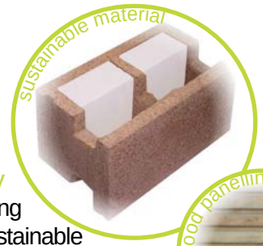
sustainability

The main component of the sustainable drainage strategy is a new reed bed system which will work in conjunction with the existing pump station & sewage storage which are to be replaced, allowing for sustainable treatment of water and waste water on site and significantly reducing the load on the local system as this has been identified as a local issue of importance.

The site has been identified as having enough wind flow to make wind turbines a viable sustainable energy option. It is proposed that the turbines will be used to provide the electricity required to pump the sewage from the existing pump station to the reed beds and to power external lighting across the development site which will be designed to be low energy and to minimise light pollution.

Part of the proposal to achieve Code for Sustainable Homes Level 4 on the new build residential housing includes the requirement for an improvement in energy performance of 44% as mandatory over Part L. A report was undertaken by Halcrow Yolles to outline the low and zero carbon technologies that would be suitable for the site. It is proposed that a biomass district heating system is used along with wind turbines, solar water heaters located on the individual units to achieve the improvement in performance required.



The principles of sustainability have been key to the evolving design for Newland Park. A sustainable hierarchical approach has been followed by first considering location, and then the building envelope to reduce energy consumption and provide a comfortable environment. Only then have additional technologies been considered. The proposed units are designed to include a: highly insulated envelope, use sustainable materials, recycling and bike storage, energy efficient lighting, space for home working and will comply with the requirements of Secure By Design part 2 and Lifetime Homes.

A sustainable urban drainage strategy is to be adopted for the site. This is proposed to include the use of sedum roofing to even out storm event run-off, water storage for external use, swales and permeable paving to aid in the infiltration of water through the ground.

Included as part of the proposed sustainable urban drainage strategy is a rain water storage system, rainwater can then be used for washing car or watering gardens. This, in conjunction with the use of low flow taps and dual flush toilets, achieves the water use requirements for Level 4 Code for Sustainable Homes.

A number of locations across the site have been identified where hazel coppicing can be planted to produce fuel for the biomass district heating system. This will be used in conjunction with the bio-waste from the general maintenance of the site as a whole.