



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



Site Code	Airp_01
Address	Employment Land to the east of Airport Buildings
Area	7.3 hectares
Current land use	Greenfield
Proposed land use	Employment
Flood Risk Vulnerability	Less Vulnerable
Sources of flood risk	
Location of site	<p>The site is located to the southeast of Exeter Airport, north of Long Lane and east of the airports 'Long stay car park 4'.</p> <p>The site is located adjacent to a small unnamed watercourse/ditch to the south and east of the site which flow in a northerly direction across Exeter Airport. This watercourse has the potential to be culverted underneath the site and further investigation should be undertaken prior to development.</p>
Topography	<p>The Environment Agency's 1m resolution 2022 Composite LiDAR shows that the topography of the site declines from the west at approximately 35mAOD to the east at approximately 27mAOD, with a relatively continuous gradient. The gradient is approximately 3%, therefore the site is considered to have little slope, and is unlikely to affect any proposed SuDS features.</p> <p>The catchment drains northwest before joining the River Clyst.</p>
Existing drainage features	<p>The watercourse/ditches to the south and east of the site have been identified to flow in a northerly direction, towards the River Clyst. Routing of the eastern watercourse as it leaves the site onto Airport land is unknown and an assessment of the watercourse immediately downstream of the site boundary is likely to be required as part of a site-specific FRA.</p> <p>There is potential for this tributary/ditch to cross the proposed development site and requires further investigation.</p>
Fluvial	The proposed development site has not been identified to be in an area at risk of fluvial flooding.
Fluvial plus climate change	The proposed development site has not been identified to be in an area at risk of fluvial flooding.
Surface Water	<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.</p> <p>Airp_01 - Surface Water 3.33% AEP – Depth Airp_01 - Surface Water 3.33% AEP – Hazard Airp_01 - Surface Water 3.33% AEP - Velocity Airp_01 - Surface Water 1% AEP – Depth Airp_01 - Surface Water 1% AEP – Hazard Airp_01 - Surface Water 1% AEP - Velocity Airp_01 - Surface Water 0.1% AEP – Depth Airp_01 - Surface Water 0.1% AEP – Hazard Airp_01 - Surface Water 0.1% AEP - Velocity</p>



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Data analysis:**3.3% AEP (1 in 30 year) event:**

Proportion – 9%	
Max Depth – 0.93m	Mean Depth – 0.43m
Max Velocity – 1.28m/s	Mean Velocity – 0.18m/s
Max Hazard – 1.57	Mean Hazard – 1.14

1% AEP (1 in 100 year) event:

Proportion – 11%	
Max Depth – 1.23m	Mean Depth – 0.62m
Max Velocity – 1.57m/s	Mean Velocity – 0.23m/s
Max Hazard – 1.79	Mean Hazard – 1.29

0.1% AEP (1 in 1000 year) event:

Proportion – 14%	
Max Depth – 1.46m	Mean Depth – 0.71m
Max Velocity – 1.92m/s	Mean Velocity – 0.43m/s
Max Hazard – 2.42	Mean Hazard – 1.32

Flood characteristics: The site is shown to be at risk of flooding in the northeastern corner and eastern boundary of the site during the 3.3% AEP event with a maximum depth of 0.93m in a small, localised area. This extent of flooding increases across the 1% and 0.1% AEP events, with additional localised ponding in the southwest, resulting in a mean depth of 0.71m in the 0.1% AEP event. The mean velocity and hazard are shown to be 0.43m/s and 1.32 (a 'danger to most') respectively.

Surface water plus climate change

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.

Airp_01 - Surface Water 3.33% AEP plus 65% Climate Change – Depth
 Airp_01 - Surface Water 3.33% AEP plus 65% Climate Change – Hazard
 Airp_01 - Surface Water 3.33% AEP plus 65% Climate Change - Velocity
 Airp_01 - Surface Water 1% AEP plus 65% Climate Change – Depth
 Airp_01 - Surface Water 1% AEP plus 65% Climate Change – Hazard
 Airp_01 - Surface Water 1% AEP plus 65% Climate Change - Velocity
 Airp_01 - Surface Water 0.1% AEP plus 65% Climate Change – Depth
 Airp_01 - Surface Water 0.1% AEP plus 65% Climate Change – Hazard
 Airp_01 - Surface Water 0.1% AEP plus 65% Climate Change - Velocity

Management Catchment: Airp_01 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 the best available data for the 3.3%, 1% and 0.1% AEPs.



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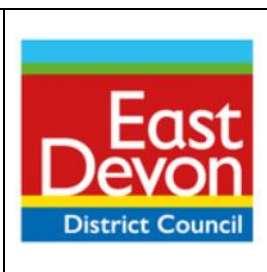
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	https://www.devon.gov.uk/floodriskmanagement/document/sustainable-drainage-system-guidance-for-devon-2023/#dcc-documents-cpt-contents	
NPPF and planning implications		
Exception Test requirements (Local Authority considerations)	<p>The Local Authority 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 “Less Vulnerable”.</p> <p>East Devon District Council require that developments in areas at risk of surface water, groundwater or reservoir flooding will be expected to follow the same requirements as those laid out in Parts (a) and (b) of the NPPF’s Exception Test.</p> <p>Given the site is in Flood Zone 1, and the limited surface water extent in the 0.1% AEP event, provided development is proposed outside of the areas at risk, the Exception Test is not required for this site.</p>	
4 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 and 2 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. 	



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	<ul style="list-style-type: none">• 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.

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 surface water and groundwater 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 flooding.
- Infiltration rates are assessed on site as part of a drainage strategy.
- 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 Nitrate Vulnerable Zone.
- Cumulative Impact Assessment policy documents must be understood, and the cumulative impact of development should be considered.