



There has been a history of quarrying in Herefordshire stretching back several centuries. These have exploited the full range of the geology from igneous rocks of the Malvern Hills, limestone in the Woolhope Dome to sand and gravel in the glacial moraines in the Wye Valley, interglacial river terrace deposits and sub-alluvial gravels in the Lugg Valley and the recently formed calcareous tufa. Herefordshire has some quarries with rare fossils including a few of global importance because of the excellent preservation of species not found elsewhere, which are greatly increasing scientific knowledge.

The rock faces of hard rock quarries provide a valuable and unique habitat for invertebrates, birds such as peregrines and rare species of Sorbus.

A number of lakes have formed as a result of gravel extraction, these lakes are important sites for wetland fauna and flora, including a variety of breeding, migrant and overwintering birds, wetland plants and amphibians. The floodplain of the River Lugg has a particularly high density of gravel pit sites. Wellington gravel pits are still being actively quarried, providing continuing future opportunities for habitat creation.

### Threats

- Lack of conservation management leading to encroachment of scrub
- Site developed or becomes land-fill
- Inappropriate restoration and management, including use of non-native plant species, use of fertile topsoil and/or artificial seed mixtures
- Recreational disturbance to wildlife particularly nesting or wintering bird populations, isolation and fragmentation of sites
- Lack of awareness of management options, and how to implement them
- Public perception that quarry sites do not enhance biodiversity and geodiversity
- Illicit dumping of waste
- Invasive species

### Current Action

- HWT Lugg Wetland Gems project to enhance the biodiversity value of gravel pit lakes, increase public engagement, and their awareness of the natural and cultural heritage of these sites
- Herefordshire Minerals & Waste Local plan presumes biodiversity as end use (HC)
- Mapping current and abandoned quarries onto [www.buildingstones.org.uk](http://www.buildingstones.org.uk) and Geological Records Centre database (H&WEHT)
- Several publications on best practice for quarry sites
- Active management of some former quarry sites as nature reserves (HWT) and Champions Sites (H&WEHT)
- Education day trips to active sites: Hanson/Tarmac, and to disused quarries: Whitman's Hill (H&WEHT)
- Management Plans and clearance of geological sites in the Wye Valley & Malvern Hills AONB (H&WEHT, MHC, MHAONB)

	Objective	Action
A	Locate and map existing habitat extent	1,2
B	Maintain, monitor and map biodiversity restoration on sites still under management agreements	2,6
C	Create or restore ponds to high quality status to protect species of national importance/priority species	3,4
D	Increase learning opportunities regarding current and old quarry sites	3,4
E	Incorporate appropriate habitat creation into extraction consents	5,6
F	Increase industry's awareness of design and management techniques	6

	Actions	Target
1	Map current and abandoned quarries onto <a href="http://www.buildingstones.org.uk">www.buildingstones.org.uk</a> and Geological Records Centre database	Annual
2	Highlight sites with opportunities for habitat creation and management e.g. old limestone quarries	2020
3	Increase education trips and materials. Develop on and off sites interpretation to educate public and recreational users	2020
4	Increase public awareness of importance of aggregate sites through articles and press coverage	2020
5	Produce advice, set up demonstration events and workshops for smaller operators	2020
6	Work with mineral extraction operatives to ensure all new restoration schemes have clear biodiversity and geodiversity objectives and long term management plans	2020

Lead Partner	Mineral Industries & HWT
Key Partners	HC, H&WEHT, HOC, AONBs, HBP, HART, MHC