



GRANGE ROAD, NETLEY ABBEY, HAMPSHIRE

Proposed Development for 89 No Residential Dwellings

Surface Water Drainage: Response to HCC letter 15.11.23

Subsequent to the LLFA comments the drainage network has been re-calculated and a simulation model has been produced using FEH22 rainfall data.

The original analysis sought not to utilise infiltration as the primary means of surface water drainage. However with the reduction of the available area for the attenuation pond and swales due to the presence of the Japanese Knotweed, which has now been accurately surveyed, the concept of infiltration has been re-assessed.

Infiltration testing and groundwater monitoring have been undertaken during winter 2019 and results are contained on the submitted drawing KNC-500-00.

These results have been used to calculate the permeable surfacing areas whose bases will be over a metre above the highest recorded winter groundwater level.

Due to the presence of Japanese Knotweed the pond size and location have had to be re-assessed. Winter groundwater levels taken over the area of the pond indicate that the eastern section of the base of the pond will not achieve the one metre freeboard requirement, although the western section does. Because discharge levels and available area for the pond is critical it has not been possible to raise levels to provide a one metre freeboard over the entire base, consequently the '*MicroDrainage*' simulation analysis has not assigned an infiltration rate to the pond. In reality there will be a level of infiltration from the pond which will provide a benefit to the network.

Due to the need to remove the swales, which were providing a contribution to the water quality management, it has been necessary to introduce two 'Downstream Defenders' into the network prior to the discharges into the pond. These will provide a substitute for the removed swales.

To enhance the bio-diversity of the pond and add to the water quality management of the SuDS train detailed planting proposals have been submitted.