

RENEWABLE ENERGY – ANNOTATED BIBLIOGRAPHY

Black, Percy, “What’s Next? A Society for the Preservation of Electricity Pylons”, Letter to the Editor, *Bucks Advertiser* (18 November 1960), The Mills Archive Trust: Press Cuttings Collection [CUTT-04052]

This short letter to the editor was written by an eighteen-year-old renewable energy enthusiast and it points out the ways in which heritage societies continue to appear in response to previously maligned industrial artefacts, such as railroads. This suggests that the use, disuse, and slow obsolescence of many technologies can engender fondness. Despite the joking tone of much of the article, Black makes an interesting argument that those who object to pylons have not fully considered the costs and inconvenience of installing and maintaining underground wiring. More than anything, this source provides a glib perspective on the types of work done by organisations like the SPAB.

Capricorn, “Plain Words”, Comment in ‘Engineering’ (19 April 1963), The Mills Archive Trust: Press Cuttings Collection [CUTT-04003]

Writing under a moniker, the author comments on the appointment of Rex Wailes as the head of a survey of British industrial monuments, and suggests readers would react in three ways: apathy, joy, or quiet gratitude (the author ends the article by praising this latter position). The author expresses sympathy with the former two reactions, and suggests these reactions are aligned to particular ways of looking at time. They argue that solely prioritising the past and future is a type of extremist approach to history. The article privileges the worker who respects the past and works in the present to build a future.

Dill, Joan. *Reading: A History* (Lancaster: Carnegie Publishing, 2019)

Dill’s account of Reading’s historical development ranges from its beginnings as a small medieval town in 1350 to the present-day. Although the role of the local mills are not discussed extensively in this book, Dill does provide useful information about how milling shaped local geography, including issues of siting on the Kennet and adjustments made to the waterways and canals in the borough. Milling is aptly located as a practice within a larger industrial history. Some attention is given to the objections made by millers to a 1708 proposal to straighten the Kennet and facilitate easier passage from Reading Wharf to Newbury, but the book prefers to spend time on the bigger picture than on small social tableaux. As regards the question of renewable energy, there is little if any discussion within the text, but this does not diminish its use as a concise history of the Reading area.

Evans, Simon, and Rosamund Pearce. “Interactive: How the UK Transformed Its Electricity Supply in Just a Decade.” Carbon Brief (12 June 2019.) <https://www.interactive.carbonbrief.org//how-uk-transformed-electricity-supply-decade/>. Accessed 20 Dec. 2023.

This interactive article describes how the UK’s energy mix changed between 2008 and 2018. Its projections about how this mix will appear in the future have been useful for identifying key projects that are ongoing or recently completed, and it has been helpful for reflecting on how the energy mix appears now at the time of my own research in 2023-2024. Pearce’s graphic design facilitates readers to choose which energy source they want to look at, and Evans’s accompanying writing offers concise information on legislative acts and carbon intensity readings. Although a few of the links are no longer active and the claims and statistics thus slightly harder to fact-check, the majority of the article presents a large number of verifiable sources, and enables people to easily expand their understanding of climate policy in the UK. It also provided me with an introduction to several helpful websites that I could use as sources.

Finch, William Coles. "Vanishing Wind And Water Mills: Their Romance And History" (1925; transcribed 2004). Michael Yates Donation. [SMDN-16845]

Finch's essay considers milling in terms of the gradual loss of its processes, people, and architecture. The essay emphasises the picturesque quality of mills and makes use of poetic and literary references, most heavily relying on Ruskin's poem 'The Old Watermill', a stanza of which is placed as the epigraph. Finch argues that the general reader is less interested in the engineering and technology of mills than in the visual charm of them, and concludes the essay by suggesting a heritage society should photograph these 'familiar landmarks' before they vanish altogether. Coming a few years before the establishment of the SPAB mills section, the essay indicates the existence of specialised interest in the preservation of mill records. Although the article provides some specific evidence of historical changes to tide mills and cornmills, including a section on the uses for mills during World War One, it predominantly recurses to imagining metaphorical mills in various states of decay. Finch was a British historian who specialised in writing about watermills and windmills in Kent, which comes across in his concluding paragraphs where he hopes to offer his collection of negatives up to a future society of windmill conservators.

Friends of the Earth, 'Removing the Windbrakes: Wind energy, the landscape and the Government', Briefing Sheet (Friends of the Earth: London, March 1991)

Written while 'wind energy development in the UK [was] in its infancy', this publication was produced by the UK-based branch of the international environmental campaigning community Friends of the Earth (FoE), for whom safe energy was an early and central issue. This briefing lays out the FoE's definition of wind power and the group's policy recommendations for reducing environmental harm and doubling the economical exploitability of the wind energy resource. It explains how low expectations for renewable contribution to the grid slowed investment in wind, and then explores the implications of siting using various maps and graphs as evidence to back up its recommendations for established targets for wind energy developments, restructuring of the NFFO and extension of the NFFO to Scotland and Northern Ireland.

Ghosh, Amitav. *The Great Derangement: Climate Change and the Unthinkable* (Chicago: University of Chicago Press, 2016)

Ghosh's book blends an analytical approach with compelling storytelling, as he considers whether the treatment of fiction about climate change as unserious suggests something about larger political and cultural patterns of evasion. In the first section, 'Stories', Ghosh accuses contemporary novels of being structurally anthropocentric, neglecting climate change due to limiting the scope of storytelling to human lifespans. Climate change, he argues, is often beyond the imagination of modern fiction. Although fiction does trend towards portraying the aftermath of climate disaster, there are plenty of examples that can suggest this polemical stance is a bit oversimplistic, particularly within speculative fiction. Although prone to aphoristic language, this book nevertheless provides a powerful example of the role storytelling can play in animating present and historical debates about our planet's future.

Gipe, Paul. *Wind Energy for the Rest of Us* (Wind-Works Org: Bakersfield, CA, 2016)

The book offers a broad overview of the affordances and history of wind-power, as well as helpful and clear explanations of terminology. Gipe's enthusiastic telling of the history and future of wind-power provides a window into how language about wind-power has adapted over time. Starting with a celebratory note about how windmills have captivated people for

centuries, Gipe goes on to build his wide-ranging and sometimes unfocused study off of an etymology that Gipe has been formulating at least since October 1987 when he wrote an enthusiastic piece about throwing away the term “wind-parks” in favour of ‘wind plants’ for *Windpower Monthly* (Oct 1987: 8). Like many other sources that have been consulted, the book stresses the ready availability of wind power technology, and makes a summative statement that wind energy has always needed ‘a reason to use it’ (28).

Gipe, Paul. “Austrian Was First with Wind-Electric Turbine Not Byth or de Goyon.” *WIND WORKS*, 25 July 2023, <https://www.wind-works.org/austrian-was-first-with-wind-electric-turbine-not-byth-or-de-goyon/>. Accessed 2 Jan. 2024.

This short blog post recounts a recent archival discovery made by French wind authority Philippe Bruyere. Bruyere’s research reveals that an Austrian engineer named Josef Friedländer may have been the first to generate electricity using a windmill. Gipe situates Friedländer in the context of better-known experiments by Charles de Goyon, James Blyth, and Charles Brush, and illustrates the similarities and differences between their experimental processes. This source, although it admits its own limitations by explaining that there is no further evidence of Friedländer’s experiments after exhibiting his invention in 1883, nevertheless displays how current archival research into milling can reveal undiscovered events of real historical importance.

Harrison, Lyn. ‘The Looming Spectre of Government Duplicity’, *Wind Power Monthly* 6.5 (May 1990) pp.16-18.

This short article, written in Harrison’s capacity as editor of *Wind Power Monthly*, reflects the concerns of wind-power specialists that the privatization of the UK’s energy industry will negatively impact the implementation of wind turbines. Like Friends of the Earth, Harrison notes the availability of wind power and also recounts the worries that have arisen out of a lack of transparency in the awarding of contracts under the NFFO. Harrison is highly suspicious of government motivations in this article, which re-emphasizes her own strong commitment to renewables as the editor of this specialist magazine. This magazine issue also includes another article closely analysing the concerned responses of wind power authorities to the government’s 1989 White Paper and NFFO programme.

Hume, John R. *The Industrial Archaeology of Scotland: The Highlands and Islands*. (London: Batsford, 1977)

Hume’s account of what types of milling activities occurred in this geographical area has been useful for demonstrating that there is very little evidence of windmilling in the Scottish islands. Rather, the landscape necessitated a greater use of water-milling, thus allowing crofters and local people to exploit the abundance of water. An earlier survey between 1964-1966 for the Society of Antiquaries of Scotland (in the Archive Library: Accession no.230570), however, concludes that despite the abundance of water-power resources, windmills were far more common in Scotland than previously realised, and points to records and extant survivals for at least 90 to 100 windmills. Hume’s book does not provide more than cursory information on the environmental and geographic features that facilitated milling. It is more interested in the products of milling than in the types of motive power. Like a survey, the book consists largely of taxonomic documentation about various mills. Hume would go on to participate in another windmill specific survey, published in 1984.

Huysen, Andreas. ‘Nostalgia for Ruins’. *Grey Room*, no. 23 (2006): 6–21.

Huyssen's article focuses on the architectural sketches of Piranesi, and it seeks to unpack the paradoxes of nostalgia by considering the historical fascination many people have for ruins. The concept of nostalgia links longing to space and time, where what is present also suggests what is no longer accessible. Huyssen argues that ruins demonstrate the ambiguities of nostalgia and authenticity. The complexity of nostalgia is useful for thinking about how people continue to feel affected by and nostalgic for mills, and Huyssen's brief mentions of industrial ruins in the twentieth and twenty-first century might also make these arguments applicable to turbines approaching decommissioning. If ruins indicate modernity as more than longing for past power or the relentless triumphalism of progress, as Huyssen argues, perhaps mills too might be thought of as more complex than provincial ornaments, but as a way of imagining a renewable future.

Jones, Lavender M. 'Harnessing the Wind' (19 January 1973), The Mills Archive Trust Rex Wailes Collection [REXW-ELB-05, Rex Wailes E L Burne Box 1]

This carbon copy of an article by Lavender Jones details her childhood memories of her father (the engineer E.L. Burne) generating electricity from a homemade turbine in their garden. The article praises Burne as an innovator and a craftsman, and lays out some chronological details about how Burne's technologies contributed to the development of commercial electricity-producing mills. Attached is a letter from Jones to the windmill specialist Rex Wailes, where Jones complains about the difficulty of getting an article about her father's mill published by a local periodical. The article's closing reflection on the miner's strike indicates the heavy use of non-renewables in the National Grid in the late twentieth-century, and how necessary renewables were to supplement infrastructural failures.

Klein, Naomi. *This Changes Everything: Capitalism vs The Climate*. (Simon and Schuster, 2014).

This non-fiction book is about how the psychological rigidity of consumer habits endangers the environment. Klein begins by admitting, quite sympathetically, to a prior disinterest in climate change despite the vocality and frequency of warnings about it, and goes on to describe how meeting Bolivian diplomat Angélica Navarro Llanos in 2009 made her begin to realise the scale of injustice. Bolivia, it is worth noting, made the issue of climate debt into a global conversation in 2010. Klein's book works to shift the terms of the argument about climate change, and considers the rhetoric of emergency and the ability of people to declare a crisis. Klein even considers how 'crisis' has been used politically to suppress civil liberties as well as advance them, but does not go quite far enough to explore the intentionality of some of these suppressions and how people's ability to declare a climate crisis is affected by multiple factors. This nuanced approach to climate change usefully charts how indifference is a matter of habit. Changing people's minds is crucial – this point returns again and again in research about renewables, such as in Gipe, Harrison, and Ghosh's accounts. For this project, looking at the homemade windmills in the archive's catalogue demonstrate ways in which enthusiasm for local history and technology has enabled people to change their minds.

Morris, William. *Political Writings: Contributions to "Justice" and "Commonwealth", 1883-1890*, edited by Nicholas Salmon, The William Morris Library, Bristol: Thoemmes Press, 1994.

Morris and other founding members wrote the SPAB manifesto in 1877, long before the introduction of the SPAB mills section in 1929. This collection of essays provides insight into Morris' political beliefs and motivations, which bled across into the manifesto that continues to guide heritage work today. Despite the lack of emphasis on mills, essays like "Why Not?" and "A Factory As It Might Be" record Morris's negative reaction towards the use of steam and

coal, rather than water or wind, for motive power when generating electricity. These essays also show how Morris perceived the use of non-renewables as bound up in exploitative labour practices and environmental damage.

Morton, Timothy. *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge, Mass.: Harvard University Press. 2007.

Morton's ecocritique seeks to undo the stereotypes about nature that undermine ecocriticism, and emphasises that aesthetic, literary and social conceptualisations of 'nature' have material implications and consequences. The idea of 'nature' as something ideologically separate from culture, he argues, hinders ecological and political action. He suggests that the environment has become a type of unconscious that produces discomfort when brought to our attention. The conceptual enormity of the environment laid out in this book likely fed into Morton's later thinking about 'hyper-objects' in 2013. Thinking about nature in this way has allowed me to unpack the association of mills with the 'picturesque'. In many archival press cuttings, mills are described as part of the landscape. Bringing mills out of nature and forward into consciousness would mean recognising them not as relics but as significant social and economic architecture. This could then make the mill more politically actionable as an image and a site. The concept then, is helpful for considering the generation of electricity from old mills.

Synon, Mary-Ellen, "Windmill power 'could wreck countryside'", Report in 'The Daily Telegraph' (5 September 1979), The Mills Archive Trust Press Cuttings Collection CUTT-04043

Synon's article reports on a British Association meeting which discussed the potential impacts of renewable development, and gives significant weight to concerns raised by R. Turnball, deputy chief in Scottish Development Department. It is proving difficult to find a record of Turnball, so his motivations in making the erroneous claim that huge machines would be placed every 500 metres along the Scottish coastline cannot yet be ascertained. Other views and counterarguments are not represented in the article. It is important to note Synon has been noted as a proponent of laissez-faire capitalism (e.g. in Irish Times, 22 March 1995, p.6). As such, her views represent an enduring strain of writing by right-wing politicians and fossil fuel lobbyists who cite the ugliness of turbines as a reason to divert resources away from wind and water and into other economic ventures. In light of what statistical and testimonial evidence tells us today about the damage done by uncontrolled industry, it is illuminating to juxtapose Synon's approach against later journalists like David Ross, whose advocacy for wave power was bound up with his uncompromising socialism (a 2002 investigative article by Ross about wave-power can be found at the Archive: Niall Roberts Collection Box 26, ROBE-066 Renewable Energy File). It is, moreover, useful to read the cons Turnball lists and consider how these might reflect or appeal to constituents; for example, land-use is a live topic in Scotland due to histories of clearances.

Thirlaway, Khalil, host. "Deep Down and Dirty? Mining for a Sustainable Future." Our Broken Planet, Episode 9, National History Museum, 15.08.2023, <https://www.nhm.ac.uk/discover/our-broken-planet-podcast.html>. Accessed 02.01.2024.

As part of a larger series that takes a holistic approach to climate change, this podcast episode asks how we can supply the materials required for a renewable future without creating excess harm to the planet. It dispels the notion that green energy is totally free of environmental damage by listing the types of mined materials required to make a wind turbine. However, this line of questioning does not go far enough to explain how these initial emissions are offset over the lifespan of a turbine. Surprisingly, no comparison between onshore and offshore

turbines is made despite the focus on the potential resources of the sea, but this may be outside the podcast's purview because it is concerned with mining outside of territorial waters. The podcast interviews research specialists and Greenpeace activists, and gives equal weight to their perspectives on whether mining materials from places like the deep sea may allow us to create a green economy, or risk a continuation of the unsustainable plundering of nature.

Vaughan-Lee, Emmanuel, host. "Speaking the Anthropocene – with Robert Macfarlane." Emergence Magazine, 30 May 2019, <https://www.emergencemagazine.org/interview/speaking-the-anthropocene/>. Accessed 19 Dec. 2023.

Vaughan-Lee, the magazine's founder, interviews author Robert Macfarlane about his research into the language which we use, make, or do not yet have to describe the Anthropocene. Macfarlane discusses how we are still in the process of making words to describe this era affected by climate change. He also argues that local resistance to windfarms in Lewis reflects a larger consideration of place, and a sense of being separated from nature. This provides a useful literary insight into the continuing issues around the siting of windfarms, and allows for nuance in discussions of opposition to renewable energy. The latter half of the interview turns to playing 'sonifications' from a musical project created in response to Macfarlane's work, where music has been composed to evoke certain landscapes. This has less relevance to the subject of this exhibition but remains of interest for considering how people react to landscape and immerse themselves in it.