# Native tree plantations in the Cairngorms? – the answer is blowing in the wind

## Description

Windblown Scots Pine by forestry track on land owned by Forest and Land Scotland, Glen Feshie January 2024,

While staying in Newtonmore over New Year I heard that Storm Gerrit, which had hit Scotland on Boxing Day, had caused some spectacular damage in the lower parts of Glen Feshie.  On my last day I went to have a look, little expecting that I would also get a post on sheep and woodland out of my visit (see here)!

The view south from near Feshie Bridge



While it was difficult to get an overall sense of of the impact of the storm from the floor of the glen, it was apparent that quite large areas had been devastated.

Photo show how a thick root (top right) had been snapped.

The force of the wind in places appears to have been immense.  Usually when conifers blow over they are uprooted, with shallow roots lifting the soil with them, i.e it is the soil that gives way. Not so here. There were other trees whose roots had held but which had snapped half-way up their trunks.

Pods at Lagganlia Outdoor Centre. Small landowners in the glen had acted very quickly to fell half-uprooted trees and clear access routes



The straggly birch trees at Lagganlia Outdoor Centre had survived somewhat better, with the younger trees more able to bend with the wind, but it must have been a scary experience for anyone staying in the pods or living in these woods.

View towards Creag Leathan from the public car park near  at Auchlean

Further up the glen, at the end of the public road, looking up the hill to the ancient Caledonian Pine Forest there was very little evidence there had been a storm. All the old Scots Pine on the bouldery slopes on the slopes appeared to be still standing despite, or perhaps because of, the lack of soil.

Toppled birch in grazed woodland between the public road and the River Feshie near the car park.

Wind behaves in complex ways as it blows across the landscape and its force and direction appear to have varied over quite short distances along Glen Feshie.  The birch in this photo, for example, appear to have had been toppled in a northerly direction while some of the Scots Pine lower down the glen appear to have fallen in a more westerly direction.


Thinned Scot Pine plantation between Auchlean and the main area of devastation which appeared to have been hardly affected by the storm.

Unless you factor in how the wind varied across the landscape, it is difficult to fully explain how some areas of Scots Pine plantation have survived better than others, though past thinning of the area in the photo above may had enabled the trees to develop bigger and stronger roots.

Plantation forestry v the wind



Set the wind aside, however, and Storm Gerrit appears to have made a much greater impact on plantations in Glen Feshie than other types of woodland.

Mixed woodland, including planted trees and natural regeneration, at Feshiebridge

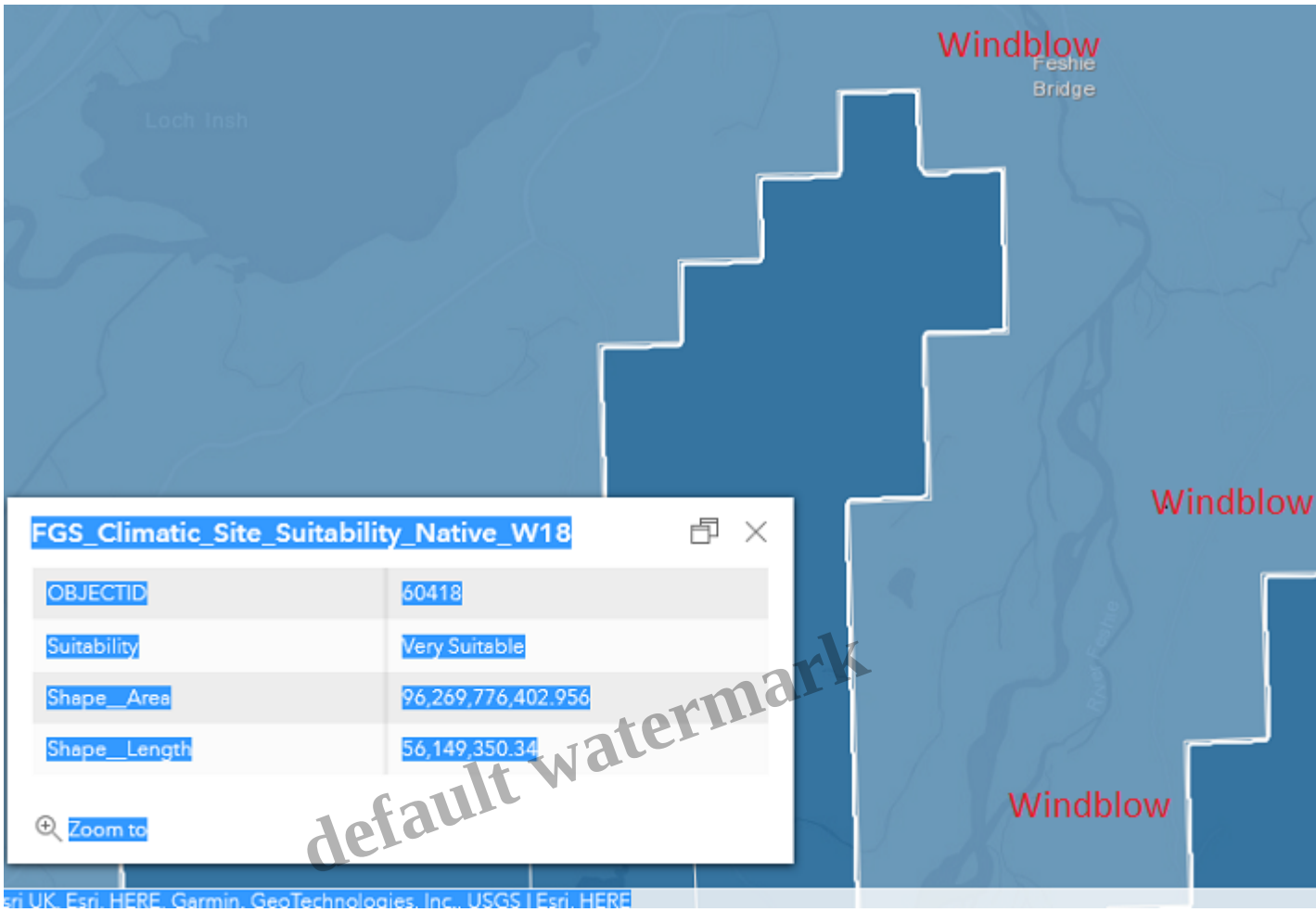
This should not be a surprise. Forest Research using satellite data showed that Storm Arwen had affected at least 5,700 hectares of coniferous forest and small woodlands across Scotland and Northern England. That was almost half of Scottish Forestry's annual planting target of 12,000 hectares, designed in part to offset carbon and help mitigate climate change.

In purely carbon terms, if one discounts other factors, the amount of CO2 released into the atmosphere by windthrown trees far outweighs that absorbed by newly planted trees. If we are serious about mitigating climate change, therefore, it is very important that the wood from windthrown timber is, like that from mature plantations, used and embedded as far as possible in human products. (While there is an important place for dead wood in nature we don't need whole plantations of the stuff).

The impact of Storm Gerrit in Glen Feshie will have created a major headache for Forest and Land Scotland (FLS). Windthrown Scots pine degrades more rapidly than spruce due to its susceptibility to attack by bark beetles and sap stain fungi (blue stain). This destroys its market value and industry advice is the trees need to be removed in six months. With FLS no longer employing local foresters and without a local market – the small sawmills that you find in almost every Alpine village – the impact of events like Storm Gerrit pose a particular challenge.



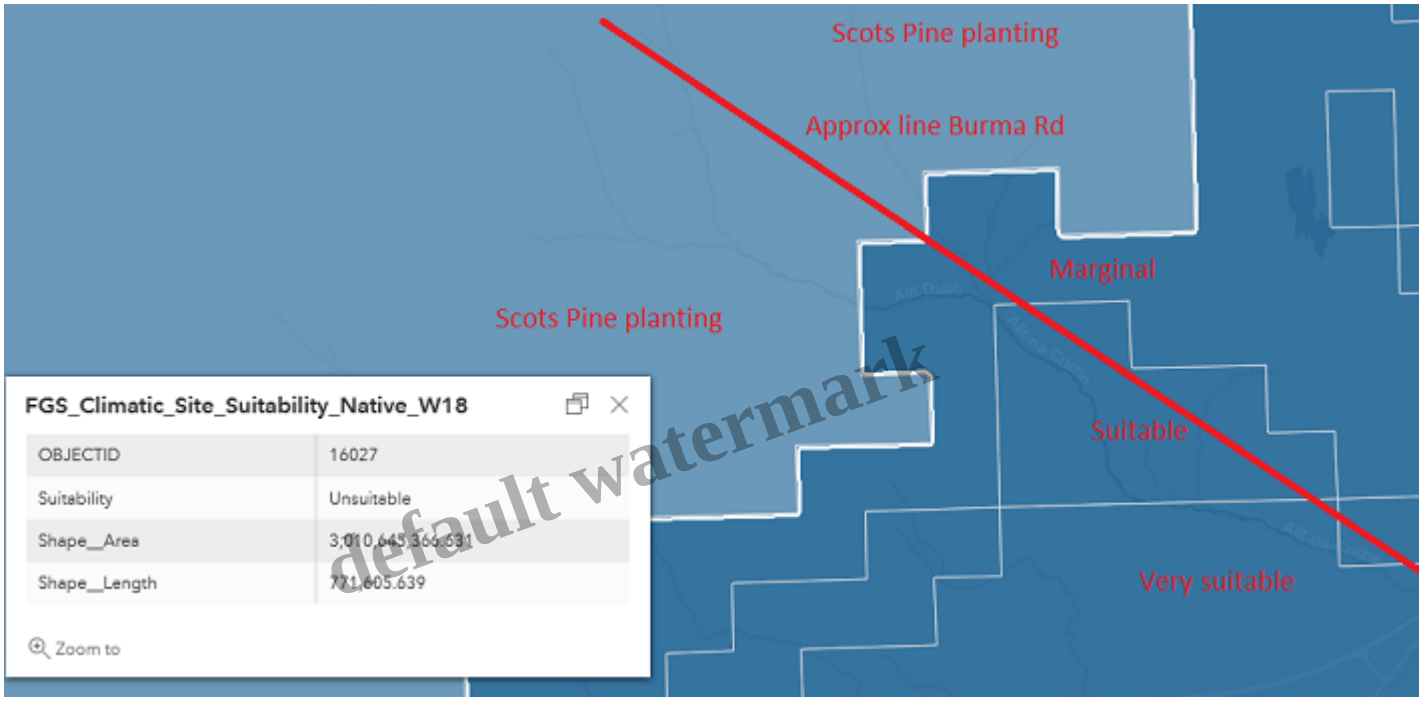
## Plantation forestry is no longer sustainable with climate change




Screenshot from Scottish Forestry's maps showing climatic suitability for Scots Pine (W18 native woodland) in Glen Feshie and around Loch Insh (visible top left). The legend applies to the light blue area and I have marked on this approximately some of the windblown areas in the lower part of Glen Feshie

Scottish Forestry's public data base includes mapping to show the climatic suitability of land across Scotland for different types of trees. It classifies land as "Very Suitable", "Suitable", "Marginal" and "Unsuitable", crude no doubt but an expression of the official position. Both the research evidence (see here) and that of the regenerating Caledonian Forest suggest that the lower parts of Glen Feshie should still be "Very Suitable" for Scots Pine but what Storm Gerrit shows is that is only if NOT grown in plantations. The Scottish Government and its agencies, FLS and Scottish Forestry therefore need to review their whole approach to tree planting and climate change.

The current presumption by Scottish Forestry is that windthrown plantations should be re-stocked,i.e.re-planted. It is partly for this reason that they require felling licenses before most windthrown treescan be removed (there is an exception that covers trees which have blocked roads, pose serioussafety risks etc). While FLS has a felling license for its land at Invereshie, this was enable theplantation to be thinned and to make it more like the surrounding Caledonian Pine Forest. All thoseplans have now been overtaken by Storm Gerrit. It is now critically important that after removing mostof the windthrown timber FLS does not re-plant and leaves the area to regenerate naturally. What'smore they should apply this lesson to all their extensive landholdings on Speyside.




Extract from Scottish Forestry's database showing climatic suitability for Scots Pine on part of BrewDog's Lost Forest at Kinrara

There are some serious questions to be asked about Scottish Forestry's climatic suitability maps, not least at Kinrara where there are mature Scots Pine with natural regeneration all around on land judged unsuitable for this species. The maps are clearly wrong when it comes to naturally regenerated pine but may well be right for planted pine. If wind can blow down plantations on land judged Very Suitable the floor of Glen Feshie why on earth is Scottish Forestry paying companies like BrewDog and Abrdn to plant Scots Pine closely together on land in far more exposed positions which they have described as marginal or unsuitable?

The answer would appear tat they are under pressure from the Scottish Government to meet its tree planting targets and no-one is giving any thought to the sustainability of the "forests" so created. The carbon calculations under the woodland code already show BrewDog's Lost Forest will be emitting

more CO2 than it absorbs for the next fifteen years because of the way trees have been planted on peaty soils (see here). What those calculations don't show is how the increasing windiness, which appears to be being driven by climate change, will do to those closely planted trees (assuming BrewDog replaces all the Scots Pine that have so far died). The destruction caused by Storm Gerrit on FLS' land in Glen Feshie should provide a wake-up call to Scottish Forestry and the Scottish Government.

While Scottish Forestry has a "Windblow contingency plan" it is basically all about how to respond to the most major storms. Storm Gerrit was far to small to be covered . More importantly, Scottish Forestry appears to have no preventive plan to re-shape forestry practice to make it more resilient to climate change. Instead, its automatic response to windthrow is re-plant. This is head in the sand stuff.

The Cairngorms National Park Authority and the Minister responsible for National Parks, Lorna Slater, could and should be taking a lead in challenging this mindset. Plantation forestry on Speyside provides all the evidence they could possibly need about the urgent need for change.

**Category**

1. Cairngorms

**Tags**

1. climate change
2. Forest and Land Scotland
3. scottish forestry
4. tree planting
5. wind



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