“Public access to woodlands for recreation is every person’s right and can be encouraged and managed at the same time. Everdon Stubbs Woodland, Northamptonshire”

Picture: J. Littlemore
Trees, Forests and Public Access: Reconciling Woodland Recreation and Conservation

James Littlemore and Ian D. Rotherham

A management dilemma
Woods and forests are increasingly popular places for recreation - from a casual walk to organized active sport. However, whilst this is undoubtedly to be welcomed it presents owners and managers with potential headaches. Woodland owners, arborists and managers are faced with a new management dilemma – what to do with the growing number of people wanting to visit their urban woods for formal and informal recreation. But is this a perceived threat, or are our best-loved woodlands and forests really under threat from the sheer numbers of visitors wanting to visit them? As managers what can we do to resolve conflicts and obtain a balance in multi-purpose forestry sites? This article argues for the sustainable management of woods to help reconcile conflicts between wildlife conservation and the various recreational pressures that result from public access. The central question is whether in urban fringe woodland sites is can the influx of visitors be managed to mitigate conflicts with little or no cost or liability to the owner or manager?

The Public in Your Woods
Demand for both formal and informal outdoor recreation has gathered pace across the British countryside. However, public access is often concentrated in some of our best loved and more accessible woodlands and forests in the urban fringe. By virtue of their unique environment, most woodland is attractive to visitors for what is predominantly a free, health driven and outdoor experience benefiting physical and mental well-being (Plate 1). In a recent 2005 rural tourism survey, 40% of respondents stated that they had visited a forest or woodland in the previous year with the number of tourism trips to woodland at approximately 25 million day visits per year reported by Natural England in 2005. This demand has resulted in extra public pressure on the countryside and coincides with an increasing awareness of the multiple uses of forest landscapes. In this context the amenity use of woods is now as high on the agenda for a woodland manager as commercial, game and wildlife conservation have ever been. It is actively promoted by many organisations and individuals in a drive to promote woodlands as accessible natural greenspace. Recently, the Forestry Commission has led the way by providing funding to create community woodlands.
through the revamped English Woodland Grant Scheme. Defra too has public access firmly on the agenda through the agri-environment grant aid support for farmers and landowners, many of whom may own and manage farm woodlands. For the private woodland owner however, potential conflicts and costs are still a worry.

The Perceived Problem

With an increasing awareness of the human imprint on our local environment since the 1970’s, it has long been recognised that public access can result in a loss in visual quality. This may be through dropped litter, noise, vandalism, fire lighting and more salubrious anti-social behaviour; best left to your imagination! The additional physical impacts of a range of human disturbance can also reduce the ecological integrity of woods of high conservation value. There are usually three major impacts associated with public access – human trampling from walking, and wear from riding animals or from the passage of machinery. Any combination of these leads to direct and indirect changes to the nature of the environment, usually away from that considered desirable. For instance, forest harvesting machinery extracting timber from woodland disturbs wildlife such as ground nesting birds, destroys in-situ vegetation and erodes soils and tree roots. Walking and mountain biking are perceived to have similar levels of impact, and are less damaging than horse riding and off-road vehicles.

Understanding Ecological Impacts on Wildlife

Recreational trampling generally causes a decrease in vegetation cover, height and biomass, damages tree roots and alters the competitive balance between species, changing community composition. Soils will vary in their ability to withstand recreational loads depending on their type and whether they are wet or dry; the latter improving ability to withstand wear.

With delicate structure and adaptation to shaded microclimates, woodland plants are particularly vulnerable to trampling. The vegetation response of forest ground flora to trampling impacts is curvi-linear - in other words damage progresses most rapidly when visitor levels are low. Recent research proves that the ecological carrying capacity of woodlands (i.e. their ability to withstand damage) is much lower than previously thought. For example, an area of bluebell woodland can only absorb visits from around 75–100 people per year before its ecological integrity is threatened. Any ability to withstand wear in woodland plants seems to be more a function of an ability to recover from impacts than to resist the impact in the first place. Thus, recreation can be a major contributor in facilitating unwanted ecological change in woods of conservation value and if unmanaged, human disturbance will permanently transform impacted areas into blocks that do not resemble the original, undisturbed environment. Indeed, the recovery rates of woodland plants and soils remains slow after a complete cessation of impact, and may take over twenty years to fully recover.

Human disturbance is often implicated in detrimental effects on fauna, inhibiting breeding, scaring animals away from preferred feeding areas and indirectly causing death. Human presence may adversely affect bird abundance, behaviour and reproductive success. The impact of specific recreational disturbances in woodlands is less well understood, but ‘one-off’ major forest events such as car rallying and orienteering have been known to cause birds of prey to desert their nests. Nevertheless, evidence suggest that many small birds tolerate frequent background levels of human presence (walkers, cyclists or horse riders) along marked trails through their nesting territories without any discernable effects. Mammals such as badgers are susceptible to disturbance (particularly from noise and dogs off the lead), resulting in later emergence times and if the problems continue, even sett abandonment. Other examples include deer whose physiology, breeding success and survivorship is adversely affected by disturbance. Important for the tree climbing arborist, even roosting and breeding bats may be susceptible and this raises potential legal issues. Disturbance is likely to be most severe around maternal or hibernation roost sites (veteran trees, buildings, caves). Disturbance during hibernation is known to disturb bat groups during periods when it is crucial that they conserve energy. A final and often overlooked impact is that on the structure and diversity of invertebrate communities (such as ground dwelling beetles). These are closely linked to direct and indirect changes in soils and environmental factors, and the type, intensity and frequency of impact. Indirect effects of trampling and the destruction of woodland ground cover may be the loss of invertebrate prey which adversely affects small mammal populations, particularly common shrews. So there is a range of possible impacts of human disturbance and they range from major and obvious ones to those which are subtle but often important. This begins to be a minefield for the site manager.

Activities in Woodlands and their Impacts

Many if not most urban fringe woodlands show evidence of wear and tear from over-use by people pursuing a range of activities such as dog-walking, paintball games and mountain biking. Over-use is a difficult thing to measure, to quantify or to evaluate, but if we take sustainability of the resource as an aspiration, then without careful management, much use is unsustainable. There are also new ways in which people interact with their local woods. A renaissance in traditional woodland management has diversified the range of opportunities for the public to engage with activities in woodlands, from bushcraft to green woodworking to llama trekking now commonplace (Plate 2). These help raise interest and awareness and re-engage people with wooded landscapes, but they of course also take their toll on the ecological and cultural resource.
Positive Management

Management of access routes into or through woods can also be challenging and require careful thought. In common with attempting to close specific trails or ‘desire lines’ to the general public, access to sites and trails can be contained by using an erected barrier such as simple information sign mounted on a frame to block the entrance, or even fencing. Linked to contemporary woodland craft activities a ‘dead hedge’ is a very environmentally friendly and low key way to direct access. Research shows that this will generally deter nine out of ten people from using a route that the manager is trying to discourage. Non-intrusive methods such as using logs and brash to block entrances or demarcate boundaries are less effective but will often work sufficiently to allow vegetation to recover. They have the advantage of being cheap and inherently bio-degradable. They are especially helpful in urban sites prone to anti-social behaviour and vandalism.

The evident growth in the market for mountain biking creates another access dilemma for woodland managers. Mountain biking is perceived to be no more physically damaging to the environment than the passage of walkers or horseback riders, but the growing numbers and popularity of this pastime do perhaps cause areas of concern. Physical barriers and warning signs can be advocated to manage use in sensitive areas. Single use trails of an ample width and wide curves may also help to eliminate conflicts. Furthermore, in areas with vulnerable soils or ancient woodland craft heritage (such as charcoal hearths), the increased surface pressure and hence erosion with a mountain bike wheel may be very damaging. In some cases birds and mammals may seem relatively unfazed by riders on bicycles or on horses as they seem to not recognize them as people.

However, the problems potentially increase manifold with off-road motor vehicles. Motorbikes expose up to four times more bare ground than walkers on level ground, and over twice as much bare ground on gentle slopes than walkers in forests. The impacts vary dramatically with conditions but with wet weather or a wet area of woodland, the damage can be very severe very quickly. Off-road 4x4 vehicles can cause serious rutting of tracks and then lead to a widening of general access use and pressure. As other uses try to find an easy way through the site and the result is a rapid proliferation of so-called ‘braided’ tracks. Once this process begins, then its remediation may become difficult and costly. Whilst there are situations where organized or informal uses of a site by off-road vehicles can be tolerated, in many woods they are inappropriate and cause both damage to the resource and annoyance or a hazard to other users. Control is only possible by preventing access into the site (often difficult and costly) or by effective hardening (also expensive). What is very clear is that once inappropriate uses are established and tolerated, then controlling or preventing it becomes much more difficult.

Horse riding is perceived as a particularly damaging activity, with horses capable to causing the most damage in terms of soil erosion in woodlands. Management or remediation is difficult and expensive, and there is often reluctance on the part of users to contribute this cost. Access into a site is usually relatively easy to control, and the law in terms of footpath or bridleway use is quite clear. Negotiation and establishment of recognised and legally defined routes for horses is the best way forward. However, the problems remain with other uses such as walkers and dog walkers often resentful and even frightened by horse riders.

There are numerous other activities in woodlands such as paintball games and orienteering that are known to be damaging. The timing of these events is crucial, with impacts lessened by appropriating seasonal scheduling, establishing good codes of practice for event organisers. Liaison with other users is important. Steps may be taken to steer competitors away from wet areas and sensitive zones may be taped or roped off. It is also useful for an activity or event or for woodland generally, to have agreed

Woodland recreation embraces more than just the traditional informal types, for example green woodworking training in Herefordshire with Mike Abbott (http://www.living-wood.co.uk)