

**OUTLINE DRAFT SEQUENTIAL TEST NOTE
ADDENDUM**

Three Rivers District Council

October 2009

Halcrow Group Ltd

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Introduction

In February 2009 Halcrow conducted an Outline Sequential Test Note for 2 broad areas and 8 individual sites identified in the February 2009 version of Three Rivers District Core Strategy Preferred Options Development Planning Document. The purpose of that study was to inform the preparation of the Three Rivers Core Strategy by establishing that there were no sequentially preferable sites in flood risk terms.

The February 2009 Core Strategy Preferred Options DPD was consulted with members of the public and with all relevant statutory authorities. Subsequent to the response received to this consultation, Three Rivers District Council (TRDC) has amended the Core Strategy DPD by removing, altering and adding a few non-strategic sites. Following this addition of sites, hereafter referred to as 'New Sites', it is required to test suitability of the New Sites for development in flood risk terms. This addendum presents results of the Outline Sequential Test (OST) conducted on the New Sites. The test follows the same methodology used in the February 2009 version of the Outline Sequential Test Note.

Three Rivers Core Strategy- Amendment

Following public consultation of the Core Strategy Preferred Option DPD alteration to the document is proposed on two key areas i.e., Housing Supply and Housing Sites. With regard to recommendation from the Government Office for the East of England TRDC has revised their housing supply search from the period 2021/22 to 2026. A revision to the period of search implies additional housing supply. Alongside amendments to capacity of already identified sites, the revised Core Strategy November 2009 version includes 'new' additional sites to meet the gap. These 13 New Sites, located variously in the District, have an estimated capacity of 499 dwelling units. These sites include 2 new large sites in the Abbots Langley and Croxley Green areas of the District.

These New Sites are identified as being suitable to help the District in achieving the regional housing target and employment land requirement. PPS 25 requires sites that are proposed for allocation to be sequentially tested early on in the preparation of an LDD development.

Four Councils (including Three Rivers) Strategic Flood Risk Assessment (SFRA)

The Four Councils (Dacorum, St Albans, Three Rivers and Watford) commissioned Halcrow to conduct a Level 1 SFRA study in 2007. This study identified areas at risk of flooding and their flood zone classification. It recommended that development sites within areas at 'medium' and 'high' risk of flooding should be sequentially tested to establish that there are no sequentially preferable sites at lower risk of flooding. Information from the SFRA study and the National Flood Defence and Coastal Database, Environment Agency, 2007 is used to conduct the OST on the New Sites of the Core Strategy.

The Sequential Test

This section sets out the findings of the sequential testing of the New Sites. It follows the steps outlined in PPS25 using a procedure devised in consultation with the Environment Agency.

It was agreed with Three Rivers District Council planning officers that the area of search should only include New Sites identified in the Revised Core Strategy DPD November 2009.

Site and Development Information

None of the New Sites identified in the November 2009 version of the Core Strategy Preferred Option, currently being consulted, are located on 'medium' or 'high' flood risk zone except a small part of the site at Fairways Farm, Garston.

Detailed site and development information on the New Sites are set out in Table 1. It also includes Flood Zone, flood defence information, and existing and proposed uses. The flood vulnerability classification in column 8 is based on guidance in Table D3 Flood Risk Vulnerability and Flood Zone 'Compatibility' of PPS 25.

Table 1 New Sites- Amended Core Strategy DPD - Flood Risk Data

Core Strategy Map ref (1)	Site address (2)	Site size (ha) (3)	Flood Zone (approx percentage) (4)	Existing Flood Defences – based on NFCDD¹ data (5)	Existing Uses (6)	Proposed Uses (indicative capacity) (7)	Flood Vulnerability Classification (8)
A	Fairways Farm/ Penfold Golf Course, Garston	8.21	1 (92%) 2 (1%) 3a (7%) 3b (0%)	No flood defences	Golf course and agricultural land	Residential 300 dwellings	More vulnerable
B	Adjacent 65 Toms Lane, Kings Langley	0.51	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Fencing yard	Residential 20 dwellings	More vulnerable
C	Mansion House Farm Equestrian Centre, Bedmond Road, Abbots Langley	0.41	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Equestrian centre (operational)	Residential 20 dwellings	More vulnerable
D	Land at Waterdell, Bricket Wood	1.62	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Open land	Residential 50 dwellings	More vulnerable
E	Hill Farm Industrial Estate, Hill Farm Avenue, Leavesden	0.60	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Employment site – operational industrial units	Residential 30 dwellings	More vulnerable
G	Land at Arnett Close/ Upper Hill Rise, Rickmansworth	0.29	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Open land	Residential 5 dwellings	More vulnerable
H	Yorke Road School, Yorke Road, Croxley Green	0.13	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Disused primary school/ office use	Residential 5 dwellings	More vulnerable

¹ National Flood and Coastal Defence Database

Core Strategy Map ref (1)	Site address (2)	Site size (ha) (3)	Flood Zone (approx percentage) (4)	Existing Flood Defences – based on NFCDD¹ data (5)	Existing Uses (6)	Proposed Uses (indicative capacity) (7)	Flood Vulnerability Classification (8)
I	Grove Crescent Car Park, Croxley Green	0.08	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Car park	Residential 5 dwellings	More vulnerable
J	Crescent Club, Hayling Crescent, South Oxhey	0.13	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Social club (in use)	Residential 5 dwellings	More vulnerable
K	The Jet Public House, Hayling Road, South Oxhey	0.18	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Derelict pub	Residential 10 dwellings	More vulnerable
L	Land at Ferryhills Close, South Oxhey	0.26	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Open land	Residential 5 dwellings	More vulnerable
M	Adjacent to 28 Maple Lodge Close, Maple Cross	0.14	1 (100%) 2 (0%) 3a (0%) 3b (0%)	Raised defence (man-made). Raised earth embankment. Heavily vegetated with grass/trees/scrub. Stable. Part of Lower Colne Improvement Scheme located at Maple Lodge STW	Open land	Residential 4 dwellings	More vulnerable
N	Land South of St Josephs, Ainsdale Road, South Oxhey*	1.54	1 (100%) 2 (0%) 3a (0%) 3b (0%)	No flood defences	Disused school playing field	Residential 40 dwellings	More vulnerable

Sequential Testing

In introducing the sequential and exception tests in PPS25, the Department for Communities and Local Government (DCLG) does not intend to prevent development on all sites that are liable to flooding. The DCLG accepts that some form of development may have to take place on sites that are liable to flooding. However, due to the risks of developing on sites that are liable to flooding, the PPS25 policy requirement is to minimise the risk from flooding to people and property.

The overall aim of decision-makers should be to steer new development to Flood Zone 1 (see PPS25 Table D.1 Flood Zones). Where no Zone 1 sites are reasonably available, taking into account flood risk vulnerability of land uses (See PPS25 Table D.2 Flood Risk Vulnerability Classification) decision makers should identify reasonably available Flood Zone 2 sites, applying the Exception Test if required i.e. in the case of highly vulnerable uses (See PPS25 Table D.3 Flood Risk Vulnerability and Flood Zone 'Compatibility')

Within each Flood Zone, new development should be directed first to sites with the lowest probability of flooding. The flood risk vulnerability of the intended use should be matched to the flood risk of the site e.g. higher vulnerability uses located on the parts of the site with the lowest probability of flooding.

Competing Sites

Three Rivers District Council Sites

The Sequential Test requires an examination of alternative sites (competing sites) that are at less or equal risk of flooding to the New Sites. The competing sites information for the Outline Sequential Test February 2009 version was taken from the Three Rivers SHLAA, February 2009 study. This SHLAA has not undergone any alteration since then; therefore the same competing sites list has been adopted for this addendum. For purposes of completeness of this sequential test note the competing sites information from the OST February 2009 version is reiterated.

All competing sites identified within the SHLAA underwent a multi-criteria assessment to identify their suitability, including the environmental and economic impacts of development. Based on this information and considering the sites against relevant national and regional planning policy considerations, the competing sites have been assessed in this Sequential Test. Table 2 presents information about the competing sites and the main reasons for not considering them to be preferable alternatives to the New Sites.

Table 2: Competing Sites

Site No. (SHLAA ID)	Site Address	Existing use	Planning Status	Proposed Development	Site Size (ha)	Flood Zone	Comments
AB36	The Retreat, Abbots Langley	Open land	Unallocated but identified in SHLAA	Residential – 148 units	2.66	1	Development may have an impact on Green Belt and the site has poor access to services
CGN5	Little Green Playing Fields, Croxley Green	Playing Fields	Unallocated but identified in SHLAA	Residential-153 units	4.5	1	Development is likely to have an impact on the Green Belt
CW27	Hall Farm, Berry Lane, Chorleywood	Farmland	Unallocated but identified in SHLAA	Residential-81 units	1.87	1	Development is likely to have an impact on the Green Belt and site has poor access to services
BP28	Egg Farm, Kings Langley	Open land	Unallocated but identified in SHLAA	Residential-49 units	0.62	1	Development is likely to have an impact on Green Belt
NW9	Henbury Way	Car Parking	Unallocated but identified in SHLAA	Residential- 63 units	0.51	1	Site is required to provide parking and access to town centre
AS44	East of Lytham Avenue, South Oxhey	Open land	Unallocated but identified in SHLAA	Residential- 30 units	0.66	1	Access to site is difficult and there is no intention to develop
MC31	West Hyde Residential Centre, Maple Cross	Residential Centre	Unallocated but identified in SHLAA	Residential – 4 units	0.12	1	Development is likely to have an impact on Green Belt and site has poor access to services
OH11	Oxhey Pavillion, Green Lane, Oxhey	Pub and car parking	Unallocated but identified in SHLAA	Residential- 46 units	0.98	1	Development is likely to have an impact on Green Belt and site has poor access to services. Additionally, there is no intention to develop this site
CW6	Ferry Car Park, Chorleywood	Car park	Unallocated but identified in SHLAA	Residential- 13 units	0.32	1	Site will be required to provide parking and access to town centre. Additionally, there is no intention to develop this site
CGS13	Croxley LUT station	Car parking and timber yard	Unallocated but identified in SHLAA	Residential – 11 units	0.69	1	Impact of railway line, required to provide parking for station. No intention to develop this site

Site No. (SHLAA ID)	Site Address	Existing use	Planning Status	Proposed Development	Site Size (ha)	Flood Zone	Comments
MC1	Buttlehide, Maple Cross	Open space	Unallocated but identified in SHLAA	Residential- 12 units	0.35	1	Site required for open space. Site has poor access to services. There is no intention to develop the site
R25	Car Park, Northway	Car parking	Unallocated but identified in SHLAA	Residential – 5 units	0.15	1	Site required for car parking
CG8	Back land to New Parade, The Green, Croxley Green	Backlands	Unallocated but identified in SHLAA	Residential- 6 units	0.11	1	No intention to develop
P23	Mill End Community Centre, Mill End	Community Centre	Unallocated but identified in SHLAA	Residential- 28 units	0.49	1	Retention of the Community Centre facilities will be required. There is no intention to develop the site
E18	The Roughts, Eastbury	Open Land	Unallocated, identified and rejected in SHLAA	Residential- 99 units	3.32	1	Development at site will impact wildlife site and have impact on LNR. The site comprises of fauna with Tree Preservation Order
AB32	Off Tibbs Hill Road, Abbots Langley	Builders yard	Unallocated but identified in SHLAA	Residential- 7 units	0.21	1	Access to site is an issue. No intention to develop the site
CG11	Elmcote House, Croxley Green	House and grounds	Unallocated but identified in SHLAA	Residential- 3 units	0.51	1	Development will have an impact on Conservation Area. No intention to develop the site
CG20	Parrotts Close, Croxley Green	House and grounds	Unallocated but identified in SHLAA	Residential- 2 units	0.84	1	Development will impact Conservation Area
CW26	Wearings Field, Stag Lane, Chorleywood	Field	Unallocated, identified and rejected in SHLAA	Residential- 68 units	2.28	1	Development may impact wildlife site, ancient woodland and public open space near the site. It also suffers from poor access to services

Sequential Test Findings

The Planning Policy Statement 25: Development and Flood Risk Practice Guide provides a flow chart indicating how to apply the Sequential Test at the local level in Figure 4.1. While the above tables provide required information on the new sites and the competing sites, the following questions and answers summarise the sequential testing process.

The New Sites and the Competing Sites

The following questions consider the New Sites and the Competing Sites in sequence.

Question 1- Are the proposed locations for development in Flood Zone 1 (Low Probability of Flooding)?

YES

New Sites

- Adjacent 65 Toms Lane, Kings Langley
- Mansion House Farm Equestrian Centre, Bedmond Road, Abbots Langley
- Land at Waterdell, Bricket Wood
- Hill Farm Industrial Estate, Hill Farm Avenue, Leavesden
- Land at Arnett Close/ Upper Hill Rise, Rickmansworth
- Yorke Road School, Yorke Road, Croxley Green
- Grove Crescent Car Park, Croxley Green
- Crescent Club, Hayling Crescent, South Oxhey
- The Jet Public House, Hayling Road, South Oxhey
- Land at Ferryhills Close, South Oxhey
- Adjacent to 28 Maple Lodge Close, Maple Cross
- Land South of St Josephs, Ainsdale Road, South Oxhey

Competing Sites

The competing sites are identified in Table 2. These Flood Zone 1 sites collectively have a housing capacity of 595 dwellings.

NO

New Sites

Fairways Farm/ Penfold Golf Course, Garston (Zone 1 (92%); zone 2 (1%); zone 3a (7%))

Question 2- Could the proposed locations for development in Flood Zone 2 (Medium Probability of Flooding) and Flood Zone 3 (High Probability of Flooding) be located in Flood Zone 1- Low Probability of Flooding?

a) Identify alternative sites that were considered and explain why they were dismissed:

Competing Sites – Flood Zone 1 sites from the Strategic Housing Land Availability Assessment Study are identified in Table 2 above. Based on a multi-criteria assessment (see Appendix 3- Housing Sites Selection Criteria of the Core Strategy Preferred Option DPD), these sites were not taken forward for the following reasons:

- The multi-criteria assessment results indicate these locations to be less sustainable because they may have adverse impacts on accessibility, infrastructure, open spaces, Conservation Areas, parking for Town Centre use and Community Amenities. Refer to Table 2 for individual competing site information.
- PPS1, PPS3, PPS6, PPG 2 and PPG 13 seek to promote sustainable development and recommend that priority is given to the use of brownfield sites in sustainable locations.

b) Explain why the proposals cannot be directed to Flood Zone 1

- Competing sites are in a less sustainable locations with access or other development constraints
- Limited regeneration sites in sustainable locations
- No sufficient interest exhibited by developers to take forward some competing sites

If the site is in Flood Zone 2- proceed to Question 3

Question 3 – How do the proposed uses relate to the Essential Infrastructure, More Vulnerable, Less Vulnerable and Water- compatible Development Flood Risk Vulnerability Classifications set out in PPS25 Table D.2?

YES

New Sites

More Vulnerable use in the following sites as they are proposed for residential land-use:

- Fairways Farm/ Penfold Golf Course, Garston
- Adjacent 65 Toms Lane, Kings Langley
- Mansion House Farm Equestrian Centre, Bedmond Road, Abbots Langley
- Land at Waterdell, Bricket Wood
- Hill Farm Industrial Estate, Hill Farm Avenue, Leavesden
- Land at Arnett Close/ Upper Hill Rise, Rickmansworth
- Yorke Road School, Yorke Road, Croxley Green
- Grove Crescent Car Park, Croxley Green
- Crescent Club, Hayling Crescent, South Oxhey
- The Jet Public House, Hayling Road, South Oxhey
- Land at Ferryhills Close, South Oxhey
- Adjacent to 28 Maple Lodge Close, Maple Cross
- Land South of St Josephs, Ainsdale Road, South Oxhey

These proposed uses are appropriate if located in Flood Zone 2

Question 4- Can the proposed locations for development in Flood Zone 3 be redirected to Flood Zone 2?

NO

Explain why the development cannot be redirected

Alternative sites are likely to have an impact on the existing infrastructure, open spaces and on community facilities, therefore they are not considered sustainable.

As only part of the site at Fairways Farm is under Zone 2 and 3, the development layout design may be organised to accommodate development to reduce vulnerability of the proposed development to flooding.

Is the development Highly Vulnerable?

NO

Question 5 - Will the proposed development type be acceptable in Flood Zone 3a?

Subject to Exception Test results, More Vulnerable development may be acceptable in Flood Zone 3a. Essential Infrastructure also may be acceptable in Flood Zone 3a.

Conclusions

In order to meet the additional housing requirement following change in the search period from 2021 to 2026 of the Core Strategy, a thorough search of suitable sites has been carried out by Three Rivers District Council. A set of New Sites were included in the November 2009 version of the Core Strategy Preferred Options DPD. These New Sites have been tested using the PPS25 Sequential Test methodology to examine their suitability for residential development that has been proposed.

The Sequential Test results indicate that the New Sites are sequentially preferable sites in flood risk terms and have a role to play in meeting the East of England Plan dwelling and employment land requirement.

Given the Green Belt constraints on Three Rivers District Council and the limited availability of other regeneration sites in urban areas, the New Sites are considered to offer the best available site. Specific recommendations for the individual sites are provided in Table 3.

Table 3: Further steps following Sequential Test on the New Sites

Map ref	Site address	Comment on next steps
A	Fairways Farm/ Penfold Golf Course, Garston	A sequential approach should be adopted for the master planning of the site – less vulnerable uses in flood zones 2 and 3a. More vulnerable uses permitted in flood zones 1 (exception test recommended).
B	Adjacent 65 Toms Lane, Kings Langley	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
C	Mansion House Farm Equestrian Centre, Bedmond Road, Abbots Langley	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
D	Land at Waterdell, Bricket Wood	No further Sequential Test or Exception Test work required – will require a surface water

Map ref	Site address	Comment on next steps
		drainage strategy
E	Hill Farm Industrial Estate, Hill Farm Avenue, Leavesden	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
G	Land at Arnett Close/ Upper Hill Rise, Rickmansworth	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
H	Yorke Road School, Yorke Road, Croxley Green	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
I	Grove Crescent Car Park, Croxley Green	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
J	Crescent Club, Hayling Crescent, South Oxhey	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
K	The Jet Public House, Hayling Road, South Oxhey	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
L	Land at Ferryhills Close, South Oxhey	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
M	Adjacent to 28 Maple Lodge Close, Maple Cross	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy
N	Land South of St Josephs, Ainsdale Road, South Oxhey*	No further Sequential Test or Exception Test work required – will require a surface water drainage strategy

Next Step

This note focuses on the Sequential Test for the New Sites. Although these sites are considered sequentially preferable in flood risk terms, it is recommended that the site at Fairways Farm should undergo an Exception Test as part of a Level 2 SFRA. All other New Sites located in Zone 1 will not require an Exception Test, however they will need an appropriate surface water drainage strategy.