



ENVIRONMENTAL



FLOOD RISK



DRAINAGE



ECOLOGY

Soar Valley College, FRA & SuDS

Leicester City Council

Project aims

Preparation of PPS25 flood risk assessment, outline SuDS design and detailed SuDS design for proposed netball hall facility at Soar Valley College in Leicester.

In addition, consent applications were made to the Environment Agency for the new discharge; for a temporary bridge crossing; and for a duct crossing of the brook.



Project summary

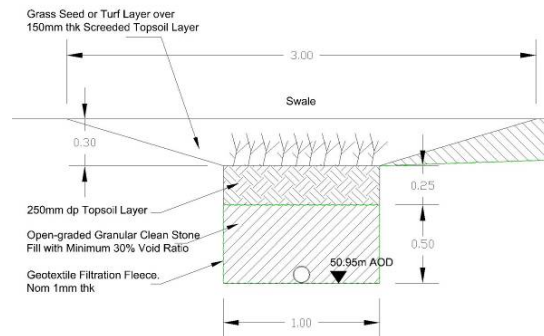
The site is located adjacent to the Melton Brook and covers an area of 0.25ha. The site was shown to lie within Flood Zone 3 of the EA indicative flood maps.

Subsequent comparison of EA flood level data and detailed topographical survey data showed that the extent of Flood Zone 3 was not as extensive. Ground modeling was used to calculate the volume of flood

storage that would be displaced by the proposed building and a compensatory storage volume was provided to mitigate against this. This approach was approved by the Environment Agency.

As the existing site was grassland, surface water runoff was restricted to the pre-development greenfield runoff rate. A SuDS design was developed that utilized an under-drained swale around the perimeter of the building to receive, treat and attenuate runoff directly from the building. The outlet from the swale was limited by a flow control device.

The swale was designed to operate at shallow depths and with shallow side slopes, such that it would not pose a hazard to users of the facility.



TYPICAL SECTION D-D THROUGH SWALE
SCALE 1:20

The SuDS system is designed to attenuate runoff from the 1 in 100 year plus climate change event.

