

Dealing with archaeological sites identified from the air

What are cropmark sites?

These are archaeological sites surviving under arable crops which have been identified from the air. These are only visible at certain times of the year under certain crop conditions .

Why are they considered important by archaeologists?

Even though they are no longer visible at ground level, significant deposits can still survive below the topsoil. Modern arable includes areas that were also fertile in the past and many of our most significant sites survive only as cropmarks. Several of these have been identified as important enough to be scheduled as Ancient Monuments of national importance.

Why do they need protection?

Recent research suggests most cropmark sites are gradually being eroded by ploughing. In some cases one episode of deeper ploughing can remove all that remains of a significant site. Subsoiling, drainage and de-stoning for root crops can also cause damage.



Different coloured marks in the ripening crop identify this as a Roman fort which has now been given Scheduled Monument protection

How can I best protect such sites from damage?

Ideally these sites should be removed from cultivation and put down to grass. You can get supplementary funding under the Rural Priorities Scheme for establishing species-rich grassland to support this work. You will need to include a minimum buffer of at least 5 and perhaps 10 metres or more to protect remains beyond the observed sites. You may find it easier to take a whole field out of cultivation.

If this is not feasible adopting minimum tillage methods will cause less damage to the buried remains, though this would need to be allied with a regime that excludes new drainage and subsoiling.

How can I find where these sites are on my land?

You can get notification on the location of a cropmark site from your local archaeological adviser. This may include a print of the the aerial photograph and a corrected drawing (known as a rectified plot) showing the precise position of the site.

Picture



A circle in the centre of the picture marks the site of a palisade built to protect a roundhouse, perhaps 2,500 years old, on a site near Inverness.

GOOD PRACTICE

- Identify where archaeological sites are recorded on your land. Ask for an aerial photograph of the recorded archaeological features and a rectified plot to show precisely where a monument is located in your fields.
- Remember that cropmark sites, protected as Scheduled Monuments (SMs), are legally protected against any form of cultivation damage. Your Basic Farm Payment and other farm subsidies could potentially be at risk if damage is identified.
- Root vegetables that require a deep seed bed like carrots or potatoes, willow coppice or other deep rooted crops should not be grown over cropmark sites. If the site is a SM you will need to prove to Historic Scotland that deep beds, deep ploughing and de-stoning were being carried out prior to the site being scheduled, otherwise you may be in breach of your legal duty to protect these sites.
- Avoid digging drains, deep ploughing, subsoiling or de-stoning over known cropmark sites and extend this to a buffer area of at least 10 metres adjacent to such areas.
- Identify which cropmark sites are likely to be most at risk on your land.
- Take advice from an archaeological adviser over which cropmark sites on your land these might be and select these as a priority for agri-environment management, such as sowing out as species-rich grassland.
- If your crop rotation system prevents you from removing a cropmark site out of cultivation then consider using minimum cultivation techniques.

Further information - see Archaeology Scotland [Identifying and Managing Cropmark Sites](#) also [Arable Management Studies 1 & 2](#) and [Case Study 1 An arable farm with buried archaeology](#) Historic England [Caring for Archaeological Sites on Arable Land](#)



The remains of a Roman Fort are shown as a cropmark in the field to the left with possible upstanding brick or tile kilns and a series of parallel lines from modern drainage cuts. Destoning and ploughing, to establish root crops in the picture to the right, are likely to be doing damage as would subsoiling. This fort is now a Scheduled Monument and such cultivations are now not permitted. It might therefore be more appropriate to get an agri-environment subsidy to put this field down to species-rich grassland. This would also provide better protection for the upstanding remains.

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