

Trench D Plan



Section

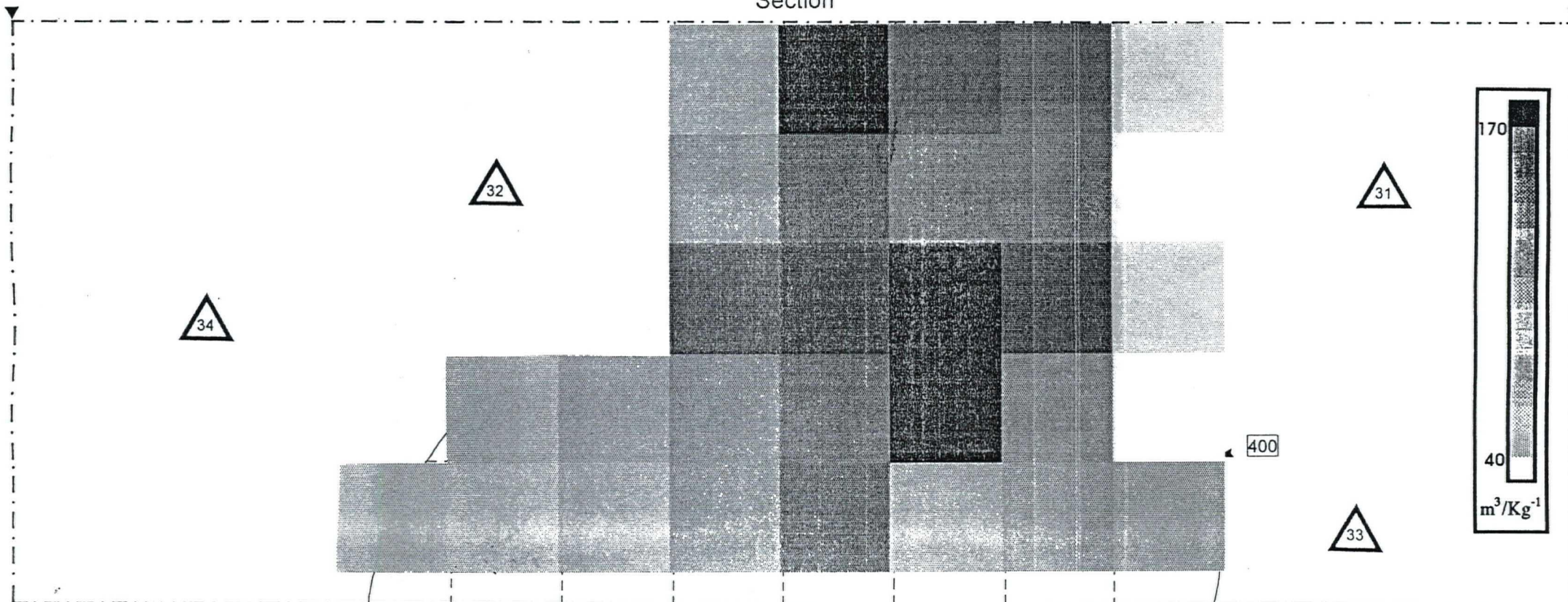


Fig. 11 Magnetic susceptibility data from Feature 400

by metal oxides caused by burning. The deposit was cleaned at this level and recorded. It was then overlaid by a 0.4m grid and sampled for magnetic susceptibility (Fig. 8). A 0.5m wide slot was excavated up against the east facing section and a further sample was taken from the deposit approximately 0.1m down the section (Fig. 9). The contexts recorded include:

- 400 *In plan the cut is irregular and rounded. It has a sharp break of slope from the top to steep sides then a smooth break of slope to a flat base.*
- 401 *Light red fine sand with frequent small stones and gravel. Also moderate charcoal flecks. Samples 1 to 34.*

The results of the magnetic susceptibility sampling are shown in Figure 11. These indicate that there were two possible hot spots within the area excavated. One lies beneath the north balk of the trench and the other in the centre of the reddened area of soil. Samples taken from the natural adjacent to the feature indicate that the burning has enhanced the susceptibility of the soil from about $40 \times 10^{-8} \text{ m}^3 \text{ kg}^{-1}$ to above $170 \times 10^{-8} \text{ m}^3 \text{ kg}^{-1}$. The level of enhancement combined with the gradual way in which the magnetic susceptibility drops off from the hot spots to substantially lower readings at the extremities of the burnt area implies that the feature was burnt in situ. It also suggests that it was burnt by an open fire rather than within an enclosed structure as the latter case would be more likely to have heated some of the extremities of the feature to the same extent as the central hot spots thus giving higher susceptibilities around its edges.

Trench E (3m by 2m)

This trench was located at the other possible choice for an entrance to the site and in an area where no anomalies had been located during the geophysical survey. It was machine excavated to a depth of 0.8m through 0.2m of topsoil and 0.6m of mid brown sandy subsoil. There were no archaeological features. The trench was oriented north-south and the east facing section was recorded (Fig. 6).

Trench F (5.46m by 2m)

This trench was initially excavated by machine to a depth of 0.5m where the archaeology was seen in plan. A machine section 1.5m wide was then excavated to a depth of 1.2m below the surface to allow the ditch section to be recorded:

- 600 *A linear ditch running north/south across the site. In profile it was 2m wide by 0.8m deep. It was a round bottomed V shape with a sharp break of slope from the top to steep sides then a smooth break of slope to a rounded base. The western side was slightly shallower than the eastern side.*
- 601 *Mid brown fine sandy silt with inclusions of medium to small stones and grits throughout and larger stones concentrated towards the base of the deposit (c. 0.3m by 0.15m by 0.1m)*

The remaining 0.5m was excavated by hand in an attempt to find some dating evidence. There were no finds (Fig. 9).

Trench G (4.5m by 1.6m)

This trench was positioned to investigate a possible enclosure ditch. It was initially machine excavated to a depth of 0.5m where the archaeology was seen in plan. The ditch had a 1m wide section hand dug through it to a depth of 1.08m. The following contexts were recorded (Fig. 10):

- 700 *Reddish brown deposit becoming lighter brown towards the base. Sandy clay with frequent charcoal flecks, igneous and sandstone rocks (0.05m diam), fragmented rounded igneous and sandstone rocks some of which appear to be heat affected.*
- 701 *Linear in plan oriented northeast southwest. U shaped in profile 2m wide by 1.06m deep. A smooth break of slope to gradual sides. Then a smooth break of slope to a rounded base.*

There were no finds.

6. Discussion

6.1 General

The following discussion combines the results of all the survey work and provides an interpretation of the stages of human use of the site. Four main uses can be identified:

1. An early ditch enclosure within which lies areas of burning (as yet undated).
2. Ridge and furrow of probable early medieval date.
3. A bailey of medieval date.
4. Modern use (pasture, services etc...).

Other earthworks and magnetic anomalies exist on the site but these are more difficult to date.

6.2 Early features

These were mainly identified by geophysical survey as linear anomalies A and B and the area of burning within Anomaly A. Trial excavation both confirmed their existence and demonstrated that they probably predate the ridge and furrow due to the depth of overburden above the cut of the features. This hypothesis is also supported by the results of the earthwork survey as it would be expected that the features would be preserved as earthworks if they were later than the ridge and furrow (the projected width of feature 701 being 3m at the surface).

It is assumed that the burnt feature (burning was confirmed through the use of magnetic susceptibility) was enclosed by ditch 701 and that Anomaly B forms part of a system of contemporary land division. Interestingly it would appear that the burnt features lie in a slight hollow (Fig. 2; J) which is in turn enclosed by ditch 701 (Anomaly A). This is unusual as normally it is high ground that would be enclosed.

6.3 Early medieval features

Ridge and furrow was identified both during the gradiometer survey and within the earthworks on the site. From the earthwork survey the extant remains of these features can be seen to predate Bank B (Fig. 2) of the bailey. A gradiometer survey carried out by the Ancient Monuments Laboratory (Bartlett and David 1984) clearly shows the presence of ridge and furrow beneath this bank. As it is known from documentary sources that Mowbray Castle was destroyed in 1176AD (Section 2.6), then the ridge and furrow must predate this. Ridge and furrow was not identified within the trenches (probably as their lengths were less than the width of a single furrow). However, the depth and nature of overburden would appear to be consistent with the positions of furrows located during the gradiometer survey. Specifically it would appear that Trench D lies on a ridge and the deposit recorded as subsoil, overlying both natural

and the burnt feature (400) at this point, is likely to be material making up the ridge. Trench G on the other hand is situated within a furrow and the greater depth of topsoil and lack of subsoil here tends to support this hypothesis.

From Figure 5 it can be seen that the northernmost ridge and furrow within the gradiometer survey is on a different alignment to the earthwork features, although some ridge and furrow at the southeast end of the site may be a contemporary with the earthwork features.

6.4 Features contemporary with Mobray Castle

The majority of features of this date were identified during the earthwork survey and comprise the banks and ditches of the bailey. It is interesting to note that the south and northwest banks (Fig. 2, A) of the bailey are more substantial than the east bank (Fig. 2, B). It is difficult to see this as being due to it being simply less well preserved than Bank A (Fig. 2) as it post dates the ridge and furrow which might otherwise have been attributed with its destruction. It is more probable that the present height of the earthworks reflects the original construction and layout of the bailey. This suggests some sort of timber palisade was originally located along the tops of the banks. In support of this latter point no evidence for a masonry revetment was uncovered during the earlier resistance survey where it crossed the bank in the southwest corner of the site (Bartlett and David 1984).

It is difficult to assign a period to the earthworks shown at E and F on Figure 2. They would appear to form a small banked enclosure, but this need not be contemporary with the bailey and could just as easily form a small division of the field at a later date.

One further feature would appear to be later than the ridge and furrow (Fig. 5, Anomaly C). From the excavated section through this feature (Fig. 9, 600) it can be seen that the subsoil is cut by the ditch. The subsoil at this point probably represents lighter material forming part of a ridge. It is not possible to say whether this feature was contemporary with the castle, although, it is more likely that it represents a later field boundary as its orientation is parallel to the west boundary of the site.

6.5 Recent features

The gradiometer survey identified a modern service pipe and a number of iron artefacts which are most probably modern in date. Other features identified in the earthwork survey (Fig. 2, K and I) appear to line up with small enclosures shown in the east corner of the field on even the most up to date digital mapping of the site (Fig. 1).

The bank that runs along the south edge of the site (Fig. 2, H) post-dates the hollow in which the earlier features lie (Fig. 2, J) and may well be associated with the construction of the adjacent road.

7. Conclusion

The evaluation on the site of the proposed dairy extension at Kirkby Malzeard has identified a number of features of archaeological significance. The earliest of these is a possible enclosure ditch and area of burning which predates early medieval ploughing on the site. These have been confirmed through both geophysical survey and excavation. The burnt features appear to lie in a slight hollow at the east end of the site.

The medieval ploughing is well preserved at the west end of the site where it survives as earthworks. Gradiometer survey has also demonstrated that these features continue to the east end of the site although little trace could be seen above ground in the long grass at the time of the survey.

A bailey forming part of Mobray Castle (Scheduled Monument Number 26935) lies on the west edge of the proposed development site and the earthworks which delimit this feature are well preserved. Other earthworks were noted to the south of the bailey but it is difficult to say that they are contemporary with the medieval castle.

A number of recent features were identified in the site including modern services and field boundaries.

Should any development that takes place on the site be likely to destroy the area at the east end of the site enclosed by Anomaly A, then the area should be exposed as an open area excavation prior to the commencement of development and features excavated and recorded with the specific aim of both interpreting and more importantly dating the features. During the evaluation the burnt feature which was exposed did not appear to be suitable for magnetic dating (the soil was too loose). However, the magnetic susceptibility results do imply that the features were caused by burning in situ and it may be that some of the stronger magnetic anomalies to the northwest of Trench D are suitable for dating.

Bibliography

Bartlett, A. and David, A., 1984, *Geophysical Survey at Kirkby Malzeard, North Yorkshire, 1983*, Ancient Monuments Laboratory Survey No. G 35/83

Newton, I., 1995, *Entry in the schedule of monuments compiled and maintained by the Secretary of State under Section 1 of the Ancient Monuments and Archaeological Areas Act 1979 as amended*: File reference AA 20241/1

Acknowledgements

Project Manager:	A. Boucher BSc
Geophysical Survey:	A. Webb BA, J. Nicholls BA MSc
Earthwork Survey:	A. Boucher Bsc, J. Nicholls BA MSc
Trial Trenching:	C. Hurn, A. Hunter-Blair, J. Nicholls BA MSc
Report:	A. Boucher BSc with contributions by - J. Nicholls BA MSc (Geophysical survey) C. Hurn (Trial Trenching)
Graphics:	H. Boyd

Appendix 1

The Magnetic Susceptibility Results

<i>Sample Number</i>	<i>Reading (m³/Kg⁻¹)</i>
1	90
2	192
3	124
4	111
5	52
6	106
7	134
8	111
9	112
10	45
11	143
12	147
13	217
14	138
15	57
16	68
17	87
18	103
19	119
20	194
21	95
22	45
23	58
24	60
25	76
26	96
27	133
28	78
29	88
30	78

Appendix 2

The Archaeological Brief



COUNTY PLANNING DEPARTMENT

Your Reference:

Please quote this reference when replying: NC/JD

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8 August 1995

Dear Madam

Re: Expansion of Fountains Dairy, Mowbray Castle, Kirkby Malzeard

Thank you for your letter of 28 July 1995. This is to confirm in writing the requirements for an archaeological field evaluation for the proposed development, as discussed at our meeting of 26 July and subsequent telephone conversation on 1 August 1995.

1. Topographical Survey: This should be carried out for the entire field, including the area of the outer bailey, totalling some 3.1 hectares. The survey should result in two maps, a contour map as existing, and an interpretive map with hachures showing the location of earthwork features. Depending on the surface expression of the earthworks, the contour interval can be either 0.25 or 0.5 m, and the measurement interval can be either 3m or 5m.
2. Geophysical Survey: This should be a gradiometer survey of a sample area of 1 hectare. Geophysical survey should be carried out in the southwestern part of the field to the east of Beech Lea House, as guided by the topographic survey and a rapid magnetometer scan of the area. The outer bailey of Mowbray Castle has previously been the subject of geophysical survey, and no further work is necessary in the area of the bailey. Survey should be undertaken to English Heritage guidelines, and should provide a grey scale plot of geophysical anomalies in addition to other plots of data and interpretive maps.
3. Trial Excavations: Six trial trenches, minimum size of 3m by 2m, or an equivalent area, should be archaeologically investigated. The locations selected for trenching should include the area for access of services and vehicular traffic, one area free from geophysical and topographic anomalies, and other locations to be determined by the results of the surveys.

Continued ...

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4. Report: The results of the evaluation work should be summarised in a report. The report should also include recommendations for any further archaeological work which the contractor considers necessary.

Should you have any questions or require further clarification of this brief, please let me know.

Yours sincerely

A handwritten signature in cursive script that reads "N. Campling".

N Campling
Archaeological Officer
for County Planning Officer

3 Diagrams not scanned, see main
report