

*The editors received the following responses to the articles on CO2 Emissions and Heatpumps in the March/April edition of the Whinstone Times. Due to the space constraints it was decided to publish these responses as a website-only addendum to WT79 .*

## **Co2 Emissions**

I'm afraid that I must complain most strongly about the inclusion of William Sutherland's rambling nonsense about limiting CO2 emissions in edition No.78.

I have a masters degree in Environmental Science from Imperial College London and frankly, I have rarely read such a load of ill-informed rubbish about the sources and effects of CO2.

This article was based upon the opinion of one man, quite obviously unqualified to comment and categorically NOT backed by scientific evidence.

Does the gentleman in question honestly believe that he knows better than 98% of the scientific community, who have spent years studying the sources and effects of CO2 on our changing climate?

In a time of clear and present climate emergency, all publications have a duty to fact check their content, especially dangerously ill-informed content such as this.

I do appreciate that the Whinstone Times is run by volunteers, but I would suggest that protocols should be adopted to monitor content that purports to be "factual" - there is a disclaimer that says "the editors reserve the right to alter or reject material" and this is a case where that right should have been exercised.

The editorial team have delivered some wonderful observational, historical and humorous articles, with inspiring poetry and local information to boot....but the Whinstone Times should not be vehicle for the rambling and frankly dangerous, opinion of one unqualified member of the community, especially when the subject concerned has been scientifically proven to represent the greatest existential threat that our planet and all its inhabitants have ever faced!

I would be happy to fact check any further material regarding emissions or climate change if that would help.

Mick Townsend  
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I am writing in response to the article by William Sutherland entitled "What you can do to limit CO2 emissions", which is written as if it is based upon proven scientific facts. In it, he writes that we should eat more meat and replace forests with grassland. This is completely wrong and dangerously misleading.

Cows and other dairy animals emit huge amounts of methane, which is about 25 times more damaging to the climate than carbon dioxide. Meat and dairy specifically accounts for 14.5% of global greenhouse gas emissions according to the UN's Food and Agricultural Association. Reducing methane emissions is seen as the biggest opportunity for slowing global heating. About a third of human-caused methane emission comes from livestock, mostly from beef and dairy cattle. Methane from their burps and manure is seen as both the biggest concern and best opportunity for tackling global heating.

The conversion of land for beef production and animal feed is a leading cause of deforestation in many tropical regions. The cutting down of tropical forest causes the release of long-held stores of carbon, and tropical deforestation as a whole accounts for around 8% of global greenhouse gas emissions.

David Kelner  
Creighton Place

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Mr Sutherland's views seem to be based on either a misguided or an outdated interpretation of the facts. It's imperative that we scrutinise our purchasing decisions, so I agree that we must think very carefully before buying any car. Cars have made a big contribution to modern life and a strong economy, but there are far too many of them in the global fleet. We must work to reduce that number through initiatives like car sharing, use of public transport and other mobility options etc. If you must buy a car, though, the best option is pure electric, not internal combustion engine (ICE) and not hybrid.

Electric cars have been proven to be a better alternative to ICE cars in terms of lifecycle CO2 emissions in multiple studies. Eg. ['A Global Comparison of the Life-cycle Greenhouse Gas Emissions of Combustion Engine and Electric Passenger Cars' ICCT July 2021](#). The key quote from this study is:

**'Results show that even for cars registered today, battery electric vehicles (BEVs) have by far the lowest life-cycle GHG emissions. [Emissions] over the lifetime of average medium-size BEVs registered today are already lower than comparable gasoline cars by 66%–69% in Europe, 60%–68% in the United States, 37%–45% in China, and 19%–34% in India.'**

In summary, BEVs comprehensively outperform ICEs and hybrids, and that situation is set to improve as renewable energy continues to proliferate, so it makes sense to switch the global fleet to electric ASAP. The points that Sutherland is trying to make in terms of the thermal efficiency of power plants or the weight of EV batteries just do not stand up to the facts that are presented in these studies.

His point about the cost of disposal does not stand up to scrutiny either. Industry is mobilising to not only ensure the value of spent EV batteries is realised via recycling but also to reuse the batteries for other applications before they need to be recycled at all. So the lifespan of an EV battery is actually more like 15-20 years. Well within that time frame, we can expect a 90%+ recycling rate of EV batteries, facilitated by robust returns on investment. A quick google of the state of the industry will reveal the sheer scale of the opportunity that is being seized upon by companies like Redwood Materials, Veolia etc. Some even predict that within 20 years there will be almost no requirement to mine for new battery materials, as all the metals required from new batteries will be made available from the recycling industry. There are legitimate concerns about the impact of mining for the materials that are required to build electric cars, and there is a lot of work to be done to clean up that element of the supply chain. That is not a reason to stop producing EVs however, the correct strategy is to hold manufacturers to account for responsibility in their supply chains, and to make sure that human rights and environmental concerns are addressed. This is already in process, driven partly by a level of scrutiny that the oil industry seems largely to have avoided, historically. The mass of metals required to make an EV battery is around 400kg. Compare that to the 17,000kg of mined raw material to run an ICE for its lifespan in the form of the oil that would be extracted to fuel the vehicle - hardly an environmentally sound or benign process in terms of human rights. It is pretty clear which is the better option.



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## **Air Source Heating**

I would like to reply to the article published in the last edition regarding the Air Source heating system at Creighton Place. This experience has certainly not been ours and I am concerned that an impression is being given out about the way the heating system should work, and indeed does work in my experience.

Let me clarify. We have never needed supplementary heat. I can manage our system so that the radiators are hot to the touch. We have plenty of hot water and the system heats our house as effectively as our previous gas central heating system, but for significantly lower cost. The key to Air Source Heating is how you manage it and during the winter months we have our system running at a steady 21 degrees which is more than adequate. For those who prefer, we have at times run the system at 23 degrees, for short periods. What I do agree is Air Source is slow but, again, that's back to managing your system to your needs. When we moved into our houses, we did have problems getting used to the system but that was apparently due to incorrect configurations on installation.

This was remedied by Grants and the system has since worked like a dream.

Air Source was never designed to provide instant heat. At least Air Source heating is shown to be more eco-friendly and therefore this will only lead by technology to improved systems in the years to come. Especially, with the government encouraging people to change to Air Source heating by providing incentives and the potential ban of gas boilers on new builds from 2025.

I feel I need to provide this information in the interests of balanced argument, not least because of those individuals who are considering selling their houses in the near future.

Gary Scofield  
Creighton Place