CC013

Chelmsford Local Plan

Pre-Submission Sequential and Exception Test Focused Update

December 2024

Our Planning Strategy 2022 to 2041



Chelmsford Pre-Submission Local Plan Sequential and Exception Test Focused Update December 2024

Introduction

The purpose of this report is to set out updates to the Flood Sequential and Exception tests undertaken to inform the Pre-Submission Local Plan. It should be read alongside the report CC012: Sequential and Exception Tests of Preferred Options Site Allocations, May 2024.

The report provides commentary on the following site allocations:

- Growth Site 11b Land At Kingsgate, Bicknacre Road, Bicknacre
- Growth Site 11c Land West of Barbrook Way, Bicknacre
- Growth Site 14b Land South of Ford End Primary School
- Growth Site 17a Land North of Abbey Fields, East Hanningfield (Note: Previously assessed as the site is classified as 'More Vulnerable' and is at significant risk from surface water flooding) Updated
- Growth Site 17b Land East of Highfields Mead, East Hanningfield
- Strategic Growth Site 1cc Andrews Place, Land West of Rainsford Lane
- Strategic Growth Site 16a East Chelmsford Garden Community (Hammonds Farm) Updated

National Planning Policy requires councils to identify land in local plans to accommodate ten percent of their housing requirement figure on sites no larger than one hectare. Allocated small sites are often built out relatively quickly and need to be identified separately from the supply generated through small windfall sites. For the purposes of the Preferred Options consultation a number of small sites (Sites 11b, 11c, 14b, 17a and 17b) were indicated on the Policies Map with a symbol near its site vehicular access point. The precise boundary of these sites has now been determined and it is confirmed that sites 11b, 11c, 14b and 17b are of low flood risk.

Growth Site 17a, which was previously assessed, is classed as 'More Vulnerable' and is at significant risk from surface water flooding. It has been updated in the tables below.

An additional site at Andrews Place (Site 1cc) is included in the Pre-Submission Local Plan and therefore has been assessed as part of this assessment.

Strategic Growth Site 16a – East Chelmsford Garden Community (Hammonds Farm) has been updated in the tables below.

Assessment of flood risk for the Local Plan

The Local Plan includes a number of related evidence base documents which should be read in conjunction with this report, this includes:

- CC001: Level 1 Strategic Flood Risk Assessment (SFRA), February 2024
- CC010: Level 2 Strategic Flood Risk Assessment (SFRA), May 2024
- SFRA Updated Site Tables, December 2024
- IIA005: Preferred Options Integrated Impact Assessment (IIA), May 2024
- CC011: Chelmsford Local Plan Sequential and Exception Test, December 2017
- CC012: Sequential and Exception Tests of Preferred Options Site Allocations, May 2024
- Pre-Submission Integrated Impact Assessment (IIA), December 2024

With the exception of the Pre-Submission IIA, these documents can be found on the Local Plan website <u>www.chelmsford.gov.uk/lp-review</u>. The Pre-Submission IIA can currently be found at <u>Chelmsford Policy Board (January 2025)</u>.

Outcomes

The tables below set out the sequential and exception tests outcomes for the sites set out above. The information within the tables have been informed by the site information provided within the Level 2 SFRA (May 2024), including site tables and mapping and the updated site tables (December 2024). These evidence base documents can be found on the Local Plan website <u>www.chelmsford.gov.uk/lp-review</u>.

Site Name:	Land North of Abbey Fields, E	ast Hanningfield		
Local Plan Reference:	Growth Site 17a			
Site Area: (Ha)	0.89			
Proposed Allocation/Use:	Residential			
Capacity:	Around 15 homes			
Flood Zone:	1	2	3	
	100%	0%	0%	
Flood Risk Vulnerability:	More Vulnerable			

Sources of Flood Risk:	
Surface Flooding	3.3% AEP – 4.0%
	1% AEP – 9.7%
	0.1% AEP - 68.1%
Critical Drainage Area	The site is not in a critical drainage area.
Reservoir Flooding	There is no risk of flooding in the 'Dry Day' or 'Wet Day' scenarios.
Fluvial and Tidal flooding	This site is not at risk from fluvial flooding from Main Rivers. Close to the site's northern boundary and south-eastern
	boundary are the sources of two Ordinary Watercourses. These are unlikely to pose significant risk to the site, but as
	there is no detailed modelling available, the risk should be confirmed as part of a site-specific Flood Risk Assessment.
	The site is not at risk from tidal flooding.
Groundwater	The whole site is shown to have negligible risk of groundwater emergence in this area, and any groundwater
	emergence incidence has a chance of less than 1% annual probability of occurrence.
Sequential Test	
Are there reasonable	No. The site is in Flood Zone 1.
alternative locations within	
the site boundary available in	
same or lower flood zone?	
Are there reasonable	No. This is proposed for a small-scale site located within Flood Zone 1.
alternative site allocation(s)	
available in same or lower	
flood zone?	
Conclusion - Will the	Yes. The proposed use of this site is residential. Residential development is classed as 'more vulnerable' and therefore
proposed development type	should be located towards the lowest flood zone areas. The development is within Flood Zone 1.
be acceptable in this flood	A site-specific Flood Risk Assessment (FRA) is required due to the risk of surface water flooding.
zone?	
Sequential Test passed?	Yes
Exception Test required?	No.
	Th site is not at risk from fluvial flooding, even when taking climate change into account. The site is at significant risk
	from surface water flooding, even during relatively frequent events. The Exception Test is only required for sites at
	risk from fluvial flooding and the significant surface water flood risk have been noted. Developers will need to
	demonstrate through a site-specific flood risk assessment that users of the site will be safe throughout its lifetime.

	With regards to managing the flood risk, development may be able to proceed if:
	 Development is steered away from the southwestern border of the site which is at risk from deep surface water
	flooding in the 3.3%, 1% and 0.1% AEP events.
	 A carefully considered and integrated flood resilient and sustainable drainage design is put forward, with
	development 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 fluvial and surface water 1% AEP plus climate change events.
	This includes measures to reduce flood risk along these routes such as raising access, but not displacing
	floodwater elsewhere. Given the significant risk to the site at the 0.1% AEP events, a suitable flood warning and
	evacuation plan will be required.
	A site-specific FRA demonstrates that site users will be safe throughout the lifetime of the development and that
	development of the site does not increase the risk of surface water flooding on the site and to neighbouring
	areas.
	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).
	In conclusion, all sources of flood risk should be addressed (notably surface water) and a sequential approach to site
	planning and land use should be employed to ensure sustainability and safety over its lifetime.
Recommendation	Allocate the site

Site Name:	Andrews Place, Land West of Rainsford Lane			
Local Plan Reference:	Strategic Growth Site 1cc			
Site Area: (Ha)	1.91ha			
Proposed Allocation/Use:	Residential			
Capacity:	Around 250 homes			
Flood Zone:	1	2	3	
	62.8%	37.2%	23.9%	
Flood Risk Vulnerability:	More Vulnerable			
Sources of Flood Risk:				
Surface Flooding	3.3% AEP – 5.8%			
	1% AEP – 8.6%			
	0.1% AEP – 20.5%			
Critical Drainage Area	The site is not in a critical drainage area.			
Reservoir Flooding There is risk of flooding in the 'Wet Day' scenario in the southwestern portion of the site		, extending approximately		
	35m into the site parallel to t	he southwestern boundary.	There is no risk of flooding to t	he site during the 'Dry Day'
	scenario.			
Fluvial and Tidal flooding	The site is not at risk from tic	lal flooding.		
	The Environment Agency's Fi	ood Map for Planning and the	Cheimer (2010) hydraulic mod	del snow that the south-west
	portion of the site is at risk if	of nuvial nooding from the R	River Can. Overall, 23.9% of the	e site is within Flood Zone 3
	of the site at rick, expanding	towards the parth pastors ha	undary	
Groundwater	The whole site is shown to be	towards the north-eastern bo	ater emergence in this area, ar	ad any groundwater
Groundwater	amorgoneo incidenco has a c	hance of less than 1% appual	probability of occurrence	iu any groundwater
	Groundwater levels are indic	ated to be at least 5m below (ground level and groundwater	flooding is not likely
	however below ground deve	lonment such as basements m	av still be suscentible to grour	ndwater flooding
Sequential Test	nowever below ground deve	iopinent such as basements n		lamater nooung.
Are there reasonable	This site is located in all flood zones in part providing some flexibility to locate more vulnerable development to the			
alternative locations within	lowest areas of flood risk.			

the site boundary available in	
same or lower flood zone?	
Are there reasonable	No. This is an urban site, extremely close to the city centre, notably the railway station and main bus station. Given
alternative site allocation(s)	most of the larger strategic brownfield sites in the urban area have already been developed, there is limited
available in same or lower	opportunity and less availability for larger scale redevelopment. Therefore, smaller scale brownfield sites have been
flood zone?	identified and there are no reasonable alternatives in the urban area beyond those proposed for allocation in the
Construction M/III the	LUCII PIdii.
Conclusion - will the	The proposed use of this site is residential, as is the existing land use. Residential development is classed as more
proposed development type	vulnerable' and therefore should be located towards the lowest flood zone areas. A site-specific FRA will be required
be acceptable in this flood	as the proposed development site is located within fluvial Flood Zones 1, 2 and 3 and at risk of from surface water
zone?	flooding.
Sequential Test passed?	Yes
Exception Test required?	Yes
Exceptions Test	
Sustainability	This proposed allocation is a key strategic site offering a range of new homes. The site is a smaller urban site that is
	well positioned to benefit and support the city centre of cheimsford and its urban area.
Safety	The site is classified as more vulnerable and is at significant risk from huvial and surface water flooding in particular
	the southwestern boundary, given the proximity to the River Can. The site is partiy within Flood Zones 2 and 3.
	with regards to managing the flood risk, development may be able to proceed if: the developers demonstrates
	through a site-specific flood risk assessment that all sources of flood risk have been considered and that the users of
	the allocation will be safe throughout its lifetime, development is steered away from the southwestern border, safe
	access and egress can be demonstrated and any flood mitigation measures are implemented are tested to check that they will not displace water elsewhere.
	The site-specific flood risk assessment should consider the following issues:
	All sources of flood risk, including ordinary watercourse and residual risk from culvert blockages and breach
	of defences
	Undertaking consultation with Chelmsford City Council, Essex County Council, Anglian Water, and the
	Environment Agency at an early stage
	Carried out in line with the NPPF. PPG and Council's Local Plan policies
	• Development should be designed with mitigation measures in place where required and consideration for
	ongoing management and maintenance of the existing defences on site.
	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 limited to pre-development greenfield rates.
Exception Test passed?	Yes
Recommendation	Allocate the site

Site Name:	East Chelmsford Garden Community (Hammonds Farm)			
Local Plan Reference:	Strategic Growth Site 16a			
Site Area: (Ha)	310.44 (excluding Country Park)			
Proposed Allocation/Use:	Residential and Employment – Garden Community			
Capacity:	Around 3,000 homes to 2041	(plus 1,500 homes post 2041)		
Flood Zone:	1	2	3	
	91.4%	8.6%	7.2%	
Flood Risk Vulnerability:	Residential - More Vulnerable	2		
	Schools – More Vulnerable			
	Employment, community use	s, commercial, shops – Less Vu	ulnerable	
	Open space – Water Compati	ble		
Sources of Flood Risk:				
Surface Flooding	3.3% AEP – 0.1%			
	1% AEP – 0.5%			
	0.1% AEP – 4.1%		Hedden the less than a straight	
	In all events surface water ris	k is limited, with flows channe	elled by the lower topography	of the watercourses. Sandon
Critical Drainage Area	Brook flows along the eastern	h border of the site and is a cal	rrier for most of the surface w	ater.
Critical Drainage Area	The site is not in Critical Drain	lage Area.	anna sia thana is a sial, af flaadi	a frame tha Creat Cir Usahaa
Reservoir Flooding	(CSU Farming Ltd) and Lland	ours dataset, in the wet Day so	cenario there is a risk of floodil	astern boundary and the
	(GSH Farming Ltu) and Handid	ey Burns Farm (Private motivity)	tants cover the majority of the	site with the exception of an
	area of high ground in the so	thumbhan water Linned) ext	ad areas east of Sandon Brook	site with the exception of an
	In the Dry Day scenario. Grea	t Sir Hughes and Hanningfield	Raw Water and Hanningfield 1	Freated water have extends
	that follow the eastern bound	ary where extents are out of	hank	Teated water have extends
	The risk designation of Chign	al Reservoir has not vet been o	determined while the others h	ave been determined to be
	high risk. therefore, in the ver	ry unlikely event that the rese	rvoirs fail. there may be a risk	to life.
	Consultation with the reserve	pir owners and the Environme	nt Agency should be sought at	an early stage to ensure that
	residents of the site can be ke	ept safe in the unlikely event o	of a reservoir breach, which is l	ikely to require suitable
	arrangements for warning an	d evacuation.	,	
Fluvial and Tidal flooding	The site is not at risk from tid	al flooding.		

	Flood risk associated with Sandon Brook impacts the length of the eastern border of the site. Flood Zones 2 and 3 encroach a maximum of 206m and 172m respectively into the site in the southeastern corner. To the northeast of the site, Flood Zones 2 and 3 only encroach by 17m and 6m respectively. Fluvial modelling matches the flood zones, with the greatest depths present in the immediate vicinity of the channel. Maximum depths outside the main channel reach up to 0.5m in 3.3% AEP, up to 0.7m in the 1% AEP and 0.9m in 0.1% AEP. The remainder of the site remains at low risk and fluvial risk is unlikely to pose a barrier to development provided development is located away from the area within the flood zones. Flood Zones and fluvial modelling extents are not available for Blakes Stream to the east of the site, however surface water mapping suggests that flood extents from this watercourse are limited. The proposed bridge and access road through the proposed country park lies within Flood Zone 3, and is classified as essential infrastructure, therefore the Exception Test will need to be applied.
Groundwater	The east of the site is at negligible risk of groundwater flooding emerging in this area. At the southwest of the site, groundwater levels are between 0.5m and 5m below the surface and as such there is risk to subsurface assets. The northwest of the site has groundwater levels at or very near the surface. Within this zone there is a risk of groundwater flooding to both surface and subsurface assets. To the east of Sandon Brook, groundwater levels are between 0.5m and 5m below the surface assets. To the east of Sandon Brook, groundwater levels are between 0.5m and 5m below the surface. As such, there is a risk of flooding to subsurface assets, but surface manifestation of groundwater is unlikely. As this area is proposed for open space/recreation uses this is unlikely to cause a barrier to development. The risk from groundwater should be confirmed and quantified as part of the site-specific flood risk assessment. Development should be steered away from those areas identified as being of risk groundwater flooding or overland flows.
Sequential Test	
Are there reasonable alternative locations within the site boundary available in same or lower flood zone?	Yes. For more flood risk sensitive land uses, such as residential and schools, with careful site planning it is feasible to place these uses in the lowest flood risk areas.
Are there reasonable alternative site allocation(s) available in same or lower flood zone?	No. This is a key strategic scale allocation that requires proximity to the city centre and urban area of Chelmsford and Beaulieu Railway Station to the north that will open in 2025. Consideration has been taken of alternative sites as part of the Pre-Submission Integrated Impact Assessment and there are no reasonable alternatives which can provide development of this scale, located in close proximity to the city centre and provide wider benefits beyond those proposed for allocation in the Local Plan.
Conclusion - Will the proposed development type	Yes. The proposed development is residential led mixed use allocation that includes schools, commercial development and open space. At over 90%, the allocation is overwhelmingly in Flood Zone 1. It is entirely feasible

be acceptable in this flood	that with appropriate site planning, land uses can be placed in those areas of least risk pertinent to their flood risk
zone?	classification.
Sequential Test passed?	Yes.
Exception Test required?	Yes.
Exceptions Test	
Sustainability	This allocation is a key strategic site offering new homes at scale and with a range of supporting uses. It will not only create its own highly sustainable garden community, but will be well positioned to benefit and support the city centre of Chelmsford and its urban area.
Safety	 The site is classified as More Vulnerable and is partly within Flood Zones 2 and 3. It is also at risk from surface water flooding. Developers will need to demonstrate through site-specific flood risk assessment that all sources of flood risk have been considered and that the users of the allocation will be safe throughout its lifetime. The site-specific flood risk assessment should consider the following issues: All sources of flood risk, including residual risk from a failure or overtopping of defences. Ground investigations will be needed to assess risk posed by ground water. Consultation with Chelmsford City Council, Essex County Council, Anglian Water, and the Environment Agency should be undertaken at an early stage. Climate change outputs for the 0.1% AEP were not available for the Chelmer 2010 model. The Environment Agency is currently updating the modelling. If climate change scenarios for the latest allowances are not available, developers will need to conduct their own site-specific flood risk assessments to determine risk for this scenario. Post development site layout, including drainage features, should account for surface water risk. Development should be designed with mitigation measures in place where required. Developers will need to demonstrate that the bridge and access road will not increase flood risk elsewhere, including consideration of potential blockage of the bridge, or impedance of floodplain flows.
Exception Test passed?	Yes.
Recommendation	Allocate the site



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