

3 Summary of Flood Risk Constraints and Recommendations

- 3.1.1 The Environment Agency website flood risk map shows that almost the entire Site lies within flood risk zone 3 having a 1 in 100 or greater annual probability of river flooding ($>1\%$), or a 1 in 200 or greater annual probability of flooding from the sea ($>0.5\%$) in any year. However following a review of the SFRA and EA modelled flood level data it has been identified that the flood risk zone shown within the EA map relates to tidal flooding based on the assumption that the Site is not protected by tidal flood defences.
- 3.1.2 Flood defences along the shoreline to the south of the Site currently provide flood protection for the Site of up to the 1 in 200 year return period event (0.5%). The SFRA flood risk map C1-T shows the actual flood risk zones (which allow for the presence of flood defences and climate change) indicates that the Site is not at risk from tidal flooding except as a consequence of flood defences being breached. As the flood defences are regularly maintained by the EA the Site is not considered at risk of tidal flooding. As such, the extent of flood risk zones for the Site are further identified based on EA modelled flood level data from fluvial source.
- 3.1.3 The latest fluvial flood level data and flood extent map provided by the Environment Agency based on the 2015 infoworks model shows that the majority of the proposed Site lies within Flood Risk Zone 2 with a very small area of the northern segment being at high risk of fluvial flooding (Flood Risk Zone 3) and the rest lies within Flood Risk Zone 1 as shown in Figure 3 below. In accordance with NPPF a site specific Flood Risk Assessment would be required to accompany a planning application.

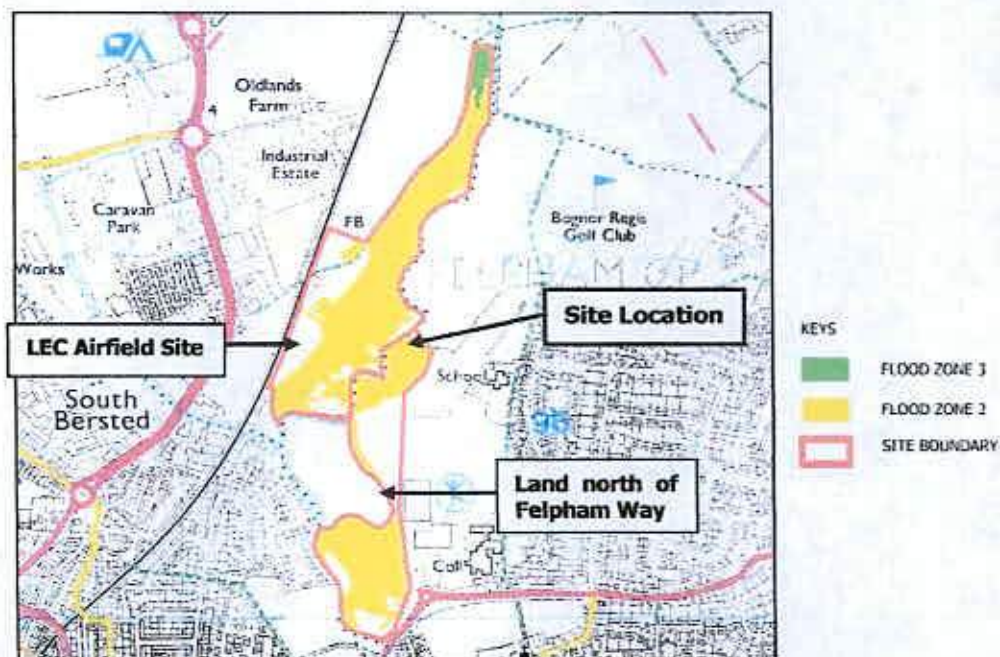


Figure 4 Flood Map based on EA Modelled Fluvial Flood Outline



- 3.1.4 In accordance with NPPF it would be necessary to demonstrate that the development passes the Sequential test. The Arun Local Plan 2011-2031 Sequential & Exception Tests published by Arun District Council indicates that the Site is suitable for employment and commercial use and considered to pass the exceptional test for more vulnerable use through addressing flood risk as recommended in the paper and finding the solutions to address and mitigate the flood risk issues relating to the site.
- 3.1.5 It is recommended that any development in Flood Risk Zone 3 (fluvial) be avoided and then more vulnerable development (e.g. residential) be located in Flood Risk Zone 1.
- 3.1.6 All finished floor levels should be set above the 1 in 100 year plus CC flood level. According to the EA modelled flood level data the maximum 1 in 100 year plus CC flood level across the Site is 1.42m AOD and assuming 300mm of freeboard gives a minimum FFL 1.72m AOD.
- 3.1.7 Since the Site is at risk of tidal flooding exceeding 1 in 200 year plus climate change event and because the tidal flood level is considerably higher than ground levels within the Site, it is recommended that all sleeping accommodation within any residential buildings is set above the 1 in 200 plus CC flood level i.e. 4.43m AOD, preferably at first floor or above.
- 3.1.8 According to the available information the Site is susceptible to flooding from sources including fluvial, tidal, groundwater and surface water. As such, it is recommended that consideration is given to suitable mitigation measures within the FRA and as part of the development design.
- 3.1.9 As the Site lies within an EA flood warning area, the FRA should discuss the need and feasibility of emergency plan for the development.
- 3.1.10 A review of the existing information suggests that infiltration SuDS may not be suitable for the development. The drainage strategy would need to consider discharging the surface water run-off into watercourse at Greenfield run-off rate.
- 3.1.11 In order to ensure that the development of the Site does not increase the risk of flooding to the surrounding area, and where possible reduce flood risk, a suitable drainage strategy including sustainable drainage techniques will be required.