

Windrush wildlife wins friends

A family-owned quarrying and farming business in West Oxfordshire is happy to support a programme that will broaden the area's habitat range and boost pond conservation, *Martin Layer* explains

Gill Mill Quarry was acknowledged as being ahead of its time when it opened in 1989. The sand and gravel operation set in attractive countryside hit the highest operational and environmental standards. As the Oxfordshire site now celebrates its coming of age, it does so by setting high standards for good practice in biodiversity.

The imminent completion of Rushy Common and Tar Lakes marks the latest in a progressive series of restoration successes for the site at Ducklington, just outside Witney, and also for family-owned firm Smiths Bletchington. Work now close to fruition will complete the transition from pasture land with low ecological value to freshwater lakes and ponds with scrapes that support a vast array of wildlife.

Working closely with the Lower Windrush Valley Project (LWVP), Smiths Bletchington is on course to provide almost 30ha of purpose-designed nature reserve and adjacent area of public open space. It has also followed the advice of Pond Conservation, which launched the Million Ponds Project early last year in a bid to reverse the decline in the number of countryside ponds. This national charity's base at Oxford Brookes University is close to Gill Mill and the Windrush Valley and the company has collaborated with it since 2004

to support the UK Pond Habitat Action Plan in its restoration work.

Smiths Bletchington is a fourth-generation family-owned and managed company which has been serving the construction industry in and around Oxfordshire since the early 1900s and is now a leading supplier of primary and recycled aggregates across the region. In addition to its sand and gravel operation at Gill Mill, the company has four other active quarries supplying crushed limestone aggregates, soft building sand and walling and building stone. It employs around 100 local staff.

The Smith family has made a long-term decision to invest in mineral-bearing land and manage it through its in-house farming business until the need arises to secure planning permission for quarrying the area. It recognises the relatively temporary nature of mineral extraction and the importance of having sound plans for afteruse. Other former gravel pit lakes further down the Windrush Valley are now managed by sister company Linear Fisheries, which has an international reputation among carp fishermen and will be hosting the world championships in October this year.

The permitted extraction area at Gill Mill extends to some 170ha. Part of it is bordered by

company-owned land in arable production and grassland managed under the environmentally sensitive areas agri-environment scheme. About 60ha of the site has so far been worked and restored to a mix of landscaped open water, agriculture and nature conservation. Smiths Bletchington won a Quarry Products Association restoration award in 2006 for the restoration of an early phase of extraction now known as Graham Water. The company has also provided land for the Windrush Path, a new footpath along the river from Witney to the Thames Path national trail.

Sites can deliver a wide range of habitats

A major extension to Gill Mill secured approval in 2001 and extraction from Rushy Common started almost immediately. By the summer of 2005, some 750,000 tonnes of sand and gravel had been recovered, restoration was largely completed and the pumps were switched off, allowing groundwater levels to recover. The site was worked to an agreed and detailed design to provide 13ha of open water incorporating a wide range of habitats informed by the geology of the gravel deposit, water levels, prevailing wind direction and the general lie of the land.

The site lies at the edge of the valley where the terrace gravels thin against the rising Oxford Clay bedrock. This provided an opportunity to create a mix of bare gravel and vegetated shallow margins, low-lying peninsulas and an archipelago of gravel-topped islands with lagoons. Extensive grassland, thorn scrub and species-rich hedgerow provide additional habitats.

The growth of unwanted vegetation on the islands and shorelines will be managed by winter flooding controlled with a recently installed sluice and a penstock gate which provides the opportunity to control lake levels each season. The reserve will be open to the public but access will be restricted to a car park with a surfaced pathway suitable for disabled users connecting to a large purpose-built bird hide on the southern shoreline.

Tar Lakes was the next phase of the progressive working scheme after Rushy Common and was dug and restored between 2005 and 2008. This site, which is linked to the nature reserve and serviced by the same car



Conservation: growth of unwanted vegetation on the islands will be managed by winter flooding

park, comprises a 7ha complex of lakes, ponds and scrapes with open public access. A surfaced path with perching posts and benches provides a circular walk suitable for all user groups around one of the two principal lakes. Mown grass paths provide a further route around the second conservation lake. The new paths link to the existing rights of way network and significantly improve access opportunities in the valley, a key objective for the LWVP.

Restoration gives bio-diversity benefits

The Rushy Common and Tar Lakes complex will be officially opened in the coming months and will be managed by Smiths Bletchington for 25 years. The Rushy Common nature reserve is still a work in progress and has yet to fully mature. However, wetland plant and aquatic invertebrate surveys commissioned from Pond Conservation in 2006 and 2007 on the open water, ponds and ditches have clearly shown the importance of creating a variety of wetland habitat types.

Within a year of restoration the open water became one of the most diverse in the 40 or so lakes in the Lower Windrush Valley and was found to be of high value for macro-invertebrates, including six nationally scarce species of water beetle. The two existing ponds are UK Biodiversity Action Plan priority ponds on the basis of their high ecological value. They added a further 25 invertebrates not found in the open water to the Rushy Common species list, contributing significantly to the biodiversity of the reserve as a whole.

Taking on board the advice of Pond Conservation, Smiths Bletchington has retrofitted additional ponds and scrapes to both Rushy Common and Tar Lakes. The

process was simple and advice contained in the Pond Creation Toolkit easy to follow. Hands-on help is currently available through its minerals project officer, a post supported by the Aggregates Levy Sustainability Fund.

Compared to the low ecological value improved pasture that existed before extraction, restoration of Rushy Common and Tar Lakes has delivered very significant biodiversity gains. Regular survey work has been commissioned to monitor the development of the freshwater habitats over time and management of the site will build on this early potential to provide a valuable nature conservation asset for the people of West Oxfordshire.

The knowledge gained from working with Pond Conservation will be now applied where possible in the current permitted working areas of Gill Mill. It will also have a key role in the company's emerging plans for a major new extension to the quarry, in which pond habitats could be integrated into a full range of restoration and afteruse opportunities. Sand and gravel quarries have the potential to make a tremendous contribution to the survival of pond habitats in the UK and Smiths Bletchington will be wading in to help out wherever it can. ■

Martin Layer is planning and estates manager Smith and Sons (Bletchington) Ltd. He would like to acknowledge the assistance of Alison Hopewell, project officer for the Lower Windrush Valley Project; Pascale Nicolet and Madeleine Ryan of the Million Ponds Project and Peter Steffens, quarry manager at Gill Mill Quarry.

○ Pond Creation on Aggregate Extraction Sites is available at www.pondconservation.org.uk

Windrush: valley project support

Taking a long-term view of mineral extraction is the reason why Smiths Bletchington strongly supports the ongoing work of the Lower Windrush Valley Project (LWVP). The organisation was set up in 2001 by Oxfordshire County Council to create and implement an environmental strategy covering the valley from Witney to its confluence with the Thames at Newbridge.

This 28km² area of West Oxfordshire has been and remains a very important sand and gravel resource for the county and has been extensively worked by a number of operators since the Second World War. This has changed the once largely pastoral landscape to a mosaic of open water, including large lakes landscaped for fishing and sailing.

The LWVP is funded by Smiths Bletchington, the county council, West Oxfordshire District Council and the Environment Agency and provides a full-time project officer to work closely with landowners, local people and environmental groups. The project aims to:

- Strengthen and develop the changing landscape.
- Protect and enhance the biodiversity it supports.
- Improve opportunities for people to access the countryside.
- Raise awareness and understanding of the many issues that influence the environment in the valley today.

Ironically, Smiths Bletchington initially resisted the creation and long-term funding of the LWVP as it was being secured by the county council through a section 106 agreement on the back of a 1994 planning application to extend its quarry.

At that time, the concept was new and untested and introduced what was seen as the burden of a 25-year post-restoration management obligation. However, the company has instead found the project team to be an invaluable source of support and guidance for the emerging restoration scheme at Gill Mill and its context within the overall project area.



Rushy Common: the site provides 13ha of open water incorporating a wide range of habitats