

**SMARTS QUARRY  
SITE OF SPECIAL SCIENTIFIC INTEREST**



**YOUR SPECIAL SITE AND ITS FUTURE**

‘Your Special Site and its Future’ is part of our commitment to improve the way we work with Site of Special Scientific Interest (SSSI) owners and occupiers. In it, we explain what is special about the geology on your site, and what care is needed to look after its geology into the future.

All SSSIs are considered to be of national importance and we recognise the crucial role that owners and occupiers play in their management and protection. We need you to share your views and knowledge of this site with us, to help safeguard it.

We hope that you will find ‘Your Special Site and its Future’ interesting and helpful. Please contact us if there is anything about the site and its management that you would like to discuss.

## **What is ‘special’ about the geology at Smarts Quarry SSSI?**

Smarts Quarry has one special feature:

- Namurian (Upper Carboniferous) rocks exposed in a disused quarry

Smarts Quarry SSSI is of national importance for a sequence of quartz-rich sandstones (quartzites) that are of Namurian (Upper Carboniferous) age and were deposited approximately 320 million years ago. These rocks belong to the Basal Grit Formation and are unique in Britain because they preserve the feeding traces of bivalves (two-shelled invertebrates, possibly similar in form to the modern-day cockle). The presence of these feeding tracers suggests that the surrounding sedimentary rocks were deposited in an estuary rather than along a simple shoreline as originally thought. The site is therefore of great importance in reconstructing environmental conditions which existed in South Wales during the Namurian interval of Earth’s history.

## **What do we want Smarts Quarry SSSI to look like?**

The following is a description of how we would like to see the future development of Smarts Quarry.

*Our aims for this site will be focused on maintaining the current level and continuity of rock exposure throughout the site, as well as keeping all existing rock faces visible and accessible. Some key parts of the stratigraphical sequence will become progressively obscured due to vegetation growth and the accumulation of scree and, in consultation with the landowner, we may wish to periodically re-expose these concealed rocks, especially ahead of any future research initiative. In seeking to achieve our aims, we will thereby ensure that the bedrock geology at Smarts Quarry SSSI will continue to provide one of the best localities in Wales for the study of this nationally important sequence of Namurian sedimentary rocks.*

## **What management is needed on Smarts Quarry SSSI and why?**

Smarts Quarry SSSI is a nationally important site for the study of Namurian quartz-sandstones and sites such as this are vital for furthering our understanding of geological science and Wales’ Earth heritage. However, it will only remain so if the necessary management is carried out and CCW will do its best to ensure that you receive any help that is necessary for this task.

## **What does this mean in practice?**

There are a number of different factors that could damage or reduce the scientific value of the special feature of the SSSI if they are not properly managed. The following are the ones we regard as most important:

- **Accessibility**  
Students and researchers need access to study the sedimentary rocks exposed at Smarts Quarry SSSI. Access for the purposes of geological research is, however, entirely at the discretion of the landowner.

- **Visibility**

The value of the geological feature depends on how visible it is. Rock faces naturally will become overgrown, and slopes will degrade and soils develop. To keep the feature exposed, vegetation growth should be controlled, and any activities that might obscure the exposures, for example the dumping of earth, spoil or other waste materials, and the buttressing and/or battering of the rock faces should be avoided. Scree, which may over time build up and obscure the feature, should also be carefully removed. With the permission of the landowner, CCW may wish to carry out limited site clearance operations to re-expose the geological feature, for example ahead of any future research initiatives.
- **Removal of quarry material**

The quartz-sandstone of the site used to be quarried for use in furnace bricks. The removal of small amounts of stone may expose new geological interests, so it is possible that this could be considered on a small scale. However, it is crucial that any proposals for extraction are discussed with CCW, to ensure the geological interest is enhanced and not damaged.
- **Fossil collecting**

Anyone seeking permission from the owner to visit the site for geological study should also be asked to contact CCW so that their scientific aims can be reviewed and terms of the permission can be agreed. This should ensure that the results of any research are added to site documentation maintained by CCW, and also that any fossils collected are properly curated at an appropriate location.

## **Finally**

Our knowledge of geology is continually improving and sites such as this are vital in that process. It is possible that new issues may arise in the future, whilst other issues may disappear. This statement is written with the best information we have now, but may have to change in the future as our understanding improves.

**If you would like to discuss any aspect of your SSSI, or have any concerns about your SSSI, please contact your local CCW office.**

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