



Fixing the path 'root and branch'



Exposed tree roots and stones show the difficulty for users and the woodland aesthetic

GLEN RIVER PATH

SLIEVE DONARD

NEWCASTLE

NORTHERN IRELAND

Piloting a natural and sensitive way of protecting trees while maintaining a popular mountain access route to Slieve Donard

The Mourne are a highly accessible landscape and Slieve Donard is the most significant 'control point' within the whole of the Mourne, with increasing use in recent years. The majority of recreational activity is walking, fell running & orienteering with a low level of mountain biking. Slieve Donard is also increasingly popular for events including charity fund raising walks, and adventure and mountain races.

The Glen River path is the busiest route to Slieve Donard; primarily as it directly links the town of Newcastle via Donard Forest to the summit and also to the wider Mourne Mountains, with approximately 90,000 journeys along the 3mile/5km route each year.

The sitka spruce and douglas fir forest has stands of scots and corsican pine and the main path hugs as close to the Glen River as possible giving people views of and access to a dramatic mountain river with cascades, pools, smoothed rocks and mature heritage trees. The path has suffered from erosion, which has exposed tree roots and rocks, making walking difficult, particularly in the wet, and when travelling downhill. Therefore,

people have voted with their feet to find an easier line, which has in turn widened the eroded corridor.

Various options were considered to address the problem, aiming to manage the environmental impact while maintaining the river-edge aesthetic. A simpler solution would be to re-route away from the exposed tree roots and construct a new main route possibly using an existing desire line, but this would not meet the above aim. Therefore, the focus was on finding a way to provide a sustainable surface across the tree roots, without damaging the trees.

The ASCENT Path Team proposed a way of laying large branches on top of the roots and backfilling with

aggregate; and discussed the idea with stakeholders on numerous site visits including during the ASCENT workshop in November 2017; Upland Path Repair = are Good Principles Enough?

The Team were inspired to try the technique after visiting Finland in Sept 2017 where timber has been used for path work for generations – particularly as they have very durable slow growing pine that lasts a long time. Moreover, a similar technique of using curved branches as a path retaining feature had been used in the Dolomites in northern Italy, albeit in that case the branches had been used as a retaining wall for stone paving instead of aggregate.

Outcome

Using a stone and aggregate technique over the tree roots would be difficult as there would be no way of setting in the stones without cutting roots, which would damage the trees, but also, importantly, it would look different to what would be expected (exposed roots), therefore, a new technique was conceived.

The idea was that the use of curved branches would mimic the naturally exposed tree roots which often formed 'steps' with mineral soil trapped between, but were usually too tangled and uneven to provide an adequate and consistent surface, leading to users finding an easier and less treacherous line but causing new braiding.

While use of timber for this type of work in milder climates would usually be avoided due to its shorter life span, it was re-considered because of the aesthetic value, ease of construction, and relatively small and accessible

areas that needed treating; making maintenance easier.

Scots pine branches were chosen due to their hardness, selecting those with natural curves, which both mimicked root curves and gave a good retaining capture of the aggregate. The branches were larger than the roots in order to provide sufficient retaining quality and were stripped off their bark, dried and treated with preservative before installation. They were placed carefully on top of the exposed roots providing larger platforms or steps than the actual roots would allow, and were secured by use of wooden/metal pins. Locally won aggregate (mineral soil) was backfilled behind the branches and tamped down. The ASCENT Path Team were assisted by the Mourne Heritage Trust Volunteer Path Team early in 2018; repairing approximately a 25 x 1 metre path section in this way.



The end result – mimicking the natural root system and providing wider platforms to protect the roots and assist user flow

FURTHER INFORMATION

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Key Findings & Learning Points

The work has been successful; it is in good repair after approximately 14 months with users expressing satisfaction with the aesthetics and flow of the path.

Therefore, more branches are being prepared to treat a further 50 x 1 metre area of exposed tree roots with the same technique.

In a similar vein, site appropriate innovation is being applied on the open plateau of the Slieve Gullion summit path, where contractors are using both sheep wool and rushes to form a membrane over boggy ground to form the base for an aggregate path.

A video of the branch and aggregate trial at the Glen River in 2018 is available at <https://www.ascent-project.eu>