Restoring a Future for Wildlife

The potential for quarry management and restoration to play a role in providing a future for woodland and wildlife should not be understated – and the Woodland Trust on behalf of Sian Atkinson

Woods and trees are such an inherent part of the UK landscape that it is easy to take them for granted. But, increasingly, policy recognizes the enormous range of societal benefits they deliver and, as a consequence, the need to protect existing woods and expand the resource. There are significant challenges in achieving this, not least because the UK is a crowded island with multiple demands on its land, but for this reason quarry sites have a particular role to play.

With only 13% woodland cover, the UK is one of the least wooded areas in Europe, where the average is 45% (37% in EU countries). Under international agreements on sustainable forest management, the UK Government is committed to maintaining at least this level of forest cover, but there are aspirations to increase it. The National Ecosystem Assessment called for a substantial increase in tree and woodland cover to help adaptation to, and mitigation of, climate change, and the 2009 Read et al report suggested woodland creation of 10,000ha a year to help combat climate change. Wales has a target of creating 180,000ha of new woodland over the next 20 years, and Scotland aims to increase woodland cover to 25% of land area by 2050. There have also been ambitious targets for native woodland creation under the UK Biodiversity Action Plan.

It would be hard to overstate the case for trees and woodland. From a nature conservation point of view, the UK’s remaining ancient woods are the country’s richest land-based wildlife habitats, home to rare and threatened species, many of which cannot move easily and therefore depend on the unique conditions ancient woods provide. Covering only 2% of the UK’s land area, they are mainly small and fragmented, yet they are irreplaceable reservoirs of biodiversity.

Protecting the country’s most valuable woods is crucial, but creating new native woodland adjacent to them is an effective way to protect them from the indirect effects of an adjacent quarry, such as noise, dust and light. Creating larger areas of habitats can help protect and enhance valued landscapes, as well as increasing the chances of survival for vulnerable populations of some species. Creating new native woods and planting native trees elsewhere across the landscape can create less hostile conditions for more mobile species, allowing them to move, for example, in response to climate change.

Adaptation to, and mitigation of, climate change, and to other realities of 21st century life, are challenges for human society as much as for wildlife, and here trees and woods can help deliver a wide range of ‘ecosystem services’.

Trees and woods store carbon and provide low-carbon substitutes for fossil fuels and other materials. They can help improve air and water quality, mitigate the effects of flooding, reduce the ‘urban heat island’ phenomenon, provide shade and shelter for livestock and improve agricultural productivity. They also provide pleasant and attractive spaces for relaxation and exercise, with the potential this has to improve people’s mental and physical health.

The scale of opportunity that quarry restoration offers for nature conservation is already well understood. Assessment by the RSPB 2 a few years ago showed how appropriate restoration of sites that were then active could deliver almost all the BAP habitat creation targets that had been set for 2015. The Nature After Minerals programme is instrumental in trying to turn that opportunity into reality, and mineral companies are largely aware of the potential, many having biodiversity strategies and action plans. Quarries already make a significant contribution to nature with more than 600 SSSIs designated on former mineral sites.

However, the wider benefits of designing woodland and trees into restoration schemes are perhaps less well promoted. The Woodland Trust, the UK’s largest woodland conservation charity, is keen to address this through working closely with companies to provide advice and assistance with woodland creation schemes at their sites. The Trust is committed to helping others create woods on their land in order to realize the many benefits they can bring and is already working in partnership with a huge range of organizations. For example, it has worked in partnership with Tarmac Ltd in Northern Ireland, planting over 5,000 native saplings on 6ha (16 acres) at Craigantlet Quarry, near Newtownards – and is keen to expand this partnerships approach in the quarrying sector.

Where conditions allow, restoration could mean substantial blocks of new woodland. Native species are the best choice to maximize biodiversity gains, but they also now have more potential to offer an economic return. Rising fuel prices and concerns over fuel security, coupled with government targets on renewable energy, are leading to growth in the wood-fuel sector. Firewood is in particular demand, with sales of wood-
burning stoves and prices for firewood both rising rapidly in the last couple of years. Native hardwoods are ideal for this market. But even where sites are restored to other uses, it can be beneficial to include trees. On agricultural land, shelter belts reduce soil erosion and run-off, which, in turn, helps to keep watercourses clean. They reduce wind speeds, slowing evapotranspiration from crops, allowing them to use water more efficiently, increasing productivity and the ability to cope with drought. Hedges, hedgerow trees and in-field trees provide much-needed shade and shelter for livestock, and for pollinating insects. Where restoration involves watercourses or water bodies, trees provide a number of benefits. Tree roots can bind soil and stabilize river banks, reducing soil erosion and sedimentation. They can buffer watercourses from run-off from adjacent land, acting as nutrient soaks and reducing the amounts of pollutants and sediment reaching the water. They provide shade, keeping rivers cool and reducing the growth of weeds and algae, and also provide habitats and food sources for wildlife. On floodplains, woods and trees can mitigate the effects of large floods, absorbing and delaying the release of flood flows. If restored to nature reserves, quarries can contribute to expanding the UK’s area of woodland habitat types such as upland ash woodland (e.g., former limestone quarries) and wet woodland (e.g., sand and gravel quarries). The latter is a relatively rare woodland type that supports an interesting range of wildlife, particularly invertebrates. New native woods can be created as part of a wider mosaic of habitats within the former quarry area.

Woodland and trees can deliver particular benefits for local communities. If included in phased restoration, tree planting in the early stages can be used to provide screening from ongoing workings. Longer term, provision of accessible, attractive green space near to people’s homes is known to be a factor in encouraging exercise and in promoting physical and mental health and well-being. Because of their structure, →

Tarmac Ltd teamed up with the Woodland Trust in 2009 when more than 5,000 native saplings were planted at the company’s Craigantlet Quarry, near Newtownards. The trees cover more than 6ha (16 acres) and within as little as 12 years will be a flourishing home for wildlife.
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woods are able to absorb large numbers of people without seeming crowded, absorb noise and, because of their complexity, offer a broad range of natural stimuli, all contributing to their restorative effect. They also offer myriad opportunities for unstructured play, essential to children’s development.

The Woodland Trust is aware of demand from many communities for local woodland in which they can have a stake through ownership, leases or management agreements, often driven by factors such as demand for wood fuel or protection of their local landscape from development.

Any restoration should take full account of the surrounding landscape and seek to maximize the benefits it can offer for wildlife and people. In some cases woodland will be an appropriate choice, while in others – eg where there are other priority habitats nearby that would benefit from expansion or linkage – another land use might be more appropriate, but trees could still form a part of that. The aim should be an ecologically functional landscape that permits survival and adaptation of a wide range of wildlife, and delivery of the ecosystem services that people in the area depend upon.

The Woodland Trust can work with site owners to assess the potential for woodland creation. It can also help with planting plans, possible sources of funding and advice on organizing people engagement activities, such as community tree planting events.

But no woodland creation project can be a substitute for the protection of existing valuable habitats, particularly ancient woodland, which is irreplaceable. The Woodland Trust is committed to preventing further loss of ancient woodland and can offer advice on mineral workings that may impact on nearby ancient woods. Dust, noise and pollution can all impact on sensitive ancient woodland habitats, and the Trust can help with solutions that will reduce this impact as well as promoting biodiversity.

Mineral sites have the potential for creating 50,000ha of native woodland, with all the benefits this could bring to society as a whole. The Woodland Trust is, therefore, keen to develop mutually beneficial partnerships with the quarrying sector that will help realize its vision of a UK rich in woods and trees.

For more information about the Woodland Trust’s work, visit: www.woodlandtrust.org.uk; or contact the Woodland Trust on tel: [01476] 581111 and ask for the partnerships team

References

4. www.afterminerals.com  