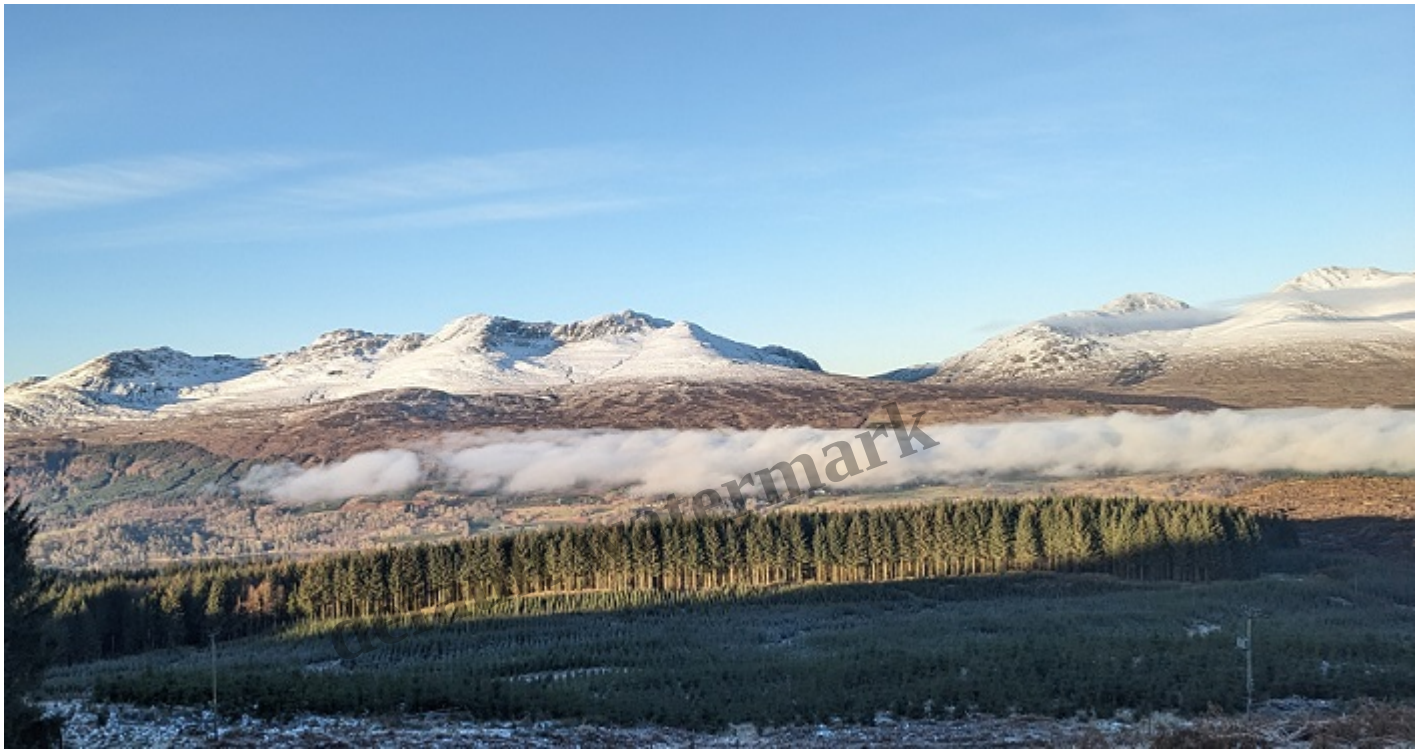
The outcome of native woodland creation in Scotland (1) – the Acharn forestry farce

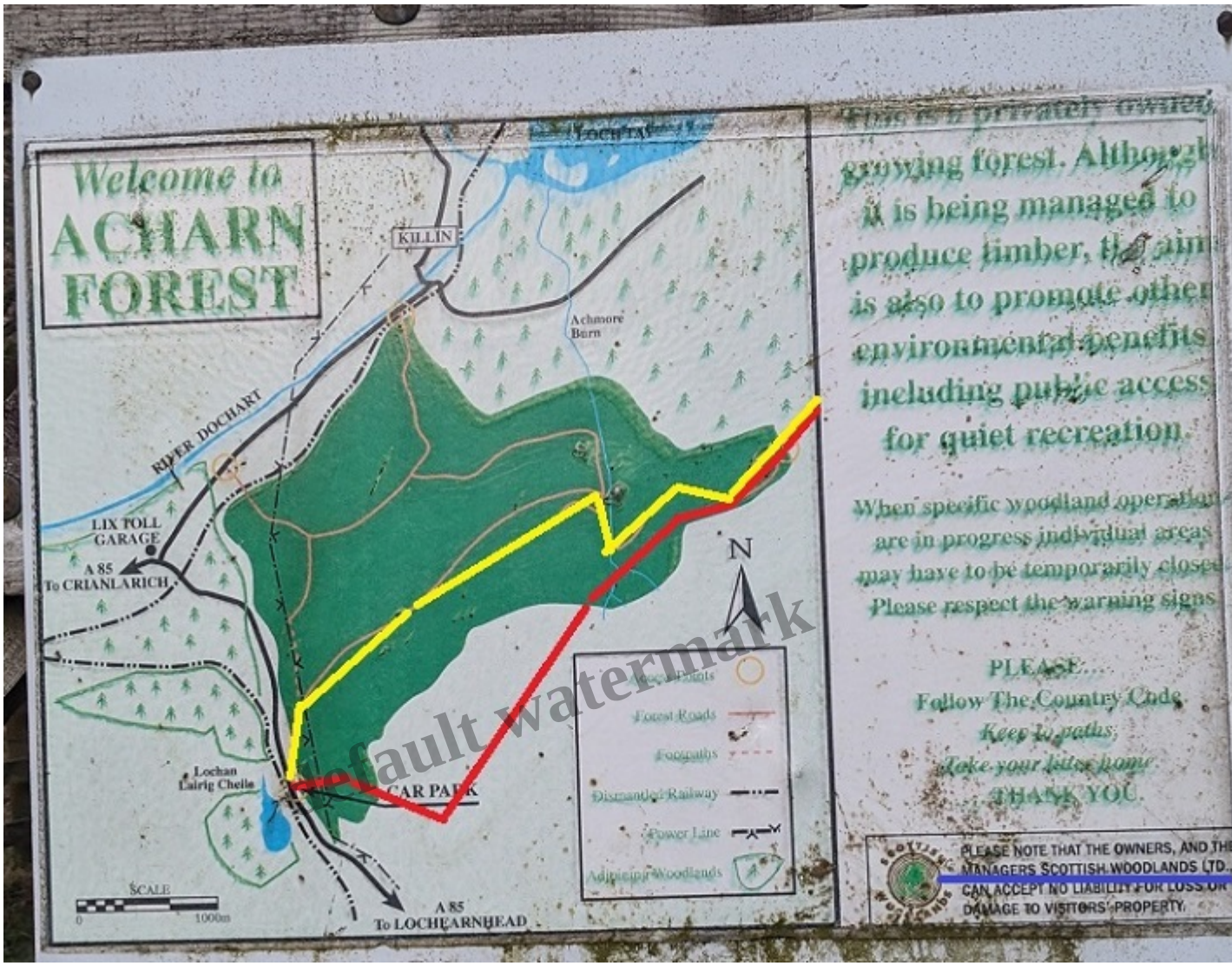
Description



View out over Creag Ghlas and Breachlaich forest, also owned by the Forestry Partnership LLP 2008, to Meall nan Tarmachan and Ben Lawers

There are two ways in which the Scottish Government attempts to increase the extent of native woodland grant at present, the first is by directly funding native woodland creation like at Far Ralia or BrewDog's Lost Forest, the second is by requiring all new and re-planted commercial forestry to include a proportion of native trees.

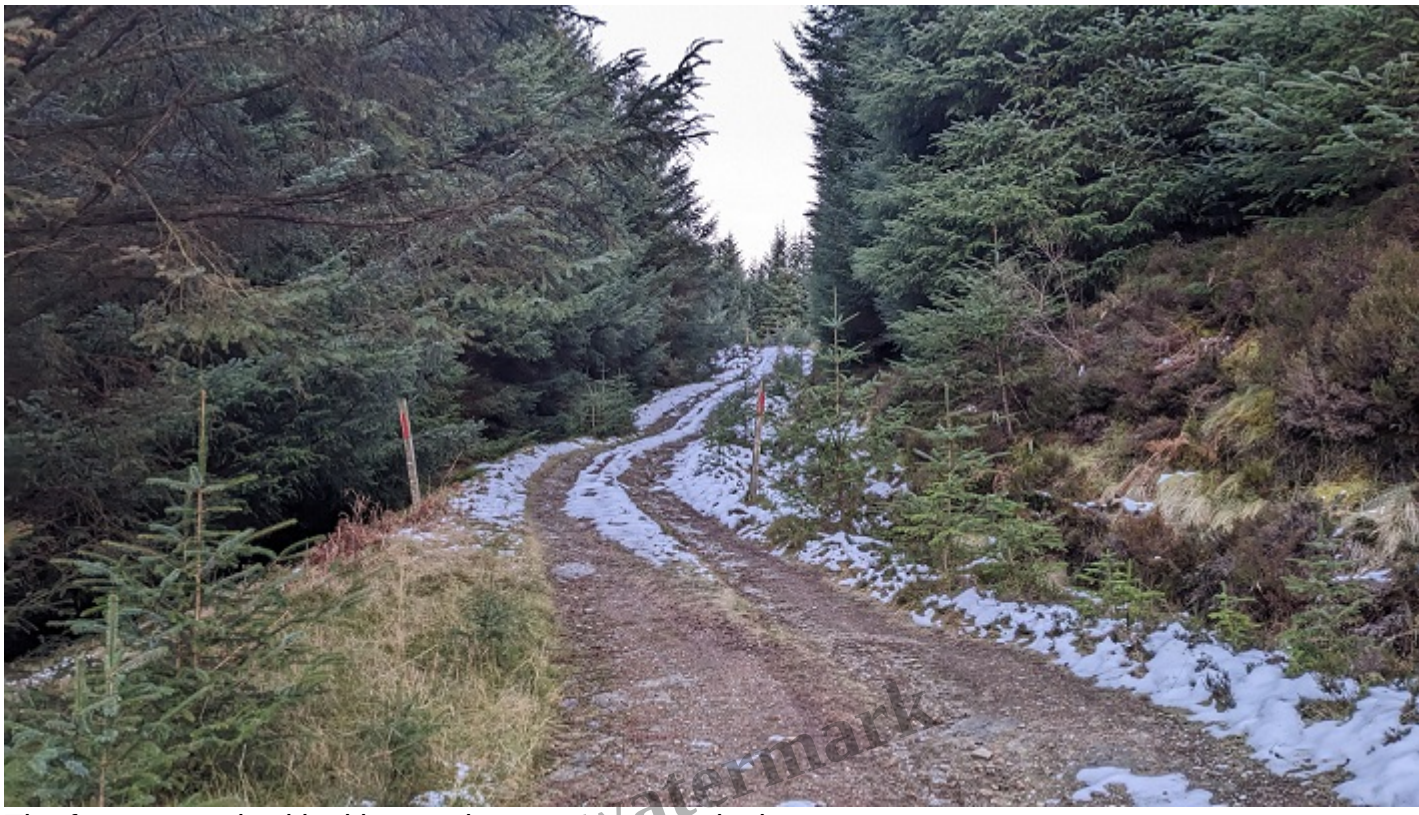
While I have given quite a lot of consideration to the destruction that much of this native woodland planting is causing, I have given far less attention to the "end result". There are schemes of both types now that are over 30 years old, quite long enough to see how successful they are, and in the last few years I have been looking at examples from all over Scotland. By chance on Monday, a glorious day, I ended up walking/jogging through one of them, along the edge of the Acharn Forest, on the boundary of the Loch Lomond and Trossachs National Park. It provides a good example of what has been happening on the ground.



Red shows approx route out over Meall Buidhe – I continued to Creag Garbh above the Breachlaich dam – and the yellow my route back along the forestry tracks. Its a very old sign, referring to the Country Code and Greshams has now replaced Scottish Woodlands as the manager.

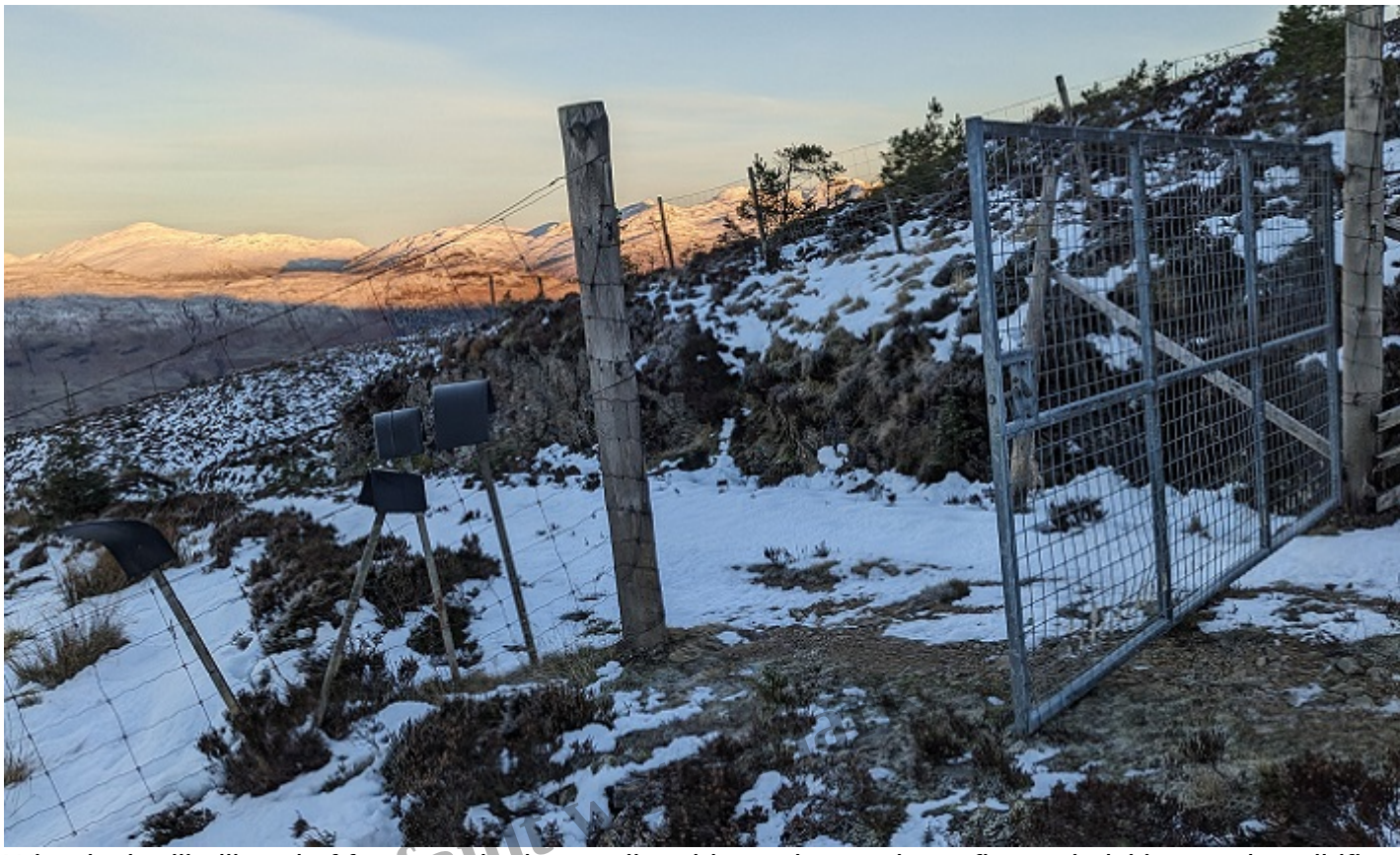
The land is known as Ardchyle (see here), changed ownership in 2017 and is now, according to Andy Wightman's website Who Owns Scotland, owned by the Forest Partnership LLP, 2008. Gresham House Asset Management Ltd is one of the partners of the LLP and, according to its last accounts, managed all its forests – i.e. including Acharn – for a fee of £1,390,550 in the year ending 30th September 2023.

My route started from the car park at the top of Glen Ogle, in the Loch Lomond and Trossachs National Park, and took a zig zag forest track up through the commercial sitka plantation. According to a recent investigation by the Ferret this non-native species now makes up 43% of all trees planted in Scotland (see here). It certainly very valuable, the Forestry Partnership LLP's accounts show that over 4/5 of the value of its total assets of c£200m lie in the timber not the land



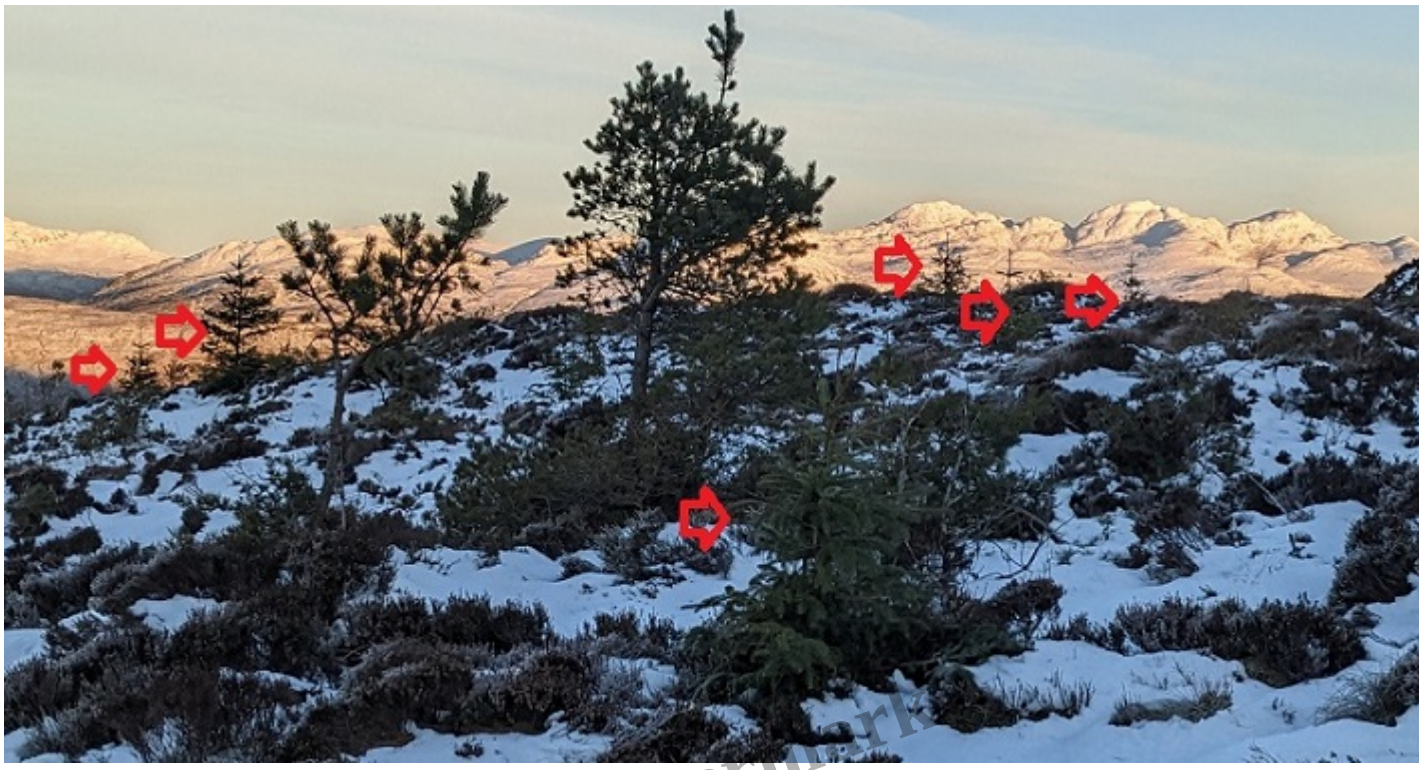
The forestry track with sitka starting to regenerate in the open spaces

Sitka begins to seed at around 25 years (see here) which explains the small size of the naturally regenerating young trees at the side of the track. Their seed was relatively recent. I saw no native trees along the track, possibly because the dense nature of the plantation has prevented windblown seeds reaching the open spaces but also possibly because they had been preferentially grazed by deer. While deer browse sitka when hungry enough, they choose native trees first.



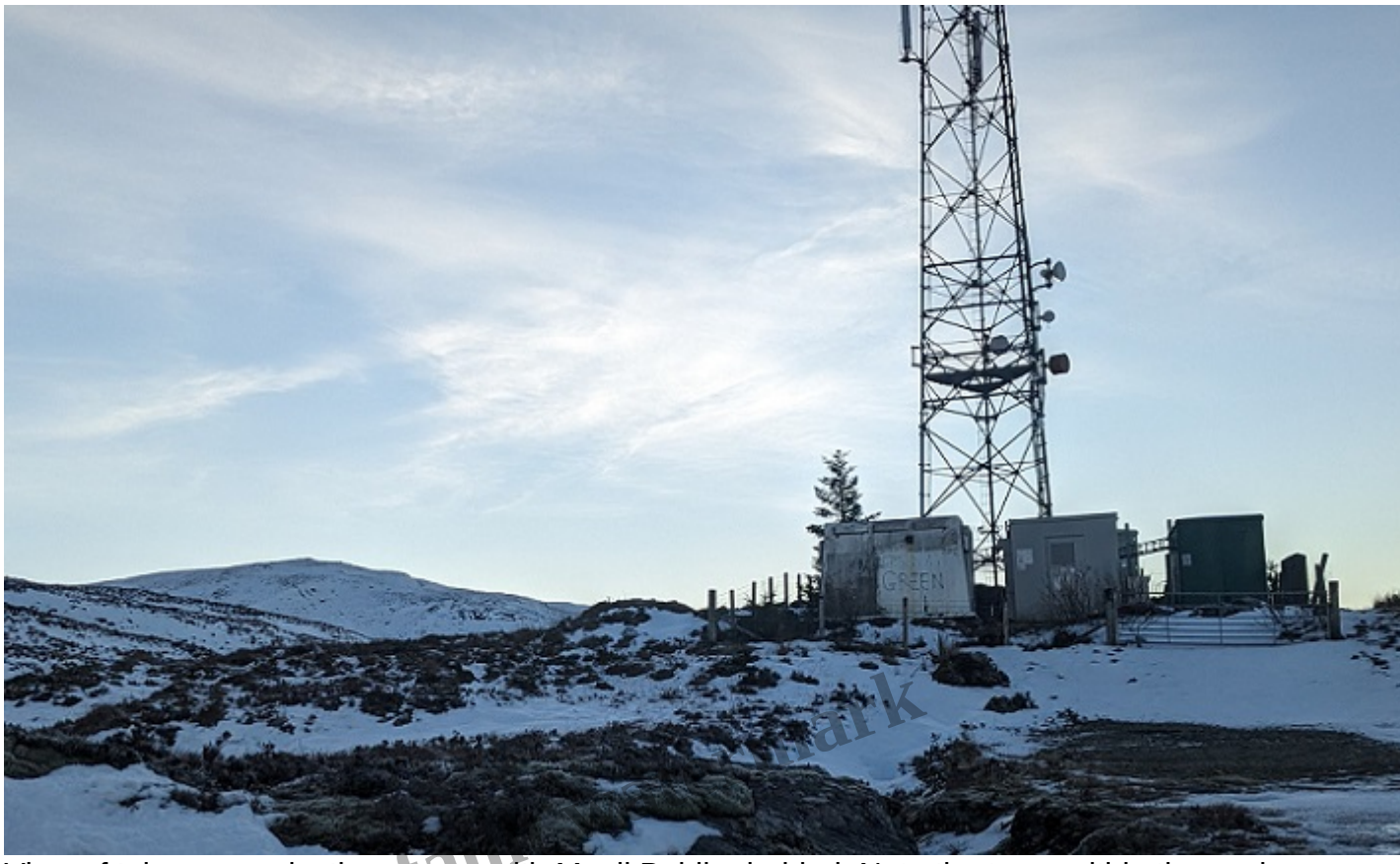
What is the likelihood of four people descending this track, spotting a fire and picking up the wildfire beaters by the gate?!. A native woodland enclosure, with Scots Pine visible, lay to the right of the upper line of fencing. Meall Ghaordhaidh left background.

Alongside the top of the plantation, where the gate was open, there was a more recent enclosure of native woodland. While fences rarely keep deer out for more than ten years, by that time fast growing and relatively unpalatble sitka are large enough to survive browsing. The open gate therefore had no implications for the success of the commercial forestry. While it could have resulted from a careless walker, equally it could have been left open deliberately to allow deer and sheep to find shelter in the cold weather.



View of the native woodland through the deer fence. The red arrows point to Sitka. To the right of the bottom arrow a dead tree is visible.

There was no gate into the native woodland plantation and I did not climb over the deer fence to have a closer look but it appears to have been mainly Scots Pine. The Pine did not appear to be doing very well and I spotted a number of dead or dying trees. By contrast the self-seeded sitka – most likely blown in from the plantation below and to the West – appeared to be doing better and some were already larger than the largest Scots Pine, Without active management the sitka will shade out many of the Scots Pine and threaten to turn this from what was meant to be new native woodland into more non-native forest. That is contrary to the objectives of the Loch Lomond and Trossachs National Park Authority which begs the question what are they doing about this?

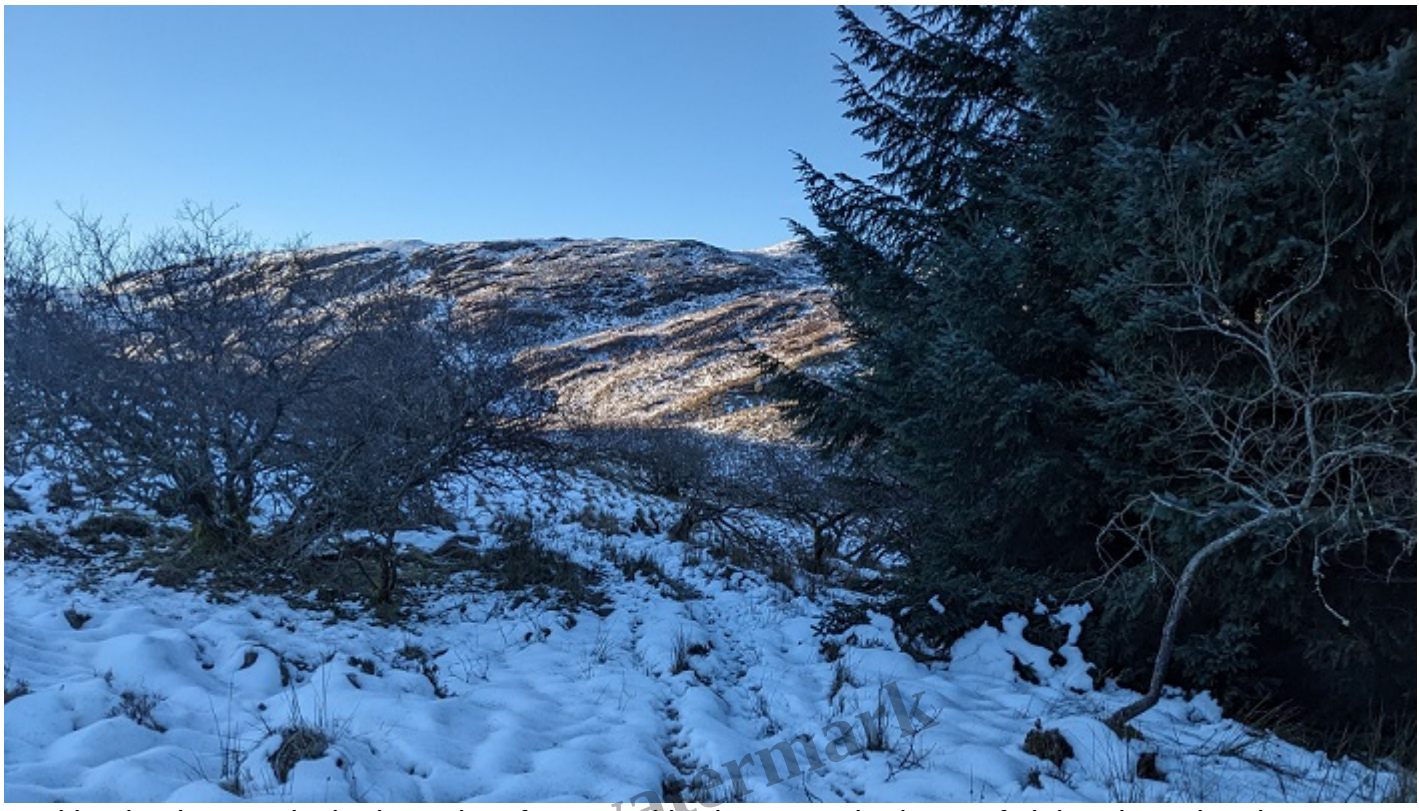


View of telecommunications tower with Meall Buidhe behind. Note the trees within the enclosure, including willow by the gate and in front of the central grey building and young sitka in the left hand corner.

The track led up to an old telecommunications mast surrounded by a barbed wire stock fence. While red deer can easily jump over such fences, they tend to avoid doing so when the enclosure is small – hence why the postage stamp planting along river banks, which is now so fashionable, doesn't use deer fencing. While it is possible the telecommunications mast operator planted some trees within the enclosure, judging by their varied age and positions most appear to have self-seeded. While the nearest seed source for sitka was only a few hundred metres away, that for the willow could have been miles away as the fluff around their seeds enables them to be carried long distances through the air.

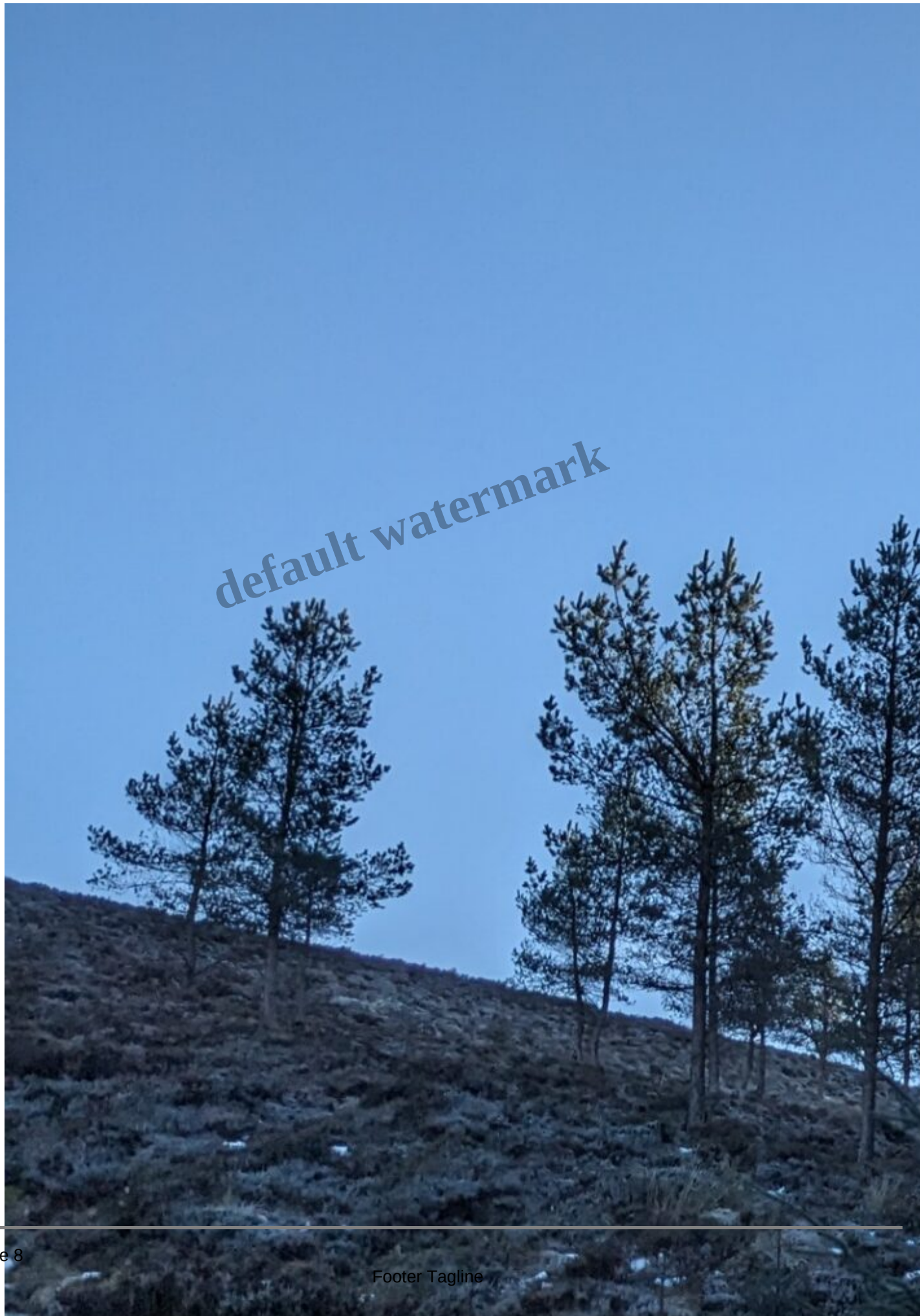
Such enclosures demonstrate the power of natural regeneration and show that if grazing levels were low enough, trees would naturally colonise areas above those where they are currently planted – provided the soil was suitable.

After the telecommunications mast, I headed over Meall Buidhe, our of the National Park, then down to the hydro intake on the Achmore Burn before following the hydro pipeline as it contoured east above the Acharn Forest, a distance of 4-5km. I did not spot a single tree, native or otherwise, on this unenclosed ground but then a lot was under snow. I re-entered the forest through a broken gate and then followed the recent sheep tracks



Looking back towards the boundary fence and broken gate, both out of sight, along the sheep tracks through the snow

It was difficult to tell whether the scattered deciduous trees in the open space between the forestry fence and the blocks of sitka had been planted deliberately or had regenerated naturally at a time when both fence and gate kept grazing herbivores out. There was no sign of any recent naturally regenerated trees.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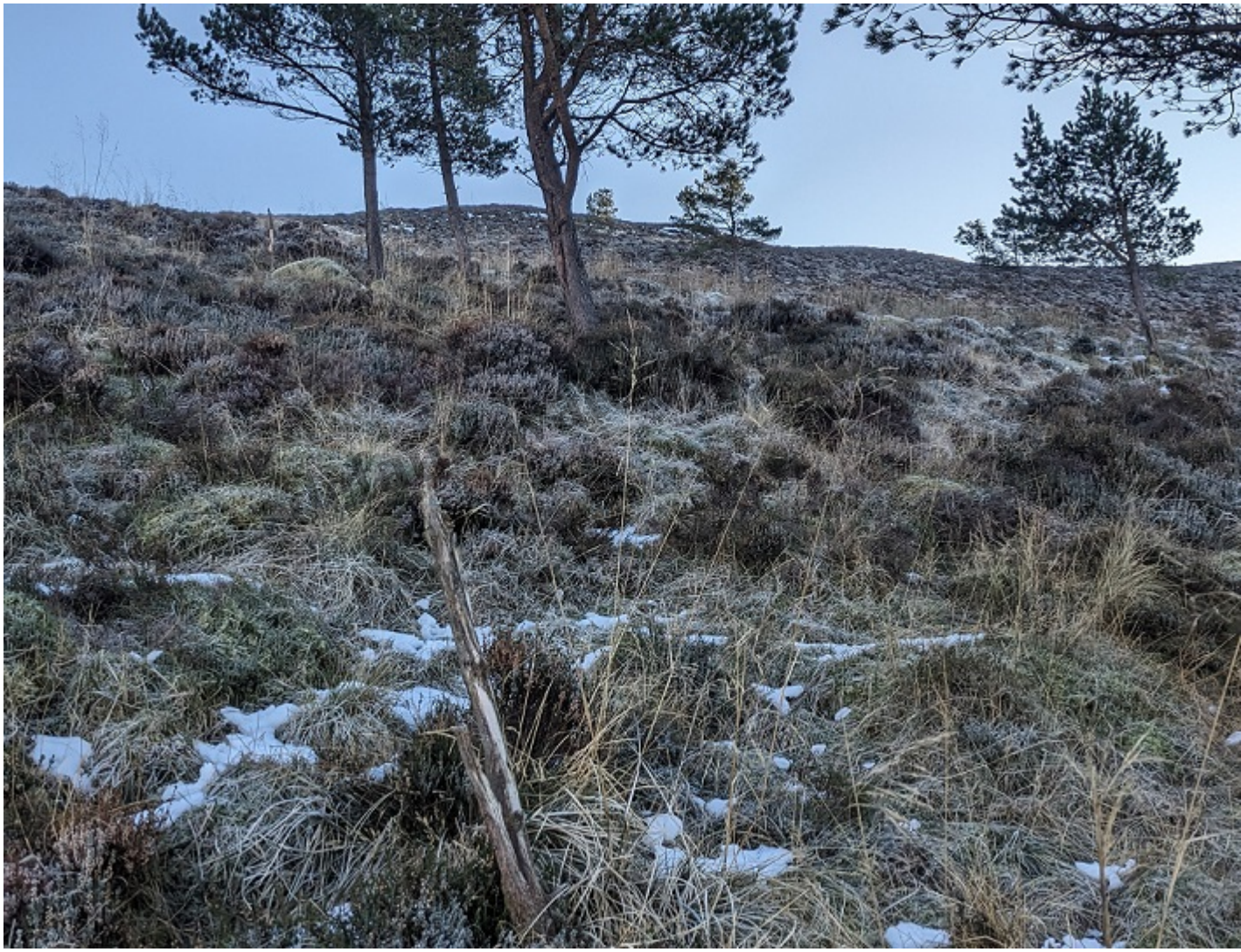
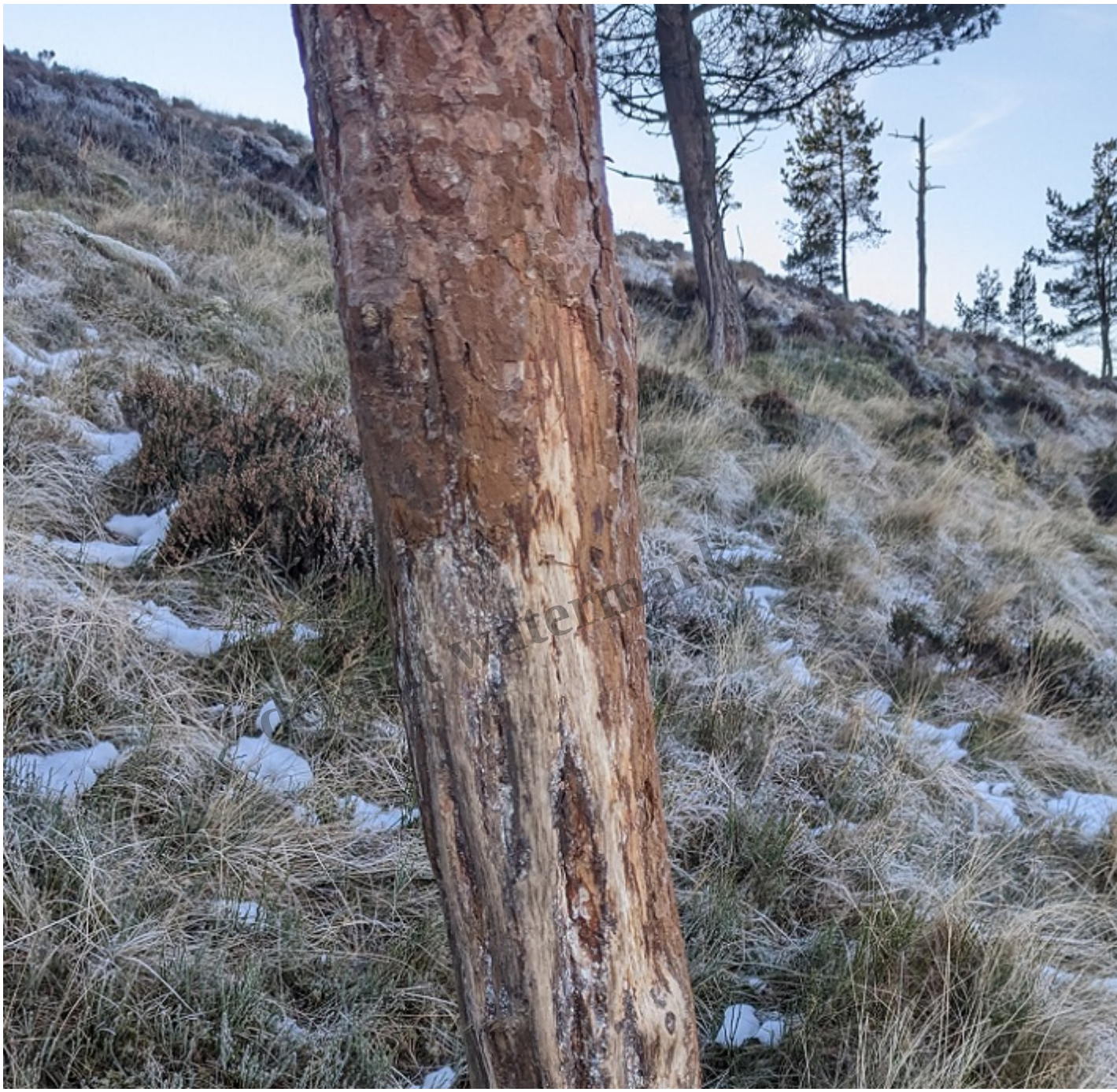
Scots Pine adjacent to the main Sitka plantation – not the smaller self seeding sitka in foreground an

A little further on, it became clearer what had happened. Groups of Scots Pine like this are now an only too familiar sight in the Scottish hills. They are the survivors of of native woodland creation schemes. What happens is that most of the planted trees fail, some because they are in the wrong place but many are killed off by browsing. This leaves scattered trees across the hillside, some in groups, some isolated but all of a certain age – like the original blocks of sitka.



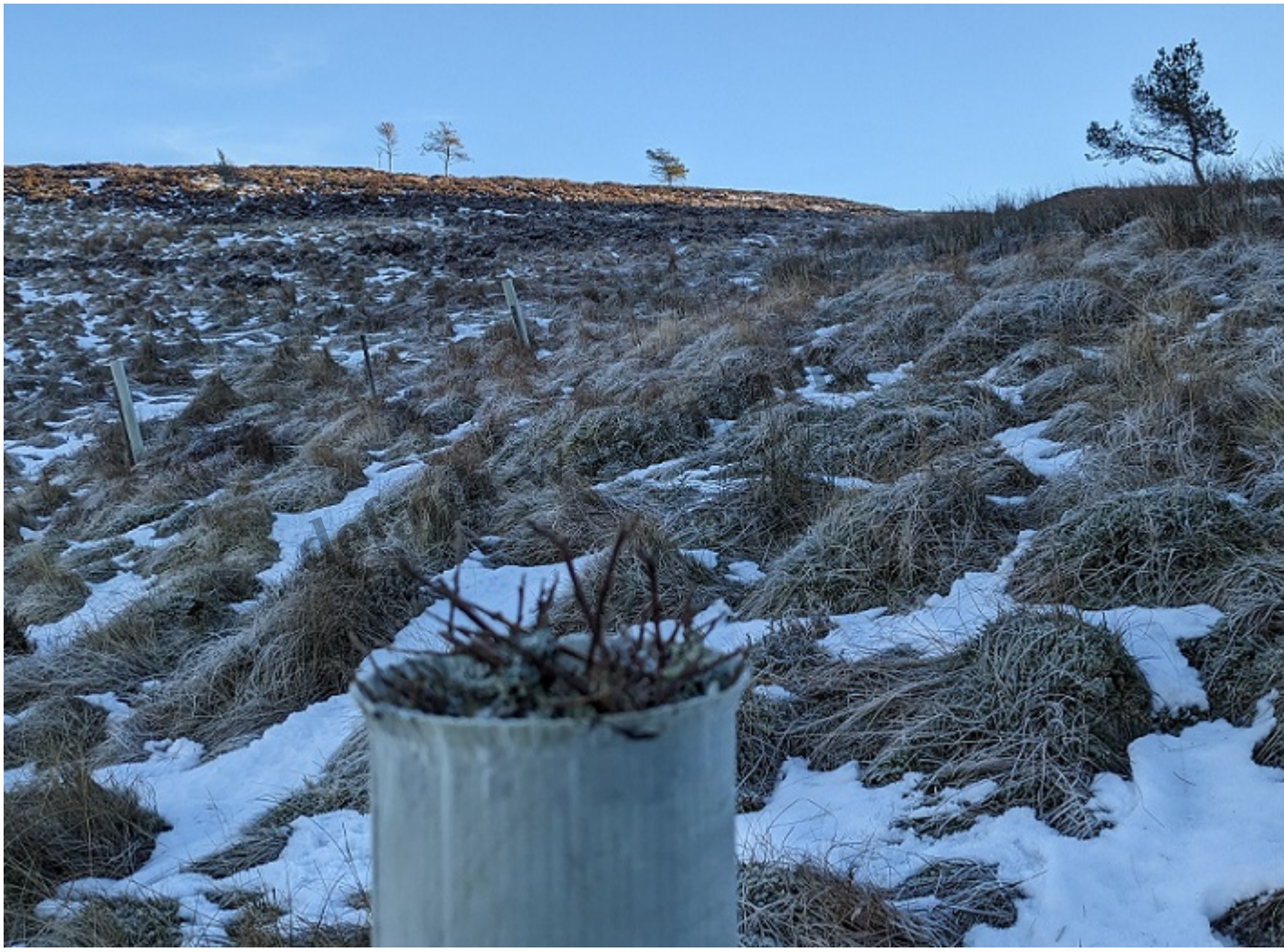
The remains of a second dead tree is visible adjacent to the Scots Pine on the left.

As the planted native trees die, their remains gradually disappear from the landscape. This is a process that continues for years but you can usually some find some evidence, in the form of dead tree trunks, for what has happened.



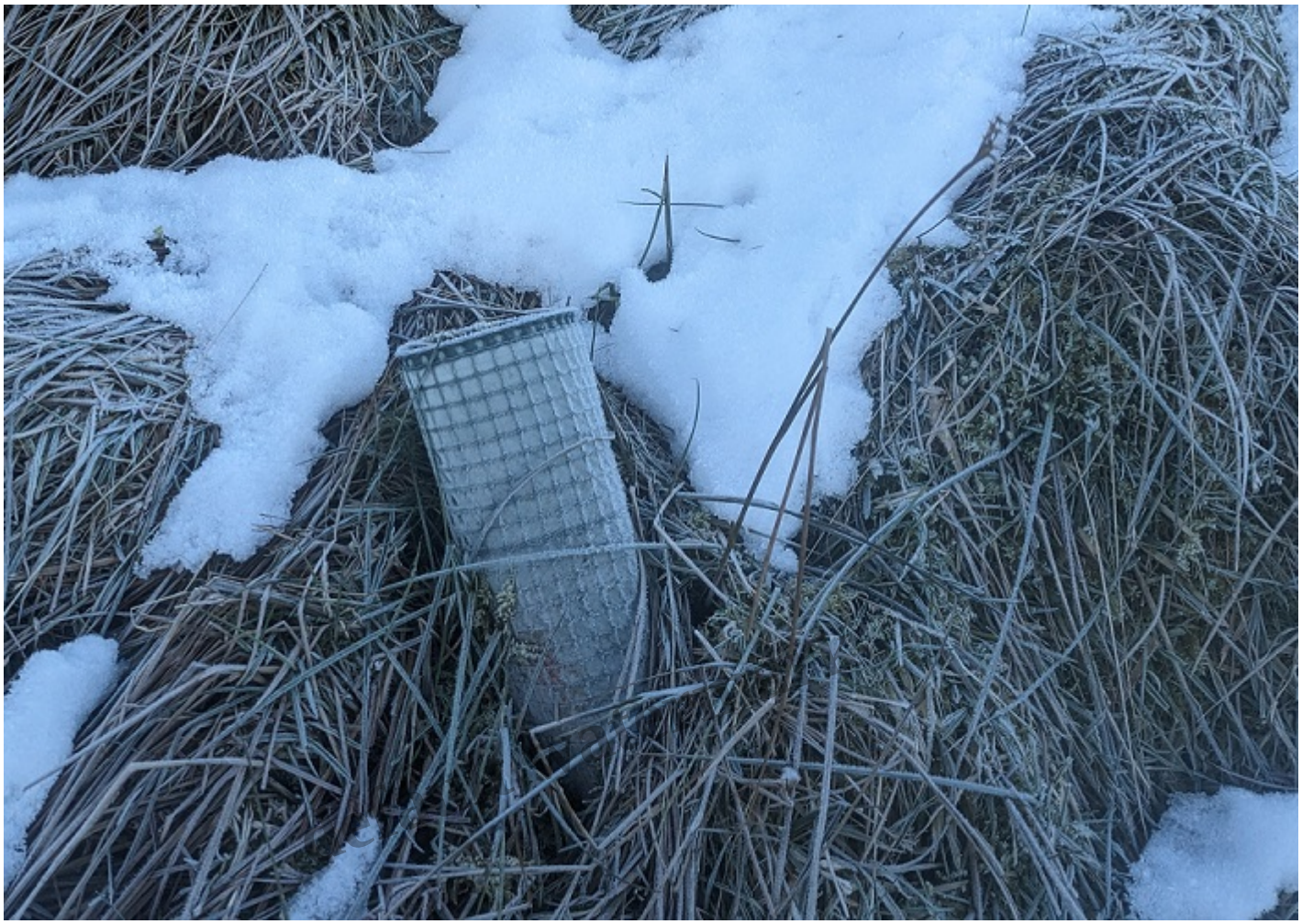
The Scots Pine in the foreground is likely to die through ring barking. It is probably that the Scots Pine on the skyline died for similar reasons though once a tree is dead and has shed all its bark it is difficult to tell.

People talk about trees “getting away”, growing above browsing height, with the implication that a tree is then safe. That may be the case for some species, like sitka, but is not so for Scots Pine. Its bark provides a food source for red deer at lean times of year, like when other vegetation is buried beneath the snow. From what I have observed, the deer start with the smallest trees whose bark is more palatable and then, as they die, they move on to larger trees. Only mature trees with thick unpalatable bark can survive. Over time that can complete destroy new Scots Pine plantations. Deciduous trees have even less chance.



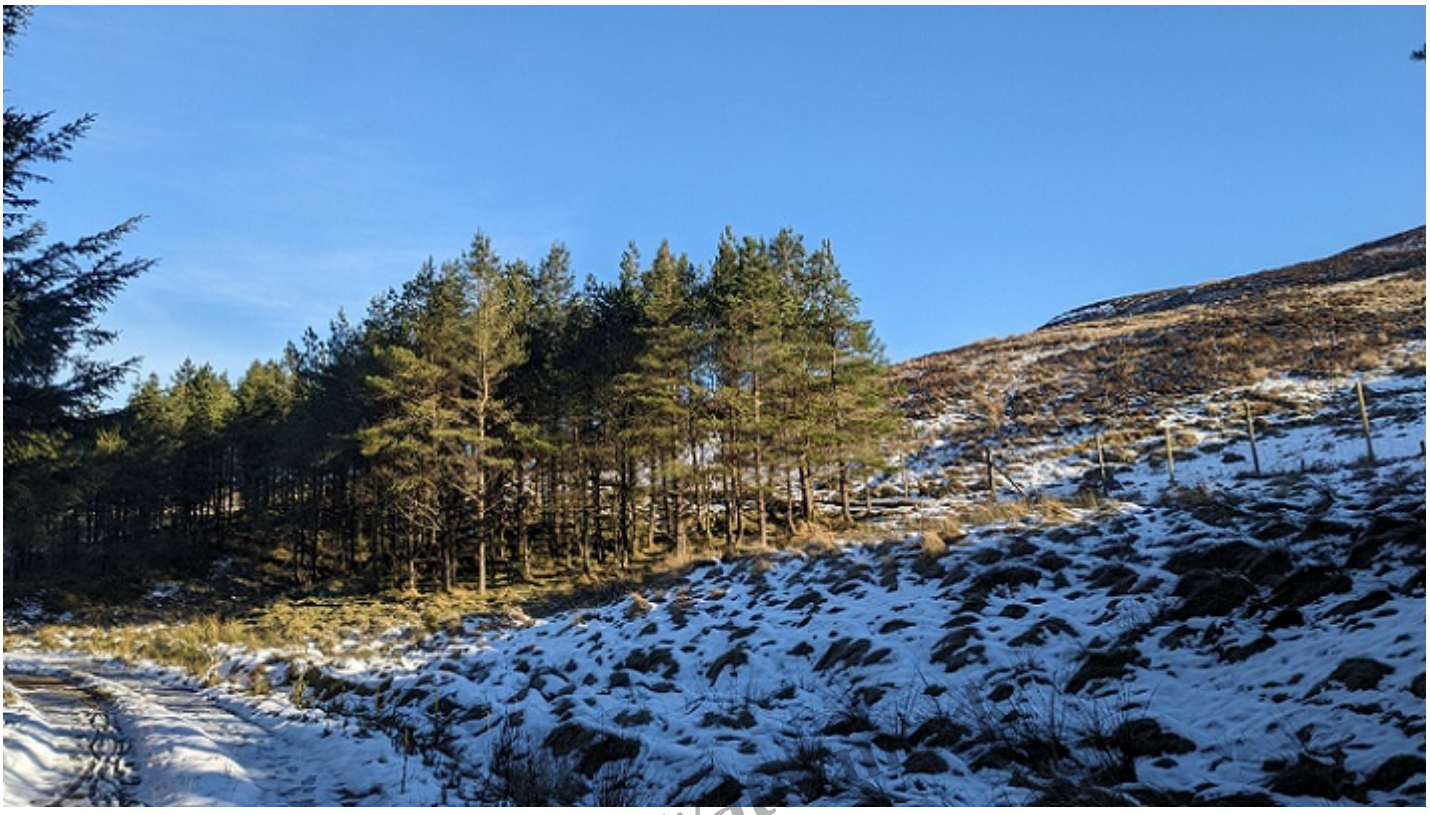
Heavily browsed birch in plastic trees shelters with scattered Scots Pine survivors. Note the self-seeded sitka just behind the tree shelter.

The plastic tree tubes suggest the original intention was to create a strip of mixed native woodland above the sitka plantation. Its failed as grazing levels by by sheep and deer have not been addressed. As Drennan Watson has observed, these plastic tree tubes are the perfect height for deer to browse without bending their necks. After repeated browsing what was a single stem has become a bush.

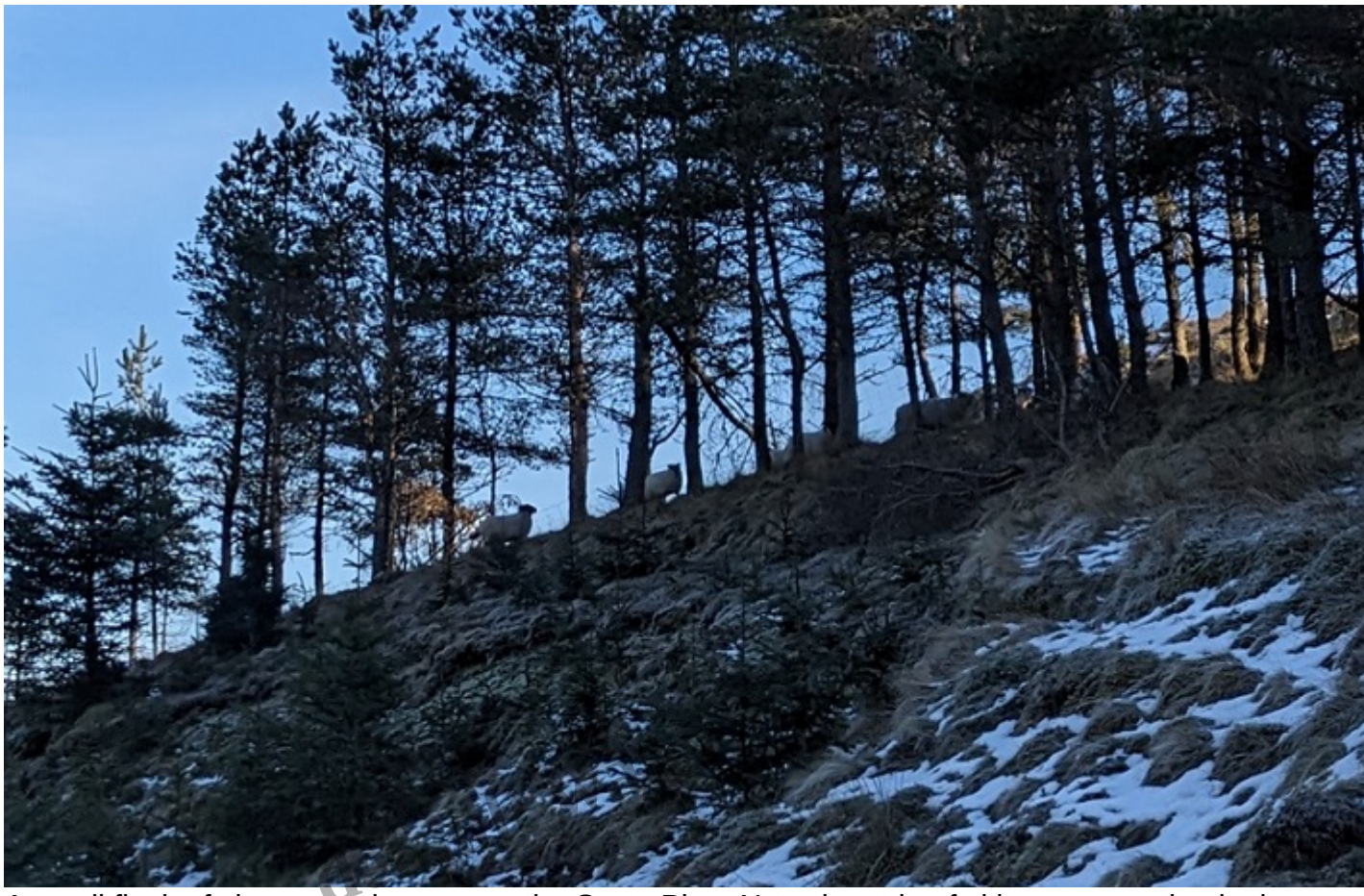


As usual, a fair number of the plastic tree tubes contained no trees and some were disappearing under vegetation

Far from helping to create new native woodland, all the plastic tree tubes have achieved is to pollute the natural environment. There are no local foresters left to care, with both Forest and Land Scotland and big companies like Greshams bringing in contractors to plant native trees after which they are abandoned.

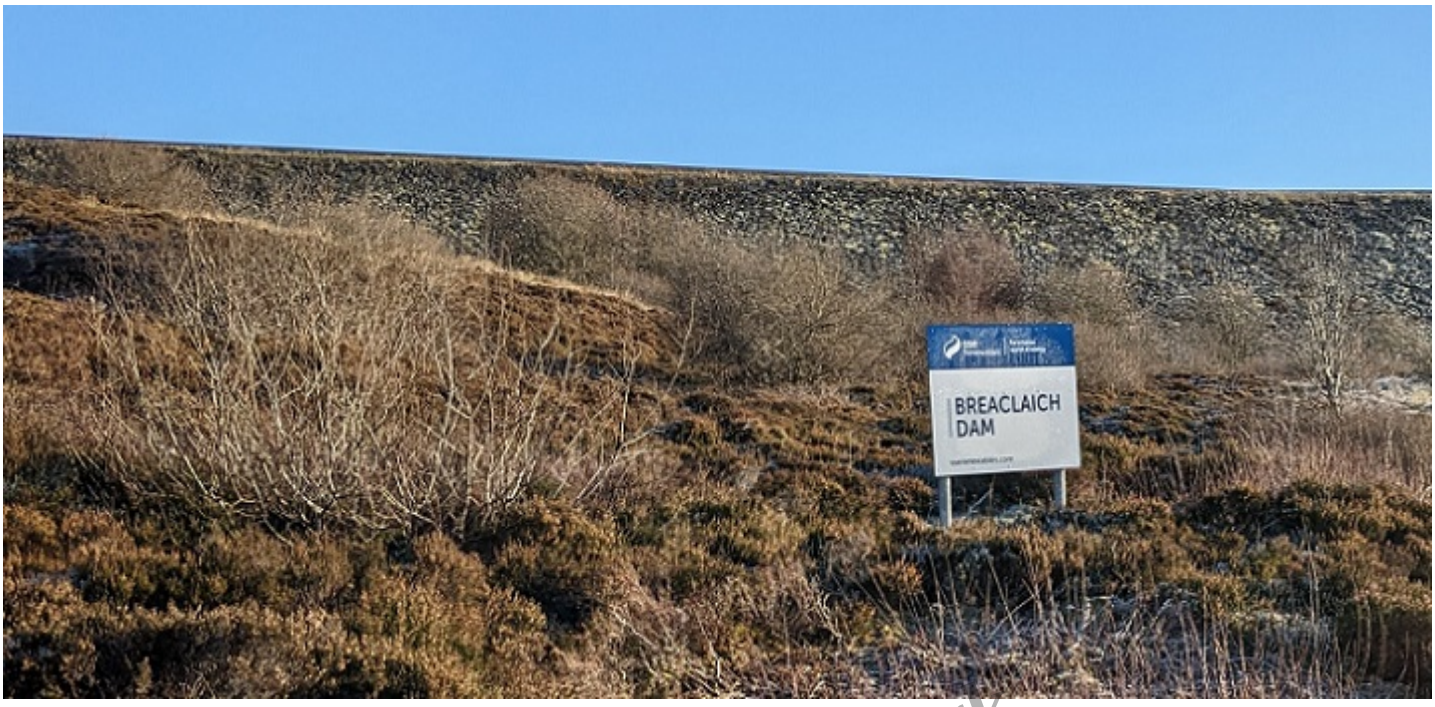


Approaching the eastern end of the Acharn Forest I reached the forest road and got an indication of what the original nativew woodland planting might have looked like, clumps and strips of densely planted trees with open space in between. While it is possible more Scots Pine were planted here than elsewhere, another explanation is that more have survived because of the narrowness of the strip of land between the sitka and the fence at this point and the presence of the track, Deer tend to avoid places where they might get trapped.

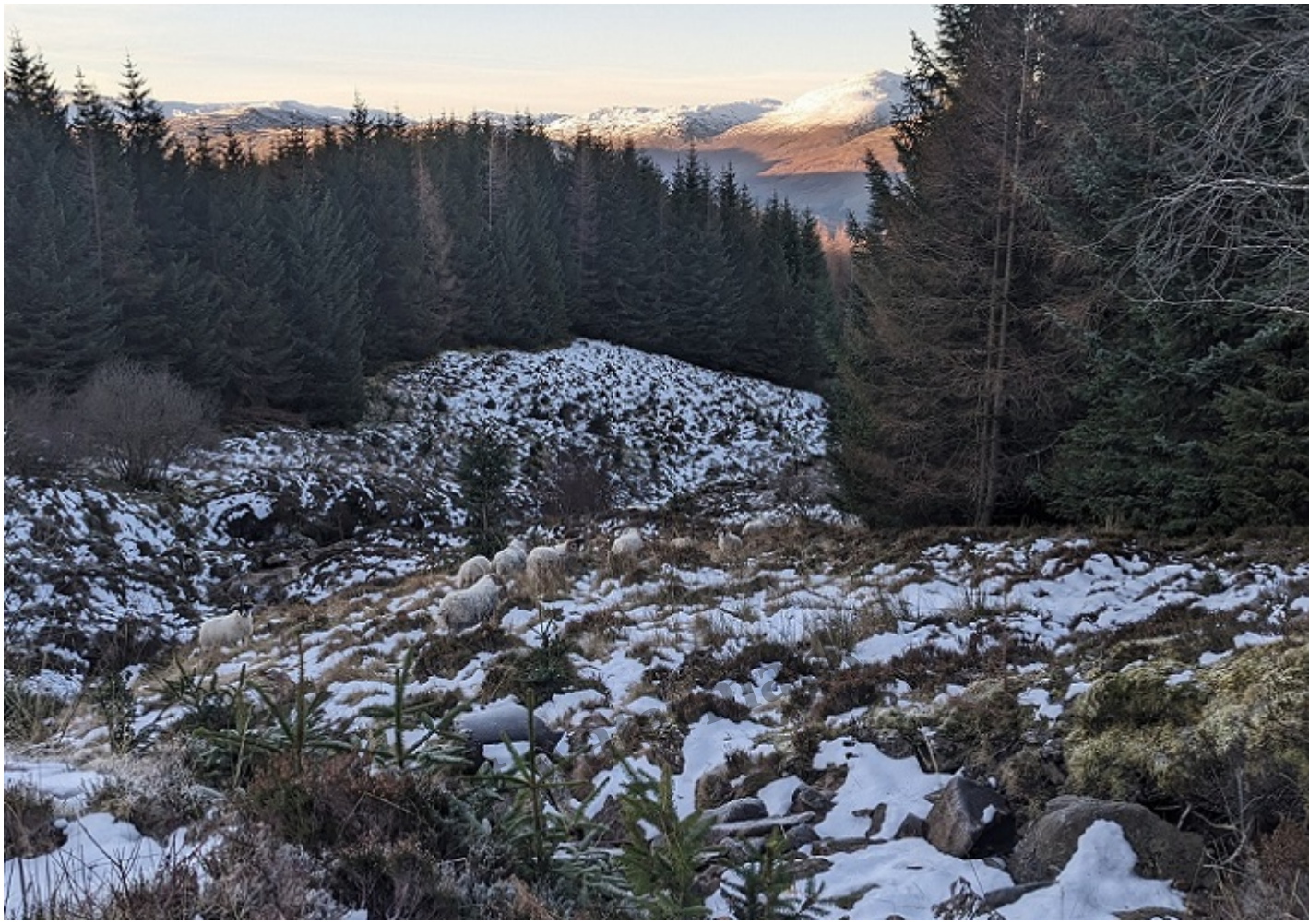


A small flock of sheep grazing among the Scots Pine. Note the strip of sitka regeneration in the foreground

While more successful than the rest of the native tree planting, there was no sign of any woodland understorey developing. That might have been partly the result of the dense nature of the original planting but also due to the grazing. Research (see here) suggests sheep are far less likely to browse sitka than deer, finding it unpalatable at all times. Hence the survival of the saplings in the foreground while any development of woodland vegetation around the base of the Scots Pine has been browsed back..

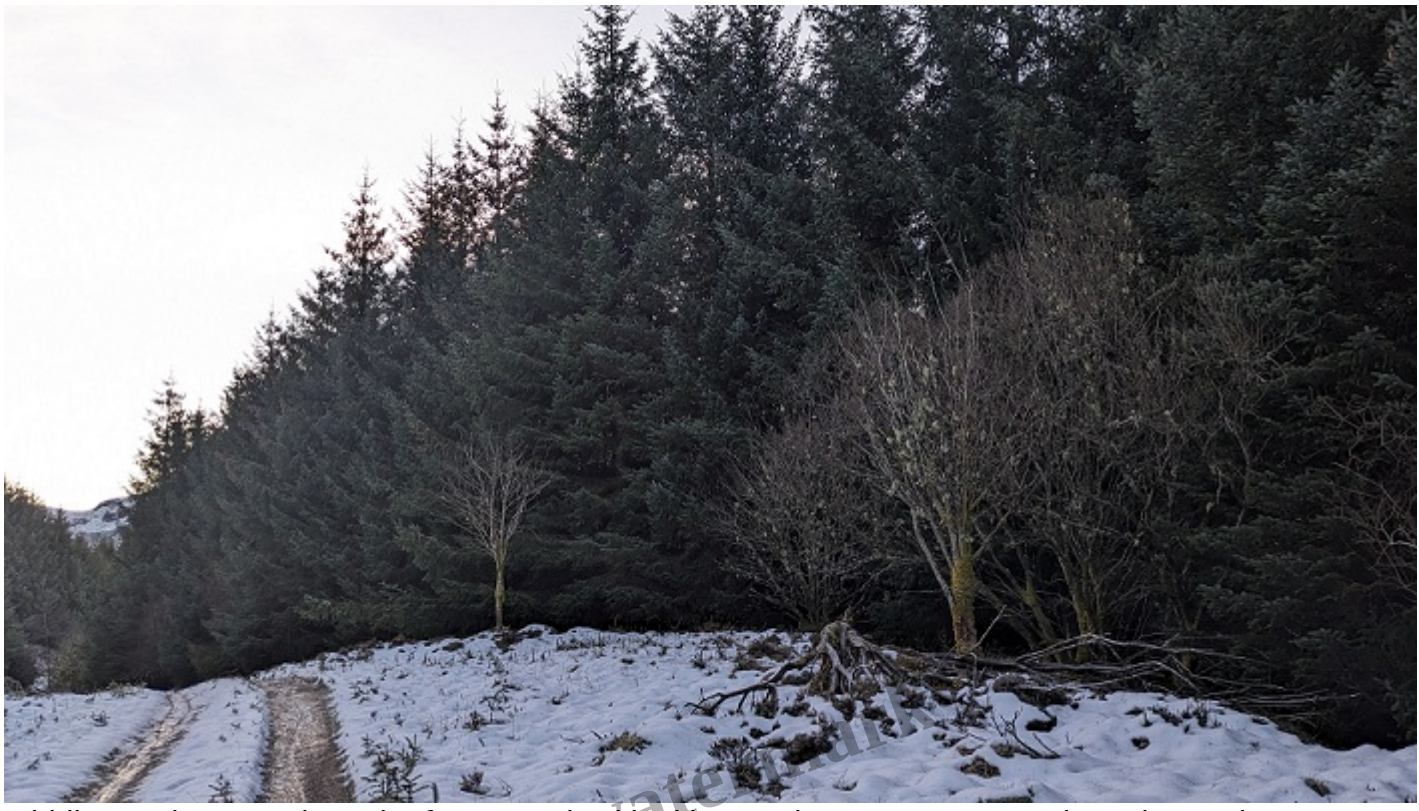


After leaving the Acharn Forest, I followed the track above the Creag Ghlas and Breaclaich Forest (first photo) to the Breaclaich dam. The area below the dam was enclosed by a barbed wire stock fence and the development of naturally generated woodland appeared far more successful than that planted in the Acharn Forest. Outside the enclosure, there were lots of sheep and the hillsides bare of trees.



With limited vegetation available for the sheep to eat, no native tree sapling protruding above the snow has a chance.

Returning to the Acharn Forest after ascending Creag Gharbh, there were indications that at one time native woodland had started to regenerate naturally in the open spaces between the blocks of sitka. However, that regeneration has now effectively been stopped because of grazing pressure while the sitka, which has started to re-seed, is starting to spread profusely.



Middle aged rowan along the forest track with sitka starting to regenerate along the track

Following the road through the depths of the sitka plantation, there was more evidence of recent woodland history. While sitka plantations create barriers to windblown native seeds, they don't stop the birds. Hence the rowan, whose berries birds (and deer) feast on in the autumn before scattering the seeds across the countryside. They are all of a certain age because, as soon soon as the deer got through the fence, the regeneration stopped. Deer browsing pressure, however, is now low enough to enable the sitka, which have now started to seed, to get established.

Native woodland policy is delivering the opposite of what was intended

What has been happening at Acharn Forest is far from unique and you can see similar examples from all over Scotland. It shows that attempts to create native woodland by planting are failing not only because of the ways trees are being planted – as with BrewDog's Dead Forest – but also as a result of the failure to address grazing levels outside fenced enclosures. The result is that when larger herbivores get in, as they inevitably do, planted native trees are destroyed and if enough do so they may completely destroy the trees that were planted. Instead of native woodland with its associated wildlife, what is then left is the wreckage of fences and abandoned plastic tree tubes.

While overgrazing is destroying native woodland plantations across Scotland, the evidence from places like Acharn also demonstrates that if grazing levels were reduced there would be no need to plant native trees. For a short time the fence around Acharn Forest, like the stock fenced enclosures outside, enabled native trees to get established through natural regeneration. The lesson should be

obvious, if we want to expand native woodland the answer is not to plant native trees but for forestry managers like Greshams to reduce deer numbers to two per square km or less and ensure farmers control their sheep.

Unfortunately, sitka the tree most favoured by the forestry industry are also the tree least favoured by large herbivores in Scotland and only need to be protected by fencing for a few years. Hence why their initial planting is often accompanied by a pulse of natural regeneration which is then browsed to a halt. While high deer numbers may then prevent the sitka from regenerating, they are the first tree to "get away" when deer numbers are reduced. The evidence from Acharn suggests that deer numbers are such that the remains of the native woodland planting will continue to die but sitka will continue to spread and take over the wreckage. Its a complete indictment of the commercial forestry system in Scotland.

At present the Scottish Government shows no awareness of these problems. It continues to fork out large sums of public money for native woodland planting, when the evidence on the ground shows that a large proportion of these plantations are failing and have contributed nothing to the "restoration" of nature. Unfortunately, Scottish Forestry, the agency responsible only monitors new native woodland planting for the first five years and shows no interest in researching what happens after that or in stopping the spread of sitka across the countryside.

The answers to the problems illustrated in this post are really quite simple. We need to stop forcing forest management companies to plant native trees and instead require them to control grazing levels and the spread of sitka in the long term to enable nature to re-wild naturally. That would mean companies like the Forestry Partnership LLP 2008 need to employ local foresters whose primary tasks would be to maintain deer density at 2 per km or less, to ensure local farmers control their sheep and to weed out non-native trees like sitka where they start to regenerate naturally.

Instead of highlighting these problems and advocating for solutions, both our National Park Authorities have uncritically promoted the current native tree planting extravaganza and turned a blind eye to the history of native woodland plantations. Once the wider public understands not just the destruction of nature and carbon caused by tree planting but also the likely long-term outcomes, they are likely to have even less faith in our National Parks to made a positive difference than they do at present.

Category

1. Cairngorms
2. Loch Lomond and Trossachs

Tags

1. conservation
2. Deer
3. forestry
4. LLTNPA
5. natural regeneration
6. scottish forestry

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