

I am a resident of Caunsall, which adjoins Cookley. My son is a hydrogeologist and knows the area of the quarry well, having cycled through on his way to school. As a hydrogeologist he has 12 years' experience of working in quarries in Australia, and more recently assessing a quarry in Ireland.

He has studied the relevant geological maps of the proposed Lea Castle quarry, and has several questions and points that should be taken into consideration, some of which have been addressed elsewhere, however, I will report them in full here:

- **What elevation/level is the groundwater table at?** [Our present understanding is that it is c.5m below the site base – assuming these measurements are accurate.]
- **Is the groundwater in the loose sands or is it in competent sandstone bedrock?** [We understand that groundwater is found in both loose sand and bedrock.]
- **Is there a plan to dig deeper than the water table?** See note below.
- **Does the plan for the quarry involve dewatering to allow for dry working of the materials?**
- **How many monitoring bores will be installed around the quarry into the sands and sandstone?** [We understand this to be only one.]
- **Will groundwater be tested to check for contamination – especially for hydrocarbons?**
- **Will a wheel wash be installed on site?**
- **Will there be any processing undertaken on site requiring groundwater supply?** This may only be necessary if the sand needs washing to remove clay.

My son said that one borehole is insufficient , and that at least four are needed around the quarry and into both the sands and the bedrock.

He is also uncertain about whether the quarrying would stop at 5m. In his experience quarrying frequently goes deeper than originally stated. If they go beyond 5m the situation becomes much more complicated when quarrying beneath the water table and may have serious consequences.

Climate change is affecting water tables, and it is impossible to accurately predict the impact of changing water tables over the coming years.

Your sincerely,

Carole Pannell