

11. Caring for Stone Walls



This sheet gives guidelines on the management of stonework in walls, caring for plants and animals associated with walls and whether to remove ivy.

Walls tend to be either dry stone, lime mortared or brick and often pre-date everything else in a site except perhaps the yew trees!

The shape of a churchyard can give a clue to the age of the site and also the probable age of the wall. A rounded shape suggests a pre-Christian or early Christian site in which case the churchyard wall may be the oldest remaining built structure in a parish.

Ways of building walls can vary regionally, depending on the stone type and also whether the wall will need to withstand severe freezing. For example Cornish hedges and Devon banks are filled with soil and building rubble which holds water. This is fine in the mild climates of these counties but would suffer from frost heave in a colder place.

An historic wall has a rich mixture of colours and textures. This reflects both the stone used and also the plants, ferns, mosses and lichens which have colonised over hundreds of years.

CARE OF STONE WALLS

When considering the repair or restoration of a stone wall seek the necessary permission, should it be required, and perhaps ask a professional waller for advice.



Repairing and rebuilding

When a section of wall needs to be repaired or rebuilt, have a hunt around for the original stones or bricks. If stone needs to be brought in then try to match the stone type and, if possible, use stone from a local quarry (ask your local Geology Trust for possible suppliers).

Similarly with bringing in brick, try to match the colour and size carefully (your local authority planning officers may be able to advise).

Repair or rebuild in the same way that the wall was originally made. Repairs carried out using a different technique will not blend in and will affect the historic importance of the wall. Unless someone in your group is practised at walling then outside help or training from a skilled waller will be required. Working alongside a skilled person makes an excellent volunteer project.

Dry stone walls

Dry stone walling is a very ancient practice dating back to at least the Iron Age and is used to create shelters, fortifications, burial mounds, ceremonial structures and animal enclosures. Many old burial grounds have stone wall boundaries.

How to care for dry stone walls

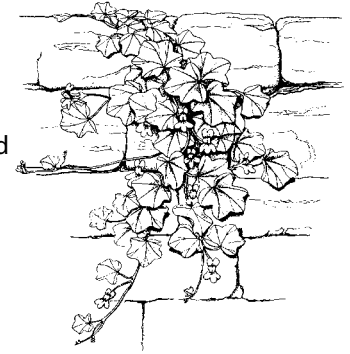
Well built dry stone walls can last well over 100 years. They look attractive, are stock proof boundaries and support wildlife whilst reflecting our traditions – so it is well worth looking after them.

Never put cement in dry stone walls

It prevents moisture escaping through joints. Moisture is forced out through the stones which are then vulnerable to damage and erosion. Filling the crevices can destroy habitat for amphibians, reptiles, invertebrates and plants.

Repair fallen walls

This is important because the stone in derelict walls often goes missing – leading to a much more expensive repair later on! Consider booking a dry stone wall trainer to run a course for local people – more fun, less



Ivy-leaved Toadflax

11. Caring for Stone Walls

expense and locals will then have the experience to make future repairs. Contact the **Dry Stone Walling Association** for trainers in your area or ask around locally for someone who has the skills and insurance to do this.

Ensure participants wear protective footwear and clothing and always undertake a risk assessment.

How to care for lime mortared walls

The earliest known use of lime mortar dates to about 4000BC in ancient Egypt.

Never repair these walls with cement. Unlike cement, lime is breathable and allows any moisture within the wall to come out. Lime mortar is soft and flexible and can accommodate movement, so if a building moves slightly the lime won't crack like cement. Cement repairs can lead to joints projecting beyond the stone face which look unsightly and provide small ledges all over the wall face which promotes decay.

- Re-point using lime mortar that matches the original as much as possible to avoid a 'patched up' look.
- Lime mortaring needs to be done between March and September – giving it time to cure before the frosts arrive.
- Consider involving local volunteers in the repair under the guidance of a qualified contractor. Contact the buildings department of your local council or consult the Building Conservation Directory.
- Ensure participants wear protective footwear, goggles and gloves (lime is alkali) and always undertake a risk assessment.



Hard Fern

CONSIDER PLANTS AND ANIMALS

Old walls may have a wealth of plants and animals living on them which have built up over time. These could be mosses, ferns, lichens, flowering plants, insects or spiders, amongst many others. Look for stonecrops on the sunny wall tops, ferns in cooler, shaded crevices and lichens on the stone itself.

A limestone wall or one with lime mortar may have a whole range of plants which grow in limy conditions. Our damp, mild climate favours many mosses, lichens and ferns in particular, many of which can be found on walls.

Walls can also contain roosting or hibernating bats. The damp bases of walls are excellent for newts, toads and slow worms or small mammals such as mice, voles and hedgehogs.

Water is usually the key factor that controls what grows on a wall and so shady, north-facing walls tend to have

more growing on them than the sunny, south-facing side. Similarly walls and stones in the west of Britain are richer in plants than those in the east.

Soft-stemmed plants such as ferns, ivy-leaved toadflax and corydalis do no damage and do not need to be removed.



If you are repairing or rebuilding a wall then take account of the wildlife within it.

Carefully remove plants before repairing a wall and place soft-stemmed plants back into the crevices once rebuilt. Replace stones with the lichens and mosses facing the same way that they grew.

Do not repair a whole wall in one go; rather do it in sections so that plants and animals can recolonise. This is also a good way to mend a wall, fitting well with volunteer work parties.

Trees and shrubs

Trees and shrubs growing on a wall or right next to it should usually be removed, either by pulling them out when small or else cutting off flush with the wall and making cuts or drilling holes into the stump to allow it to rot.

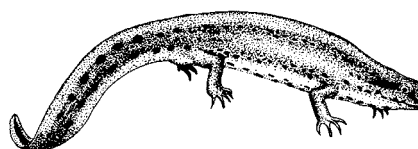
In many cases a tree which is growing in a wall cannot be removed without damaging the wall itself – so you may have to repeatedly cut off re-growth to kill the tree. Sometimes a tree will have been part of a wall for a long time and can be left there as a distinctive feature of your site.

Ivy and woody-stemmed plants

Ivy is a mixed blessing; it can push in between the stones or bricks of a wall further weakening it, but it can also hold up a collapsing wall saving it from being rebuilt. It also reduces the extremes of water and temperature which cause weathering of stonework.

Research suggests that in general as long as ivy is not rooting into the wall the benefits outweigh the risks in terms of stone deterioration. Therefore ivy does not always need to be removed (Ivy on Walls, English Heritage 2010).

If the ivy has rooted into the wall and you wish to remove it then do not attempt to unless you are ready to rebuild the wall. Ivy may be holding the wall together and removing it can cause more damage.



Smooth Newt

11. Caring for Stone Walls

Consider controlling it by regular clipping. If you do want to remove the ivy do not cut the stem expecting it to die off. On walls, cutting the stem and leaving the ivy can stimulate further, more aggressive root growth into the wall.

When deciding whether to remove ivy, remember it is great for wildlife. Wherever possible and appropriate (e.g. not covering or shading out lichens, mosses and ferns) ivy can be left to grow, flower and fruit.

Woody-stemmed plants such as valerian can be damaging to stone walls. Valerian does, however, look attractive so you may choose to leave it in certain places.

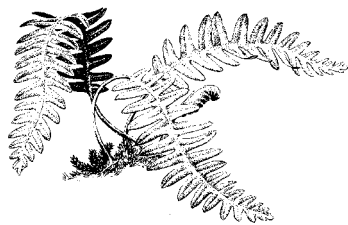
Birds and other animals

Walls with gaps and crevices or with ivy growing over them may well contain both nesting and over-

wintering birds and hibernating animals. This could include protected species such as great crested newt and bats.

If you know that there are protected species in or near to your burial site then it is sensible to ask advice before rebuilding or repairing a wall. Contact the local authority, the local wildlife trust or the statutory government agencies.

Whether or not there are specific protected species, work should be timed to avoid disturbing nests or hibernating creatures. The best time for rebuilding or repairing dry stone walls is late summer and early autumn (mid August through to the end of October). This is a pleasant time of year for working outdoors and avoids the nesting season and the winter. If there are no obvious nests in the wall then you can work in the spring and early summer as well.



Polypody Fern



Wren

Useful contacts

Building Conservation Directory, www.buildingconservation.com

Caring for God's Acre, www.caringforgodsacre.org.uk

Church of England, ChurchCare, www.churchcare.co.uk

Church in Wales, www.churchinwales.org.uk

Dry Stone Walling Association, www.dswa.org.uk

Geology Trusts, www.thegeologytrusts.org

Wildlife Trusts, www.wildlifetrusts.org

Statutory government agencies:

Cadw, www.cadw.gov.wales

Historic England, www.historicengland.org.uk

Historic Scotland, www.historic-scotland.gov.uk

Natural England, www.naturalengland.org.uk

Natural Resources Wales, www.naturalresourceswales.gov.uk

Northern Ireland Environment Agency, www.daera.gov.uk

Scottish Natural Heritage, www.nature.scot

Useful reading

Ivy on Walls – English Heritage 2010 publication