

Managing archaeological sites in machair and dune systems

Why are archaeological sites in machair and dune sites considered important?

These areas with easily worked soils and access to the resources of the coast have been important areas for settlement since the first humans arrived into Scotland. Shell sand that forms a component of machair and many dune sites helps preserve human and animal bones. Such materials do not survive within the acid soils prevalent over most of the rest of Scotland, making dune sites a significant archaeological resource.

Also the mobility of dune systems in the past has preserved structures to a considerable depth, sometimes engulfing complete buildings.

Why are they considered to be under threat?

Dune systems even where they have been converted to permanent pasture can be subject to erosion. Due to the fine unconsolidated nature of the material it is particularly prone to wind damage. This can be exacerbated by people and also by stock both by eroding tracks and by overgrazing.



A buried house site eroding out of the sand. Note the former fence line running diagonally across the picture



Some of Scotland's most important archaeological sites, like World Heritage protected ancient village at Skara Brae, lie in dune systems.

What can be done to protect such sites from further damage?

Identifying areas at risk and doing remedial work before there is major damage is the most effective way of dealing with problems. This can include blocking paths and restricting grazing during dry conditions. Areas worst affected may require to be fenced off or even sealed and re-sown.

Cultivation and grazing of the machair is an important part of the history of the Western Isles contributing significantly to the landscape value and biodiversity of these areas. While is therefore not always appropriate to remove archaeological areas from cultivation, returning such areas to grassland is often the preferred management option.

If interested in recording archaeological sites eroding from dune systems, you can help by joining a local network of volunteers, known as [SCHARP](#).

GOOD PRACTICE

- Identify where archaeological sites survive on your land.
- Where sites survive in machair or dune systems, check to see that sands sealing known sites are not subject to erosion.
- Where cultivation is required, avoid ploughing to a depth greater than 150mm to reduce erosion. Allow re-seeded grassland to become well established before allowing grazing.
- Maintain grazing at a level that allows good grass cover to be maintained but avoid overgrazing to prevent erosion occurring.
- Where damage has occurred but is limited, see if you can stabilise the site by low-level management such as altering grazing patterns or blocking paths.
- If damage is severe, consider getting funding for repair work from the agri-environment programme or another source like SNH or Historic Scotland.
- Where finds or structures are exposed by storms or other erosion report them and their location to your local archaeology or museum service.
Do not remove finds off site unless you consider they will suffer further immediate damage.
- If unable to monitor continuing damage yourself, encourage a local [SCHARP](#) Group to do this.

Further information - see [Scotland's Heritage at Risk Project](#) (SCHARP)
Contact your [local archaeologist](#)



Machair sites, like this 7,000 year old shell midden on Oronsay, can also be of considerable biodiversity interest. Protecting archaeological sites should not be in conflict with nature conservation concerns.



A local group recording a building eroding out of the sand.

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