

Ecological Survey & Assessment; Middle Avenue & Farm Walk, Dunham Park

Introduction

National Trust is proposing to upgrade the footpath along Middle Avenue which lies within Dunham Park SSSI. In addition, the northern end of Farm Walk is planned to be straightened to follow the original design line. To understand any ecological implications, the National Trust ecologist undertook a survey on 12th August 2021.

Biological Significance of Dunham Park

The primary interest feature of Dunham Park SSSI is stated to be its concentration of veteran tree, particularly oak and beech, together with the associated communities of dead wood invertebrate fauna. Alongside the veteran parkland trees and their fauna there is additional nature conservation significance in the unfertilised and `unimproved` acid grasslands, patches of dry heath, marshy grassland and various ponds found within the park walls.

Survey Findings

Middle Avenue is a designed parkland route which is now very well used by visitors and is consequently heavily trampled. It is lined either side by a double avenue of trees, mostly mature oak but with some veterans and other much younger replacements. Unsurprisingly, the line of the path is vegetated by a very short and often open sward of trampling resistant species including greater plantain, perennial rye-grass, prostrate knotweed, slender rush and dandelion. Along the centre line even the trampling adapted species are unable to survive the pressure and the sandy, erodable soil is becoming exposed. Away from the most intense trampling the adjacent sward is more intact and diverse with a mix of species characteristic of the light, acidic soil conditions such as common bent, meadow and creeping buttercup, tormentil, common cat's-ear, field speedwell and white clover. Here, along the edges of the avenue there is clearly less compaction and wear of the vegetation.

Tree roots are exposed in some areas of Middle Avenue, particularly the southern half. Fine roots and small roots have been physically damaged and will not be ecologically functioning. In places larger roots are also seen at the surface and are increasingly exposed and damaged. The process of root exposure appears to be continuing with a combination of trampling, vegetation loss and water erosion leading to the problem. At this moment any impact of root damage does not appear to be reflected in the health of the adjacent avenue trees, but that could change over time.

The tightly deer-grazed grassland across which the very north end of Farm Walk is proposed to be restored, comprises the same mix of trampling tolerant herbs and grasses forming a very short, species-poor turf.

Ecological Impact of Proposed Path Surfacing Work

Trampling and compaction, perhaps combined with shading from adjacent trees, has resulted in Middle Avenue not supporting a field layer vegetation of ecological distinction, unlike some other areas of Dunham Park. Along the line for the proposed path upgrading work the sward is severely degraded to the point where soil is eroding and tree roots exposed. Without intervention this situation will inevitably worsen with likely negative impacts for tree health ultimately. This was an issue identified in the Parkland Management Plan, 2018, funded by Natural England through a Countryside Stewardship Scheme, and which highlighted the need for proper surfacing on the main routes.

Provision of a suitable firm walking surface of limited width down the centre of the avenue will reduce trampling and compaction of the adjacent grassland, thus resulting in stronger vegetation growth, deeper herb/grass root penetration, improved rainfall absorption and recovery of finer tree roots. These aspects will collectively be ecologically beneficial in terms of the resilience and nature value of the sward but especially in protecting the future health of parkland trees for which the Dunham Park SSSI is most especially noted.

John Hooson

National Trust, Regional Nature Conservation Adviser