

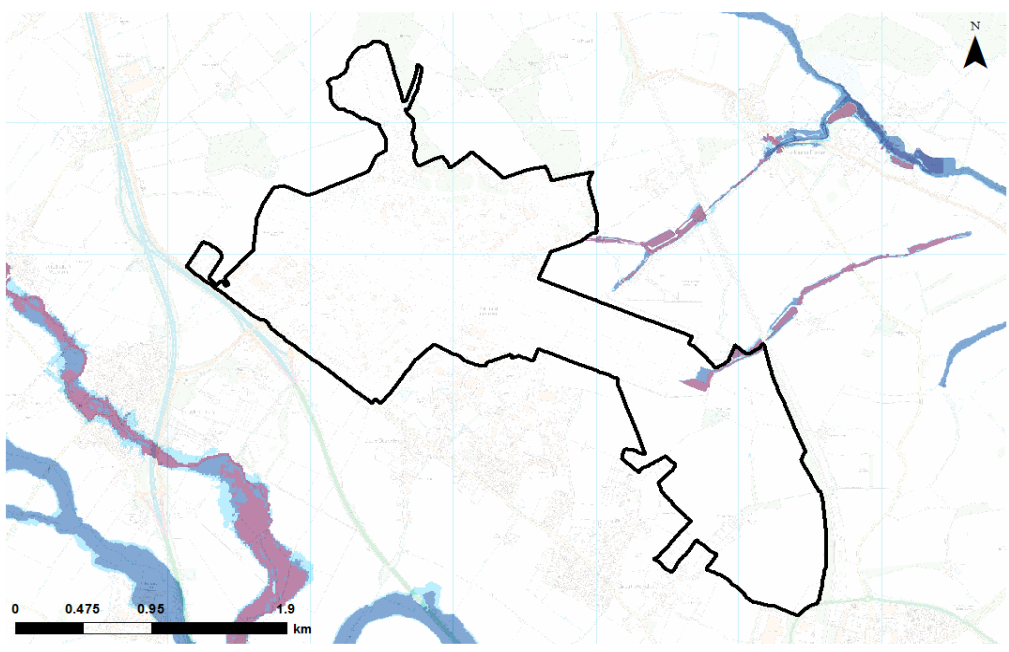
**Alconbury Weald (HU29)**

<b>OSNGR:</b> 521510,276434	<b>Area:</b> 575.00ha		<b>Brownfield / greenfield</b>	
<b>Flood Zone Coverage:</b>	<b>FZ3b</b> 1%	<b>FZ3a</b> 1%	<b>FZ2</b> 0%	<b>FZ1</b> 98%

**Sources of flood risk:**  
 The site has a very small risk of fluvial flooding, consisting of a small drain flowing west to east through the site. Surface water flooding is more of a risk with a number of flow routes in the south of the site as well as a number of pockets of risk throughout the rest of the site.

**Exception Test Required?**  
 Yes, if More Vulnerable and Essential Infrastructure development is located in FZ3a and for Highly Vulnerable development located in FZ2.  
 Highly Vulnerable infrastructure should not be permitted within FZ3a and FZ3b.  
 More Vulnerable and Less Vulnerable Infrastructure should not be permitted within FZ3b.  
 Essential Infrastructure in Flood Zone 3b will require the Exception Test.

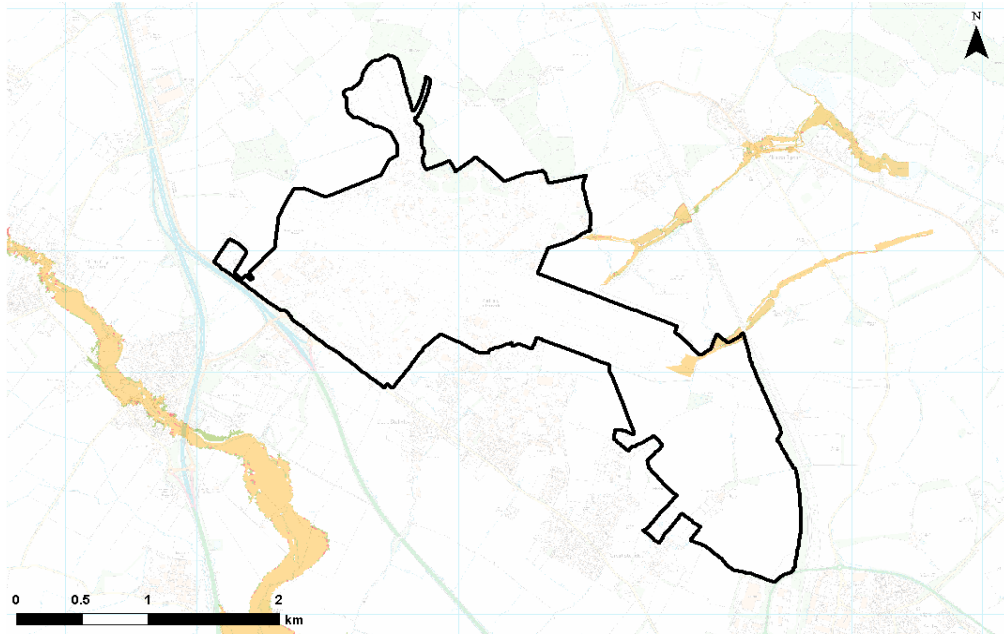
**Flood Zone Map**



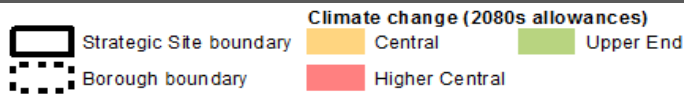
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Potential development location	Flood Zone 3b	Flood Zone 3a
Council boundary	Indicative Extent of Flood Zone 3b	Flood Zone 2

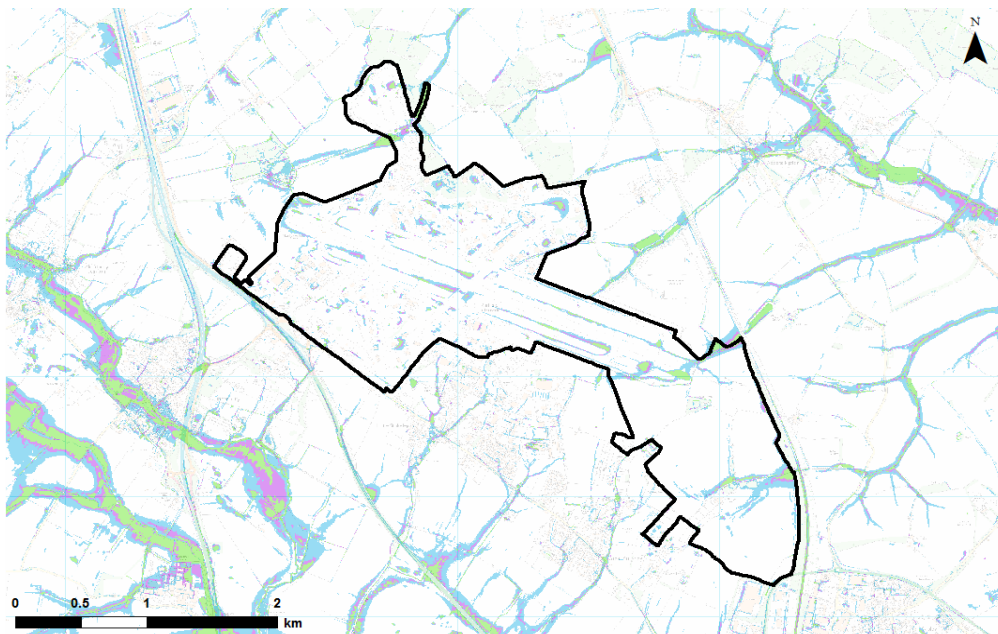
### Climate Change Map



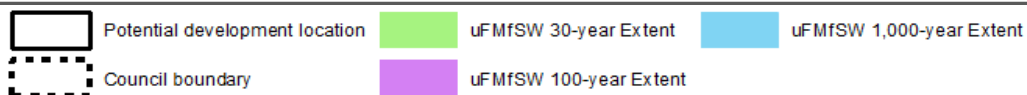
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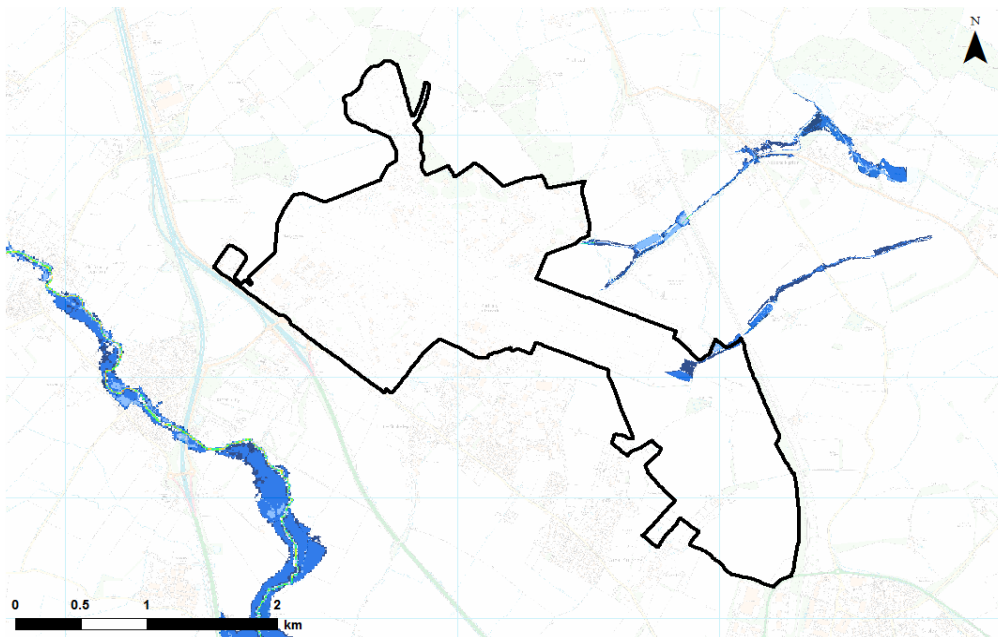
### Surface Water Map



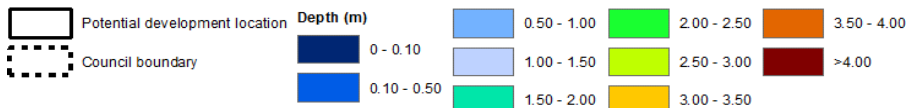
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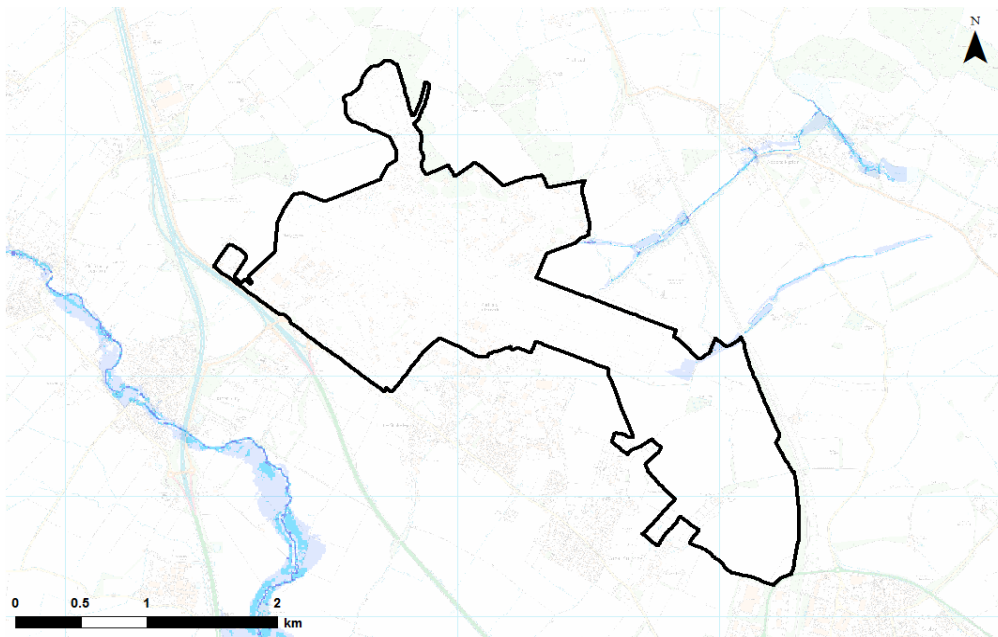
**Depth Map - fluvial flooding (1% Annual exceedance probability)**



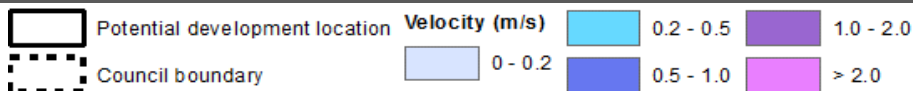
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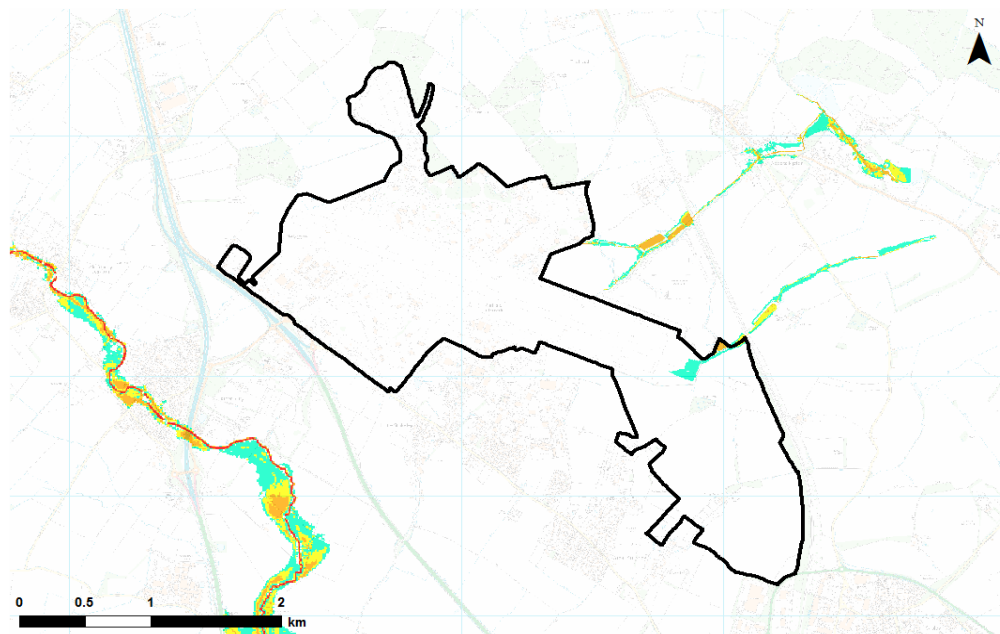
**Velocity Map - fluvial flooding (1% Annual exceedance probability)**



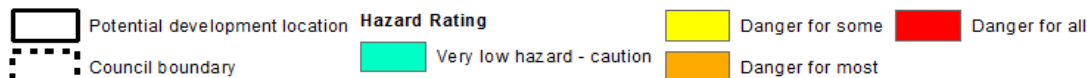
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**Hazard Map - fluvial flooding (1% Annual exceedance probability)**



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**SuDS & the development site:**

SuDS Type	Suitability	Comments
Source Control		Most source control techniques are likely to be suitable. Mapping suggests that permeable paving may have to use non-infiltrating systems given the possible risk from groundwater and risk of contaminated lands from designated landfill within the site boundary.
Infiltration		Infiltration may be suitable. Mapping suggests a medium risk of groundwater flooding and underlying soils may be permeable. However, areas of the site have been designated as containing historic landfill therefore, further site investigation should be carried out to assess potential for drainage by infiltration. If infiltration is suitable it should be avoided in areas where the depth to the water table is <1m.
Detention		This option may be feasible provided site slopes are < 5% at the location of the detention feature. If the site has contamination or groundwater issues; a liner will be required.
Filtration		This feature is probably suitable provided site slopes are <5% and the depth to the water table is >1m. If the site has contamination or groundwater issues; a liner will be required.
Conveyance		All forms of conveyance are likely to be suitable. Where the slopes are >5% features should follow contours or utilise check dams to slow flows. If the site has contamination or groundwater issues; a liner will be required.

This site has areas within its boundary designated by the Environment Agency as being a landfill site. A thorough ground investigation will be required as part of a detailed FRA to determine the extent of the contamination and the impact this may have on SuDS. As such, proposed SuDS should be discussed with the relevant stakeholders (LPA, LLFA and EA) at an early stage to understand possible constraints.

Drainage strategies should demonstrate that an appropriate number of treatment stages have been delivered. This depends on the factors such as the type of development, primary source of runoff and likelihood of contamination. Guidance should be sought from the LLFA and other guidance documents such as the CIRIA SuDS Manual (C753).

**Flood Defences:**

There are no flood defences at this site.

**Emergency Planning:**

There are currently no flood warning areas covering this site.

**Access & Egress:**

Availability of safe access and egress is not an issue for this site.

**Climate Change:**

The floodplain of the unnamed drain appears to be fairly constrained within this area - there is not much difference in extent between Flood Zone 3 and the 1% AEP event with the 2080s climate change allowances applied. Therefore, it is likely that climate change will not have a significant impact on the extent of flooding from this watercourse. It may, however, increase the depth of flooding in the area affected.

Climate change may also increase the extent, depth and frequency of surface water flooding in the future.

**Implications for Development:**

Use of the Sequential Approach means, given the size of the site, development can be placed away from Flood Zones 2 and 3, with the area affected by flood risk left undeveloped. Approximately 577 hectares of land is available outside of the Flood Zones.

Safe access and egress is not an issue for this site.

Broadscale assessment of suitable SuDS has indicated a number of different types may be possible; given the size of the site, the type of SuDS system used is less likely to be limited by the amount of land available for development.

The site is not covered by the Environment Agency's Flood Warning Service. However, if development is placed outside of the Flood Zones, then access to a Flood Warning would not be required.

The site is not known to benefit from any flood defences. Given the location of the site, any storage is unlikely to have any significant benefit to areas downstream as the drain flows through a predominantly rural area.

**Guidance for Developers:**

[Mapping in this table is different to the Flood Map for Planning as it based on results from a 2D model developed for this SFRA.](#)

At the planning application stage, a site-specific flood risk assessment will be required to confirm Flood Zone extents.

Other sources of flooding should also be considered. Where a site specific FRA has produced modelling outlines which differ from the Flood Map for Planning then a full evidence based review would be required; where this is acceptable to the EA then amendments to the Flood Map for Planning may take place

Resilience measures will be required if buildings are situated in the flood risk area.

The peak flows on the unnamed drain should be considered when considering drainage.

Assessment for runoff should include allowance for climate change effects.

New or re-development should adopt exemplar source control SuDS techniques to reduce the risk of frequent low impact flooding due to post-development runoff.

Onsite attenuation schemes would need to be tested against the hydrographs of the unnamed drain to ensure flows are not exacerbated downstream within the catchment.

New development must seek opportunities to reduce overall level of flood risk at the site, for example by:

- o Reducing volume and rate of runoff
- o Relocating development to zones with lower flood risk
- o Creating space for flooding.
- o Green infrastructure should be considered within the mitigation measures for surface water runoff from potential development and consider using Flood Zones 2 and 3 as public open space.

Consultation with the Local Authority and the Environment Agency should be undertaken at an early stage.