

Rt Hon Boris Johnson MP
Prime Minister
10 Downing Street
London SW1A 2AA

by email

8 February 2021

Dear Prime Minister,

Woodhouse Colliery, Cumbria

We write to ask you to intervene in the planning decision about the proposed coal mine in Cumbria.

We are all independent academic experts with specialist knowledge in this area (listed at the end of this statement). Our concern about this development stems directly from our research in the fields of environmental economics, climate governance and industrial decarbonisation.

We have two major concerns about the development: First, that it is not compatible with the UK's legal obligations on climate change or indeed its political stance and associated responsibilities in hosting COP26; and second, that coal from the mine is not needed for steelmaking, and will actually hinder efforts to decarbonise the steel industry. We raised these issues with Cumbria County Council during the planning process, and we do not believe that they have adequately considered this evidence.

1. The UK's legal obligations on climate change: The Climate Change Act and the Paris Agreement

Climate change is a global issue and concern, with a long-standing international framework of obligations including the Paris Agreement, on which the UK has sought to take a leading position and is urging other countries for stronger action at COP26. It is clearly inconsistent for the UK government to claim that development of a coal mine, intended to fuel emissions for almost 3 decades, is not a matter for national consideration.

The Climate Change Act (2009, amended 2019) sets statutory limits on greenhouse gas (GHG) emissions from the UK economy, with an end goal of net-zero emissions by 2050. A crucial feature of the Act is the establishment of five-yearly 'carbon budgets', as advised by the Committee on Climate Change, and as agreed by Government and Parliament. These budgets are designed to establish a smooth trajectory for GHG reduction over the coming decades. In December last year, the Committee on Climate Change published its recommendation on the level of the Sixth Carbon Budget, covering the period 2033-2037. All sectors of the economy, including industry, will be expected to contribute to emissions reduction.¹

We note that Cumbria County Council have imposed a 2049 end-date for the mine, in an attempt to ensure compatibility with the UK's net-zero target. However, as you will be aware, climate change is driven by cumulative emissions of greenhouse gases, which stay in the atmosphere for decades or centuries. Correspondingly, a 2049 end-date is wholly inappropriate. The 2050 date for net-zero is the end point in a process, not a sudden halt. Emissions in the years leading up to 2050 are just as significant. As GHGs remain in the atmosphere for many years, it is the total, cumulative amount of GHGs that is of concern.

Under the Paris Agreement, the UK is legally obliged to work with other signatories to limit global average temperature rises to well below 2°C and pursue efforts to limit the temperature increase to 1.5°C. In order to limit global average temperature rises to 1.5°C, global emissions must peak by 2030 (sooner for the UK and other industrialised nations) and then decline rapidly after this date, according to the Intergovernmental Panel on Climate Change.²

Taking into account both the science of climate change, and the UK's legal obligations, therefore, it is clear that the 2049 end-date for the mine is a wholly inadequate proposal. Emissions in each and every one of the intervening years (ie from the opening of the mine until 2049) are just as important.

2. Emissions reduction from coal and steel

As described above, over the period to 2050, UK industry will need to continue to reduce emissions of GHGs. It is not the case that the steelmaking industry will continue to use steady amounts of coal for the next thirty years, and then stop suddenly in 2050. The exact trajectory depends on steel demand, technological advances, and climate legislation (such as a carbon price).

Carbon emissions from the steel sector can be reduced in three ways: through technological advances; more use of recycled steel; and reductions in demand for steel.

In terms of technological advances, there will be more widespread use of technologies such as Electric Arc Furnaces (EAF) and Direct Reduced Iron (DRI) using natural gas; as well as adoption of new technologies such as hydrogen direct reduction (H-DRI). Examples of innovation include Tata Steel's H2ermes project, and the Hybrit project, Sweden, using hydrogen in place of coal, which aims to produce fossil-free steel by 2026. In the UK, Liberty Steel have committed to Green Steel development which would avoid use of coking coal.

Looking at reduced demand, the Climate Change Committee assumes a 30% reduction in steel use in UK under its scenario to achieve net-zero emissions by 2050, through greater efficiencies in use.³

As a result both of innovation and reduced demand, the need for metallurgical coal in the European market is likely to reduce very significantly in the next fifteen years: a published estimate combining these various factors projects that European demand for coal-based primary steel will roughly halve by 2035, and will need to do so if the temperature targets in the Paris Agreement are to be met.⁴ The Climate Change

Committee states that “Coking coal use in steelmaking could be displaced completely by 2035” in the UK.⁵ The Energy Transitions Commission (ETC) states that “a complete decarbonisation of the steelmaking industry is achievable by mid-century”.⁶

However, this is not a foregone conclusion. A sizeable new development of UK coal, from the Cumbria mine, would create an incentive to maintain old coal-based steel plants, and reduce the incentives for steel producers in the UK and elsewhere to accelerate adoption of alternative low-carbon technologies.

As this letter makes clear, the decision about the mine in Cumbria is a national decision, with international consequences. We therefore urge you to intervene and consider this decision at a national level, in order to preserve the UK’s reputation as a climate leader in the run-up to the crucial COP-26 Summit this year.

Signatories:

Professor Paul Ekins OBE, Director; Professor of Resources and Environmental Policy, UCL Institute for Sustainable Resources, University College London

Dr. Pao-Yu Oei, Head of Research Group CoalExit, Technische Universität Berlin

Professor Michael Grubb, Professor of Energy and Climate Change at University College London (Institute of Sustainable Resources & Energy Institute) and Hub Leader for Sustainability, ESRC Programme on Rebuilding Macroeconomics

Professor John Barrett, Chair in Energy and Climate Policy, University of Leeds

Dr Piotr Śpiewanowski, Assistant Professor, Institute of Economics, Polish Academy of Sciences (specialist in commodity markets & mining sector)

Professor Peter Newell, University of Sussex and co-founder and research director of the Rapid Transition Alliance

Professor Adrian Smith, Professor of Technology & Society, SPRU - Science Policy Research Unit, University of Sussex

Dr Matthew Lockwood, Senior Lecturer in Energy Policy, Sussex Energy Group, Science Policy Research Unit, University of Sussex Business School

Valentin Vogl, MSc, PhD student in steel industry transitions, Environmental and Energy Systems Studies, Lund University, Sweden

Professor Lars J. Nilsson, Professor of Environmental and Energy Systems, Lund University; IPCC lead author on industry in the 6th assessment report.

Dr Max Åhman, Associate Professor and Senior Lecturer, Environmental and Energy Systems Studies, Lund University

Professor Rebecca Willis, *Professor in Practice, Lancaster Environment Centre.*

Professor Mike Berners-Lee, *Lancaster Environment Centre; director, Small World Consulting.*

¹ *Net zero – The UK’s contribution to stopping global warming*, Committee on Climate Change, May 2019

² Intergovernmental Panel on Climate Change, 2018. *Global Warming of 1.5°C*. IPCC Special Report, 2018.

³ *Net zero – The UK’s contribution to stopping global warming*, Committee on Climate Change, May 2019, page 164.

⁴ Vogl, V., M. Åhman, and L. J. Nilsson, 2021: The making of green steel in the EU: a policy evaluation for the early commercialization phase. *Clim. Policy*, **21**, 78–92, <https://doi.org/10.1080/14693062.2020.1803040>.

⁵ Letter: Deep Coal Mining in the UK, Climate Change Committee, January 2021

⁶ Energy Transitions Commission, July 2018, ‘Reaching zero carbon emissions from steel’, consultation paper.