

Snow and snow making in the Alps – the implications for snowsports at Cairn Gorm

Description



The Planning Application to level off the slope by the day lodge for snow making was approved by the National Park Authority last Friday

Thanks to Phil Swainson, an occasional contributor to this blog, for forwarding me the Guardian's long read yesterday about how Alpine Ski resorts are using snow making to battle with climate change • [\(see here\)](#). Its recommended reading for anyone concerned about the future of

snowsports at Cairn Gorm or who is concerned about how we tackle the climate emergency, with an explanation of why the Alps are heating faster than elsewhere (20% more sunny days) and a description of how Alpine glaciers are disappearing.

While the impacts of global warming on snow cover are broadly similar to Scotland, with snow lying for shorter periods and increasingly only at higher altitudes ([see here](#)), the information in the article has implications on the potential for snow making in Scotland. (And the article acknowledges the inherent contradiction in using energy to make snow to mitigate the impacts of global warming caused by our profligate use of fossil fuels)

• You need four things to make snow, Pierre Mattis told me in September as we toured the control centre of the snow-making operation he runs in Val d'Isère. Water, air, cold and talent.

In the Alps, even when Spring daytime temperatures may exceed 20C, at night it often freezes down to low altitudes. That makes it possible to create snow for long periods and over large areas by blowing water through snow cannon at high pressure out into the air, a process that uses far less energy than snow factories which have to freeze water to make snow. Snow factories are only meant to supplement traditional snow making. Compare the 65km of piste that can be created with artificial snow at Val d'Isère with the snow patch created by the snow factory at Cairn Gorm.

It re-inforces my argument that both Highland and Islands Enterprise and the Cairngorms National Park Authority should have looked at information on temperature and snow lie before deciding to place the energy guzzling snow factory by the Day Lodge (see extract from Strathy above). Snow factories may be justifiable if using renewable energy and if they help keep a resort open but not to create an isolated patch of snow with fossil fuels. They need to be in the right place.

In the Alps resorts have been snow making since the 1980s. What the Guardian article shows is that as the snow retracted, so the Alpine resort operators have responded with investment in snow making capacity. As temperatures rise this is becoming increasingly challenging but, by being inventive and investing early, resorts have survived and got a return on that investment: *Today, 95% of Italian, 70% of Austrian, 65% of French and half of Swiss ski resorts are reliant on snow machines for their continued survival*. Looked at in this context, it's hardly surprising Cairn Gorm has been struggling and amazing that the other Scottish resorts have managed to survive at all.

What is scandalous is that Highlands and Islands Enterprise, which is meant to be an Enterprise Agency, has still failed properly to consider the potential for snow making at Cairn Gorm, despite the valiant attempts of the Save the Ciste Group and also failed to develop a sensible short-term plan. The rationale given for purchasing the snow factory was to maintain the Carpark T-bar uptrack throughout the season, enabling access further up the mountain. There is no evidence that staff at Cairn Gorm are attempting to do this or did so last year. At present they continue to widen the patch at the bottom and there's been no attempt to make snow on the uptrack further up. Inexplicably, the snow cannon that are close enough to the tow to enable this to happen have not been switched on when conditions allow. Where is the talent that Pierre Mattis says is essential for snow making to work?

For snow making at Cairn Gorm to work there needs to be a proper plan based on evaluation of the data on temperature and snow lie. Whatever you may think of Val d'Isère and I have mixed feelings having skied there but also seen the impacts it has in summer what they do is thought

through and based on science.

It was staff working on Cairn Gorm who were responsible for the removal of the WinterHighland Automatic Weather Station and webcams from the Scottish Ski Club Hut in 2017. That single act of vandalism meant that the temperature data set that had been compiled over a period of 10 years and used to verify the case for snowcannon use was broken and we cannot therefore examine present temperature trends to see if that might help to inform us about what is happening with the climate as we go forward. HIE has never apologised for this act or done anything to remedy it. The talent needed to find a way forward at Cairn Gorm, if that is to have any chance of being sustainable, whether environmentally or financially, is going to have to come from outside.

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