

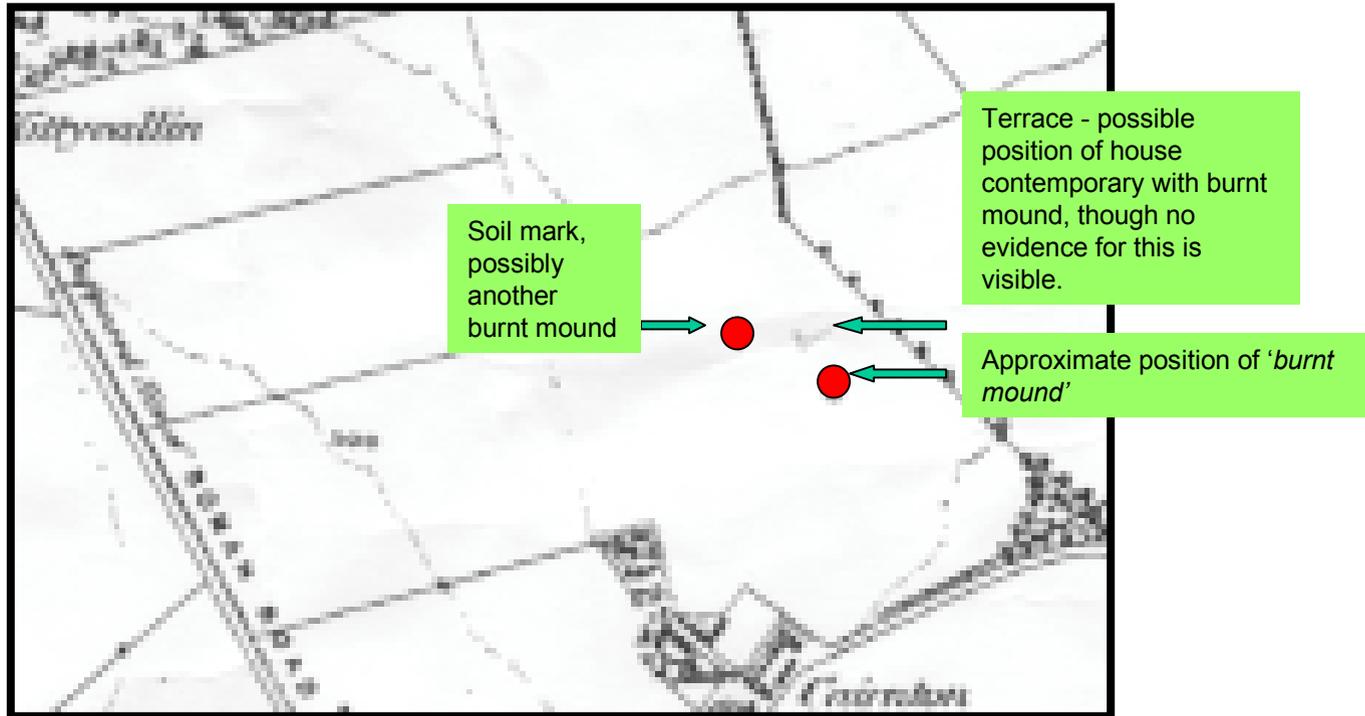
Managing archaeological sites in arable systems

Some farming issues





The map above shows a typical arable field with soil marks of possible archaeological sites. The farm and soil marks are based on an actual example but have been adapted slightly for the purpose of this study. Note in particular the tramlines for fertiliser, herbicide and insecticide. Besides passing over the field for ploughing, harrowing, creation of a seed bed and sowing, a typical arable crop may require an additional 3-4 passes by the tractor down the tramlines on average these would be spaced around 12' apart



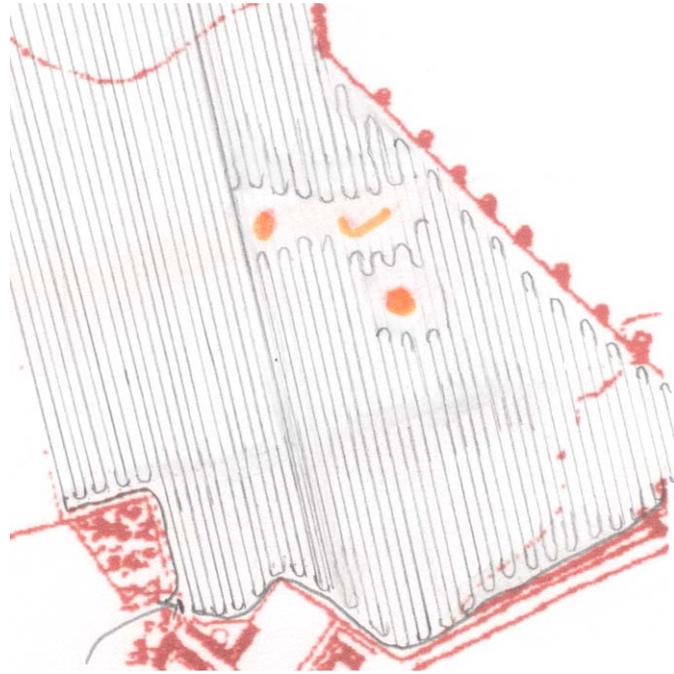
Within this field a dark soil mark had been noted by the farmer which over 20 years has grown from c3 metres diameter to c15m . Examination showed it to contain charcoal flecks and fire-shattered stone a typical indication of a site known as a burnt mound. These typically date from c2000BC to 500Ad and could only be more precisely dated by submitting a sample for C14 dating. It is likely to have been associated with a building, though no trace of this is now visible. For the purpose of this study it could also be seen as identical to a cropmark site that has been identified from the air.



Option 1

Leave a 10m exclusion zone around the site. Note that because of the tramlines this is likely to include an area more than 10m from the edge of the monument.

Before ploughing this site would be invisible on the surface, just as a cropmark site identified from the air. Since ploughing and other treatments might be carried out by ploughmen or contractors unfamiliar with the site, it would be desirable to distinguish the area to be protected. A stock fence would be sufficient for this but this should be robust enough to survive a 5 year crop rotation in this field. Also access by stock to the enclosed area may well be desirable to prevent it becoming overgrown with rank vegetation.

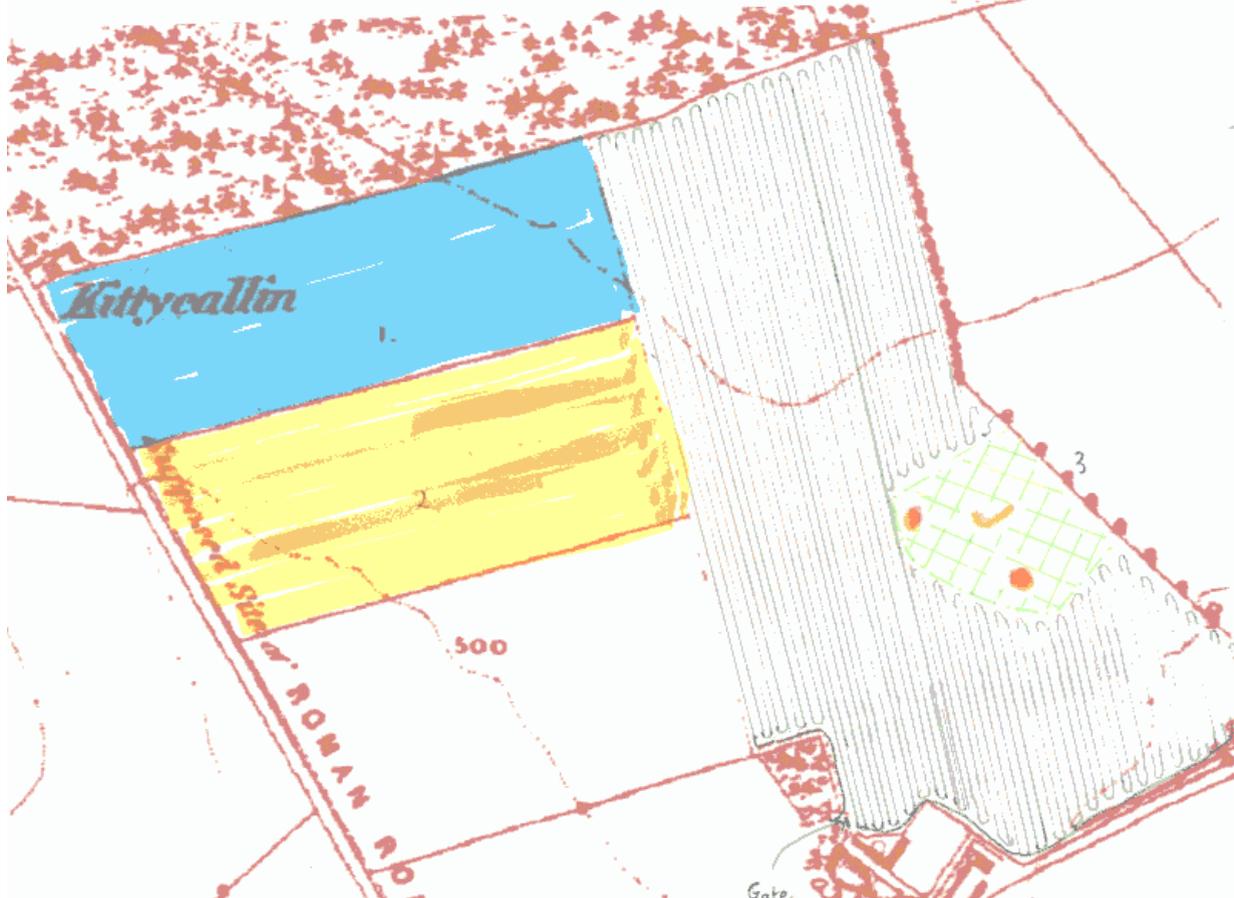


Option 2

Including all three possible sites offers the opportunity to protect both the known site and the two possible ones.

The extent to which the burnt mound site has 'grown' shows that it is gradually being levelled by ploughing and it will not be long before its archaeological value is totally lost.

Note that supplying a minimum 10 metre buffer around these sites does not work in terms of crop management.



Option 3

Linking the three possible sites makes for a more coherent unit, more easily managed by the farmer. For preference this should be sown to grass and grazed. It is still preferable that the area should be fenced separate from the rest of the field because under the crop rotation it is likely to spend some period as grassland and may need to be distinguished from the rest of the field. It should still be grazed every year. If sown to grass it is eligible for a payment of £320 per ha. per annum.

1. This area in blue is former set-aside being converted species-rich grassland (paid at £100perha. after £400 per ha. establishment costs)
2. This area is proposed for mown or grazed grassland for birds (respectively paid at £150 & £100 per ha.)

General Points for further consideration 1

- If considering areas for grassland for birds or for sowing as species-rich grassland, there should be a greater incentive for selecting cropmark or other buried archaeological sites for these options.
- The creation of a species-rich grassland which might well be ploughed up after the 5 years of an agri-environment scheme is of a lower environmental priority than an archaeological site that may have survived for thousands of years. (It is unlikely to be of significant biodiversity interest in this time - phosphate levels for example are unlikely to have diminished for a true species-rich grassland to become established.)
- There should be a presumption on selecting cropmark and other archaeological sites in arable systems for management as normal agricultural practice is destroying them.
- If not selected for Rural Stewardship management, they should be chosen for permanent set-aside.
- There should be an incentive to farmers for keeping these sites out of cultivation after an agri-environmental scheme has ended.
- If Land Management Contracts are adopted from 2004 there should be sufficient funding to make the removal of these sites from cultivation a compulsory part of an LMC agreement.
- However, there must be some evaluation of each site for management by professional archaeologists. Not all sites are worth protecting - some are too damaged to be worth preserving and others might not be considered significant enough to justify protection.

Further points for consideration

- The physical position of cropmark and other soilmark sites is crucial in determining their appropriateness for protection. Sites in the middle of fields are less suitable than those sited adjacent to the edges of fields.
- Defining boundaries and locations is crucial
- Professional archaeological input is crucial in defining the significance of sites to be protected.
- Monitoring is impossible unless sites are sown to grass for the duration of a scheme.
- Drainage impacts of isolating one section of a field from arable cultivation.