



East Devon District Council Level 2 Strategic Flood Risk Assessment Detailed Site Summary Tables





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**Site Code****GH_ED_80a****Address**

Land north of Sector Lane, Axminster

3.3% AEP (1 in 30 year) event:

Proportion - 4%	
Max Depth - 0.67m	Mean Depth - 0.44m
Max Velocity - 2.84m/s	Mean Velocity - 1.53m/s
Max Hazard - 2.93	Mean Hazard - 1.89

1% AEP (1 in 100 year) event:

Proportion - 4%	
Max Depth - 1.05m	Mean Depth - 0.65m
Max Velocity - 3.55m/s	Mean Velocity - 1.87 /s
Max Hazard - 4.27	Mean Hazard - 2.6

0.1% AEP (1 in 1000 year) event:

Proportion - 8%	
Max Depth - 1.44m	Mean Depth - 0.53m
Max Velocity - 4.09m/s	Mean Velocity - 1.22m/s
Max Hazard - 5.25	Mean Hazard - 2.05

Flood characteristics:Flood Map for Planning

The site is partially located within Flood Zone 2 and 3 to the north of the site, with a tributary crossing from south to north. The remainder (the majority) of the site is located within Flood Zone 1.

- Flood Zone 1 represents areas which have less than 1 in 1000 (0.1%) chance of river flooding in a given year.
- Flood Zone 2 represents areas which have less than 1 in 100 (1%) but greater than 1 in 1000 (0.1%) chance of river flooding in a given year.
- Flood Zone 3 representing an area greater than 1 in 100 (1%) chance of river flooding in a given year.

River Axe Flood Risk Modelling

The site is shown to flood along the north/eastern boundary in all three events, with an increasing extent through AEP events. The mean depth and hazard on site during the 0.1% AEP event is shown to be 0.53m and 2.05 rated as a 'danger to all'. The average velocity on site is shown to be 1.22m/s, with a maximum of 4.09m/s. It is evident that the mean depth appears to decrease between the 1% AEP and 0.1% AEP event due to the increased flooding extent.

It should be noted that there is a significant difference in flood extent between the River Axe modelling and the Flood Map for Planning. It is therefore recommended that detailed flood modelling is undertaken for this site prior to any development to accurately define the Flood Zone 3b extent. In the absence of detailed modelling, Flood Zone 3 should be used as a proxy for Flood Zone 3b. Should future developers carry out detailed modelling then this should consider channel blockage given development should not be reliant on ongoing channel maintenance. The floodplain must be retained free from development.



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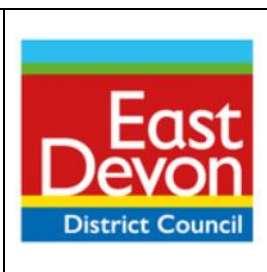
Site Code	GH_ED_80a																																
Address	Land north of Sector Lane, Axminster																																
Fluvial plus climate change	<p>Available data and mapping: The River Axe 2014 Flood Risk modelling provided by the Environment Agency as part of the Level 1 SFRA for East Devon was run by JBA in 2023 with the 46% and 61% climate change allowances.</p> <p>GH_ED_80a - Fluvial 3.3% AEP plus 46% Climate Change – Depth GH_ED_80a - Fluvial 3.3% AEP plus 46% Climate Change – Hazard GH_ED_80a - Fluvial 3.3% AEP plus 46% Climate Change – Velocity GH_ED_80a - Fluvial 1% AEP plus 46% Climate Change - Depth GH_ED_80a - Fluvial 1% AEP plus 46% Climate Change - Hazard GH_ED_80a - Fluvial 1% AEP plus 46% Climate Change - Velocity GH_ED_80a - Fluvial 0.1% AEP plus 46% Climate Change – Depth GH_ED_80a - Fluvial 0.1% AEP plus 46% Climate Change – Hazard GH_ED_80a - Fluvial 0.1% AEP plus 46% Climate Change – Velocity</p> <p>Management Catchment: GH_ED_80a is located within the East Devon Management Catchment. The Environment Agency guidance recommends that the central allowance is assessed for sites within Flood Zones 2 and 3a for sites that have a flood risk vulnerability of more vulnerable. The recommended uplift on peak river flow allowances for the central and higher central estimate for the 2080s are 46% and 61% respectively. The model was therefore set to run with a 46% and 61% climate change allowance to reflect these allowances and the results are discussed below for completeness, however mapping has only been provided for the 46% central allowance as recommended.</p> <p>Data analysis:</p> <p>3.3% AEP (1 in 30 year) plus 46% Climate Change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 4%</td> <td>Mean Depth – 0.57m</td> </tr> <tr> <td>Max Depth – 0.9m</td> <td>Mean Velocity – 1.71m/s</td> </tr> <tr> <td>Max Velocity – 3.15m/s</td> <td>Mean Hazard – 2.28</td> </tr> <tr> <td>Max Hazard – 3.41</td> <td></td> </tr> </table> <p>3.3% AEP (1 in 30 year) plus 61% Climate Change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 4%</td> <td>Mean Depth – 0.65m</td> </tr> <tr> <td>Max Depth – 1.05m</td> <td>Mean Velocity – 1.86m/s</td> </tr> <tr> <td>Max Velocity – 3.55m/s</td> <td>Mean Hazard – 2.57</td> </tr> <tr> <td>Max Hazard – 4.2</td> <td></td> </tr> </table> <p>1% AEP (1 in 100 year) plus 46% Climate Change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 5%</td> <td>Mean Depth – 0.63m</td> </tr> <tr> <td>Max Depth – 1.34m</td> <td>Mean Velocity – 1.52m/s</td> </tr> <tr> <td>Max Velocity – 3.81m/s</td> <td>Mean Hazard – 2.42</td> </tr> <tr> <td>Max Hazard – 4.79</td> <td></td> </tr> </table> <p>1% AEP (1 in 100 year) plus 61% Climate Change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 8%</td> <td>Mean Depth – 0.62m</td> </tr> <tr> <td>Max Depth – 1.6m</td> <td>Mean Velocity – 1.45m/s</td> </tr> <tr> <td>Max Velocity – 4.68m/s</td> <td>Mean Hazard – 2.32</td> </tr> <tr> <td>Max Hazard – 6.65</td> <td></td> </tr> </table>	Proportion - 4%	Mean Depth – 0.57m	Max Depth – 0.9m	Mean Velocity – 1.71m/s	Max Velocity – 3.15m/s	Mean Hazard – 2.28	Max Hazard – 3.41		Proportion - 4%	Mean Depth – 0.65m	Max Depth – 1.05m	Mean Velocity – 1.86m/s	Max Velocity – 3.55m/s	Mean Hazard – 2.57	Max Hazard – 4.2		Proportion - 5%	Mean Depth – 0.63m	Max Depth – 1.34m	Mean Velocity – 1.52m/s	Max Velocity – 3.81m/s	Mean Hazard – 2.42	Max Hazard – 4.79		Proportion - 8%	Mean Depth – 0.62m	Max Depth – 1.6m	Mean Velocity – 1.45m/s	Max Velocity – 4.68m/s	Mean Hazard – 2.32	Max Hazard – 6.65	
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Address	Land north of Sector Lane, Axminster																								
	<p>Flood characteristics: The site is shown to be at risk of flooding along the northern and eastern boundary in all three modelled events, with flow paths from the south to the north and east in the 0.1% AEP event. The mean depth within the 0.1% AEP event is shown to be 0.33m, with a mean velocity of 1.58m/s. The average hazard on site is 1.5, which is stated to be a 'danger to most'.</p>																								
Surface water plus climate change	<p>Available data and mapping: Environment Agency's Risk of Flooding from Surface Water dataset for the 3.33%, 1% and 0.1% AEP events with 65% Climate Change scenarios.</p> <p>GH_ED_80a - Surface Water 3.33% AEP plus 65% Climate Change – Depth GH_ED_80a - Surface Water 3.33% AEP plus 65% Climate Change – Hazard GH_ED_80a - Surface Water 3.33% AEP plus 65% Climate Change - Velocity GH_ED_80a - Surface Water 1% AEP plus 65% Climate Change – Depth GH_ED_80a - Surface Water 1% AEP plus 65% Climate Change – Hazard GH_ED_80a - Surface Water 1% AEP plus 65% Climate Change - Velocity GH_ED_80a - Surface Water 0.1% AEP plus 65% Climate Change – Depth GH_ED_80a - Surface Water 0.1% AEP plus 65% Climate Change – Hazard GH_ED_80a - Surface Water 0.1% AEP plus 65% Climate Change - Velocity</p> <p>Management Catchment: GH_ED_80a is located within the East Devon Management Catchment. The Environment Agency guidance recommends that the Upper End allowance is considered for both the 3.3% and 1% AEPs for the 2070's epoch, unless the allowance for the 2050's epoch is higher, in which case this should be used. This is appropriate for development with a lifetime beyond 2100. The recommended uplift on peak rainfall intensity for the 3.3% AEP is 40% and for the 1% AEP is 45%. As Risk of Flooding from Surface Water data with a 65% uplift was already available this has been used as best available data for the 3.3%, 1% and 0.1% AEPs.</p> <p>Data analysis:</p> <p>3.3% AEP (1 in 30 year) plus 65% climate change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 9%</td> <td>Mean Depth – 0.26m</td> </tr> <tr> <td>Max Depth – 1.57m</td> <td>Mean Velocity – 1.23m/s</td> </tr> <tr> <td>Max Velocity – 3.25m/s</td> <td>Mean Hazard – 1.14</td> </tr> <tr> <td>Max Hazard – 3.23</td> <td></td> </tr> </table> <p>1% AEP (1 in 100 year) plus 65% climate change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 13%</td> <td>Mean Depth – 0.31m</td> </tr> <tr> <td>Max Depth – 1.74m</td> <td>Mean Velocity – 1.48m/s</td> </tr> <tr> <td>Max Velocity – 4.23m/s</td> <td>Mean Hazard – 1.4</td> </tr> <tr> <td>Max Hazard – 3.91</td> <td></td> </tr> </table> <p>0.1% AEP (1 in 1000 year) plus 65% climate change event:</p> <table style="width: 100%; border: none;"> <tr> <td>Proportion - 22%</td> <td>Mean Depth – 0.45m</td> </tr> <tr> <td>Max Depth – 2.33m</td> <td>Mean Velocity – 2.05m/s</td> </tr> <tr> <td>Max Velocity – 5.52m/s</td> <td>Mean Hazard – 2.14</td> </tr> <tr> <td>Max Hazard – 8.02</td> <td></td> </tr> </table>	Proportion - 9%	Mean Depth – 0.26m	Max Depth – 1.57m	Mean Velocity – 1.23m/s	Max Velocity – 3.25m/s	Mean Hazard – 1.14	Max Hazard – 3.23		Proportion - 13%	Mean Depth – 0.31m	Max Depth – 1.74m	Mean Velocity – 1.48m/s	Max Velocity – 4.23m/s	Mean Hazard – 1.4	Max Hazard – 3.91		Proportion - 22%	Mean Depth – 0.45m	Max Depth – 2.33m	Mean Velocity – 2.05m/s	Max Velocity – 5.52m/s	Mean Hazard – 2.14	Max Hazard – 8.02	
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Site Code	GH_ED_80a	
Address	Land north of Sector Lane, Axminster	
	Flood characteristics: The site is shown to be at risk of flooding in all three scenarios along the northern and eastern boundary, and along the watercourse on site with an average mean depth in the 0.1% AEP plus 65% climate change of 0.45m. The average velocity is shown to be 2.05m/s, with a maximum of 5.52m/s. The average hazard rating is shown to be a 'danger to all' at 2.14, however this only relates to a small proportion of the site, as only 22% of the site is at risk of flooding in the 0.1% AEP plus climate change event.	
Reservoir	The site is not located near to a Wet or Dry day reservoir flooding extent, according to the Environment Agency's reservoir flood mapping.	
Groundwater	Available data and mapping: The JBA Groundwater Flood Data Map (GW5) is provided as a 5m resolution grid. GH_ED_80a - Groundwater Emergence Flood characteristics: Groundwater levels on site are predominantly at 'low risk', with a small area to the north of the site either at or very near (within 0.025m of) the ground surface. In the centre of the site two areas are shown to have levels between 0.5m and 5m below the ground surface, and at least 5m below the ground surface.	
Sewers	No evidence of sewer flooding has been identified at or near the development site.	
Flood history	<p>The site is not shown to be located within the Environment Agency's Recorded Flood Outlines extent.</p> <p>There are no flooding incidents within Devon County Council's dataset recorded within 100m of the site.</p> <p>Downstream on the Millbrook there is a history of widespread flooding with Devon County Council undertaking upsizing to existing structures to their maximum capacity, but they remain unable to convey the 1% AEP plus Climate Change flows. The catchment is a rapid response catchment with extremely limited opportunity for any flood warning on the Millbrook itself.</p>	
Policy zones		
Critical drainage areas	<p>The site is located within Axminster's critical drainage area. Information on the Axminster CDA can be found on the Devon County Council website: https://www.devon.gov.uk/floodriskmanagement/planning-and-development/</p> <p>See the <i>Broad-scale assessment of possible SuDS</i> Section for more details of the drainage requirements for this site.</p> <p>Mapping: GH_ED_80a - Critical Drainage Area</p>	
Coastal change management areas	The site has not been identified to be located within a coastal change management area.	




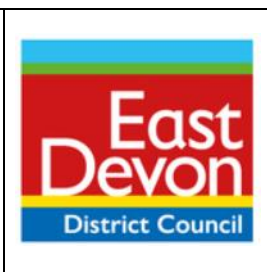
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Site Code	GH_ED_80a	
Address	Land north of Sector Lane, Axminster	
NPPF and planning implications		
Exception Test requirements (Local Authority considerations)	<p>The Local Authority will need to confirm that the Sequential Test has been carried out in line with national guidelines. The Sequential Test will need to be passed before the Exception Test is applied.</p> <p>The NPPF classifies the usage as “More Vulnerable”; this type is taken into consideration for the Exception Test.</p> <p>The site is partially located within Flood Zone 2 and 3, and the 0.1% AEP surface water and fluvial modelling extents, however providing development is proposed to the south of the site (outside of the areas at risk), the Exception Test is not required for this site. Should development be proposed within Flood Zone 2 or 3, the exception test will be required and detailed flood modelling should be undertaken during a site-specific FRA.</p>	
Requirements and guidance for site-specific Flood Risk Assessment (Developer considerations)	<p>Flood Risk Assessment:</p> <p>The Level 1 SFRA has more guidance on this section and any relevant policies and information applicable to development within East Devon District Council.</p> <ul style="list-style-type: none"> • Consultation with the East Devon District Council, and where relevant South West Water, Devon County Council, and the Environment Agency should be undertaken at an early stage. • Developers should consult with South West Water to ensure that the development aims to help achieve the targets of the Drainage and Wastewater Management Plan. • Development plans should use the Level 1 SFRA for East Devon District Council, as well as the Local Flood Risk Management Strategies to identify cumulative flood risk issues. It should also promote an integrated approach to water management. • The site is located within a medium risk Cumulative Impact Assessment (CIA) catchment and therefore specific CIA policy documents are applicable to this site. <p>Guidance for site design and making development safe:</p> <ul style="list-style-type: none"> • The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF’s policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG). • 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 do not exceed greenfield rates. • Arrangements for safe access and egress are likely to be possible, however these will need to be considered further within a site-specific FRA for the surface water events with an appropriate allowance for climate change, using the depth, velocity, and hazard outputs. 	



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Site Code

GH_ED_80a

Address

Land north of Sector Lane, Axminster

Key messages

The site is generally identified to be at low risk, and development is likely to progress if:

- A site-specific FRA is undertaken to assess the risk of fluvial and surface water flooding in relation to the proposed development, and the access and egress arrangements.
- Development is placed outside of the areas at risk from surface water and fluvial flooding to the site of the site, with an appropriate 'no development' buffer applied along the watercourse. Should development be proposed within areas at risk or within Flood Zones 2 or 3 detailed flood modelling should be undertaken within a site-specific FRA. It should be noted that there is a significant difference between the River Axe modelling and the Flood Map for Planning. It is therefore recommended that detailed flood modelling is undertaken for this site prior to any development to accurately define the Flood Zone 3b extent. In the absence of detailed modelling, Flood Zone 3 should be used as a proxy for Flood Zone 3b. Detailed modelling should consider channel blockage given development should not be reliant on ongoing channel maintenance. Any development within Flood Zone 3 should be allocated as an undeveloped open space corridor, and not as gardens, car parking or other features associated with individual plots.
- Infiltration rates are assessed on site as part of a drainage strategy. A substantial robust drainage strategy will be required, and any opportunities to go above and beyond what is required should be considered. Early pre application engagement should be sought with Devon County Council.
- There is early engagement with the LLFA and the EA on the proposed SuDS measures and infiltration rate to discuss requirements on the site meeting relevant conditions due to the sites location within a critical drainage area.
- Cumulative Impact Assessment policy documents must be understood, and the cumulative impact of development should be considered.