

East of Silver Street, Buckden

OSNGR: 519560,268080	Area: 0.68ha		Brownfield / greenfield	
Flood Zone Coverage:	FZ3b 0%	FZ3a 0%	FZ2 4%	FZ1 96%

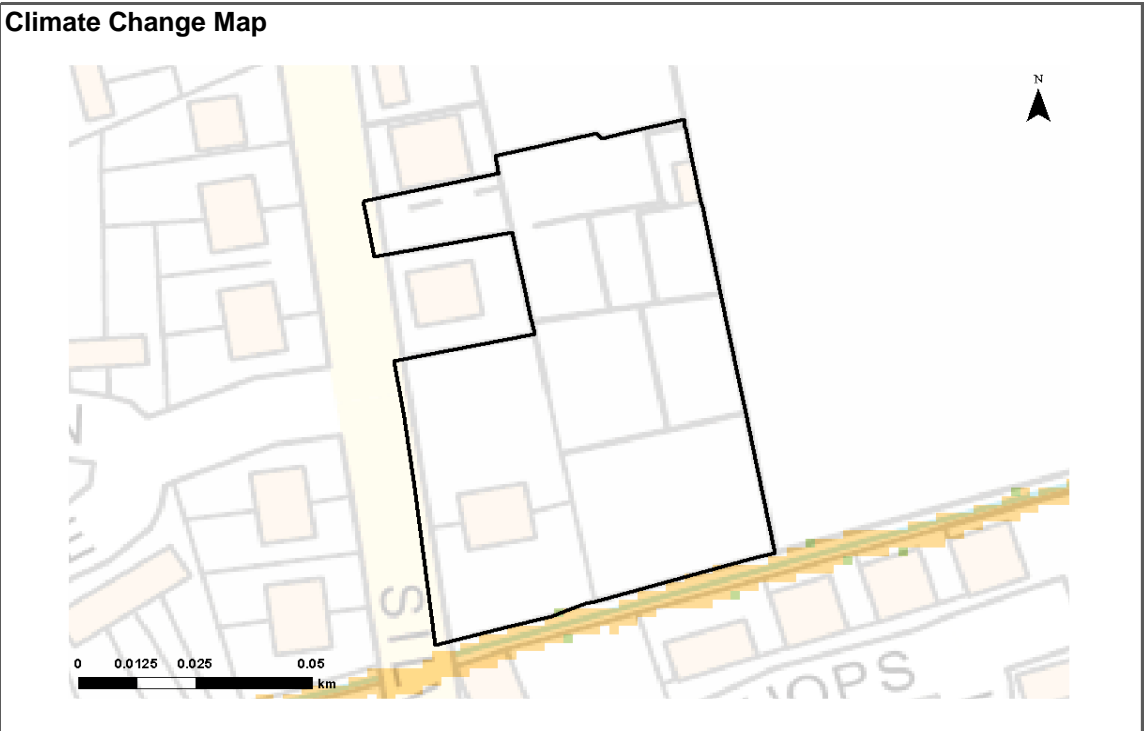
Sources of flood risk:
 Fluvial flood risk to the site is from a tributary of the River Great Ouse which flows along the southern site boundary. Surface water flooding poses more of a risk to the site, affecting the north east corner of the site.

Exception Test Required?
 Yes, for Highly Vulnerable development located in FZ2.

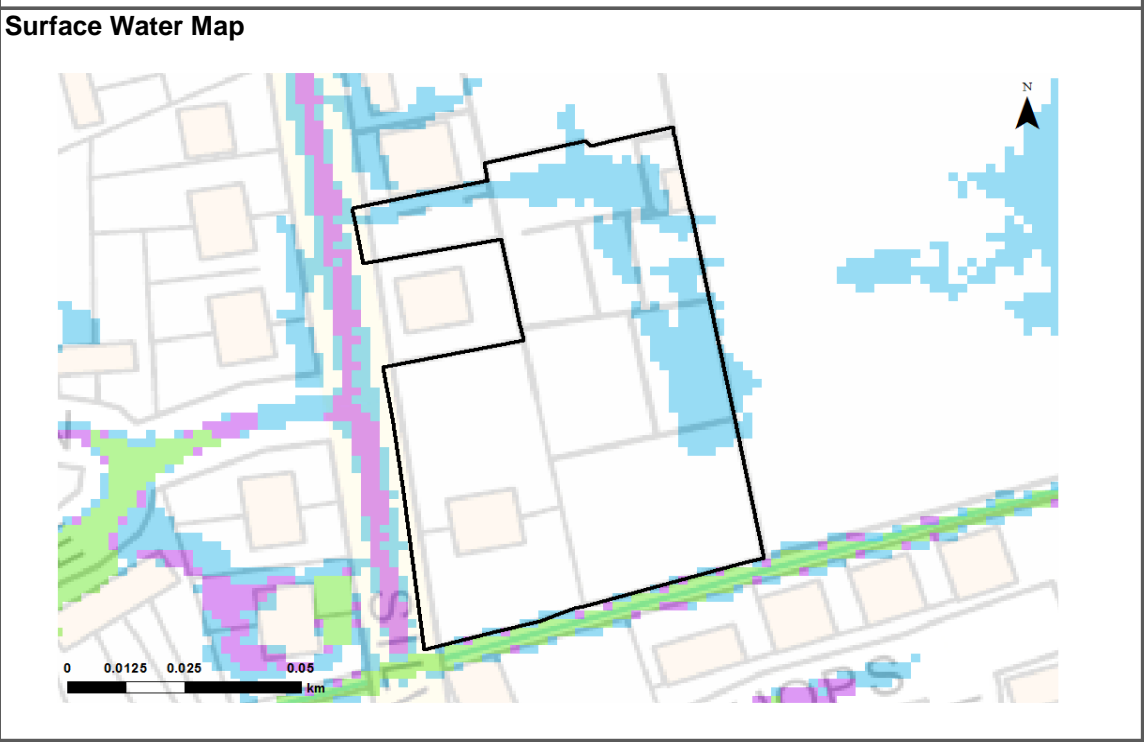
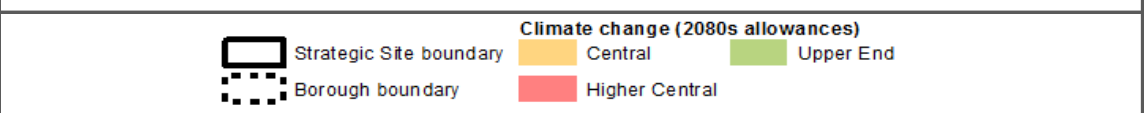


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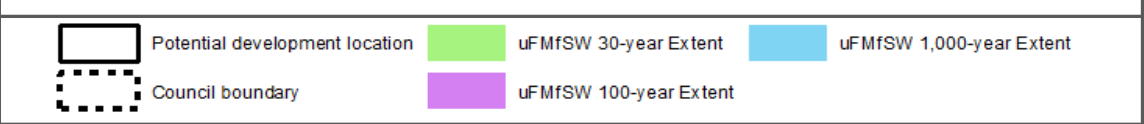
Potential development location	Flood Zone 3b	Flood Zone 3a
Council boundary	Indicative Extent of Flood Zone 3b	Flood Zone 2



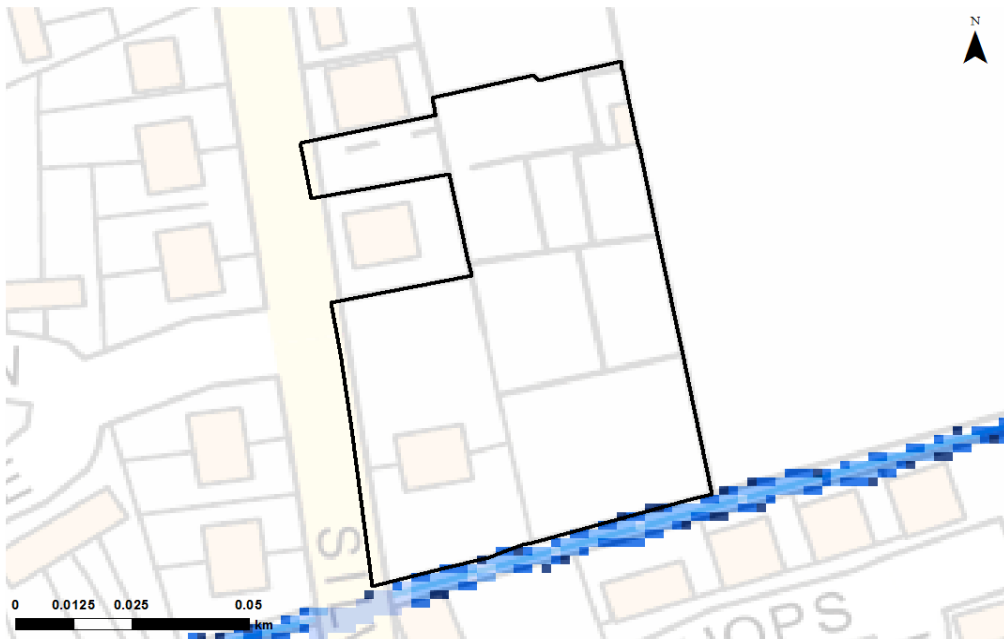
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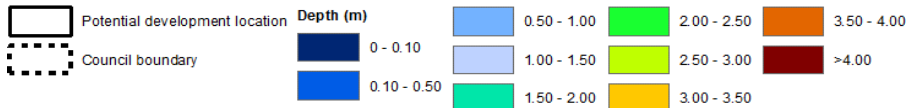
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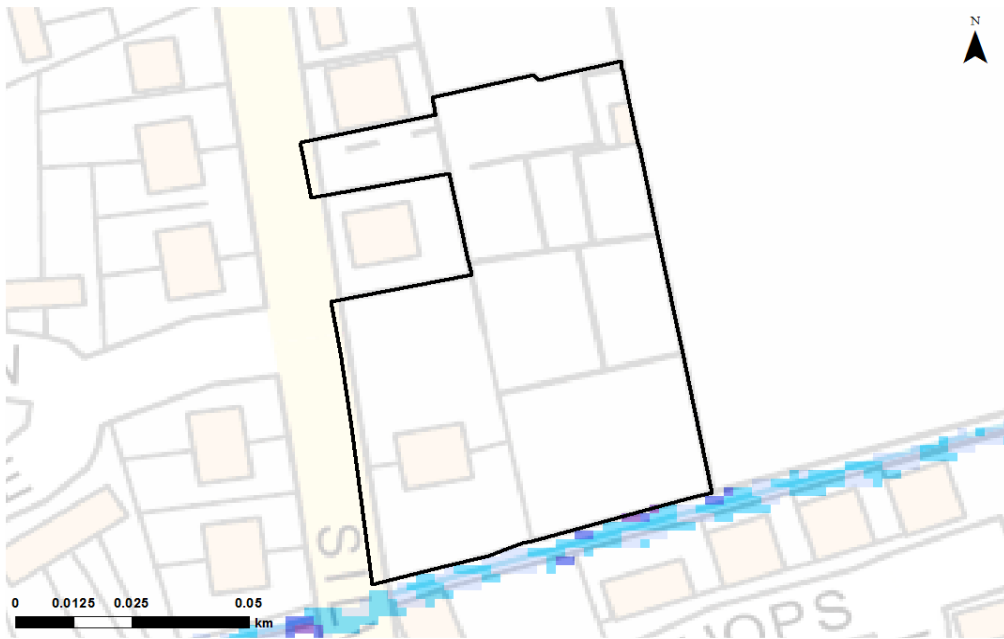
Depth Map - fluvial flooding (1% Annual exceedance probability)



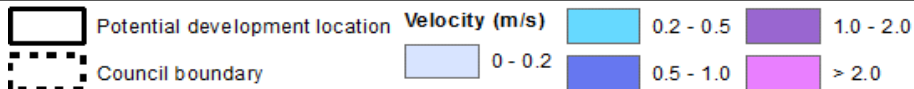
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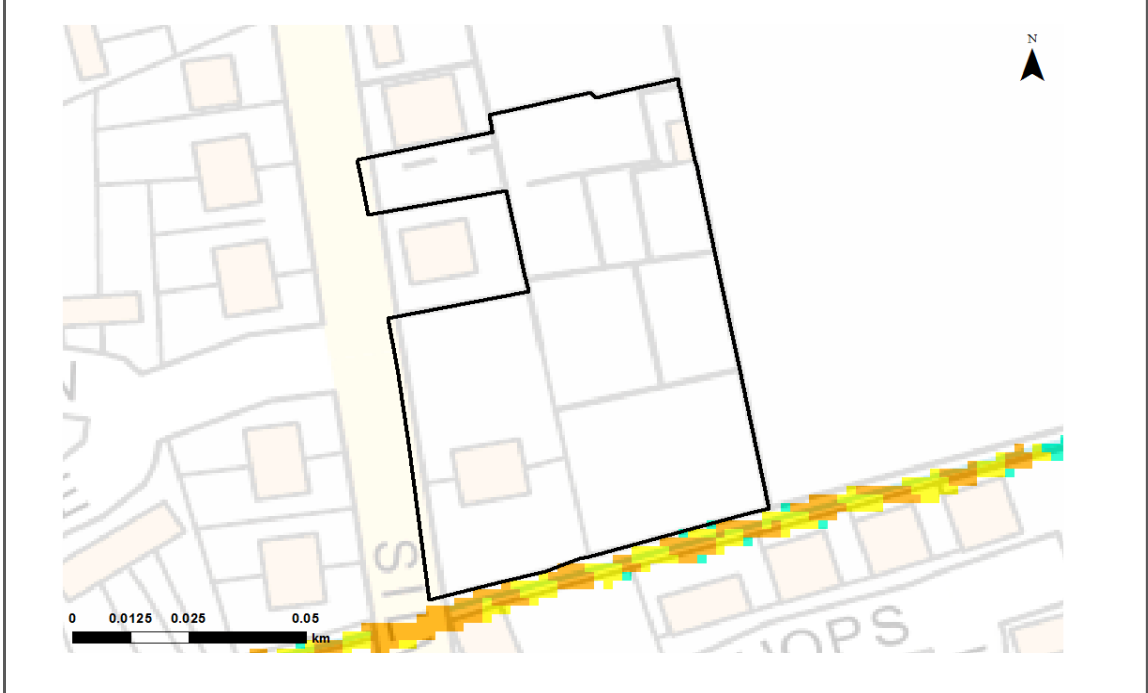
Velocity Map - fluvial flooding (1% Annual exceedance probability)









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



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	Potential development location	Hazard Rating		Danger for some		Danger for all
	Council boundary		Very low hazard - caution		Danger for most	

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.
Infiltration		Infiltration may be suitable. Mapping suggests a medium risk of groundwater flooding and underlying soils may be permeable. 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		Mapping suggests that the site slopes are suitable for all forms of detention. A liner may be required due to the site potential groundwater flooding.
Filtration		All filtration techniques are likely to be suitable. If the site has 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 groundwater a liner will be required.

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:

The main access and egress route for the site, Silver Street, is unaffected by fluvial flooding; however it is affected by surface water from the 1.3% AEP event.

Climate Change:

Climate change modelling shows that even when the Upper End 2080s climate change allowance is applied to the 1% AEP event, flooding does not occur in the site.

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 will be required to place vulnerable development outside of high risk areas.

Safe access and egress is not affected by flooding.

Broadscale assessment of suitable SuDS has indicated a number of different types may be possible; however, given the size of the site and the proportion of the site at risk from flooding, the type of SuDS system used may be influenced by amount of land available; depending on the system used there may be an impact on the amount of land available for development and the cost of development.

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

The site is not known to benefit from any flood defences. Given the size and location of the site, it is unlikely the site itself could be used to implement strategic solutions to alleviate flood risk elsewhere in the catchment.

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. 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 tributary 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 tributary 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.