

## APPENDIX VI

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### ELECTRICAL IMAGING GEOPHYSICS AT WELTON-LE-WOLD

The sections have the quarry face at the left. Nominal line lengths were Q and T at 46.5m, and R and S at 62m.

The colour scale of electrical resistivity has been adjusted to be the same on each section. The range of values is quite wide, indicating the significant differences between the backfill (typically green/blue) and the strata underneath (reds). If this is chalk, then it is reasonable for it to have a higher resistivity than the clay rich fill. As far as the material properties are concerned, this was a good site for use of this method.

There appears to be a ridge of high resistivity under the middle of lines S and R, which is interpreted as either the underlying chalk or possibly the drained gravel. The simplest interpretation of the material to the north (left on sections) is that it is fill which is possibly wetter in places causing localised (blue) anomalies. The obvious places to drill, to test the two types of material, would be at 16m and 28m along line S.

The overall impression from these results is that any remnant gravel bench is closer to the quarry face than we were able to image except possibly on line Q, where there is some weak evidence of such a bench at the north (left) end. The deepest parts of the fill imaged appear to be at some 5-6m.

The trend of the conductive anomaly approximately tracking the line of the Alabaster and Straw section and the ridge of resistive material to the south may show on the results of the Electrical Conductivity survey, so it will be interesting to compare the results.