

CLIENT	Leonard Engineering Design Consultants
PROJECT	Student Accommodation, Egham
ARCHITECT	Reading & West Architects
VALUE	
SCOPE OF WORK	New Build 129 unit student accommodation

NLG Associates were appointed to assist with planning submission requirements of preliminary design and investigations for a proposed 129 room each with en-suite facilities student accommodation scheme situated within Egham Surrey.

NLG Associates scope of works was to engineer and develop the on site above and below ground drainage strategy for the foul and surface water systems serving the buildings with emphasis on the surface water attenuation and disposal.

It was ascertained that surface water sewers or a natural water course do not exist within the vicinity of the site and that only a limited foul water sewer was available but with minimal spare capacity. Ground condition surveys carried out also revealed that the soil and under lying make up conditions do not permit the use of soakaways for surface water disposal.

Following discussions with the local authorities it was established that a limited surface water discharge would be allowed into the existing sewer but at a very restricted and controlled rate, and for this reason large on site attenuation / holding tanks incorporating a rainwater harvesting system has been selected.

The proposal as currently designed is that rainwater is pre filtered and collected in below ground holding tanks from where it is pumped to the "day" tanks and associated filtration equipment located in the basement plant rooms of each block. From here it is pumped to be used for flushing toilets, for washing machines and garden irrigation / washdown.

In anticipation of an inevitable increase of foul water flow from the development it was clear that the existing sewer would not have the carrying capacity to deal with such a development and again NLG Associates addressed this by negotiating with the local authorities for a new dedicated sewer outfall.

It was found that a limited outflow to the sewer was being stipulated and therefore a holding and controlled pumping chamber suitably sized to accommodate the anticipated days storage is to be incorporated.