

Proposed Development, Park Lane, Donington, Lincolnshire, PE11 4TZ **Drainage Strategy Report – 18th January 2018**

Further to instruction from Calderdale Homes (Eastern) Ltd. [CH] to undertake an assessment of the data provided for the design of the infrastructure on the above site, and following receipt of the topographical site survey, soils investigation reports and other relevant data, including the latest Planning Layout Ref. 1179-02-SP02 Rev.C, please find below our assessment of the infrastructure design that is proposed for this development.

FOUL WATER DISPOSAL

Anglian Water Pre-Planning report; Ref.00015875 from August 2016 permits the connection of the foul water systems from this development to manhole 6706 in Park Lane to the north east of the site.

With the site levels we have, reaching that invert under gravity is just possible.

The private gravity foul drainage system within the site has therefore been designed in accordance with B.Regs. Doc.H. with no requirement for pumping.

The connection to the offsite adopted manhole will require a S106 application to Anglian Water.

SURFACE WATER DISPOSAL

The site falls approximately 200mm from north to south.

Soils investigation report C13751A from Ground Engineering confirms ground water standing 1.8m below existing ground level, percolation rates that should be considered poor at 2m down and CBR values of around 3%.

As these percolation tests were taken at a depth of 2.00m, presumably on the assumption that the design would incorporate traditional soakaways, it's likely that improved rates will be found if testing were taken at the level of the underside of the proposed permeable pavement, and/or just below the made ground. It is recommended that additional testing be carried out at these levels.

At 83% the existing site contains considerably more impermeable area than the 60% now proposed and apparently has only two modest traditional soakaways to deal with it.

It is plain that there are no other means of surface water disposal available so in order to provide SuDS based surface water control in accordance with the Flood and Water Management Act 2010, the current design incorporates a permeable pavement over the drive and parking areas and the run-off from the houses is to be allowed to attenuate in the pavement sub-base.

The SuDS design allows for the 100yr + 30% Climate Change volumes to be stored in the permeable pavement subbase although the half-empty time exceeds the recommended value we suggest that this is the best solution available as there are no other options.

Any modification to the highway drainage required by Lincs.CC will be connected into the existing highway surface water systems, so will be separate from the onsite systems.

T. R. Stafford
Senior Partner;