Forestry, finance and nature – the cracks are beginning to show at Stobo Hope

Description

View south west from Penvalla to Hammer Head (right) and Trahenna Hill showing the vegetation killed by herbicide described as Harry Humble as “the need to use herbicide in limited parts of the site”.

Having been investigating for some time the way in which Scotland’s forestry grants have been used to destroy nature and release carbon into the atmosphere in the Cairngorms National Park, I did not foresee the whole system would start to implode in the Borders. What is happening at Stobo Hope, on the north side of the River Tweed above Peebles, has implications for the whole of Scotland.

Last week Raptor Persecution Scotland published an excellent guest blog on Stobo Hope considering the proposals from a wildlfe perspective (see here): the use of herbicide to kill off heather and other plants; the failure to assess the impact of the fragmentation of the moorland on black grouse; the application to re-introduce fox hunting allegedly to control predators; and the inadequately marked deer fences which kill grouse. However shocking, all of this apart from the use herbicide is a sideline to the main story so far.

After Scottish Forestry decided to award a £2m contact to the Forestry Carbon Sequestration Fund, based in Guernsey, to plant sitka on moorland, the Stobo Residents Action Group mounted an unprecedented legal challenge to the decision through a judicial review (thanks to all readers who contributed). Scottish Forestry then tried to switch attention from whether it had acted unlawfully in approving the scheme without an Environmental Impact Assessment by conceding the judicial review before going to court, cancelling the entire £2m grant and serving an enforcement notice to stop the planting on the grounds that the forestry managers had failed to disclose to Scottish Forestry their intention to spray large parts of the site with herbicide.

As reported on Raptor Persecution Scotland and in the press on Friday, the tax haven registered Forestry Carbon Sequestration Fund, described as a 'Green Fund' (see here), and managed by True North, is now seeking a judicial review of Scottish Forestry's decision in the Scottish Courts. The public arguments being made for this by Harry Humble of True North Real Asset Partners Ltd, whose business is described on Companies House (see here) as "development of building projects" deserves critical scrutiny and comparison with the claims that have been made about native woodland planting schemes in the Cairngorms.

NB this company based in Alnwick, Northumberland used to be called True North European Real Estate Partners Ltd and could be confused with the tax haven registered True North European Real Estate Partners (Guernsey) Ltd (see here) which also has a Harry Humble as director.

Stobo Hope and the alleged carbon benefits of planting sitka spruce

The removal of health moorland at Stobo Hope in favour of trees.

The main justification Mr Humble gave for seeking the judicial review was about the need to offset carbon emissions:

"Ultimately, everyone is agreed that the objective in these areas has always been to remove heather in favour of trees which sequester vastly more carbon to address the climate emergency"

and,

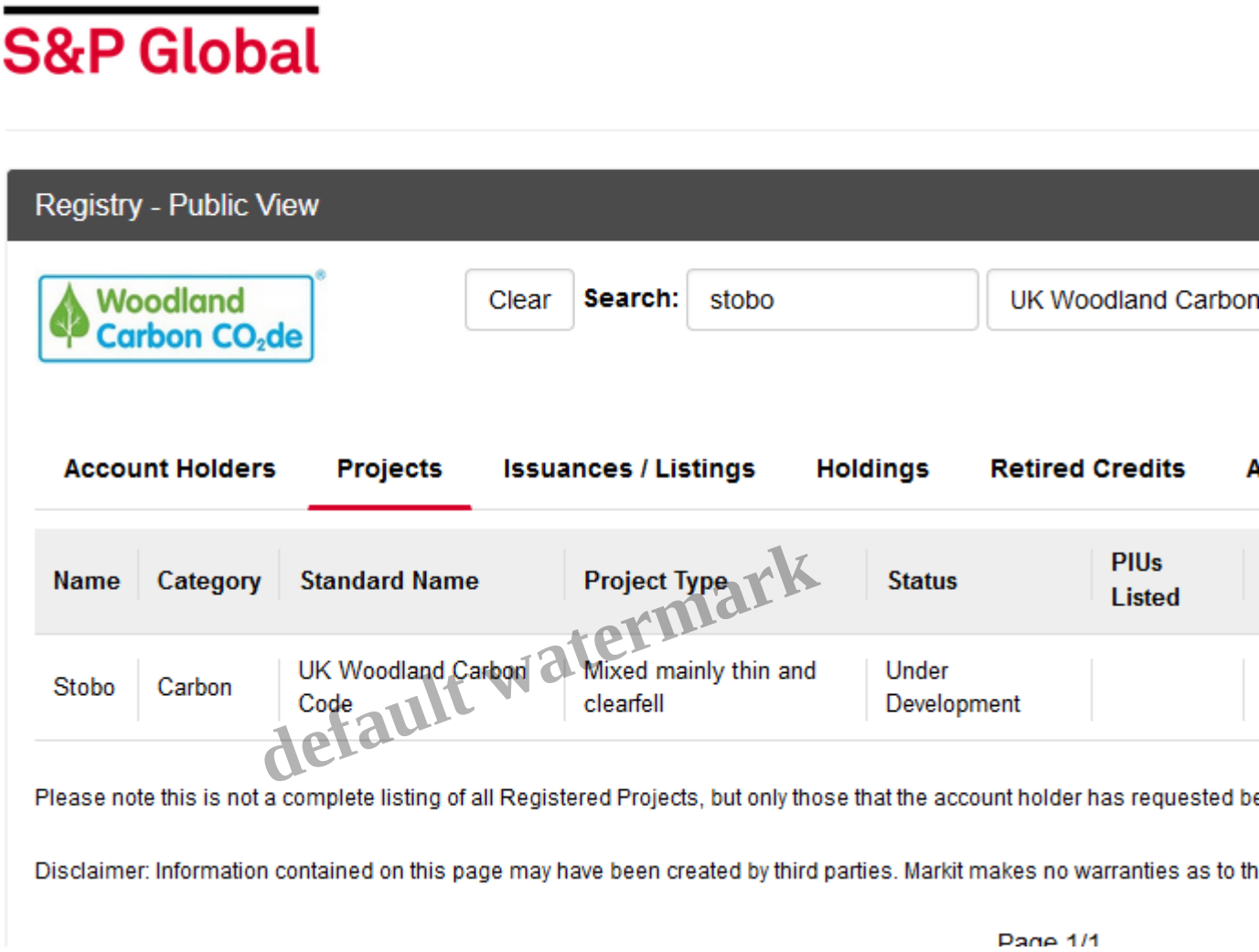
"Scotland's carbon capture strategy which is already behind target, now stands on the edge of a major backward step that will shake investor confidence and could result in a significant reduction in at-scale forestry investment just at a time when planting needs to be accelerated" (both quotes from Brian Donnelly's article in the Herald 14th December).

At the same time True North claimed in a news release:

"The Stobo development does not attract any carbon credits. As the planting scheme has now started there is no scope to secure verification under the Woodland Carbon Code" (note to news release).

At best, all these claims are highly misleading. Stobo Hope appears to have been registered for carbon credits under the Woodland Carbon Code (WCC) by an approved developer, Pryor and

Rickett, and the scheme still appears on the carbon registry:

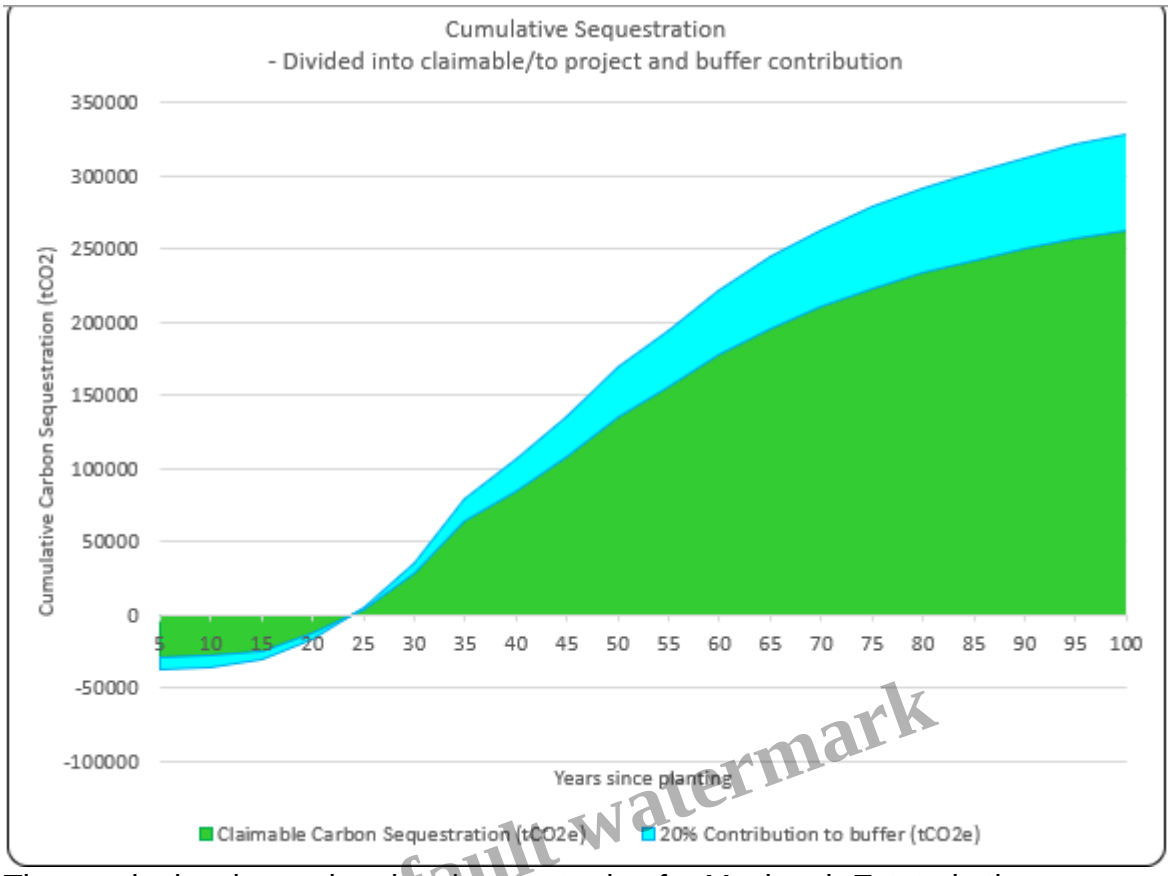


Screenshot 15th December. Always download evidence where it appears on portals like this!

The only documentation that remains, however, is a map but I have a copy of the WCC calculator from before it was removed, perhaps because the spreadsheet contained some damning information, for example that 400 ha were to be sprayed with herbicide.

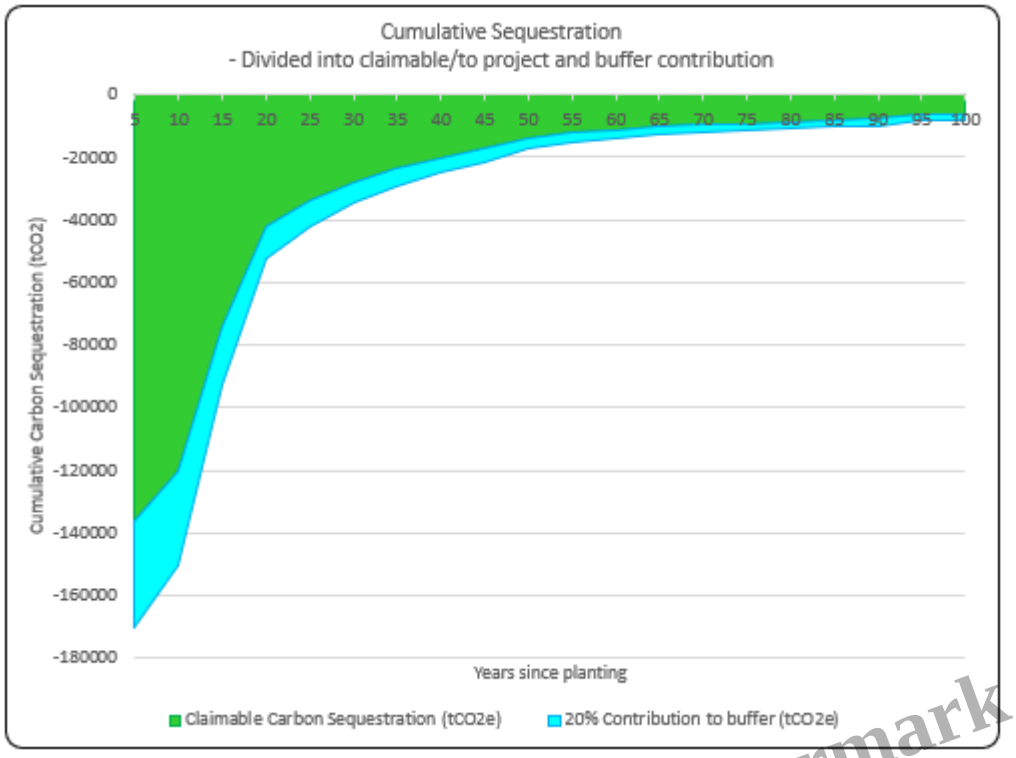
The calculator was undated and lacked the name of the person completing it but clearly the original intention was to register the Stobo Hope scheme for carbon credits. It appears that either True North failed to do this before the planting work started, a requirement of the WCC scheme since October 2022, or decided to withdraw from this carbon market **or there is something else to explain what is going on.** What is clear is that contrary to the claim contained in the True North news release, schemes that register with the WCC cannot be “verified” until a later stage so it was not verification that has prevented the scheme from attracting carbon credits but something else.

Normally, the carbon sequestration graphs generated by the information in the WCC calculator looks something like this:



The graph showing carbon loss/sequestration for Muckrach Estate in the Cairngorms. The blue buffer is a precautionary measure to cover the fact that a proportion of trees, however, planted will die before maturity.

An initial period of carbon loss, caused by the establishment work, appears below the bottom line but as the planted trees begin to sequester carbon the lines moves into positive territory. The Stobo Hope graph is unlike any I have ever seen, below the bottom line for over a hundred years:



The explanation for this is a basic mistake in the data entered into the spreadsheet. Under road construction, the person completing the spreadsheet entered a figure of 4,000 presumably thinking the calculator measured forestry tracks in metres not kilometres!. The mistake made the entire calculation worthless.

Assumptions - Emissions from establishment - Table 1

Project Basics				
Project start date				31 March 2025
Project duration (years)				100
Total net planting area - excluding open space (ha)				681.90
Country				Scotland
If in England, Are you using the Woodland Carbon Guarantee?				*N/A*
If using the Woodland Carbon Guarantee, 10-yearly or 5-Yearly verifications?				*5-Yearly*
Emissions from establishment	**spacing (m)**	**area (ha)**	**tCO_2e/ha**	**tCO_2e**
Seedlings	2.5	681.90	-0.24	-163.7
Ground Preparation (Fuel)		681.90	-0.06	-40.9
Tree Shelters		0.00	-0.82	0.0
Fencing		681.90	-1.64	-1118.3
Herbicide		400.00	-0.001	-0.4
Road Building		**km**	**tCO_2e/km**	**tCO_2e**
Roads		4000.00 !	-43.13	-172520.0
Emissions from removal of trees or other vegetation at the start of the project				
To be calculated separately if any trees or other vegetation is removed prior to planting. Show working on a separate sheet. (See Guidance 5.5 Project Carbon Sequestration)				0.0
Total Emissions from establishment				**-173843.3**
Soil Carbon accumulation (currently only claimable for a site with mineral soil which was previously in arable use, managed with minimum intervention)				**area (ha)**
If previously arable site on mineral soil: Over what area are you claiming Soil C Sequestration (ha)				0.00
Baseline and Leakage				**Yes or No**
Baseline: Will your project area sequester a significant amount without planting trees? (See Guidance 5.1). If yes, ask the WCC team for further assistance				No
Leakage: Will your project cause significant emissions outside the project area? (See Guidance 5.2). If yes, ask the WCC team for further assistance				No

Project Name:	Stobo
Calculation Completed by:	Name of person completing form
Date calculation completed:	dd mmm yyyy

Table 1, showing the error. This table, emissions from establishment includes the carbon cost of ground preparation but NOT the subsequent release of carbon from soils

The point to stress is no-one appears to have noticed the mistake before the calculation was made public or while it was on the carbon registry! Scottish Forestry, which is responsible for WCC, appears completely uninterested in the most basic governance and does not even appear to check schemes

which it is funding through the forestry grants scheme.

There are further fundamental flaws in the calculations. These concern the carbon emissions caused by the planting, the single most important issue in determining the benefit of these schemes since soils generally store far more carbon than trees:

Summary Carbon Sequestration over time

Cumulative to Year	A: Cumulative Carbon Sequestra from lookup tables (tCO_2e)	B = 80% of A Cumulative Carbon Sequestra Less 20% model precision (tCO_2e)	C: Negative Removal of vegta and/or Establishm ent Emissions (tCO_2e)	D: Cumulative Soil Carbon (loss in year 1 and cumulative accumula if relevant) (tCO_2e)	E= B+C+D: Total Project Carbon Sequestrat ion (tCO_2e)	F: Baseline (tCO_2e) - Normally Zero - No change over time	G: Leakage (tCO_2e) [Emissions are negative] - Normally Zero - No change over time	H=E+F-G Net Project Carbon Sequestrati on adjusted for Baseline and Leakage (tCO_2e)	I=15- 20% of H 20% Contributio n to buffer (tCO_2e)	J=H-I Claimable Carbon Sequestrati on (tCO_2e)	K=J/Net Area Average total claimable sequestrat ion per hectare by year x (tCO_2e/
5	8757	7005	-173843	-3308	-170146	0	0	-170146	-34029	-136117	-200
10	33694	26956	-173843	-3308	-150195	0	0	-150195	-30039	-120156	-176
15	105674	84539	-173843	-3308	-92612	0	0	-92612	-18522	-74090	-109
20	155651	124521	-173843	-3308	-52630	0	0	-52630	-10526	-42104	-62
25	168992	135194	-173843	-3308	-41957	0	0	-41957	-8391	-33566	-49
30	178114	142491	-173843	-3308	-34660	0	0	-34660	-6932	-27728	-41
35	184744	147795	-173843	-3308	-29356	0	0	-29356	-5871	-23485	-34
40	190066	152053	-173843	-3308	-25098	0	0	-25098	-5020	-20078	-29
45	194604	155683	-173843	-3308	-21468	0	0	-21468	-4294	-17174	-25
50	199799	159839	-173843	-3308	-17312	0	0	-17312	-3462	-13850	-20
55	202329	161863	-173843	-3308	-15288	0	0	-15288	-3058	-12230	-18
60	204039	163231	-173843	-3308	-13920	0	0	-13920	-2784	-11136	-16

While Column D refers to loss of carbon at year one, the first entry covers five years, so it is not clear if the 3308 tCO2 represents carbon emissions for one year or five

This table is the only example I have ever seen of a carbon developer claiming all soil emissions stopped at Year 1-5 at which point they were estimated to be 3,308 tCO2. The basis on which this figure was calculated was also totally wrong:

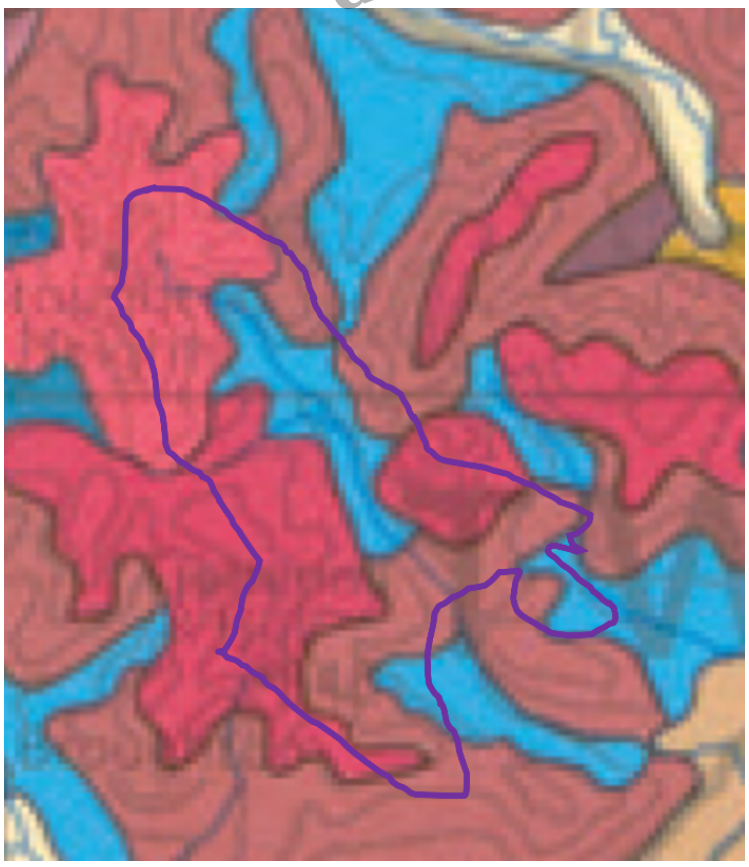
Assumptions - Soil Carbon Emissions - Table 3. Input the previous landuse, soil type and site prep type . Use one line for each soil type/ soil prep type

Previous Landuse	Soil Type	Disturbance/ Site Preparation	Area (ha)	% Soil Carbon Lost	Soil C Emissions (tCO2e/ha)	Soil C Emissions (tCO2e/are
Seminatural	Mineral	Low disturbance: Hand turfing, inverted, hinge & trench mounding, patch scarification, subsoiling, drains	400.00	00	0.0	0.0
Seminatural	Mineral	Medium Distrubance: Shallow/rotary (<30cm) plough, Disc/line scarification/continuous mounding	281.90	02	-11.7	-3307.6
Please select	Please select	Please select	0.00	0	0.0	0.0
Please select	Please select	Please select	0.00	0	0.0	0.0
Please select	Please select	Please select	0.00	0	0.0	0.0
Please select	Please select	Please select	0.00	0	0.0	0.0
		Total	681.90			-3307.6

** Check total area here is at least the net area planted above

Note that mounding, which exposes carbon in soils to the air where it oxidises, is described as low disturbance and causing NO CO2 emissions. That is clearly wrong.

The entire area of the proposed planting, 681ha, is recorded under soil type as being “mineral”. This has a significantly lower organic carbon content than brown soils, hence the low emissions per hectare. In fact soil data from the James Hutton Institute shows a significant proportion of the soils on the site are peaty or brown soils, with a much higher carbon content.



Boundary of Stobo plantation is in purple: examples of soil types; red is 227 – Humus iron podzols, crimson is 228 peaty podzols, so these will result in lots of carbon emission from tree planting.

One wonders if Scottish Forestry ever check that applicants put the correct soil type in the WCC calculator? The current failure to do so enables the forest industry to inflate both the carbon and the financial value of these scheme and has fed speculation.

That much of the soil at Stobo Hope has a high organic carbon content is confirmed by the photos:

Sitka seedlings on shallow ploughed strips. Peaty soils exposed to the air like this oxidise and release carbon into the atmosphere added to which the respiratory processes associated with tree as they grow releases more carbon.

As even the Scottish Government acknowledged, in response to an information request in January 2024 (see here), sitka plantations on non-mineral soils will cause net emissions of carbon for 10-15 years. Despite this, True North in a note to their news release claim:

"The Stobo development is forecast by independent Scottish Forestry modelling [i.e the WCC} to capture 144,515 tonnes CO2 (16 tonnes per day) by 2049 where the previous land use was a net greenhouse gas polluter".

This figure of *144,515* tCO2 for 2049 is even higher than the one in the removed WCC calculator which showed (Column B above) 135,194 tCO2 removed at year 25 after the 20% buffer adjustment. Given the failure to take account of soil emissions the assertion in the news release appears baseless.

Neither is any evidence provided to substantiate the claim that previously Stobo Hope was a net greenhouse gas polluter. Photos of the site suggest the opposite as there was very little peaty soils exposed to the atmosphere until True North brought in the ploughs.

Newly exposed peat at Stobo Hope February 2024. Photo credit Parkswatch reader.

Harry Humble was also wrong to claim to the Herald that "everyone is agreed" the objective should be to replace heather with trees. The important research from Friggens et al (2020) (see here) found that over timescales of up to 39 years "*Plots with trees had greater soil respiration and lower SOC [Soil Organic Carbon] in organic soil horizons than heather control plots".* In other words moorland stores more carbon in soils than woodland. (For a really good blog on soils and trees from the James Hutton Institute (see here)).

While there are some native trees and Douglas Fir included in the planting at Stobo Hope, the main species is sitka spruce. This is the fastest growing commercial forestry tree planted in the UK and, discounting what happens to the carbon in the soils, in the short-term sequesters more carbon from the atmosphere than native species like birch (see here). That process does not continue for very long, however, and the WCC calculator for Stobo Hope showed the sitka being harvested at 40 years.

Maybe by that time all the forestry machinery will be electric but unless the harvesting process changes lots of wood will be left on site to decay, in the process of which it releases carbon back into the atmosphere:

Fairly typical conifer felling with piles of unused timber generating C02- Acharn Forest 9th December

The value of the sitka as a carbon store then depends on how it is used but most timber products have short life cycles so carbon will be returned to the atmosphere. This varies from the extremely low, if the sitka pulped and turned into paper or cardboard, to reasonable when used in construction. Over the timber lifecycle, however, there is no overall sequestration as there are additional carbon emissions from processing, manufacturing and distribution of timber each time a plantation like that at Stobo Hope is felled.

Even if the sitka is used to construct house that lasts for a couple of hundred years – which is way higher than the life expectancy of many modern buildings – that pales into insignificance compared to the organic carbon in peat which can last thousands of years. Harry Humble's quote in the Herald cherry picked the 2049 sequestration figure and not taken into account what happens over the lifecycle of the products or the carbon released from soils. Stobo Hope may not be registered under the WCC but epitomises all that is wrong with it.

What needs to happen

There may be a case for Scotland growing more conifers to use as timber but the argument, which Harry Humble is trying to make, that Stobo Hope should go ahead because of its value in terms of carbon sequestration appears to me extremely weak. Setting aside its other environmental impacts, there was no justification for Scottish Forestry to provide a £2m subsidy for carbon sequestration purposes. Whether or not Stobo Hope is registered under the WCC, it epitomises all that is wrong with it.

This is not, however, how Scottish Forestry sees the world. Its been dishing out cash to plant trees where-ever it can to meet the Scottish Government's tree planting targets without asking too many questions. Hence why Stobo Hope was given the go ahead without any evidence of the benefits it might bring. That creates the risk that Scottish Forestry may not wish fight the legal challenge from the Forestry Carbon Sequestration Fund to withdraw the grant because doing so would cast light on its own complicity in the process that led to the planting. The best way to ensure that doesn't happen would be if the Stobo Hope Action Group becomes a party to the action and either stiffens Scottish Forestry's resolve or threatens to resume the original court case.

Meantime, the last word to Dave Morris, contributor to this blog who suggested the following in a comment on the Raptor Persecution UK blog:

"Stobo is yet another example of Scottish Forestry ignoring expert ecological advice when approving a massive planting scheme. £millions are being wasted today, across much of Scotland, on schemes which will put more carbon into the atmosphere for decades to come than is captured by the growing trees. Many SF staff know that their grant system is now being exploited by individuals and institutions based far away from Scotland and is no longer fit for purpose. The result is damage to wildlife, landscape, outdoor recreational opportunity and loss of local employment. This is a modern version of the Highland Clearances and will not stop until SF is instructed by the Scottish Government to cease financial support for planting on peaty soils in the uplands and re-direct that support to mineral soils in the lowlands. There is no chance that the senior managers of SF will make this essential change in policy without SG intervention……The best next step is for the Scottish Parliament to only approve the 2025/26 Budget so long as there is a zero allocation of funds to the SF planting budget. Suspending all such planting grants for 12 months will give an opportunity for our politicians to design a planting policy and incentive system that benefits the public interest rather than the bandits who are exploiting the current system."

Category

1. Other parts Scotland

Tags

1. carbon offsetting
2. climate change
3. conservation
4. Forestry Commission Scotland
5. scottish forestry

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nickkempe