RUGBY BOROUGH
STRATEGIC FLOOD RISK
ASSESSMENT (SFRA)
SEQUENTIAL AND EXCEPTION
TEST REPORT
JANUARY 2026

1. INTRODUCTION AND POLICY CONTEXT

1.1. Rugby Borough Council is currently developing a new Local Plan which will allocate land for development to meet the Borough's future housing and employment needs. The relevant sections of the National Planning Policy Framework (NPPF) (2025) state as follows:

"172 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. They should do this, and manage any residual risk, by:

a) applying the sequential test and then, if necessary, the exception test as set out below;
b) safeguarding land from development that is required, or likely to be required, for current or future flood management;
c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management);
d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations"

"174. Within this context 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 strategic flood risk assessment will provide the basis for applying this test."

"177. Having applied the sequential test, if it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in Annex 3."

"178. The application of the exception test should be informed by a strategic or site specific flood risk assessment, depending on whether it is being applied during plan production or at the application stage. To pass the exception test it should be demonstrated that:

a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and

b) 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.

179. Both elements of the exception test should be satisfied for development to be allocated or permitted"

1.2. The Planning Practice Guidance provides additional information:

"**What is the aim of the sequential approach?**

The approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. This means avoiding, so far as possible, development in current and future medium and high flood risk areas considering all sources of flooding including areas at risk of surface water flooding. Avoiding flood risk through the sequential test is the most effective way of addressing flood risk because it places the least reliance on measures like flood defences, flood warnings and property level resilience features. Application of the sequential approach in the plan-making and decision-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. Other forms of flooding need to be treated consistently with river and tidal flooding in mapping probability and assessing vulnerability, so that the sequential approach can be applied across all areas of flood risk.

Paragraph: 023 Reference ID: 7-023-2"

"**How can the Sequential Test be applied to the location of development?**

The Sequential Test ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should go on to compare reasonably available sites:

- Within medium risk areas; and
- Then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.

Initially, the presence of existing flood risk management infrastructure should be ignored, as the long-term funding, maintenance and renewal of this infrastructure is uncertain. Climate change will also impact upon the level of protection infrastructure will offer throughout the lifetime of development. The Sequential Test should then consider the spatial variation of risk within medium and then high flood risk areas to identify the lowest risk sites in these areas, ignoring the presence of flood risk management infrastructure.

It may then be appropriate to consider the role of flood risk management infrastructure in the variation of risk within high and medium flood risk areas. In doing so, information such as flood depth, velocity, hazard and speed-of-onset in the event of flood risk management infrastructure exceedance and/or failure, should be considered as appropriate. Information on the probability of flood defence failure is unsuitable for planning purposes given the substantial uncertainties involved in such long-term predictions.

Paragraph: 024 Reference ID: 7-024-20220825

Revision date: 25 08 2022”

1.3. Three flow-diagrams are provided in the Planning Practice Guidance. The accessible version of the text of these is pasted below.

Diagram 1: Taking flood risk into account in the preparation of strategic policies

1. The strategic policy-making authority (on its own or jointly with other authorities/ partners) undertakes a Level 1 Strategic Flood Risk Assessment

2. The authority uses the Strategic Flood Risk Assessment to: (i) inform the scope of the Sustainability Appraisal for consultation; and (ii) identify where development can be located in areas with a low risk of flooding

3. The authority assesses alternative development options using the Sustainability Appraisal, considering flood risk (including potential impact of development on surface water run-off) and other planning objectives

4. Can sustainable development be achieved through new development located entirely within areas with a low risk of flooding?

If Yes:

5. Use the Sustainability Appraisal to inform the allocation of land in accordance with the Sequential Test. Include a policy on flood risk considerations and guidance for each site allocation. Where appropriate, allocate land to be used for flood risk management purposes

6. Include the results of the application of the Sequential Test (and Exception Test see Diagram 3 - where appropriate) in the Sustainability Appraisal Report. Use flood risk indicators and Core Output Indicators to measure the Plan’s success (End).

Alternate process at step 4.

4. Can sustainable development be achieved through new development located entirely within areas with a low risk of flooding?

If No:

5. Use the Strategic Flood Risk Assessment to apply the Sequential Test (see Diagram 2) and identify appropriate allocation sites and development. If development is proposed within areas at risk of flooding now or in the future, undertake a Level 2 Strategic Flood Risk Assessment

6. Assess alternative development options using the Sustainability Appraisal, transparently balancing flood risk against other planning objectives

7. Use the Sustainability Appraisal to inform the allocation of land in accordance with the Sequential Test. Include a policy on flood risk considerations and guidance for each site allocation. Where appropriate, allocate land to be used for flood risk management purposes

8. Include the results of the application of the Sequential Test (and Exception Test see Diagram 3 - where appropriate) in the Sustainability Appraisal Report. Use flood risk indicators and Core Output Indicators to measure the Plan’s success (End).

Diagram 2: Application of the Sequential Test for plan preparation

1. Can development be allocated in areas of low flood risk both now and in the future? (Level 1 Strategic Flood Risk Assessment). **If Yes:** Sequential test passed

If No:

2. Can development be allocated in areas of medium flood risk, both now and in the future? (Level 2 Strategic Flood Risk Assessment) – lowest risk sites first. (Table 1 and NPPF Annex 3). **If Yes:** Progress to Diagram 3 (Table 2)

If No:

3. Can development be allocated within the lowest risk sites available in areas of high flood risk both now and in the future? (Table 1 and NPPF Annex 3). **If Yes:** Progress to Diagram 3 (Table 2)

If No:

4. Is development appropriate in remaining areas? (Tables 1, 2 and NPPF Annex 3). **If Yes:** Progress to Diagram 3

If No:

If No:

5. Strategically review need for development using Sustainability Appraisal

Diagram 3: Application of the Exception Test to plan preparation

1. **Start Here:** Has the sequential test been applied and shown that there are no reasonably available, lower risk sites, suitable for the proposed development, to which the development could be steered? **If No:** Do the sequential test (see diagram 2)

If Yes:

2. Is the Exception test required (Table 2)? **If Yes:**

Does the development pass both parts of the exception test?

- **If Yes:** Development can be considered for allocation or permission.
- **If No:** Development is not appropriate and should not be considered.

2. Is the Exception test required (Table 2)? **If No:**

Can the development be made safe throughout its lifetime, without increasing flood risk elsewhere (NPPF Annex 3 and Table 2)?

- **If Yes:** Development can be considered for allocation or permission.

If No: Development is not appropriate and should not be considered.

1.4. Table 2 is referred to in the above table and is used to determine whether the exception test is required. Table 2 is also included in the Planning Practice Guidance and is shown below:

Table 2: Flood risk vulnerability and flood zone 'incompatibility'

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✔	✔	✔	✔	✔
Zone 2	✔	Exception Test required	✔	✔	✔
Zone 3a †	Exception Test required †	X	Exception Test required	✔	✔
Zone 3b *	Exception Test required *	X	X	X	✔ *

Key:

✔ Exception test is not required

X Development should not be permitted

1.5. Relevant "highly vulnerable" uses are: "Caravans, mobile homes and park homes intended for permanent residential use". Relevant "more vulnerable" uses are: "Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.". Less vulnerable uses include "Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'more vulnerable' class; and assembly and leisure.".

1.6. In summary, the principal points are:

- Sites at low risk of flooding do not need to be subject to the sequential test.

- For all sites not a low risk of flooding a sequential test is necessary.

- The sequential test means choosing low flood risk sites in preference to medium flood risk sites and medium flood risk sites in preference to high flood risk sites.

- Per paragraph 177 NPPF the application of the sequential test looks at whether there are sites that could accommodate the development in lower flood risk areas "taking into account sustainable development objectives".

- This is reinforced by PPG diagram 2 which states plan makers should "Assess alternative development options using the Sustainability Appraisal, transparently balancing flood risk against other planning objectives".

- After application of the sequential test, the exception test would only be required for sites of medium or high flood risk if an incompatible use is proposed in a flood zone applying Planning Practice Guidance Table 2. Table 2 is only about fluvial flood zones, but it is assumed the same approach should be applied to pluvial (surface water) flood risk.

- The exception test requires it to be demonstrated both that a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and b) 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.

2. METHODOLOGY

2.1. The sequential test (and if necessary, exception test) forms part of the wider assessment process in determining suitable sites for development allocations in the emerging Local Plan. The sites included in the test originate from the call for sites process run by Council and are the sites which were identified as potential site options following the Housing and Economic Land Availability Assessment and Stage 2 Site Assessment at Regulation 18 stage.

2.2. Data was collated on the fluvial flood risk and surface water flood risk of each site by the Strategic Flood Risk Assessment consultants. The proportion of a site within Flood Risk Zones 1-3 is used to determine a site's fluvial flood risk, where Flood Zone 1 is low risk, Flood Zone 2 is medium risk, and Flood Zone 3a and 3b is high risk. Surface water flood risk is determined by the proportion of land at risk of a 1 in 1000-year (low risk), 1 in 100-year (medium risk), or 1 in 30-year (high risk) flood event. The classifications are based on the Environment Agency's National Flood Risk Assessment data (NaFRA2).

2.3. In the sequential test a threshold-based approach has been used. A maximum of 10% of the site area may be classed as at medium or high risk of flooding, either fluvial or surface, without the entire site being considered medium or high risk. This threshold has been chosen to conservatively represent the amount of a site on which development can be avoided through site design and layout, for example open space or other uses which are less vulnerable to flooding.

2.4. On many sites it would be possible to simply avoid building in areas of flood risk on greater than ten percent of the site area, particularly on large sites. This potential is reflected in the base assumptions applied in The Housing and Economic Land Availability Assessment, which for residential sites applies net to gross of 75% for sites of 1-10 hectares (i.e. 25% of the site area is assumed to be undevelopable) and 60% for sites of more than 10 hectares (40% of the site area is assumed to be undevelopable). For employment sites plot ratios were applied assuming buildings occupy 40% or 35% of the site, depending on site size. These are base assumptions and would be displaced if more bespoke analysis of net developable area had been undertaken. Nonetheless, these assumptions illustrate that applying a 10% threshold to the area of the site that can be subject to medium/high flood risk is a conservative assumption. That conservative assumption is justified to allow full consideration of flood risk by applying the sequential (and if necessary, exception) test to sites with more than 10% of their area subject to surface water or fluvial flooding risk.

2.5. The 10% threshold is not applied if the location of the flood risk is such that it would mean the likely location of the site access would be subject to medium or high flood risk. Sites which have greater than 10% of their area classed as medium or high risk would need to pass the sequential and/or exception test.

2.6. The sequential test only considers fluvial and surface water flood risk. Groundwater flood risk has not been used for this sequential test due to a lack of sufficient data. While there is data available on potential groundwater flood occurrences, this gives no indication of possible water quantity or scale of the flood. Sewer and reservoir flooding has not been included as these are residual risks i.e., they result from infrastructure failures and therefore cannot be adequately quantified within this analysis.

3. SEQUENTIAL TEST RESULTS

3.1. The results are presented in the Annex. The study found 36 sites with a low risk of flooding which pass the sequential test. These are shown in **Table 1** below. Five sites were categorised as medium risk, these sites are shown in **Table 2** below. Three sites had a high risk of flooding and are shown in **Table 3** below.

3.2. Tables **4a and 4b** present the same analysis for the main residential and employment omission sites respectively.

4. EXCEPTION TEST

4.1. Within the SFRA site tables have been prepared for the medium/high flood risk sites, including a number of the omission sites. However, an exception test has only been identified as required for three high-risk sites, all urban regeneration sites within the Rugby urban area:

Rugby Central Shopping Centre
Rounds Gardens North
Former Snooker Hall on Railway terraces.

4.2. The SFRA contains site tables for these sites demonstrating that in accordance with NPPF paragraph 178 b) "… 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".

4.3. It is also considered that, for the purposes of Paragraph 178 a) NPPF redevelopment of these urban sites will "provide wider sustainability benefits to the community that outweigh the flood risk". Therefore, all three sites pass the exception test.

ANNEX: SEQUENTIAL TEST RESULTS

TABLE 1 - SITES AT LOW RISK OF FLOODING

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	screening
6	Land east of Fosse Way opposite Knob Hill, Stretton-on-Dunsmore	0.26	3 dwellings	97.9	2.1	1.2	0.5	14.5	9.0	7.5	Sequential test passed, but a detailed site summary table is prepared in SFRA which shows that surface water flow path bisects the site during a 1000 year event causing potential access issues. For this reason the site was subject to further assessment in the SFRA and a site summary table was prepared which concluded the site could be made safe for its maximum lifetime of 100 years. Development is dependent on a site-specific FRA with surface water modelling and groundwater investigation. Carefully considered SuDS will be required with appropriate management plans. Site is located within a Nitrate Vulnerable Zone requiring engagement with the EA and LLFA.
14	Land north of Ansty Park, Ansty, Coventry	21.26	75000m2 employment land	90.8	9.2	9.0	6.9	19.5	4.3	1.3	Sequential test passed but detailed site summary table prepared in SFRA which concluded that the site could be made safe for its 75-year lifetime as an employment site. Development should be undertaken outside of areas within FZ2 and 3 where possible. Development is dependent on a site-specific FRA with surface water modelling and groundwater investigation. Carefully considered SuDS will be required with appropriate management plans. Site is located within a Nitrate Vulnerable Zone requiring engagement with the EA and LLFA.
17	South West Rugby safeguarded land	36.9	110,000m2 employment land	99.9	0.1	0.1	0.1	0.5	0.3	0.3	Sequential test passed
39	Dyers Lane, Wolston	1.04	15 dwellings	100.0	0.0	0.0	0.0	1.1	0.0	0.0	Sequential test passed
54	Oakdale Nursery, Binley Woods	3.9	43 dwellings	100.0	0.0	0.0	0.0	0.4	0.1	1.3	Sequential test passed
59	Newton Manor Lane, Rugby	17.03	240 dwellings	96.7	3.3	2.4	2.3	16.8	7.5	4.7	Sequential test passed but detailed site summary table prepared in SFRA which noted the watercourse passing through the site and recommended that the central southern area is avoided for development to make the site safe for its 100-year lifetime. Development is dependent on a site-specific FRA with surface water modelling and groundwater investigation. Carefully considered SuDS will be required with appropriate management plans. Site is located within a Nitrate Vulnerable Zone requiring engagement with the EA and LLFA.

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	screening
64	Coton Park East, Central Park Drive, Rugby	35.97	115000m2 employment land	100.0	0.0	0.0	0.0	9.0	4.8	3.2	Sequential test passed
81	Land west of Fosse Way, Stretton-on-Dunsmore	3.52	40 dwellings	100.0	0.0	0.0	0.0	16.9	6.0	2.7	Sequential test passed but detailed site summary table prepared in SFRA which noted potential for flow path depths of up to 0.9 metres in 1000 and 100 year events, with surface flood risk concentrated in the southern half of the site. It concluded the site could be made safe for its 100-year lifetime. Development is dependent on a site-specific FRA with surface water modelling and groundwater investigation. Carefully considered SuDS will be required with appropriate management plans. Site is located within a Nitrate Vulnerable Zone requiring engagement with the EA and LLFA.
87	Hillcrest Farm, Newton	1.04	25 dwellings	100.0	0.0	0.0	0.0	0.4	0.0	0.0	Sequential test passed
100	Land at High St, Ryton-on-Dunsmore	1.2	37 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed
129	Land north of Lilbourne Road, Clifton	2.31	60 dwellings	100.0	0.0	0.0	0.0	3.3	2.0	1.3	Sequential test passed
136	Land North of Warwick Road, Wolston	3.87	80 dwellings	100.0	0.0	0.0	0.0	1.4	0.9	0.8	Sequential test passed
153	Westway Car Park	0.29	8-24 dwellings	100.0	0.0	0.0	0.0	24.9	9.8	0.0	Sequential test passed
172	Elizabeth Way, Long Lawford	0.09		100.0	0.0	0.0	0.0	1.7	0.0	0.0	Sequential test passed
202	Newton Road, Clifton upon Dunsmore	3.58	80 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed
279	Stagecoach Car Park	0.4	32 dwellings	100.0	0.0	0.0	0.0	0.2	0.0	0.0	Sequential test passed
253	Lawford Fields Farm, Long Lawford	29.4	250 dwellings	100.0	0.0	0.0	0.0	1.7	0.5	0.3	Sequential test passed
294	Land adjacent to 9 Railway Terrace	0.09	14 dwellings	100.0	0.0	0.0	0.0	0.4	0.0	0.0	Sequential test passed
307	North Road, Clifton (Site A)	0.94	10 dwellings	100.0	0.0	0.0	0.0	1.3	0.0	0.0	Sequential test passed
309	Land North of the B4109, Wolvey	7.1	150 dwellings	99.8	0.2	0.1	0.1	0.1	0.0	0.0	Sequential test passed
315	Land south of Brinklow	16.94	250 dwellings	100.0	0.0	0.0	0.0	8.6	4.2	2.6	Sequential test passed

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	screening
316	Land at Long Lawford	26.36	400 dwellings	96.0	4.0	2.4	1.9	11.4	6.0	4.1	Sequential test passed but potential access issues where surface water flooding is concentrated along western and northern boundaries to the A428. Fluvial flood risk on the western boundary. A detailed site summary table was prepared in the SFRA and concluded that the site could be made safe for its lifetime of 100 years. Development should be undertaken in areas outside FZ2 and 3. Development is dependent on a site-specific FRA with surface water modelling and groundwater investigation. Further assessment needed into residual risk from potential blockage of the structure the ordinary watercourse flows through to the northwest site boundary including blockage scenario modelling. Carefully considered SuDS will be required with appropriate management plans. Site is located within a Nitrate Vulnerable Zone requiring engagement with the EA and LLFA.
332	Albert Street	0.28	25 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed
337	West Farm and Home Farm, Brinklow (combined sites 5 and 89)	4.05	75 dwellings	100.0	0.0	0.0	0.0	1.4	0.0	0.0	Sequential test passed
338	Land south of Crick Road, Houlton	6.27	250 dwellings	100.0	0.0	0.0	0.0	14.4	10.1	7.2	Sequential test passed
348	The Croft, Stretton-on-Dunsmore	3.57	70 dwellings	100.0	0.0	0.0	0.0	0.3	0.0	0.7	Sequential test passed
349	Land to rear of 30 Albert Street	0.03	5 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed
353	Town Hall	1.57	114 dwellings	100.0	0.0	0.0	0.0	6.1	3.3	0.0	Sequential test passed
355	Land adjacent 44 Craven Road	0.06	5 dwellings	100.0	0.0	0.0	0.0	0.1	0.0	0.0	Sequential test passed
356	The Railings	0.24	10 dwellings	100.0	0.0	0.0	0.0	4.9	0.1	0.0	Sequential test passed
357	28-29 High Street	0.05	8 dwellings	100.0	0.0	0.0	0.0	2.7	0.0	0.0	Sequential test passed
358	Land at Coventry Road (smaller cut)	2.27	60 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed
G&T 1	Land adjacent Rosefields, Hinckley Road	0.26	1 pitch	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	screening
G&T 2	Top Park, Top Road	1.3	22 pitches	100.0	0.0	0.0	0.0	9.9	3.7	2.2	Sequential test passed
G&T 9	Bryant's Bungalow, Brandon Lane	0.7	10 pitches	100.0	0.0	0.0	0.0	1.7	0.0	0.0	Sequential test passed
G&T 10	Wilsher Ranch, Shilton Lane	0.3	4 pitches	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Sequential test passed

TABLE 2 - SITES AT MEDIUM RISK OF FLOODING

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
95	Land bound by M69, M6 and B4029, Ansty	112.18	275,000m2 of B8 18,000m2 of E(g)(i) office space	83.4	16.6	9.3	6.3	13.6	7.6	5.2	Site has planning permission and sequential and exception tests were undertaken as part of that application and do not need to be repeated. Sequential test therefore passed.
62	Morgan Sindall House, Rugby	0.29	90 dwellings	100.0	0.0	0.0	0.0	15.4	11.2	9.5	Medium flood risk is from surface water affecting a relatively small area of the site, just above the 10% threshold identified in the methodology. In pure flood risk terms ignoring all other planning considerations there may be sites in areas of lower surface water flood risk that could be allocated in preference to the site. However, given limited urban capacity, lower flood risk sites would be greenfield sites. As a vacant office building within Rugby town centre there are strong sustainability and regeneration reasons for supporting its redevelopment. Therefore, taking into account sustainability objectives, it is not possible for development to be located in areas of lower risk of flooding (para 177 NPPF). Sequential test is therefore passed. SFRA identified no significant concerns and applying PPG Table 2 exception test not required.
121	Land at Walsgrave Hill	201.83	289,780m2 employment land	89.1	10.9	6.3	5.6	4.2	2.3	1.3	Medium fluvial flood risk affecting just over 10% of site area. Smaller areas of high flood risk and surface water flood risk. The Sustainability Appraisal identifies two main reasonable alternative sites to this site based on sustainable development objectives, site 50 and 61 Prologis Park West and Mountpark and site 130 North of Houlton. Prologis Park West and Mountpark has high/medium flood risk affecting a larger part of the site area and so is not sequentially preferrable. North of Houlton has a marginally lower proportion of the site area affected by medium fluvial flood risk: 7.3% inf FZ2 compared to 10.9% at Land at Walsgrave Hill. For the reasons explained in the Sustainability Appraisal, Stage 2 Site Assessment and Green Belt Exceptional Circumstance Topic Paper, when balanced against other planning objectives, North of Houlton is not a sequentially preferable site. The Sustainability Appraisal identifies a further alternative of the combined sites 18 and 133 at Thurlaston. These sites are of lower flood risk. Their combined assessed capacity to accommodate floorspace is circa 130,000sqm compared to 290,000sqm at Walsgrave Hill. Therefore, as highlighted in the Sustainability Appraisal, these sites do not

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
											substitute for Walsgrave Hill. Also, these sites perform poorly in the SA. These sites are accordingly not sequentially preferrable applying NPPF para 177 and PPG diagram 1. As detailed in Table 4a below there are other employment omission sites which in pure flood risk terms are at lower flood risk. However, these are not identified as reasonable alternatives in the Sustainability Appraisal and reasons for their non-allocation are set out in the Stage 2 Site Assessment and Green Belt Exceptional Circumstances Topic Paper. Therefore, the sequential test is passed. The site is at medium risk of flooding. Applying Table 2 NPPF employment use is a 'less vulnerable use' and the exception test is not required. There are only small areas of higher risk of flooding and employment floorspace would not be built in these areas. Notwithstanding the lack of need for an exception test, a detailed site summary was prepared as part of the SFRA which concluded that most of the site is at low flood risk but there are two key areas of fluvial risk along the Withy Brook in the north and along Smite Brook and its tributary in the southern and eastern edges of the site. Development should avoid these areas and further detailed hydraulic modelling of the Withy Brook and Smite Brook and its tributary may be needed as part of a site-specific FRA at application stage. Safe access and escape routes should be demonstrated for 1% AEP fluvial and surface water climate change events, considering the potential for the northern area to be cut off by Withy Brook. Access and escape should be possible from Coombe Fields Road to the north and the A46. A site-specific FRA, surface water drainage strategy, and SuDS maintenance and management plan will all be required and should be supported by detailed modelling.
350	Rounds Gardens South	2.5	70 dwellings	100.0	0.0	0.0	0.0	23.5	12.3	7.5	Medium surface water flood risk. There is a flow path that bisects the site from south to north. An area in the southwestern corner of Rounds Gardens South is at risk of groundwater emergence with groundwater levels at least 5m below the ground surface. An area along the eastern boundary of Rounds Gardens South is at risk of groundwater emergence with groundwater levels between 0.025 and 0.5m below the ground surface. The position is similar to Morgan Sindall House (discussed above). Given limited urban capacity, lower flood risk sites would be greenfield sites. As a recently cleared redevelopment site within central Rugby which was previously occupied by high-rise apartments there are strong sustainability and regeneration reasons supporting its redevelopment. Considering sustainability objectives, it is not possible for development to be located in areas of lower risk of flooding (para 177 NPPF).

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
											Sequential test is therefore passed. Applying PPG Table 2 and a threshold-based approach, an exception test is not required. Nonetheless, a site table has been prepared within the SFRA level 2 and shows that the site could be made safe for its lifetime of 100 years as a residential development. Development is dependent on a site-specific FRA supported by detailed surface water modelling, and investigation into the groundwater risk is recommended. Developers will need to produce an integrated flood resilient and sustainable drainage design, including a site-specific Surface Water Drainage Strategy and SuDS management plan, supported by detailed modelling. Development should avoid any areas identified as high risk for groundwater emergence and should be aligned with the sequential approach for site layout. Safe access and egress will need to be demonstrated in the 1% AEP plus climate change surface water event. Access and escape to Rounds Gardens South from York Street is impeded in all modelled surface water flooding events. Access and escape from the western part of Oliver Street is impeded during the 0.1% AEP surface water event, however access along Oliver Street from the east is shown to remain clear. A surface water flow path bisects Rounds Gardens South, separating it into east and west. Therefore, access and escape to these areas will need to be considered separately.
354	92 Lower Hillmorton Road	0.36	34 dwellings	100.0	0.0	0.0	0.0	24.0	12.6	6.1	Medium surface water flood risk. Given limited urban capacity, lower flood risk sites would be greenfield sites. As a vacant previously developed site in the Rugby urban area there are strong sustainability and regeneration reasons supporting its redevelopment. Considering sustainability objectives, it is not possible for development to be located in areas of lower risk of flooding (para 177 NPPF). Sequential test is therefore passed. Applying PPG Table 2 and a threshold-based approach, an exception test is not required. A site summary table was not found to be necessary for this site as safe access and egress can be achieved.

TABLE 3 - SITES AT HIGH RISK OF FLOODING

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
283	Rugby Central	2.17	200 dwellings	100.0	0.0	0.0	0.0	48.0	39.6	13.1	High surface water flood risk. However, given limited urban capacity, lower flood risk sites would be greenfield sites. As a part-vacant shopping centre within Rugby town centre there are strong sustainability and regeneration reasons supporting its redevelopment. Redevelopment of this site is vital to achieving the objectives of the plan in regenerating Rugby town centre. Considering sustainability objectives, it is not possible for development to be located in areas of lower risk of flooding (para 177 NPPF). Sequential test is therefore passed. Applying a threshold based approach, as greater than 10% of the site area is at high risk of flooding an exception test has been carried out as discussed above. A site summary table was prepared as part of the SFRA Level 2 which found that the site could be made safe for its lifetime of 100 years as a residential development, subject to a site-specific FRA to assess the risk of surface water in relation to the proposed development. Developers will need to produce an integrated flood resilient and sustainable drainage design, including a site-specific Surface Water Drainage Strategy and SuDS management plan, supported by detailed modelling. Arrangements for safe access and escape routes will need to be provided for the 0.1% AEP fluvial and surface water events with an appropriate allowance for climate change. Access and escape via North Street and Corporation Street is currently limited in the 0.1% AEP present day surface water flood event and the 1% AEP plus climate change surface water flood event. 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. Part of the site has planning permission for which a site-specific flood risk assessment was completed. The FRA completed for the planning application (R22/0657) concluded that proposed designs and SuDS would mitigate against 1 in 100-year flood events including climate change influences and would not increase flood risk elsewhere.

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
351	Rounds Gardens North	4.96	60 dwellings	100.0	0.0	0.0	0.0	33.9	26.1	22.1	High surface water flood risk. There is a flow path from the south which leads to a large area of surface water ponding in this site. Given limited urban capacity, lower flood risk sites would be greenfield sites. As a site within the urban area which is not in active use there are strong sustainability and regeneration reasons supporting its redevelopment. Taking into account sustainability objectives, it is not possible for development to be located in areas of lower risk of flooding (para 177 NPPF). Sequential test is therefore passed. Applying a threshold based approach, as greater than 10% of the site area is at high risk of flooding an exception test has been carried out as discussed above. A site table has been prepared within the SFRA level 2 and shows that the site could be made safe for its lifetime of 100 years as a residential development. Development is dependent on a site-specific FRA supported by detailed surface water modelling, and investigation into the groundwater risk is recommended. Developers will need to produce an integrated flood resilient and sustainable drainage design, including a site-specific Surface Water Drainage Strategy and SuDS management plan, supported by detailed modelling. Safe access and egress will need to be demonstrated in the 1% AEP plus climate change surface water event. Access and escape to Rounds Gardens North is shown to remain unimpeded in all surface water flooding events. A planning application was refused on this site (R24/0111). The flood risk assessment prepared for the application proposed mitigation strategies which it claimed to suitably minimise surface water flood risk. The officer's report on the application notes that the LLFA commented as follows: "WCC Flood Risk Management has carried out an independent assessment of the FRDS. They are satisfied that the findings of the FRDS are acceptable and form a robust basis for considering the flood risk and drainage impacts arising from the proposed development. They agree that the applicant has demonstrated the principles of an acceptable surface water management strategy however further detailed information would be required via condition. They have therefore raised no objection to this subject to conditions requiring further ground water monitoring to be undertaken, the submission of a detailed surface water drainage scheme, a verification report for the installed flood risk mitigation measures and surface water drainage system, and site specific maintenance plan."

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Allocation	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
352	Former snooker hall	0.07	7 dwellings	100.0	0.0	0.0	0.0	100.0	84.0	18.7	High surface water flood risk Given limited urban capacity, lower flood risk sites would be greenfield sites. As a vacant building close to Rugby town centre there are strong sustainability and regeneration reasons supporting its redevelopment. Considering sustainability objectives, it is not possible for development to be located in areas of lower risk of flooding (para 177 NPPF). Sequential test is therefore passed. Applying a threshold based approach, as greater than 10% of the site area is at high risk of flooding an exception test has been carried out as discussed above. A site table has been prepared within the SFRA level 2 and shows that it may be possible for the site to remain safe for its lifetime of 100 years as a residential development. Development is dependent on a site-specific FRA, supported by detailed surface water modelling, to assess the risk of surface water flooding for the proposed development. Developers will need to produce an integrated flood resilient and sustainable drainage design, including a site-specific Surface Water Drainage Strategy and SuDS management plan, supported by detailed modelling. Arrangements for safe access and escape routes will need to be provided for the 0.1% AEP fluvial and surface water events with an appropriate allowance for climate change. Railway Terrace and Pinders Lane could both provide access to the site, however both roads are also at risk of surface water flooding. 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.

TABLE 4A MAIN EMPLOYMENT OMISSION SITES

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Capacity	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
18	Barnwell Farm, Thurlaston	26.2	96,720m2 employment land	100.0	0.0	0.0	0.0	2.5	1.8	1.1	Low flood risk Site screening notes groundwater risk at western site boundary.
20	Blue Boar Farm, Thurlaston	10.51	40,000m2 employment land	100.0	0.0	0.0	0.0	3.2	1.5	0.6	Low flood risk
50	Prologis Park West	141.3	27,000m2 employment land	80.2	19.8	18.3	16.9	6.0	3.3	1.9	High flood risk Not sequentially preferrable to proposed submission plan allocations. Site promoter masterplan shows that areas of medium and high flood risk could be avoided through the location of development. Exception test would be required and SFRA includes a site table.
61	Mountpark Ryton, Ryton on Dunsmore	30.6	72,000m2 employment land	68.8	31.2	23.8	20.5	2.4	1.2	0.6	High flood risk Not sequentially preferrable to proposed submission plan allocations. Site promoter masterplan shows that areas of medium and high flood risk could be avoided through the location of development. Exception test would be required and SFRA includes a site table.
130	Land north of Houlton	135.71	305,309m2 employment land	92.7	7.3	6.3	5.5	6.0	2.8	1.6	Low flood risk Clifton Brook runs parallel to southern site boundary and through part of site
133	Land North of M45	11.81	42,938m2 employment land	100.0	0.0	0.0	0.0	5.9	3.2	2.1	Low flood risk
325	Land adjacent Magna Park	159.09	583,175m2 employment land	100.0	0.0	0.0	0.0	5.9	2.7	1.8	Low flood risk However, Smite Brook runs parallel to part of the southern/western area and is not modelled in existing flood zone data

TABLE 4B - MAIN RESIDENTIAL OMISSION SITES

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Capacity	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
16	Barby Lane, Hillmorton	4.05	45 dwellings	100.0	0.0	0.0	0.0	1.0	0.1	0.0	Low flood risk
24	Brierley's Farm, Brinklow	4.97	50 dwellings	100.0	0.0	0.0	0.0	8.6	2.3	0.6	Low flood risk
26	Brookside, Stretton	1.5	30 dwellings	100.0	0.0	0.0	0.0	1.9	1.3	1.0	Low flood risk overall. However, SFRA identifies significant flow path on the road in all events presenting access issues. Significant depths for all events. Therefore, site not considered sequentially preferable.
40	East of Kilsby Lane, Hillmorton	4.85	125 dwellings	100.0	0.0	0.0	0.0	7.5	4.3	2.6	Low flood risk
73	Lodge Farm, off Daventry Road, Rugby	252.71	up to 2680 dwellings, 1800 by 2045	96.6	3.4	2.8	2.3	18.4	11.4	7.8	Medium flood risk Rainsbrook runs through the northeastern part of the site and is not currently modelled in flood zone data.
75	Lea Crescent, Newbold	0.78	20 dwellings	100.0	0.0	0.0	0.0	6.4	4.3	3.9	Low flood risk Site screening notes potential ponding in the site in all events with max depths of 0.6 to 0.9m. Limited implications for access which is mainly from the south.
83	Land south of Lilbourne Road, Clifton on Dunsmore	8.58	180 dwellings	100.0	0.0	0.0	0.0	1.4	1.0	0.8	Low flood risk
84	Land south of Leicester Road, Wolvey	8.49	60 dwellings	72.8	27.2	25.1	23.4	7.3	3.3	1.5	High flood risk Not a sequentially preferable site. Developer masterplan shows development not extending to parts of site subject to flood risk. SFRA includes a detailed site table.
90	Homestead Farm, Dunchurch	1.07	30 dwellings	100.0	0.0	0.0	0.0	2.6	0.0	0.0	Low flood risk
96	Land at Coventry Road, Wolvey	26.14	60 dwellings	100.0	0.0	0.0	0.0	4.5	1.4	0.9	Low flood risk

				Fluvial flood zones				Risk of surface water flooding			
Ref	Site Name/ Address	Gross site area (Ha)	Capacity	% in FZ 1	% in FZ 2	% in FZ 3a	% in FZ 3b	% in RoFSW 1000yr	% in RoFSW 100yr	% in RoFSW 30yr	Screening
104	Land rear of 25 Croft Close, Wolvey	1.1	31 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Low flood risk
118	Land at Police College, Ryton-on-Dunsmore	2.3	9200m2 employment land or 48 dwellings	100.0	0.0	0.0	0.0	3.7	2.0	1.7	Low flood risk
122	Fenley Fields, Cawston	4.64	80 dwellings	100.0	0.0	0.0	0.0	2.0	0.5	0.0	Low flood risk
136	Land North of Warwick Road, Wolston	3.87	80 dwellings	100.0	0.0	0.0	0.0	1.4	0.9	0.8	Low flood risk
134	Land North of Plott Lane, Stretton on Dunsmore	4.82	125 dwellings	100.0	0.0	0.0	0.0	0.0	0.0	0.0	Low flood risk
334	Land off Barby Lane (smaller cut)	19.22	380 dwellings	100.0	0.0	0.0	0.0	0.9	0.5	0.3	Low flood risk
335	Land off Rugby Rd Clifton (smaller cut)	8.03		100.0	0.0	0.0	0.0	0.7	0.6	0.5	Low flood risk
341	Land South of Coventry Road, Dunchurch (part of site 97)	18.04	180 dwellings	100.0	0.0	0.0	0.0	4.6	1.4	0.5	Low flood risk