New Park Wood: a road to recovery

Introduction and background

New Park Wood was affected by a major pollution incident in February 2018. The woodland and surrounding water courses were affected by a discharge of UAN (Urea Ammonium Nitrate) from the neighbouring fertilizer plant. The Forestry Commission gave permission for the trees to be felled to allow access to the site to enable the clear-up operation and to prevent ingress into the water environment.

The importance of soils in ancient woodland

New Park Wood is an ancient woodland which means it has been continuously wooded since records began in 1600 and probably much longer. The Lincolnshire Limewoods are of national importance because of their history and special biodiversity. We regard ancient woodland as irreplaceable, once it is destroyed it can't be recreated. However, in the life of any woodland, management (i.e. cutting trees down) is normal and when done sustainably, is beneficial to many woodland species. In fact, it is this cycle of cutting and regeneration, which gives many woodlands their character and diversity. So, whilst we might see the removal of trees from New Park Wood as a dramatic intervention, it is not a bad thing for the woodland on its own.

However, we are also just beginning to understand that much (if not most) of the special nature of ancient woodlands is held within the soils which, have been largely undisturbed for hundreds, if not thousands of years. Woodland soils are not the same as garden or agricultural soils: they have a much higher level of organic matter and often develop a strong structure giving home to trillions of insects and microorganisms. These soils take hundreds of years to develop and we are only at the beginning of identifying what is there and what the value of the species of fungi, bacteria and other micro-organisms might be. Woodland soils are living ecosystems and for these to survive, they need woodland cover and access to air, water and light.

The current situation

The team of people working to resolve the environmental issues agreed that it was most important to remove the threat to the water environment. This has mostly been achieved by pumping contaminated water off the site after collecting it in trenches – as the rain falls it 'washes' the pollutant out. However, there was an area of soil adjacent to

the road which was too badly affected to be treated like this and so an area of topsoil was removed. As of this spring, trees and other plants across much of the site are beginning to regrow.

Prescription

Because New Park is an ancient woodland, we do not want to import any foreign plant material, or soil. This would affect and possibly infect, what is there. So our strategy for regenerating the site will be to do as little as possible. This will allow seed already present in the soil along with seed from the neighbouring woodland to germinate and grow naturally.

The one thing that we do need to do is to keep grazing animals (especially deer) out. So, the site will remain fenced. Although it doesn't look lovely, the existing Heras fencing makes a very good deer fence and so will remain in place.

As the nitrogen levels fall in the area where soils have been removed, it will be used by invertebrate species and eventually will be colonised by plants and then willow and other trees making an area of wet woodland, another valuable habitat. This process will take many years. A baseline ecological survey was done this spring and it shows plant regrowth across much of the site with woodland successional communities. This means that there are signs that the ecology is beginning to recover and move towards being a woodland again.

We plan to assess the regeneration on site after five years to see if any other measures need to be taken to re-establish woodland.

July 2020: New Park Wood from the air.

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