

Figure 86. B2 'Sunburst' Monument. GPR record from the ground coupling signal (left) with interpreted archaeological and geological features (right).

Below the coupling zone, the archaeological features were not clearly delineated until approximately 0.3m depth. In this instance, the ring ditch was apparent, but may be difficult to identify without background knowledge of both the archaeological feature and GPR.

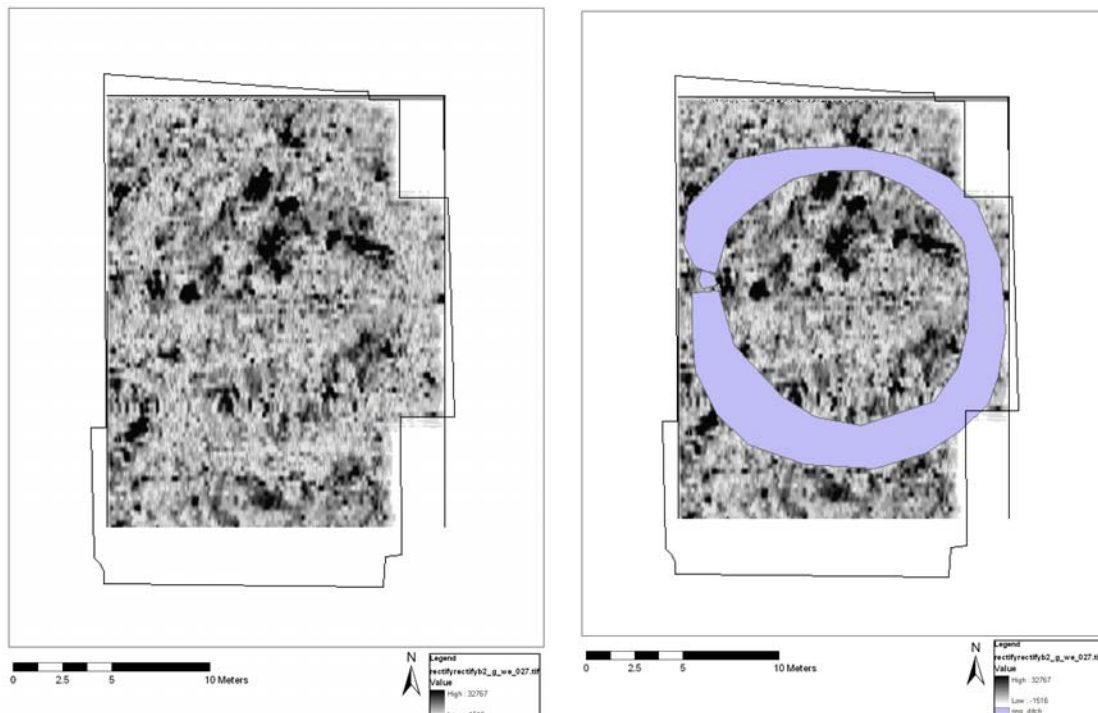


Figure 87. B2 'Sunburst' Monument ring ditch in GPR data.

As can be seen in the data above, the ring ditch was defined by a low amplitude reflector at this depth. Better definition of the ring ditch can be seen at approximately 0.4m depth with a distinct contrast between ditch fill and the background sandy gravel in material. This appears only in some sections of the ditch while in others, the definition of the ring ditch was lost because of the lack of contrasting properties between the ditch fill and surrounding materials.

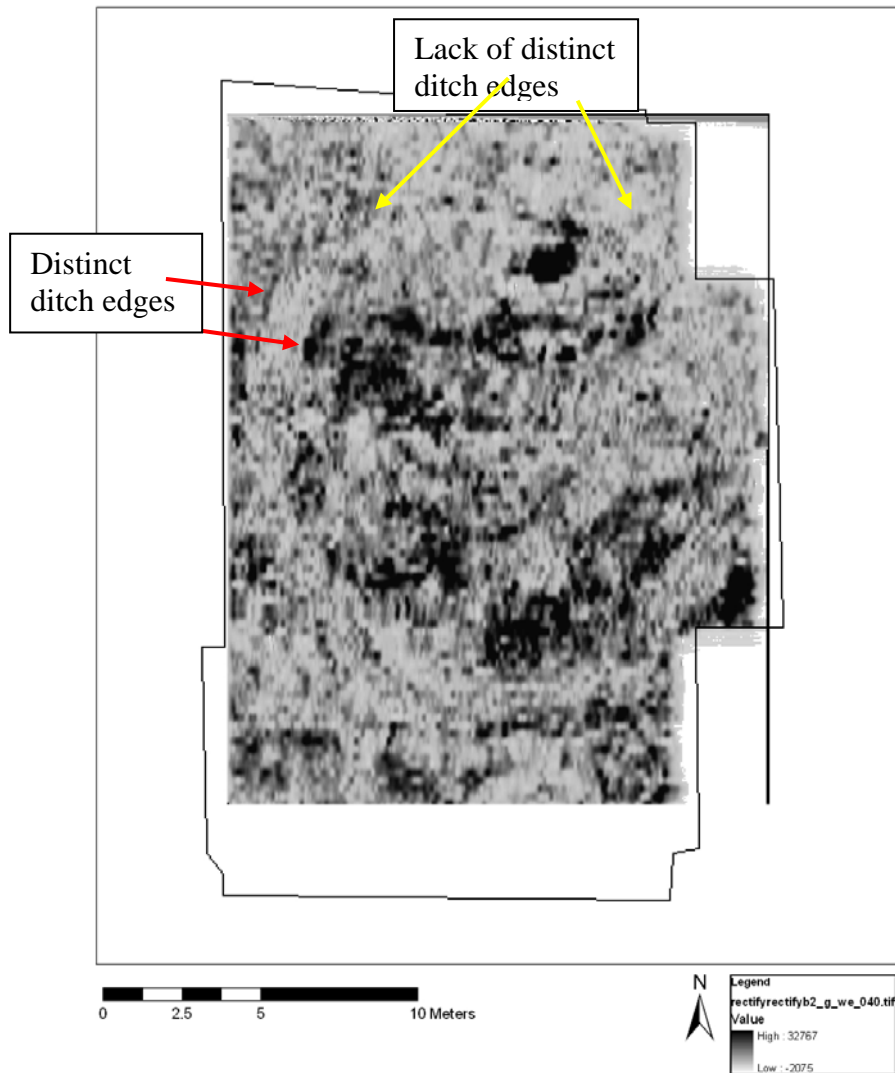


Figure 88. B2 'Sunburst' monument GPR data at 0.4m depth showing distinct ring ditch property contrasts with background material (red arrows) and the lack of contrast and ditch definition (yellow arrows).

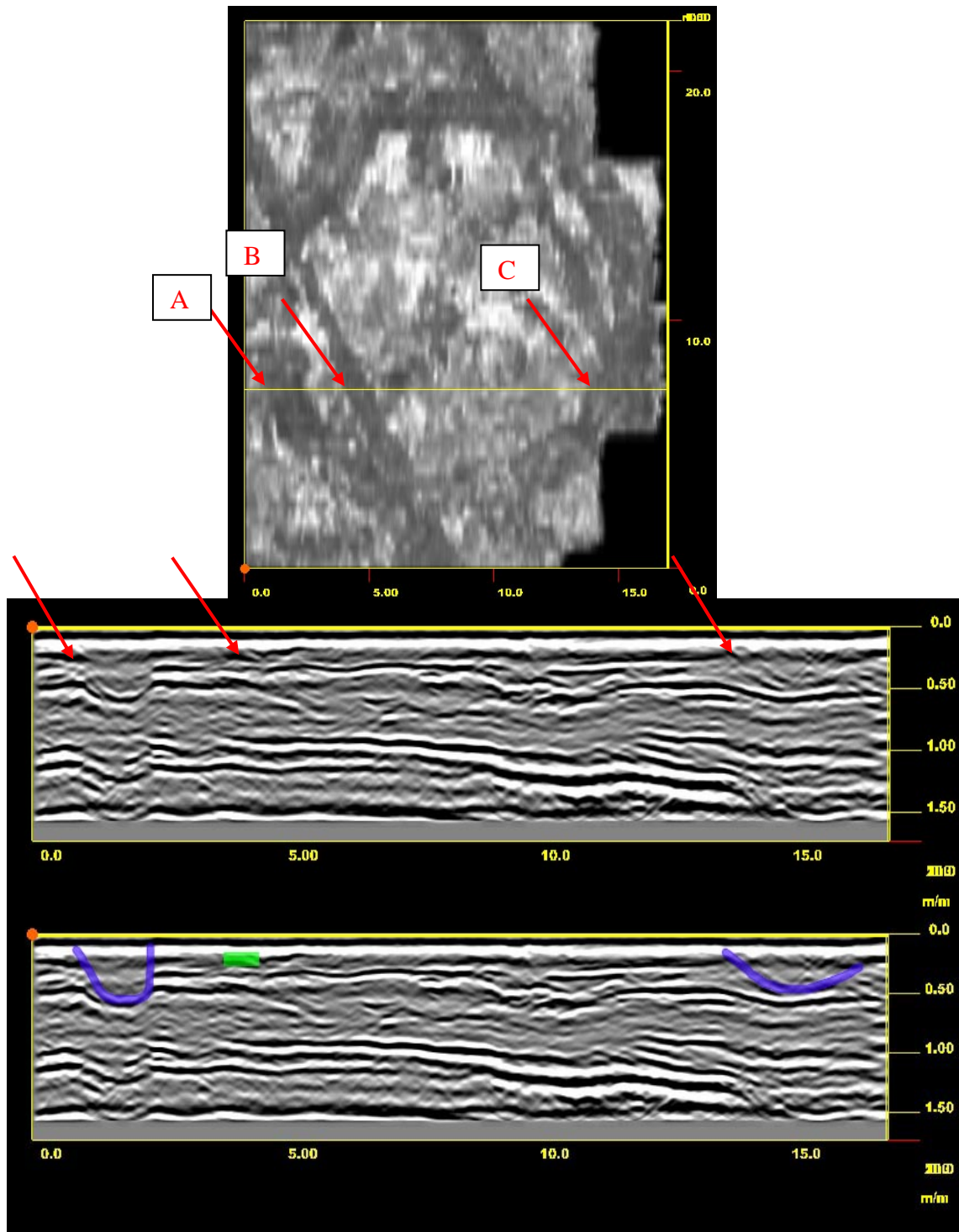


Figure 89. B2 GPR image of profile through ring ditch. A and C are the ring ditch (blue) and B is one of the plough furrows (green) passing through the ring ditch.

The ring ditch has many variations in structure. The example in figure 89 shows two sections of the ring ditch that have different constructions. The western side, A, is a deep, well defined anomaly where C on the eastern side is not as well defined and could be challenging to interpret as a ring ditch if supplementary information was not available. The plough furrow running through the ring ditch barely appears in the GPR profile, and would not be recognisable in this format. As with the pits in A1, examination of the GPR profiles can provide additional detail and information on the

structure and possible fill characteristics of archaeological features such as the ring ditch.

Another GPR profile provides a cross-section of a pit that appears on the western side of the ring ditch situated between two terminus points of the ditch. This profile also crosses over the burial anomaly, the ditch with the *in situ* burnt wood, the plough furrows and the eastern edge of the ring ditch.

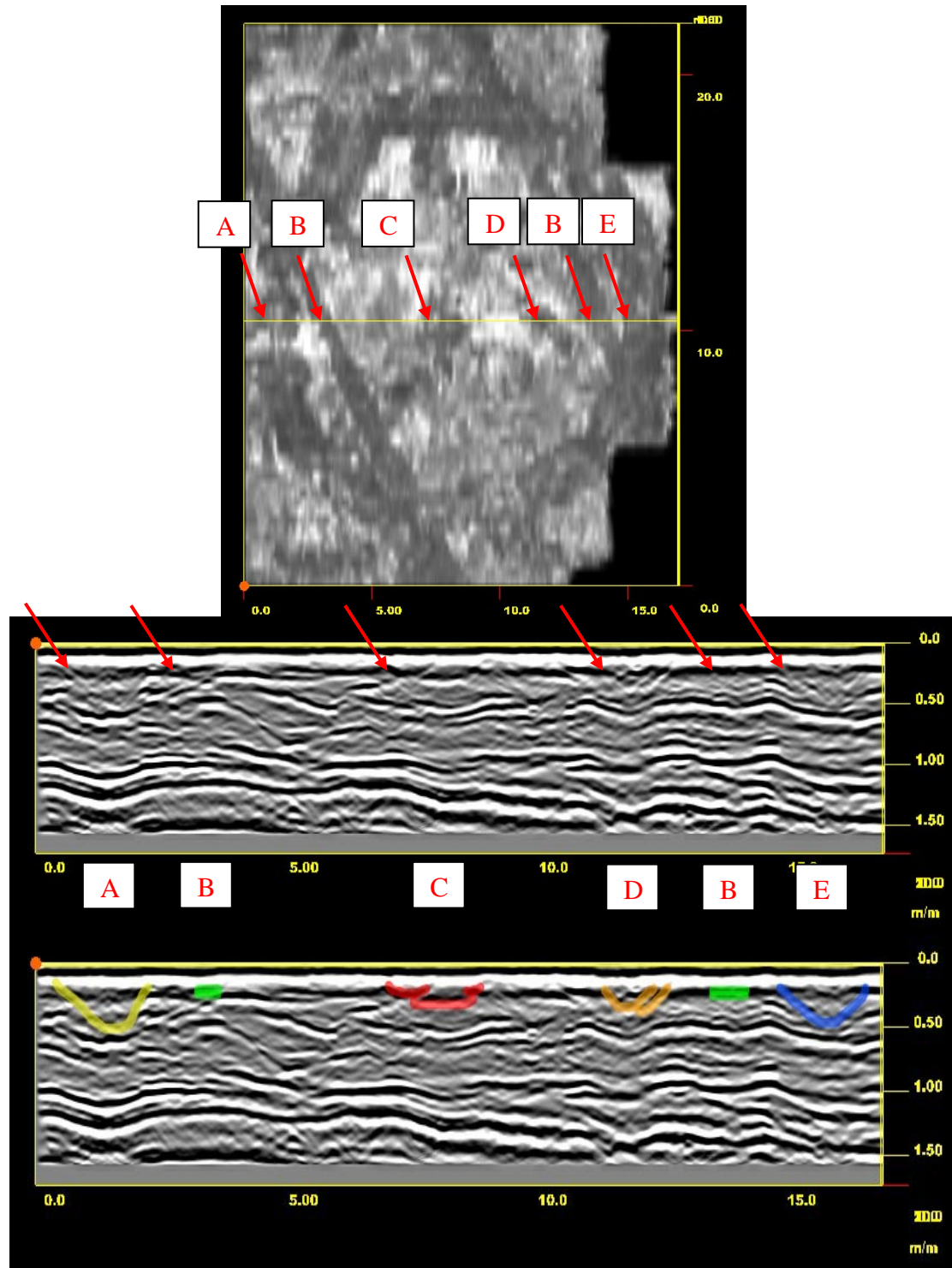


Figure 90. B2 GPR profile through archaeological features: A - pit, B- plough furrow, C- burial, D- pit with *in situ* burning, E- ring ditch.

Figure 90 shows a profile of GPR data cutting through the centre of the ring ditch passing through different types of archaeological features including: A – pit, B – plough furrow, C – burial, D – pit with *in situ* burning and E – the ring ditch. All the features have been highlighted in the bottom image of the figure. As with the example in Figure 89 above, the pit and ring ditch have similar appearing anomalies. This is not surprising as, taken in profile, theoretically they should have a similar form. The plough furrows are difficult to recognise in the data; the one to the east is not visible at all even as a slight disturbance in the radar profile. The plough furrow at these points is not recognisable in the radar profile. The pit with the *in situ* burning can be identified, as can the burial, but both of these features would be difficult to discern as archaeological in nature without previous knowledge of feature positions. Due to the background structure of the survey area with inter-bedded sands, gravels and silts it is difficult to extract the more ephemeral anomalies and to then interpret them as archaeological features from vertical profiles. Consideration of both the vertical profiles and plan views provides the most effective interpretation for the archaeological nature of the GPR data in B2.

5.3.5 B2 2m x 5m Sub-area

5.3.5.1 Magnetic Susceptibility

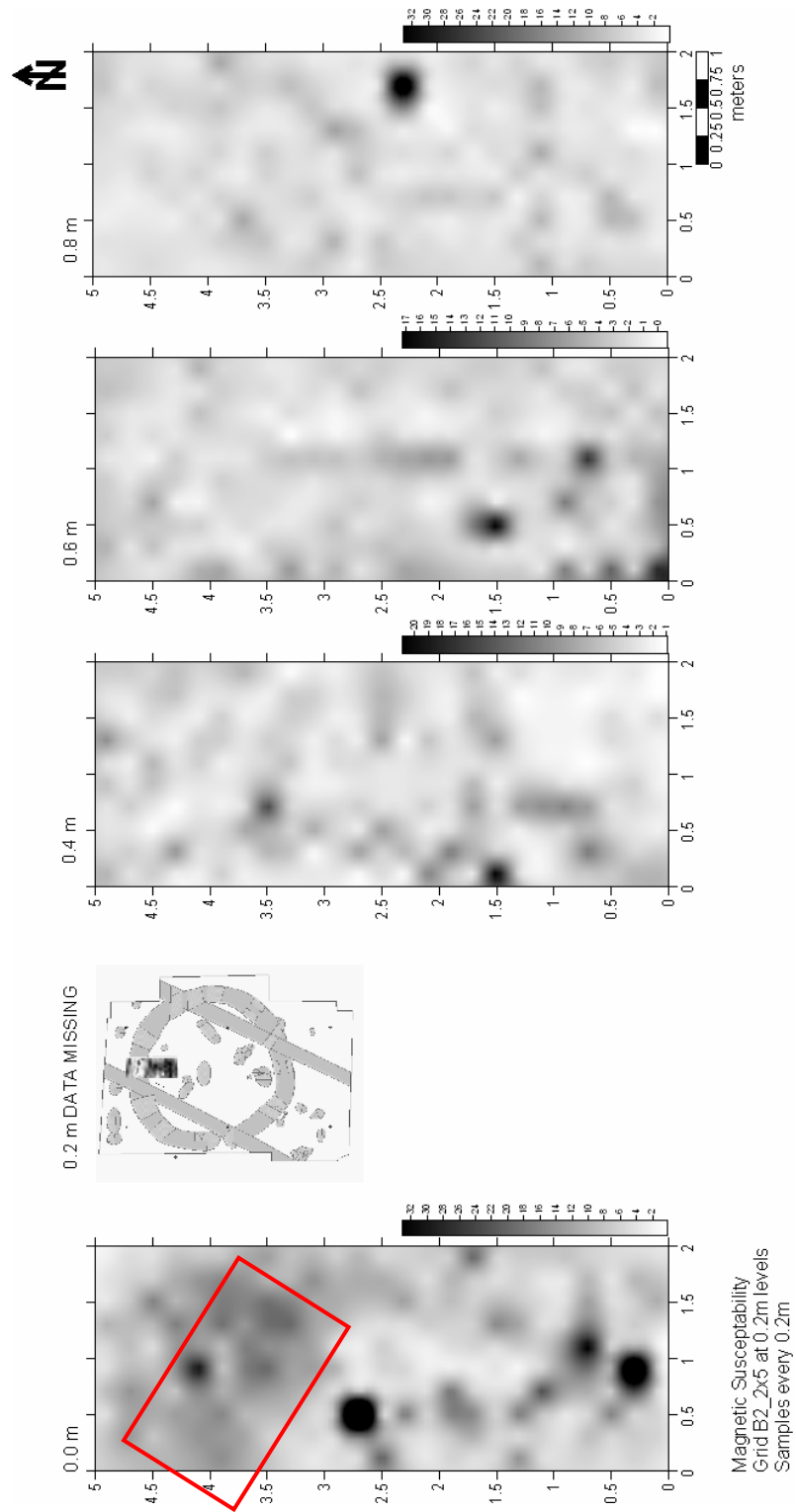


Figure 91. B2 2m x 5m magnetic susceptibility survey results.

The natural subsoil magnetic susceptibility survey mapped the ring ditch, as is outlined in red.

5.3.5.2 Resistivity

Apparant Resistivity
Square Array with 0.25m probe spacing
Sample Spacing 0.25

Grid B_2
2x5 excavation test trench

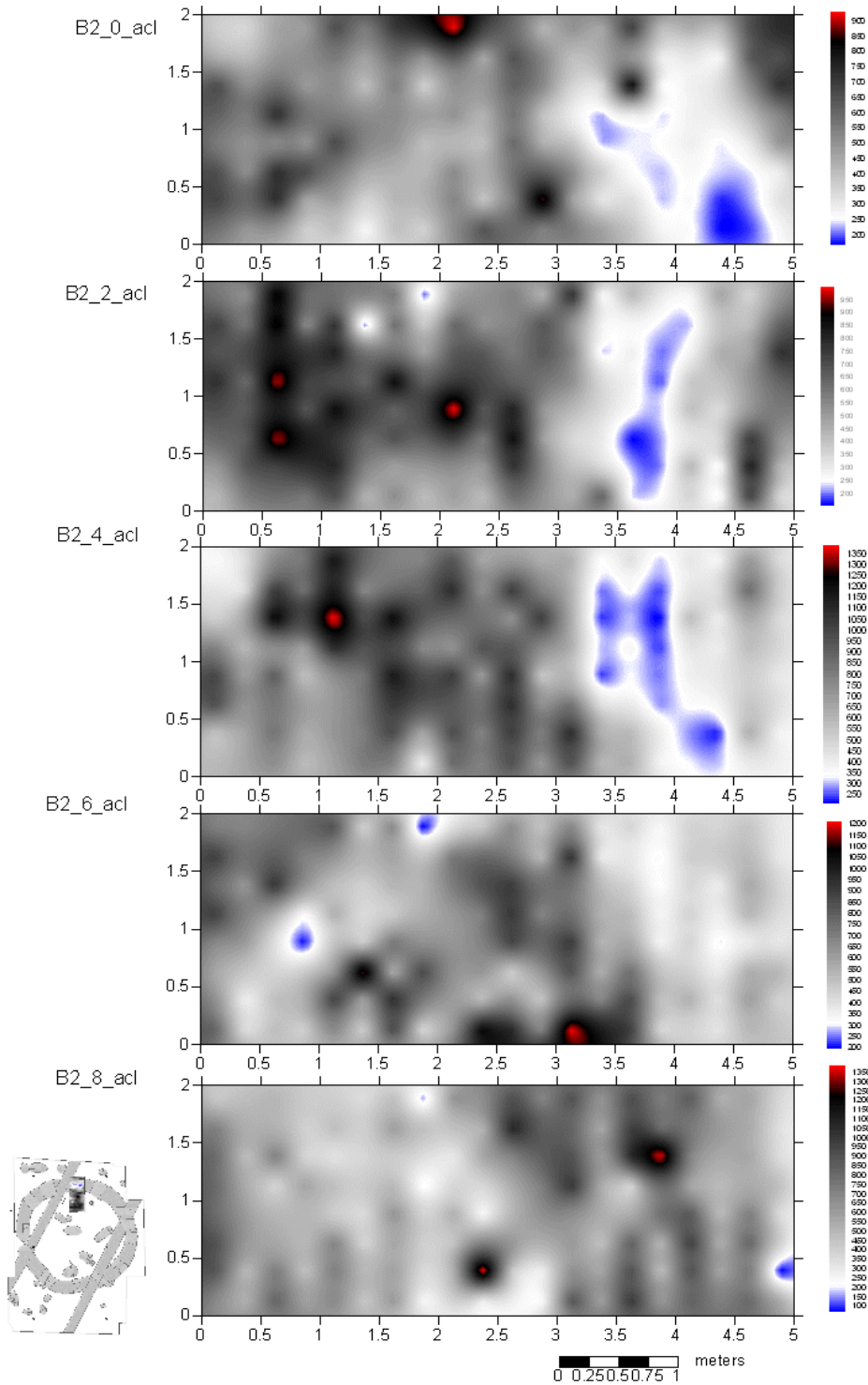


Figure 92. A1 2m x 5m resistivity survey results.

The resistivity results mapped the ring ditch down to 0.6m as a low resistivity anomaly (blue).

5.3.5.3 Dielectric Permittivity

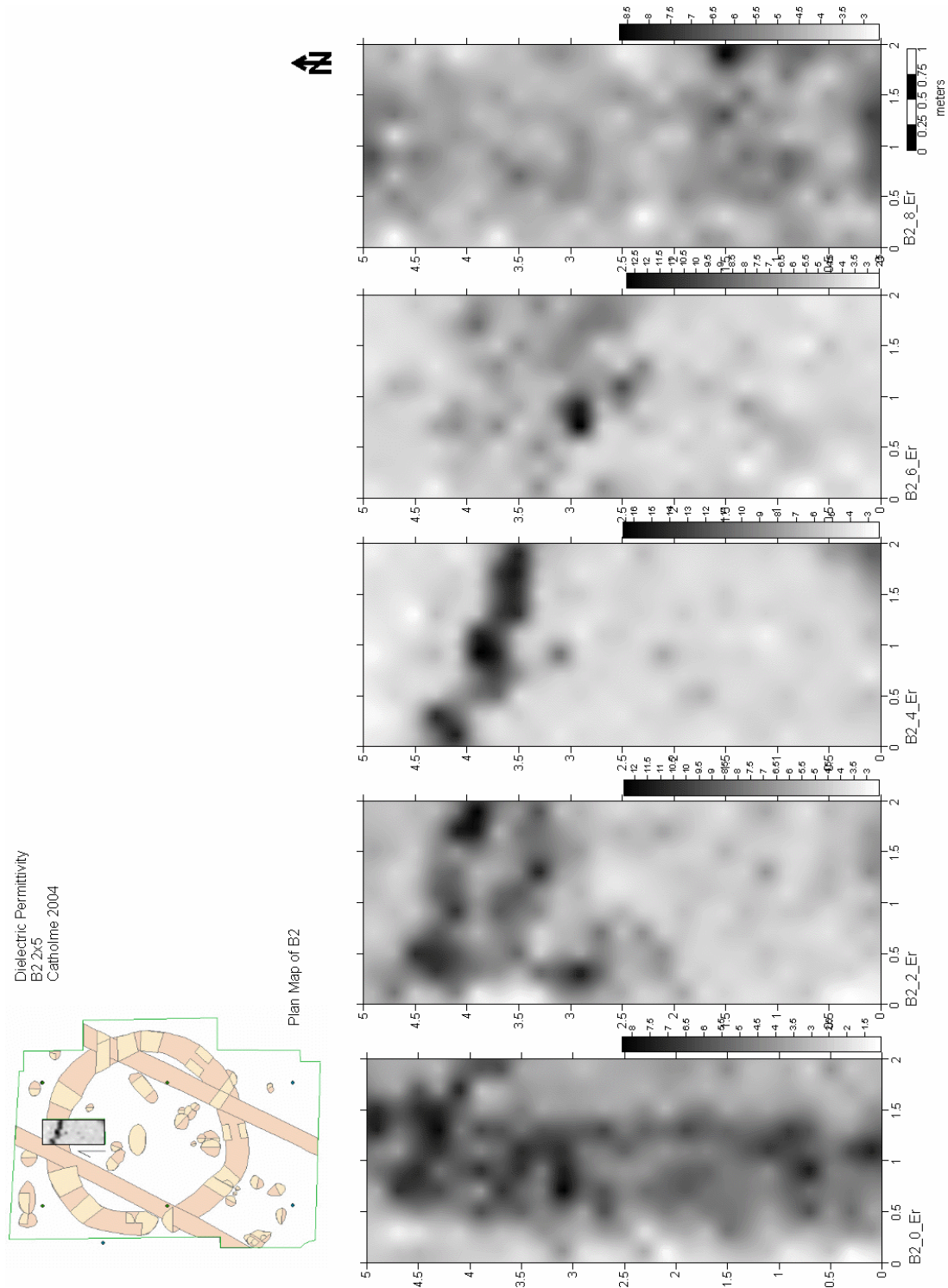


Figure 93. B2 2m x 5m dielectric permittivity survey results.

The results from the dielectric permittivity survey mapped the ring ditch from the ground surface through to 0.6m depth. The dielectric permittivity was mapped as a strong (high) feature that represents the moisture maintained within the ditch fill. The pattern that this follows of a relatively narrow line that defines the ditch was probably related to the shape of the feature and the rate at which it was drying with removal of the topsoil and each subsequent level.