for development due to other planning constraints, or their deliverability is uncertain at this stage. After these sites have been considered, there is a remaining need for at least 3,483 dwellings. It has therefore necessary to turn to sites within FZ3. The sites listed in Table 3a are

3.15 There is a need for a minimum 86 new Gypsy and Traveller pitches to be delivered within the local plan period. Sites for this use which immediately pass the Sequential Test (i.e. in FZ1 and at low risk of all other sources of flooding) have been considered and can accommodate 17 pitches (Table 1a). Those which have passed a more detailed Sequential Test (and where relevant, Exception Test) following more detailed consideration are shown to be able to accommodate 28 pitches. After these sites have been considered, there remains a need for 41 pitches.

Table 3b: Sites in Flood Zone 3 (not immediately passed the sequential test), that are not proposed for allocation

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5CV001	Land east and West of Park View Drive North	FZ1 FZ2 FZ3a FZ3b	28%	16%	33% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).13% of the site is highlighted on the Historic Flood Map.31% of the site is at risk from reservoir flooding in the wet day event.	Does not immediately pass the sequential test and exception test required.	• The site is considered to have an appropriate relationship to the settlement, but given the flood constraints, and its less contained nature with regard to landscape impacts, the site is considered less preferable than alternative development at Charvil village. • On balance, development of this site in addition to the proposed allocation south of Charvil is considered inappropriate at a limited development location.
5FI051	Land at Fleet Hill Farm Site A	FZ1 FZ2 FZ3a FZ3b	10%	11%	11% of the site is at risk of surface water flooding in the 1 in 1000 year event. 6% of the site is at risk from reservoir flooding in the wet day event and 3% in the dry day event.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Site lies within the Blackwater Valley BOA.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU003	Whistley Meadow St Nicholas, Whistley Green	FZ1 FZ2 FZ3a FZ3b	50%	41%	21% of the site is at risk of surface water flooding in the 1 in 1000 year event. 22% of the site is highlighted on the Historic Flood Map. 58% of the site is at risk from reservoir flooding in the wet day event. Approximately 99% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). Main river adjoins and partly covers the site.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape character. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by. • Landscape sensitivities.
5HU009, 5HU010, 5HU011, 5HU012, 5HU013, 5HU014, 5HU015, 5HU017, 5HU020,	Ashridge strategic promotion	FZ1 FZ2 FZ3a FZ3b	1%	<1%	15% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Does not immediately pass the sequential test and exception test required.	• The site would require significant development to the north of the A329M, which is the accepted northern extent of the settlement of Wokingham, leading to landscape and townscape sensitivities , • There is significant uncertainty about the deliverability of the

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU021, 5HU022, 5HU023, 5HU041, 5HU047, 5HU056							necessary highways linkages onto the A329M. The site is also not well served by sustainable transport services, and there is a lack of certainty that required improvements could be viably achieved. • Uncertainties around availability of all parcels of land, which has the potential to undermine holistically planned development. • These sites have been promoted as a strategic opportunity. Whilst individual sites within the wider area with lesser flood risk may come forward separately, this is not considered appropriate from a placemaking perspective as development north of the A329M would need to be of sufficient scale to function as a new community.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5HU030	Land north of Hogmoor Lane	FZ1 FZ2 FZ3a FZ3b	8%	5%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 28% of the site is highlighted on the Historic Flood Map.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape character. • Potential harm to a number of designated and non-designated heritage assets close by, including harm to the visual break between two historic settlements. • Site frontage covered by TPO trees. • Landscape sensitivities.
5HU032	Land south west of Broadcommon Road	FZ1 FZ2 FZ3a	51%	35%	79% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approximately 25% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 41% of the site is highlighted on the Historic Flood Map. A Main river partly covers the site.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land. • Potential harm to a number of designated and non-designated heritage assets close by. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5RU001, 5RU002, 5RU003, 5RU004, 5RU005, and 5RU006	Land to east of Twyford / Ruscombe	FZ1 FZ2 FZ3a FZ3b	7%	6%	21% of the site is at risk of surface water flooding in the 1 in 1000 year event. 7% of the site is at risk from reservoir flooding in the wet day event. 6% of the site is highlighted on the Historic Flood Map. A main river adjoins the southern part of the site.	Does not immediately pass the sequential test and exception test required.	• The site is wholly within the Green Belt and it is not considered exceptional circumstances exist to justify removing the land from the Green Belt. • Loss of BMV agricultural land. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SH021	Land at Kirtons Farm Road	FZ1 FZ2 FZ3a FZ3b	99%	<1%	100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 95% of the site is highlighted on the Historic Flood Map.	Does not immediately pass the sequential test and exception test required.	• Lack of safe access given flood risk. • Site located within Detailed Emergency Planning Zone around AWE Burghfield. Development inappropriate in terms of impact on AWE Burghfield. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Employment development would likely unacceptably increase the number of people working in the area and residential development of any scale would unacceptably increase the number of people living in the area. • Potential loss of BMV agricultural land. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SH026	Land south of Millworth Lane	FZ1 FZ2 FZ3a FZ3b	2%	2%	17% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 14% of the site is highlighted on the Historic Flood Map. 4% of the site is at risk from reservoir flooding in the wet day event.	Does not immediately pass the sequential test and exception test required.	• While assessed as potentially suitable along with site cluster 5SH023 and 5SH027, the site comprises an existing recreation ground. This is proposed to be retained and therefore no development is proposed at this site.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SH029	Land at Grazeley	FZ1 FZ2 FZ3a FZ3b	21%	0%	26% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approximately a third of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 4% of the site is highlighted on the Historic Flood Map. 12% of the site is at risk from reservoir flooding in the wet day event. A main river covers part of the site.	Does not immediately pass the sequential test	• Site located within Detailed Emergency Planning Zone around AWE Burghfield. Development inappropriate in terms of impact on AWE Burghfield. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Employment development would likely unacceptably increase in the number of people working in the area. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SH040	Land at Grazeley, south of M4 Motorway Junction 11 and west of Mereoak Lane	FZ1 FZ2 FZ3a FZ3b	43%	<1%	25% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approximately just under half of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 11% of the site is highlighted on the Historic Flood Map. A main river covers part of the site.	Does not immediately pass the sequential test and exception test required.	• Site located within Detailed Emergency Planning Zone around AWE Burghfield. Development inappropriate in terms of impact on AWE Burghfield. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Residential development of any scale would unacceptably increase in the number of people living in the area. • Landscape sensitivities.
5SO011	Land at Holme Farm	FZ1 FZ2 FZ3a FZ3b	<1%	0%	<1% of the site is at risk from reservoir flooding in the wet day event.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SW004	Land off Basingstoke Road	FZ1 FZ2 FZ3a FZ3b	10%	9%	18% of the site is at risk of surface water flooding in the 1 in 1000 year event. 20% of the site is highlighted on the Historic Flood Map. 1% of the site is at risk from reservoir flooding in the wet day event. A Main River adjoins the southern edge of the site.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Site located within Detailed Emergency Planning Zone around AWE Burghfield. Development inappropriate in terms of impact on AWE Burghfield. Development within the DEPZ can only be permitted where it can be demonstrated that the number of people living, working, shopping and visiting the proposal can be safely accommodated having regard to the needs of emergency organisations and the emergency off-site plan for AWE Burghfield. Employment development would likely unacceptably increase in the number of people working in the area. • Landscape sensitivities.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SW005	Land east of Trowes Lane	FZ1 FZ2 FZ3a FZ3b	16%	14%	57% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 7% of the site is highlighted on the Historic Flood Map. 13% of the site is at risk from reservoir flooding in the wet day event and 2% in the dry day event.	Does not immediately pass the sequential test and exception test required.	• The site is considered to have an appropriate relationship to the settlement, but given the flood constraints, and its less contained nature with regard to landscape impacts, the site is considered less preferable than alternative development at Swallowfield village. • In principle, development of this site in addition to the proposed allocation on the opposite side of Trowes Lane is considered inappropriate given the level of services available locally.
5SW006	Land off Basingstoke Road	FZ1 FZ2 FZ3a FZ3b	2%	<1%	2% of the site is highlighted on the Historic Flood Map. <1% of the site is at risk from reservoir flooding in the wet day event	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape. • Poor sustainability in terms of access to services and facilities. • Loss of BMV agricultural land. • Landscape sensitivities. • Development would result in harm to the setting of a designated heritage asset, as per the

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
							conclusion of an appeal Inspector considering an appeal related to the promoted development.
5TW006	Land west of Hurst Road	FZ1 FZ2 FZ3a FZ3b	25%	24%	19% of the site is at risk of surface water flooding in the 1 in 1000 year event. 93% of the site is highlighted on the Historic Flood Map. 60% of the site is at risk from reservoir flooding in the wet day event and <1% is at risk in the dry day event. A Main River runs through the centre of the site.	Does not immediately pass the sequential test and exception test required.	• Site located within an identified country park. • Potential loss of BMV agricultural land. • Landscape sensitivities. • Overall, whilst sustainably located, the site is subject to unacceptable flood risk.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5TW007, 5TW011	Land north of the A4 / Land north of A4 New Bath Road and west of A321 Wargrave Road	FZ1 FZ2 FZ3a FZ3b	7%	3%	Approx 38% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). The remaining approx 62% is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface). 3% of the site is highlighted on the Historic Flood Map. 8% of the site is at risk from reservoir flooding in the wet day event. A Main river adjoins the western boundary of the site.	Does not immediately pass the sequential test and exception test required.	Outline application for up to 230 dwellings (the promoted development development) refused 14 June 2024 for the reasons summarised below: • Inappropriate unplanned development outside of development limits contrary to the spatial objectives of the plan Lack of practical or desirable level of permeability due to development being an incongruous urban extension served by poor quality walking/cycling environment. • Lack of sustainability given physical separation of the site from services and facilities. • Lack of legal agreement to secure affordable housing, employment skills plan, highways improvements, and allotments.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WK006	Land south of Gipsy Lane	FZ1 FZ2 FZ3a FZ3b	24%	22%	34% of the site is at risk of surface water flooding in the 1 in 1000 year event. 46% of the site is highlighted on the Historic Flood Map. 25% of the site is at risk from reservoir flooding in the wet day event and 19% in the dry day event. A Main River lies adjacent to the southern boundary of the site.	Does not immediately pass the sequential test and exception test required	• Whilst located within the defined settlement and within the SDL, the nature of flood risk makes access to the wider SDL difficult to deliver. Insufficient information to consider the site achievable.
5WK009	Wokingham Sewerage Treatment Works, Bell Foundry Lane	FZ1 FZ2 FZ3a FZ3b	1%	1%	29% of the site is at risk of surface water flooding in the 1 in 1000 year event. 9% of the site is highlighted on the Historic Flood Map.	Does not immediately pass the sequential test and exception test required.	• Whilst the site performs well in terms of accessibility and provides an opportunity for development which broadly conforms to the existing and planned settlement form and landscape character, the feasibility of replacing / relocating the existing sewerage treatment works is unknown.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WO004	Land at Sandford Mill Pumping Station	FZ1 FZ2 FZ3a FZ3b	7%	7%	59% of the site is highlighted on the Historic Flood Map. 4% of the site is at risk from reservoir flooding in the wet day event and <1% in the dry day event.	Does not immediately pass the sequential test and exception test required.	• Whilst the site provides an opportunity for development which broadly conforms with the existing settlement form and landscape character, it would require extensive tree removal and would also likely involve access being very close to or on the existing Mohawk Way / Clover Rise roundabout. This is not considered to be feasible and therefore access is unlikely to be achieved.
5WW003	Pine Ridge Park, Nine Mile Ride	FZ1 FZ2 FZ3a	43%	0%	21% of the site is at risk of surface water flooding in the 1 in 1000 year event. >99% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Does not immediately pass the sequential test and exception test required.	• While the context of the site is considered suitable for Gypsy and Traveller pitches, a woodland TPO covers the majority of the site which would impact the location and quantum of development. • Site lies within the Thames Basin Heaths BOA. • The availability of the site is unknown and therefore deliverability is not confirmed.
5WW009	Ravenswood Village	FZ1 FZ2 FZ3a	54%	0%	42% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Does not immediately pass the sequential	• Development across the whole site would be out of character with the established settlement form and

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
						test and exception test required.	landscape character. If development was focussed within the envelope of the existing substantial built form, there is potential opportunity to achieve environmental improvements through sensitive redevelopment. The flood risk on site is mostly in the non-developed area, so PDL redevelopment may be possible in areas of low risk of flooding. • Site not proposed for allocation on balance due to comparatively poor access to services and facilities and lack of certainty regarding relocation of existing facilities.
5WW013	Pinecopse, Nine Mile Ride	FZ1 FZ2 FZ3a	5%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Landscape sensitivities. • Site lies within the Thames Basin Heaths BOA.

Site	Address	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WW023	Holme Park Game Hatcheries	FZ1 FZ2 FZ3a FZ3b	17%	12%	23% of the site is at risk of surface water flooding in the 1 in 1000 year event. 11% of the site is highlighted on the Historic Flood Map.	Does not immediately pass the sequential test and exception test required.	• Inappropriate relationship to established settlement form and pattern and landscape character. • Poor sustainability in terms of access to services and facilities. • Potential loss of BMV agricultural land.
5WW032	Land at New Acres	FZ1 FZ2 FZ3a	100%	0%	72% of the site is at risk of surface water flooding in the 1 in 1000 year event. 100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required and exception test required.	• The whole site falls within an identified Local Wildlife Site comprising a mix of woodland, heathland and grassland. It also falls within the Thames Basin Heath BOA. • Potential loss of BMV agricultural land. • Proposed Gypsy and Traveller caravan use considered inappropriate given flood risk on site.

Table 4a: Potential windfall sites that are not proposed for allocation but lie within the defined settlement boundary and could come forward under the current policy framework OR sites assessed as potentially suitable for development but not proposed for allocation

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5BA033	Land at Rooks Nest Farm	2 x SEND Schools	FZ1	0%	0%	Low risk of flooding from all sources	Sequential test passed	The proposed use would help to meet an identified need for SEND provision. A planning application is likely to be acceptable against current policy framework given it would involve the provision of an essential community use.

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5EA002	Gasholders	Unknown quantum of employment floorspace	FZ1 FZ2 FZ3a FZ3b	1%	<1%	6% of the site is at risk from reservoir flooding in the wet day event. Approx 26% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). The remaining approx 74% is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	The site comprises previously developed land and is situated within the development limits of Earley, and the expanded Core Employment Area of Suttons Business Park, where there is a presumption in favour of development.
5FI014	Land to the rear of 6-8 The Village	Residential dwellings	FZ1	0%	0%	100% of the site is within the second highest risk category in JBA Groundwater map (groundwater is between 0.025m and 0.5m below the surface).	Sequential test required	Site falls below HELAA threshold in terms of site size / development capacity.

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5FI054	Land at Blackcroft Farm, Farley Hill	Renewable energy	FZ1	0%	0%	13% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	Site potentially suitable for solar farm development, however insufficient information is available to justify allocating the site.
5HU037	Dinton Pastures, Sandford Lane, Davis Street	Unknown leisure use	FZ1 FZ2 FZ3a FZ3b	6%	6%	Approx 78% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 10% of the site is at risk from reservoir flooding in the wet day event and 6% in the dry day event. 11% of the site is highlighted on the Historic Flood Map. A Main river partly covers the site.	Sequential test required and exception test depending on uses proposed.	Site potentially suitable for leisure use, which may be water compatible. However the nature of the proposed uses is unknown and therefore insufficient certainty to allocate for leisure use.
5HU053	Bill Hill	Renewable energy	FZ1 FZ2	<1%	0%	18% of the site is at risk of surface water flooding in the 1 in 1000 year event. 16% of the site is highlighted on the	Sequential test required	Site potentially suitable for solar farm development, however insufficient information is available to justify allocating the site.

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
						Historic Flood Map. A Main river partly covers the site.		
5SH029	Land at Grazeley	Renewable energy	FZ1 FZ2 FZ3a FZ3b	21%	0%	26% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approximately a third of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface). 4% of the site is highlighted on the Historic Flood Map. 12% of the site is at risk from reservoir flooding in the wet day event.	Does not immediately pass the sequential test and exception test required.	Site potentially suitable for solar farm development, however insufficient information is available to justify allocating the site. NB also promoted for employment per table 3b.

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5SH061	Land at Stanbury Park	SANG	FZ1	0%	0%	Low risk of flooding from all sources	Sequential test passed	Site considered potentially suitable for SANG and the use is suitable in principle outside of defined settlements. Site not allocated based on lack of information to demonstrate that suitable vehicular parking and access can be achieved, which is likely to be resolvable through the planning application process.
5SH063	Land adjacent to Mereoak Park & Ride	Ancillary highways / commercial use to Park and Ride	FZ1	0%	0%	47% of the site is at risk of surface water flooding in the 1 in 1000 year event. Approximately 96% of the site is within the highest risk category in JBA Groundwater map (groundwater is within 0.025m of the surface).	Does not immediately pass the sequential test.	The proposed development would be compatible with the established Park and Ride use, and be broadly compatible with the landscape character. Ancillary facilities are considered to be potentially suitable within the DEPZ by

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
								virtue of not attracting additional potential visitors.
5WI013	Millennium Arboretum, to rear of properties at 22-28 Wayside, off Old Forest Road	Leisure	FZ1	0%	0%	12% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	Site considered potentially suitable for leisure use, which is suitable in principle in this location. Site not allocated based on lack of information regarding the exact leisure use proposed and lack of detail about how or whether suitable access could be achieved.
5WK017	Telephone Exchange, Elms Road	Housing, retail, employment	FZ1	0%	0%	Low risk of flooding from all sources	Sequential test passed	Whilst the site provides an opportunity for development which utilises previously developed land within a

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
								highly sustainable settlement, the feasibility of relocating or incorporating the existing telephone exchange is unknown.
5WK018	54 - 72 Peach Street	Housing, retail, employment	FZ1	0%	0%	14% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	Whilst the site provides an opportunity for development which utilises previously developed land within a highly sustainable settlement, at least part of the site is not demonstrably available for development.
5WK048	Suffolk Lodge, Rectory Road	Housing	FZ1	0%	0%	11% of the site is at risk of surface water flooding in the 1 in 1000 year event.	Sequential test required	Whilst the site provides an opportunity for development which utilises previously developed land within a highly sustainable settlement, it is not currently demonstrably available for development.

Site	Address	Assessed / promoted quantum of development	Flood Zones	Flood Zone 2	FZ 3 + Higher Central CC	Risk of flooding from other sources	Conclusion	Summary of reasons for not allocating the site
5WK050	Site of former M&S Building, Wokingham	Town centre uses	FZ1	0%	0%	Low risk of flooding from all sources	Sequential test passed	Whilst the site provides an opportunity for development which utilises previously developed land within a highly sustainable settlement, there is insufficient certainty to warrant allocating the site.