

Ecology response amended 15 1 24 for F/23/96488 PAVILION, LONG LANE DISTRICT PARK, LONG LANE, BURSLEDON, SOUTHAMPTON, SO31 8DA

Demolition and Replacement of 2-changing room sports pavilion and groundsman facilities.

Summer Sharpe

15/1/24

I have reviewed the additional drainage information regarding exceedance flows, the existing drainage system within the pitch, the outfall location and that there have been no existing flooding issues.

I have no further surface water drainage concerns.

Lisa Malter

Ecologist

28/12/23

I have reviewed the outline Foul and Surface Water Drainage strategy by Ridge and Partners (P02, December 2023). The report states that *The rainwater precipitating upon the roof and permeable paving pathway is intended to be captured within soft landscaped areas in front of the pavilion, with silt catchpits and attenuated and infiltrated into the ground via a new aggregate drainage strip with aggregate drainage trenching.*

There appears to be a conflict between the surface water drainage proposal which is for attenuation and infiltration, and the infiltration test results which demonstrate that infiltration is not feasible. In section 4.4 *The onsite BRE365 infiltration testing investigations demonstrated very low infiltration rates and no results could be obtained. Hence, for hydraulic modelling we have used a rate of infiltration = 3.0×10^{-8} m/s (0.0004m/hr) applicable for clay soils.*

In section 8.2 the report states *The underlying soils present at the Application Site are semi-permeable and therefore using rainwater infiltration-based SuDS features (i.e., infiltration trenches and soft landscaping) is considered appropriate.* Where does this estimate of semi-permeability come from if the infiltration testing shows no results?

The calculations provided in Appendix C show that the proposed system is able to absorb the surface water from a 1 in 100 year flood plus 45% for climate change with 58% spare capacity. There is no indication of exceedance flow routes if the drainage trench was full. Would this create ponding in front of the building or in another location?

The simple index approach has been used to show that water quality would be acceptable with this system. The soft landscaped rain gardens must be designed for this purpose. General landscaped beds may not provide the required attenuation.

The SuDS maintenance schedule (7.3) is appropriate.

In section 5.8 I am not sure why bird and bat boxes are mentioned in this report as they are not related to SuDS benefits but are potential biodiversity enhancements. Section 7.1.i, and section 7.2 also mention bird and bat boxes. Rainwater harvesting and water butts do relate to surface water drainage, but bird and bat boxes do not.

Lisa Malter

Ecologist

14/12/23

I have reviewed the PEA (March 2023), Bat Survey (October 2023) and Biodiversity Net Gain Assessment Monitoring and Management Plan (November 2023) reports by Ecosupport. I am satisfied that the recommendations in these reports are appropriate.

A bat brick and swift nest box have been recommended to be installed in the gable ends of the building. The bat brick should be installed in the SE gable end and the swift nest box should be installed in the NW gable end in line with guidelines from the Bat Conservation Trust and Swift Conservation (links given below). Four native trees are also proposed to be planted.

The Bat Conservation Trust recommends installing a bat brick/box at least 4 m above the ground, away from artificial light sources, sheltered from strong winds and exposed to the sun for part of the day, facing south, south-east or south-west. (<https://www.bats.org.uk/our-work/putting-up-your-box>)

Swift nest boxes are best positioned under the eaves or on walls facing north, northeast or north-west out of direct sunlight, five metres above the ground, with clear adjacent airspace so swifts can access them in a high-speed direct flight. (<https://www.swiftconservation.org/Nestboxes%26Attraction.htm>)

The Design and Access Statement mentions the existence of a surface water drainage plan, but I don't see it in the list of documents. Since this is a replacement building, the existing

system can be used. I don't need to review a new plan unless significant changes are proposed to the surface water drainage system.

Lisa Malter

Ecologist